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OF

HERBACEOUS PERENNIALS

TESTED IN THE

ARBORETUM AND BOTANIC GARDEN

CENTRAL EXPERIMENTAL FARM

OTTAWA, CANADA

WITH DESCRIPTIONS OF FLOWERS, AND OTHER NOTES

BY

W. T. MACOUN

Horticulturist, and Curator of the Arboretum
and Botanic Garden

BULLETIN No. 5, SECOND SERIES

Bulletins of the Second Series treat of such subjects as are of interest to a limited class of readers, and will be mailed only to those to whom the information is likely to be useful. Copies may, however, be obtained by any one desiring them on application to the Director of Experimental Farms.

Published by direction of the Hon. SYDNEY A. FISHER, Minister of Agriculture, Ottawa, Ont.

OTTAWA

GOVERNMENT PRINTING BUREAU

1908

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PERENNIALS AT CENTRAL EXPERIMENTAL FARM, OTTAWA, CAN.

Photo by F. T. SHUTT.

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U.S. Agric. Dept.

To the Honourable

The Minister of Agriculture.

SIR,—I have the pleasure herewith of submitting for your approval Bulletin No. 5 of the Second Series, containing a list of the Herbaceous Plants which have been tested in the Arboretum and Botanic Garden at the Central Experimental Farm, during the past twenty years. This list has been prepared at my request by Mr. W. T. Macoun, Horticulturist of the Central Farm and Curator of the Arboretum and Botanic Garden.

In this list the species and varieties have been arranged alphabetically under their scientific names, and in all cases where common names could be found, these have also been given, together with the name of the country from whence the different species and varieties have been obtained.

This list of Perennial Plants is the result of much labour and painstaking effort on the part of the author. He has given, in addition to the botanical names of the species, the year when planted, the height to which the plant grows, the time of blooming and the colour of the flowers; also whether the plant is hardy or tender. In the introduction to the bulletin some very useful information is given, including brief notes on the planting and care of Herbaceous Perennial Plants.

It is hoped that the information presented in this bulletin will be helpful to all lovers of perennial plants and flowers, and that it will assist in the correct naming of varieties and be the means of bringing such useful and hardy species as are deserving of general cultivation, into greater prominence.

I have the honour to be

Your obedient servant,



WM. SAUNDERS,

Director of Experimental Farms.

INTRODUCTION.

There is a rapidly growing interest in flowers in Canada, and the increased demand for information regarding them during recent years is very marked. Children are being taught to care for flowers in the public schools, and many horticultural societies in the cities, towns and villages are awakening a greater interest in horticulture. There have also been lecturers sent to different parts of Canada to interest the people, who have spread much useful information. Much horticultural literature has been available in recent years in attractive books, and in the reports and bulletins issued free by the public institutions to whoever asked for them. These have all had their influence, and the result has been a growing desire on the part of Canadians to beautify their home surroundings by the planting of trees, shrubs and herbaceous plants.

The Central Experimental Farm has, for more than twenty years, been a bureau of information to those who sought for greater knowledge in growing plants, and in order that the information should be of the most practical and reliable character, experiments were begun in 1887 to determine the kinds of plants most desirable to grow.

A botanic garden comprising sixty-five acres of land was established in 1887, in which it was planned to test as many species and varieties of trees, shrubs and herbaceous plants as could be brought together there. In 1899 a list was published of the trees and shrubs which had been tested up to that time, with notes on their hardiness. The rapidly growing interest in herbaceous perennials has made it seem necessary to now publish a list of these plants, and in this bulletin 2,116 species and varieties representing 280 genera tested in the Arboretum and Botanic garden are recorded. This large collection has been obtained from botanic gardens, nurserymen, seedsmen and private individuals in many parts of the world, and while there is a large number of kinds yet to be obtained the collection is a very representative one. In the list which is here published it is probable that there are a few synonyms or duplicates, but as far as possible these have been eliminated. Some bulbs have been tested in the botanic garden and these are included in this list. These are for the most part botanical species, not many horticultural varieties having been tested in the perennial border.

The herbaceous perennial border in the botanic garden at Ottawa is about half a mile long and twelve feet wide. It has a southern and southeastern exposure, with a fine hedge of American arbor vitæ, *Thuja occidentalis*, for a background. The soil varies from a clay loam to sandy loam, with a moist cool subsoil in most places, but the evergreen background reflects the heat in summer, and it is very hot, especially where the exposure is southern, which makes the plants sometime suffer from the heat in a dry time. On the other hand this hedge holds the snow in winter, and makes better protection for the plants than they would have without it. No special conditions are made for plants which might do better with them, all being treated alike. This fact should be borne in mind when consulting this bulletin, as it is probable that some plants would succeed in rockeries for instance that do not do well in the border. The border is laid

out in rows three feet apart, with the plants three feet apart in the rows, and from one to three plants of each kind are grown. The surface soil is kept loose throughout the summer with the hoe and rake to conserve moisture and destroy weeds, and the plants are staked when necessary to keep them from breaking down. On a few occasions it has been necessary to water part of the border, but generally speaking no artificial watering is done. Late in the autumn the plants, after the dead stalks are cut off, are mulched with about four inches of strawy manure or leaves for protection in winter, part of which is dug in in the spring. The plants in the border have not yet been arranged in botanical sequence, as the collection has been growing so rapidly that it would have been difficult to apportion the space required for each genus. As far as possible, however, the species and varieties of each genus are kept near together. The plants are well labelled with zinc labels, so that any one who is interested may learn the name of a plant. A record has been kept of the hardiness, growth and height of the plants, also the dates when the plants begin to bloom, and when the blooming season is over. Descriptions of the flowers have also been taken. With this information available it was felt that as much as possible of it should be included in this bulletin. The nomenclature used in this bulletin is that adopted by the Royal Gardens, Kew, in the Kew Guide and the Index Kewensis.

As far as possible the spelling of the names of horticultural varieties has been obtained from reliable sources, but it has not always been possible to trace up a variety. The common names employed are for the most part those found in the Kew Guide and Encyclopædia of American Horticulture. It has not been possible to identify all the plants in the border, hence it is probable that there are some errors in taking it for granted that a plant may be true to name when it is not. All available literature has been used to identify as many species and varieties as possible. It is hoped that any errors noticed by readers of this bulletin will be reported to the author so that they may be known. Plants mentioned in this bulletin are called 'hardy' if they live three seasons and more in the border at the Central Experimental Farm. There are a few exceptions to this rule. For instance a plant may be called hardy if it were only planted in the border in the botanic garden in 1908, should it be known that elsewhere on the Farm under almost similar conditions it has proved hardy. Plants are called 'half hardy' if they last for two seasons only. Sometimes, however, even if they have lasted longer than two seasons they are called half hardy if it is known that they have had special conditions in the border, such as greater protection from snow, than they would have under less favourable conditions. Plants are called 'tender' if they are killed out the first winter after planting. The height of the plant has, in most cases, been determined by actual measurement in the border, and the figures given usually represent the average of several years. In a few cases it has been necessary to obtain the height of a plant from some other source. The colours of the flowers are in most cases from descriptions made by the writer from the plants growing in the botanic garden. In recording the colours the 'Repertoire de Couleurs' and 'A chart of Correct Colours of Flowers' have been used for guidance. As the descriptions of the species and varieties of flowers in this bulletin are, however, not the original descriptions of them, it has not been thought desirable to adopt, in all cases, the terms used in the 'Repertoire de Couleurs,' which describe fine variations in colour, but, rather, to use more familiar terms that would be easily understood by the general public. The dates of blooming have been taken from several years' records. The first date represents the earliest date when a species or variety began to bloom in

the border at Ottawa, and the last date represents the close of the blooming season. These dates are not necessarily taken from the same year; in most cases they are not. The object is to give the range of blooming season. Years, when there was an extraordinarily early or late spring or a very long drought which affected the blooming season, were not taken into consideration.

In order to avoid the use of adjectives to describe the merits of the different plants, asterisks or stars have been used instead. The plants with three asterisks before the name are considered by the author to be the best for cultivation in the perennial border; those with two asterisks, the second best; those with one asterisk, third, and those without an asterisk are either considered not worthy of cultivation or of being of interest to botanists only, or have not been tested long enough to judge of their merits. In addition to these marks of merit, a list of one hundred of the best plants is given at the end of the bulletin, a list of the best fifty, and a list of the best twenty-five. There are also lists of the twelve best varieties of German iris; the twelve best varieties of pæonies, and a list of the twelve best varieties of perennial phlox, *Phlox paniculata* (*decussata*). There are so many fine varieties of iris, pæonies and phlox that a list of the best twelve given by one person may not be the same as the list of another, as much depends on individual taste.

The author desires to acknowledge, and to express his appreciation of, the assistance given by Mr. Frank T. Shutt, Chemist, in illustrating this bulletin. All the photographs were taken by Mr. Shutt, and are of plants growing at the Central Experimental Farm. We wish also to acknowledge the services rendered by Mr. Frank Horn, foreman in the botanic garden, who has charge of the perennial border, and who for several years has kept the records of dates of blooming and height of the plants, and has also assisted in compiling the records used in this bulletin.

THE PLANTING AND CARE OF HARDY HERBACEOUS PERENNIALS.

As many of the persons who receive this bulletin may not have had much experience in gardening, and as the descriptions and illustrations of the flowers may lead some persons to grow herbaceous perennials who have not done so before, a few words in regard to the planting and care of them should prove useful.

No flower garden is complete without perennials. Even though the plot of ground be small, some of the space should be devoted to this useful and varied class of plants. Few flowers require as little care as hardy herbaceous perennials if given the proper conditions to start with. The soil should be a good loam which will not bake, and well drained, for thorough drainage is very essential. When planted, most perennials should be left undisturbed for a long time, hence the soil should be well prepared in the beginning by trenching and digging under a liberal supply of well rotted stable manure. Most perennials thrive best in full sunlight, and, where possible, they should be planted where they will get the most favoured conditions. A southern aspect is the most suitable, and where there is protection from the cold winds the plants do best. Planting may be done either in spring or autumn, but the month of September is the best month to plant most kinds of perennials. In making and planting a border it is most important to plant those kinds which will give a continuity of bloom from early in the spring until late in the autumn, and to arrange them so that they will be most effective. The dates of blooming, heights of the plants and colours of the flowers given in this bulletin will be a great aid to those who desire to make the most of the material they have or may get. In large borders the best effects are obtained by massing several plants of one colour or several varieties of one species, and also arranging for a continuity of bloom, but in smaller borders and where the number of plants is limited it is often not thought possible to get this, and sometimes one part of the border will be without bloom.

There are a number of good perennials which can be grown readily from seed, such as Iceland and Oriental Poppies; varieties of Columbine, Coreopsis, Gaillardia, Campanula, Platycodon, Delphinium, &c., and at a comparatively small outlay, and in two seasons many hundred plants may be grown from seed, which will furnish bloom from early in the spring until late in the autumn. The planting of small clumps of bulbs between the later blooming perennials also furnish bloom in the spring when flowers are most desired. A seed bed four feet wide and as long as desirable of good loamy soil which will not bake, and enclosed with six-inch boards, will be found a very suitable place for raising young plants. Seed should be sown in rows about six inches apart across the bed. Autumn is the best time to sow the seed, as it will be softened by the moisture then in the soil and cracked by frost before spring, and will then germinate readily, whereas if it were sown in the spring it may lie a whole year without germinating. The depth of sowing will depend on the seed. Very small seed merely needs enough soil to prevent its blowing away, while the larger seed may be sown half an inch deep. If sown much deeper most seed will not germinate. The young plants at the end or in the middle of the first season's growth may be either transplanted direct from the seed bed to the border or be pricked out about six inches apart into another bed and left growing for the remainder of the season or another year, by which time there will be fine strong plants. During the growing season the surface soil should be kept loose and free from weeds, and in the summer the taller growing plants will need staking, as fine specimens are liable to be broken by storms if this is neglected. When the plants have ceased blooming the old stalks should be cut off near to the ground. Just before permanent frost sets in, the border or bed should be given a dressing of about four inches of strawy manure or leaves. This will form a good mulch for the protection of the plants in winter and at the same time enrich the soil. The mulch ought not to be removed too soon in the spring, as often most of the damage done to perennials is at that season of the year when so much thawing and freezing takes place. After raking off the coarse material in the spring the shorter manure may be dug in to enrich the soil.

LIST

OF

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TESTED IN THE

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CENTRAL EXPERIMENTAL FARM

OTTAWA

WITH

DESCRIPTIONS OF FLOWERS AND OTHER NOTES

ABBREVIATIONS USED.—Pl., planted. Ht., height. Fl., flower. Fol., foliage. In., inch or inches. Ft., foot or feet. Syn., synonym. *, desirable. **, more desirable. ***, most desirable.

ACHILLEA, L. MILFOIL, YARROW.

(*Compositæ.*)

A. argentea, Law. = *Tanacetum argenteum*.

A. Clavennæ, L. Europe.
Pl., 1898. Tender.

A. grandiflora, BIEB. Asia Minor.
Pl., 1907.

A. filipendulina, LAM. Orient.
Pl., 1897. Tender.

A. lanata, SPRENG. HAB?
Pl., 1896. Hardy. Ht. 3 to 4 ft.
Fl. dull white; July 4 to Oct. 7.

A. magna, L. GREAT MILFOIL. Europe.
Pl., 1896. Hardy. Ht. 2 ft. Fl.
white; June 21 to Aug. 15.

A. micrantha, WILLD. Orient, &c.
Syn. A. pubescens, Sibth.
Pl., 1896. Hardy. Ht. 2½ ft. Fl.
white; June 27 to Sept. 18.

**A. Millefolium rubra*.
Pl., 1895. Hardy. Ht. 2½ ft. Fl.
crimson; June 17 to Oct. 20.

A. mongolica, Fisch. = *A. sibirica*,
Ledeb.

ACHILLEA—*Con.*

A. nobilis, L. Europe, &c.
Pl., 1896. Hardy. Ht. 1½ to 2½ ft.
Fl. white; June 20 to Oct. 22.

**A. Ptarmica*, L. SNEEZEWORT. North-
ern Hemisphere.
Pl., 1899. Hardy. Ht. 1½ ft. Fl.
white; June 20 to Sept. 19.

***A. Ptarmica flore pleno*.
Pl., 1894. Hardy. Ht. 2 to 2½ ft.
Fl. white, double; June 20 to
Oct. 3.

****A. Ptarmica flore pleno The Pearl*.
Pl., 1895. Hardy. Ht. 2½ to 3 ft.
Fl. white, double; June 24 to
Oct. 3.

A. pubescens, Sibth. = *A. micrantha*.

***A. serrata plena*.
Pl., 1903. Hardy. Ht. 2½ ft. Fl.
white, double; June 16 to Aug.
21.

A. setacea. WALDST & KIT. Europe.
Pl., 1902. Hardy. Ht. 2 ft. Fl.
white; June 30 to Oct. 27.

ACHILLEA—Con.

A. sibirica, LEDEB. Northern Asia.
Syn. A. mongolica, Fisch.
 Pl., 1897. Hardy. Ht. 1½ to 2 ft.
 Fl. white; June 17 to Oct. 7.

****A. sibirica** Blush.
 Pl., 1897. Hardy. Ht. 3 ft. Fl.
 pinkish lilac; July 7 to Aug. 18.

ACONITUM, L. MONK'S-HOOD, WOLF'S-BANE.

(Ranunculaceæ.)

***A. Anthora**, L. Wholesome Wolf's-bane.
 Europe, North Asia, &c.
 Pl., 1905. Hardy. Ht. 4 ft. 9 in.
 Fl. creamy white, slightly tinged
 with rosy purple; July 13 to
 Aug. 10.

A. autumnale, Lindl. = A. Fischeri, Reichb.

A. barbatum, Patr. = A. Lycotonum, L.
A. californicum, Hort. = A. Fischeri.

A. Cammarum, L. Europe.
Syns. A. cernuum, Baumg.; A. decorum, Reichb.
 Pl., 1895. Tender.

A. Cammarum stœrkianum.
Syn. A. stœrkianum.
 Pl., 1897. Tender.

A. cernuum, Baumg. = A. Cammarum, L.

A. decorum, Reichb. = A. Cammarum, L.

*****A. Fischeri**, REICHB. Autumn Aconite.
 North Asia, North America.
Syns. A. autumnale, Lindl.; A. californicum, Hort.
 Pl., 1901. Hardy. Ht. 3 ft. 8 in.
 to 4 ft. 3 in. Fl. bluish violet;
 Aug. 12 to Oct. 14.

****A. Fischeri acutum.**
 Pl., 1897. Hardy. Ht. 4 to 5½ ft.
 Fl. bluish violet flushed with
 white; Aug. 19 to Sept. 24.

****A. heterophyllum**, WALL. Himalayas.
 Pl., 1901. Hardy. Ht. 5½ to 6½ ft.
 Fl. violet; July 10 to Aug. 18.

A. japonicum, DECNE. Japan.
 Pl., 1907.

ACONITUM—Con.

A. Kusnezoffi, REICHB. North-eastern Asia.
 Pl., 1894. Hardy. Ht. 2½ ft. Fl.
 bluish purple; Aug. 8 to Sept. 5.

***A. Lycoctonum**, L. Common Wolf's-bane. Europe, North Asia.
Syn. A. barbatum, Patr.
 Pl., 1898. Hardy. Ht. 3 to 4 ft.
 Fl. bluish purple; July 27 to
 Sept. 2.

A. Lycoctonum orientale.
 Pl., 1902. Hardy. Ht. 6½ to 7 ft.
 Fl. dull white and pale greenish
 yellow tinged with purple; June
 26 to Aug. 13.

A. Lycoctonum pyrenaicum pubescens.
 Pl., 1902. Hardy. Ht. 3 ft. Fl.
 dull greenish white; June 8 to
 July 7.

A. Lycoctonum Scholeri.
 Pl., 1895. Hardy. Ht. 3½ to 4½ ft.
 Fl. pale greenish yellow; July 3
 to Sept. 2.

A. macrophyllum, HORT.
 Pl., 1908.

***A. Napellus**, L. Common Monk's-hood. Northern Hemisphere.
 Pl., 1895. Hardy. Ht. 3 to 4 ft.
 Fl. bluish purple; July.

*****A. Napellus bicolor.**
 Pl., 1906. Hardy. Ht. 3 to 3½ ft.
 Fl. white and violet; July 20 to
 Aug. 16.

***A. Napellus laxus.**
 Pl., 1905. Hardy. Ht. 3 ft. Fl.
 violet. July 16 to Aug. 10.

A. Napellus Mielichhoferi.
 Pl., 1895. Hardy.

****A. Napellus strictum.**
 Pl., 1907. Ht. 4 ft. 9 in. Fl. violet
 purple.

****A. orientale**, MILL. Caucasus.
 Pl., 1905. Hardy. Ht. 2 to 2½ ft.
 Fl. deep purple; July 30 to
 Aug. 24.

A. pyrenaicum, L. = A. Lycoctonum pyrenaicum.

ACONITUM—Con.

A. reclinatum, A. GRAY. North Amer.
Pl., 1902. Hardy. Ht. 4 to 4½ ft.
Fl. pale greenish yellow; June
26 to Aug. 8.

A. stœrkianum, Reichb. = *A. Cammarum stœrkianum*.

*****A. uncinatum**, L. Wild Monk's-hood.
North America.

Syn. A. volubile, Muhl.

Pl., 1895. Hardy. Ht. 5 to 6 ft.
Fl. violet; July 26 to Sept. 24.

A. volubile, Muhl. = *A. uncinatum*, L.

ACORUS, L. SWEET FLAG.

(*Araceæ.*)

A. Calamus, L. Myrtle Grass. North-
ern Hemisphere.

Syn. A. spurius, Schott.

Pl., 1897. Ht. 2½ to 3 ft.

A. Calamus variegatus.

Pl., 1895. Hardy. Ht. 1½ to 2 ft.

A. gramineus, ART. Japan.

Pl., 1897. Hardy.

Acorus spurius, Schott. = *A. Calamus*.

A. gramineus variegatus.

Pl., 1898. Hardy. Ht. 2½ ft.

A. japonicus fol. var. = *A. gramineus variegatus*.

ACTÆA, L. BANE-BERRY, HERB CHRISTOPHER.

(*Ranunculaceæ.*)

A. alba, MILL. White Bane-berry.

North America.

Pl., 1895. Hardy. Ht. 1 ft. to 1
ft. 8 in. Fl. white; May 23 to
June 9.

A. japonica, Thunb. = *Cimicifuga japonica*.

ACTINOMERIS, NUTT.

(*Compositæ.*)

A. helianthoides, Nutt. = *Verbesima helianthoides*.

A. squarrosa, NUTT. North-western
America.

Pl., 1898. Hardy. Ht. 7 to 8 ft.
Fl. yellow; Sept. 4 to Oct. 14.

ADENOPHORA, FISCH. GLAND BELL-FLOWER.

(*Campanulaceæ.*)

A. denticulata, FISCH.

Pl., 1908.

A. liliifolia, BESS. Europe, &c.

Pl., 1895. Tender.

*****A. polymorpha stricta.**

Pl., 1904. Ht. 4 ft. Fl. bluish
purple; Aug. 12 to Oct. 7.

*****A. Potanini**, BATALIN. Turkestan.

Pl., 1901. Hardy. Ht. 2 to 3½ ft.

Fl. pale bluish violet suffused
with white; July 20 to Sept. 21.

A. verticillata, FISCH. Dahurica,
Japan.

Pl., 1895. Hardy. Ht. 4 to 4½ ft.

Fl. pale blue; July 12 to Aug. 18.

ADONIS, DILL.

(*Ranunculaceæ.*)

A. davurica, Reichb. = *A. vernalis*.

****A. hybrida**, HORT.

Pl., 1901. Hardy. Ht. 1 ft. Fl.
yellow; May.

A. pyrenaica, DC. Pyrenees.

Pl., 1901. Hardy. Ht. 1 to 1½ ft.

Fl. yellow; May 9 to May 21.

*****A. vernalis**, L. Ox-eye. Europe, etc.

Syn. A. davurica, Reichb.

Pl., 1895. Hardy. Ht. 1 ft. 4 in.

Fl. golden yellow; May 1 to
May 26.

A. Walziana, SIMK. Eastern Europe.

Pl., 1907.

A. wolgensis, STEV. Europe; Northern
Asia.

Pl., 1907.

ZEGOPODIUM, KNAUT. GOUT-WEED.

(*Umbelliferaæ.*)

Æ. Podograria variegatum.

Pl., 1905. Hardy. Ht. 1 ft. Fol.
variegated.

ÆTHIONEMA, R.BR.

(Cruciferæ.)

Æ. Buxbaumii, DC.=*Æ. cappadocium*.***Æ. cordifolium*, DC. Lebanon Candy-tuft. Orient.

Pl., 1896. Hardy. Ht. 1 ft. Fl. rosy pink; May 24 to July 30.

Æ. græcum, BOISS & SPRUN. Greece. Pl., 1907.****Æ. grandiflorum*, BOISS. & HOHEN. Persia.

Pl., 1901. Hardy. Ht. 1 ft. Fl. rosy pink; May 28 to June 23.

Æ. iberideum, BOISS. Orient. Pl., 1905.**Æ. persicum*, HORT.

Pl., 1896. Hardy. Ht. 7 to 10 in. Fl. pink; May 26 to July 16.

AGRIMONIA, L. AGRIMONY.

(Rosaceæ.)

A. Eupatoria, L. Cockle Burr. Northern Hemisphere.*Syn. A. pilosa*, Ledeb.

Pl., 1895. Hardy. Ht. 3½ ft. Fl. yellow; June 29 to July 30.

A. odorata, MILL.. Sweet-scented Agrimony. Europe.

Pl., 1901. Hardy. Ht. 3½ ft. Fl. dull yellow; June 28 to Aug. 18.

A. pilosa, Ledeb = *A. Eupatoria*.**AJUGA, L. BUGLE.**

(Labiata.)

**A. genevensis*, L. Europe; Orient.*Syn. A. pyramidalis*, Bieb.

Pl., 1895. Hardy. Ht. 1 ft. Fl. deep blue; May 25 to Aug. 18.

A. pyramidalis, Bieb. = *A. genevensis*, L.*A. reptans atropurpurea*.

Pl., 1898. Hardy. Ht. 1 to 1½ ft. Fl. deep blue; May 28 to June 27.

A. reptans foliis variegatis.

Pl., 1905. Hardy. Ht. 4 in. Fl. deep blue; June 5 to June 16.

A. reptans metallica crispa.

Pl., 1905. Tender.

ALCHEMILLA, L. LADY'S MANTLE.

(Rosaceæ.)

A. vulgaris, L. Great Sanicle. Northern Hemisphere.

Pl., 1896. Hardy. Ht. 1 ft. Fl. greenish yellow; June 4 to June 28.

ALETRIS, L.

(Hæmodoraceæ.)

A. japonica, LAMB. Japan.

Pl. 1895. Hardy. Ht. 2 to 3 ft. Fl. white; Sept. 8 to Sept. 13.

ALLIUM, L. ONION, &C.

(Liliacæ.)

A. acuminatum, HOOK. North Amer.

Pl., 1896. Hardy. Ht. 2½ ft. Fl. white shaded with pale lilac; July 4 to Aug. 1.

A. angulosum, L. Siberia, &c.

Pl., 1901. Hardy. Ht. 2 ft. Fl. pale purplish lilac; July 16 to Aug. 8.

**A. cæruleum*, PALL. Siberia.

Pl. 1896. Hardy. Ht. 2 ft. Fl. deep blue; June 18 to July 16.

A. cernuum, ROTH. North America.

Pl. 1894. Hardy. Ht. 2½ ft. Fl. purplish lilac; July 2 to Aug. 11.

A. Fetisowi, REGEL. Turkestan.

Pl., 1895. Hardy. Ht. 1 ft 3 in. Fl. purplish pink; May 26 to July 15.

**A. flavum*, L. Europe, &c.

Pl., 1897. Hardy. Ht. 1½ ft. Fl. yellow; July 15 to Aug. 18.

A. flavum pumilum roseum.

Pl., 1897. Hardy. Ht. 1½ ft. Fl. rosy purple; Aug. 7 to Aug. 29.

A. Geyeri, S. WATS. California.

Pl., 1897. Hardy. Ht. 1 ft 3 in. Fl. pink; June 20 to July 9.

A. hymenorrhizum, LEDEB. Persia, &c.

Pl., 1898. Hardy. Ht. 2½ ft. Fl. rosy purple; June 28 to July 19.

A. karataviense, REGEL. Turkestan.

Pl., 1897. Tender.

ALLIUM—*Con.*

- **A. Moly**, L. Lily Leek. Europe.
Pl., 1897. Hardy. Ht. 3 ft. Fl.
yellow; June 13 to July 2.
- A. nigrum**, L. Europe, &c.
Pl., 1897. Hardy. Ht. 1 ft. 9 in.
Fl. dull white with black centre;
June 18 to July 9.
- A. odorum**, L. Siberia.
Pl., 1895. Hardy. Ht. 2 ft. Fl.
white with lilac brown lines;
June 17 to July 27.
- *A. ostrowskianum**, REGEL. Turkestan.
Pl., 1897. Hardy. Ht. 1 ft. Fl.
rosy pink; June 4 to July 6.
- A. Schœnoprasum sibiricum**.
Syn. A. sibiricum, L.
Pl. 1901. Hardy. Ht. 2½ to 3 ft.
Fl. white; June 8 to July 21.
- A. Schuberti**, ZUCC. Orient.
Pl., 1900. Hardy. Ht. 1 ft. Fl.
reddish purple; May 26 to June
24.
- A. sibiricum, L. = A. Schœnoprasum
sibiricum.*
- A. senescens**, L. Europe; Siberia.
Pl., 1901. Hardy. Ht. 2½ ft. Fl.
rosy purple; July 4 to Aug. 15.
- **A. sphærocephalum**, L. Europe;
Orient.
Pl., 1897. Hardy. Ht. 3 ft. Fl.
reddish purple; July 12 to Aug.
25.
- A. stellerianum**, WILLD. Siberia.
Pl., 1895. Hardy. Ht. 2 ft. Fl.
white; June 14 to July 10.
- A. stipitatum**, REGEL. Central Asia.
Pl., 1897. Hardy. Ht. 1½ ft. Fl.
purplish pink; May 31 to July 20.
- A. urceolatum**, REGEL. Turkestan.
Pl., 1896. Hardy. Ht. 1 ft. 9 in.
Fl. dull white with green stripe;
June 23 to July 14.
- A. urceolatum atrocæruleum**.
Pl., 1897. Hardy. Ht. 1½ ft. Fl.
blue; June 24 to July 16.

ALSINE. See **ARENARIA**.

A. verna, Fenzl. = Arenaria verna.

ALTHÆA, L. HOLLYHOCK.

(*Malvaceæ.*)

- A. armeniaca**, TENORE. Orient.
Pl., 1901. Hardy. Ht. 7 ft. Fl.
pink; July 20 to Oct. 17.
- A. cannabina narbonensis**.
Pl., 1901. Hardy. Ht. 7½ ft. Fl.
white and purplish pink; July
24 to Oct. 17.
- A. officinalis**, L. Marsh Mallow. Eu-
rope.
Pl., 1896. Hardy. Ht. 5 to 6 ft.
Fl. purplish pink; July 2 to
Aug. 29.
- ***A. rosea**, CAV. Common Hollyhock.
Orient.
Pl., 1895. Hardy. Ht. 6 to 8 ft.
Fl. white to almost black; July
to Sept.
- A. taurinensis**, DC. North Italy, &c.
Pl., 1901. Hardy. Ht. 7 ft. Fl.
purplish pink; July 24 to Oct. 1.
- ALYSSUM**, L. MADWORT.
(*Cruciferae.*)
- A. argenteum**, VITM. Europe, &c.
Pl., 1902. Hardy. Ht. 1 ft. Fl.
yellow; June 20 to July 23.
- A. calycinum**, L. Europe, &c.
Pl., 1901. Tender.
- A. incanum**, L. Europe; Siberia.
Pl., 1905. Tender.
- A. minimum**, WILLD. Europe; Hima-
layas.
Pl., 1903. Tender.
- A. saxatile**, L. Rock Madwort, Golden-
tuft. Europe.
Pl., 1899. Hardy. Ht. 1 ft. Fl.
yellow; May.
- A. saxatile compacta aurea**.
Pl., 1902. Tender.
- A. saxatile foliis variegatis**.
Pl., 1905. Tender.
- A. saxatile sulphureum**.
Pl., 1905. Tender.

ALYSSUM—Con.

A. sinuatum, L. Europe; Asia Minor.
Pl., 1905. Tender.

A. Wierzbickii, HEUFFL. Eastern
Europe.
Pl., 1903. Hardy. Ht. 1½ ft. Fl.
deep yellow; June 24 to Aug. 8.

AMSONIA, WALT.

(*Apocynaceæ.*)

A. latifolia, Michx. = *A. Tabernæmontana*, Walt.

***A. Tabernæmontana**, WALT. North
America.

Syn. A. latifolia, Michx.
Pl., 1895. Hardy. Ht. 4 to 4½ ft.
Fl. slate blue; May 19 to July 9.

***A. Tabernæmontana salicifolia**.
Pl., 1895. Hardy. Ht. 4 ft. Fl.
pale slate blue; May 29 to July
25.

ANCHUSA, L. ALKANET.

(*Boraginaceæ.*)

****A. Barrelieri**, VITM. Europe; Asia
Minor.

Pl., 1900. Hardy. Ht. 2 to 2½ ft.
Fl. deep blue; May 31 to July 18.

A. italica, RETZ. Mediterranean region.
Pl., 1896. Tender.

A. italica grandiflora.
Pl., 1908.

A. leptophylla, Koch = *A. officinalis*.

A. officinalis, L. Common Alkanet.
Europe.

Syn. A. leptophylla, Koch.
Pl., 1907.

A. osmanica.
Pl., 1907.

ANEMONE, L. WINDFLOWER.

(*Ranunculaceæ.*)

A. alpina, L. Europe.
Pl., 1895. Hardy. Ht. 18 in. Fl.
dull yellow inside, purple out-
side; April 24 to May 23.

***A. apennina**, L. Europe.
Pl., 1900. Hardy. Ht. 6 in. Fl.
caerulean blue; May.

ANEMONE—Con.

A. coronaria, L. Poppy-flowered Ane-
mone. Mediterranean region.
Pl., 1898. Tender.

Anemone cylindrica, GRAY. North
America.

Pl., 1895. Hardy. Ht. 2 to 2½ ft.
Fl. greenish white; June 3 to
July 4.

A. decapetata, L. North America.
Pl., 1907.

A. Halleri, ALL. Europe.
Pl., 1901. Tender.

*****A. Hepatica**, L. Common Hepatica.
Northern Hemisphere.

Pl., 1896. Hardy. Ht. 6 to 7 in.
Fl. in various colours; April 13
to May 10.

A. japonica Colerette.
Pl., 1908.

A. japonica Coupe d'Argent.
Pl., 1908.

A. japonica elegans.
Pl., 1908.

*****A. japonica elegantissima**.
Pl., 1905. Hardy. Ht. 2 to 2½ ft.
Fl. rose flushed with white, semi-
double; Sept. 23 to frost.

*****A. japonica Lady Ardilaun**.
Pl., 1903. Hardy. Ht. 2½ to 3 ft.
Fl. white; Sept. 5 to frost.

*****A. japonica Mont Rose**.
Pl., 1906. Hardy. Ht. 2½ ft. Fl.
rose flushed with white; late Sept.
to frost.

*****A. japonica Queen Charlotte**.
Pl., 1906. Hardy. Ht. 2½ ft. Fl.
rose flushed with white, semi-
double; late Sept. to frost.

*****A. japonica Whirlwind**.
Pl., 1903. Hardy. Ht. 2½ to 3 ft.
Fl. white, semi-double; Sept. 1
to frost.

A. multifida, Poir. North America.
Pl., 1895. Hardy. Ht. 2½ ft. Fl.
whitish-yellow and dull red; June
12 to July 5.

ANEMONE—Con.

- A. narcissiflora**, L. Northern Hemisphere. Pl., 1907.
- *****A. patens nuttalliana**. American Pasque Flower. Pl., 1902. Hardy. Ht. 1 ft. Fl. bluish purple, mauve, or whitish; April 25 to May 29.
- A. pratensis**, L. Europe. Pl., 1902. Hardy. Ht. 1 ft. Fl. dark purple; April 28 to May 19.
- A. pratensis montana**. Pl., 1895. Hardy. Ht. 18 in. Fl. dark purple; May 5 to June 3.
- A. Pulsatilla**, L. Pasque Flower. Europe. Pl., 1901. Hardy. Ht. 9 in. Fl. blue to reddish purple.
- A. rivularis**, BUCH.-HAM. Himalayas. Pl., 1903. Hardy. Ht. 2½ ft. Fl. white; June 30 to Aug. 21.
- *****A. sylvestris**, L. Snowdrop Windflower. Europe, &c. Pl., 1902. Hardy. Ht. 6 to 12 in. Fl. white; May 19 to June 10.
- ****A. sylvestris flore pleno**. Pl., 1903. Hardy. Ht. 6 to 12 in. Fl. double, white; late May to early June.
- A. sylvestris baicaliense**. Pl., 1907.
- A. vitifolia**, BUCH.-HAM. Himalayas. Pl., 1907.

ANGELICA, L.

(Umbelliferae.)

- A. Curtisii**, BUCKL. North America. Pl., 1895. Hardy. Ht. 3 to 3½ ft. Fl. white; July 6 to Aug. 13.

ANTHEMIS, L. CHAMOMILE.

(Compositae.)

- A. Aizoon**, Griseb = *Achillea ageratifolia*, Benth. & Hook. f.

ANTHEMIS—Con.

- A. carpathica**, WILLD. Europe; Asia Minor. Pl., 1902. Hardy. Ht. 1½ to 2 ft. Fl. white; June 23 to Oct. 2.
- A. nobilis**, L. Common Chamomile. Europe. Pl., 1896. Hardy. Ht. 1 ft. Fl. white with yellow disk; June to Sept.
- A. tinctoria**, L. Ox-eye Chamomile. Europe. Pl., 1895. Hardy. Ht. 1½ to 2 ft. Fl. bright yellow; June 15 to Sept.
- ****A. tinctoria Kelwayi**. Pl., 1895. Hardy. Ht. 1½ to 2 ft. Fl. bright yellow; June 27 to Sept. 24.
- ****A. Triumphetti**, DC. Europe. Pl., 1896. Hardy. Ht. 2 to 2½ ft. Fl. sulphur yellow; June 21 to Sept. 24.

ANTHERICUM, L.

(Liliaceae.)

- A. graminifolium** = *A. ramosum*.
- A. Liliago giganteum** = *L. Liliago major*.
- ***A. Liliago**, L. St. Bernard's Lily. Europe; North Africa. Pl., 1905. Hardy. Ht. 2 ft. Fl. white; June 25 to July 11.
- A. Liliastrum**, L. = *Paradisea Liliastrum*.
- A. plumosum**, Ruiz & Pav. = *Bottionea thysanthoides*. Pl., 1907.
- ****A. ramosum**, L. Europe. *Syn. A. graminifolium*. Pl., 1901. Hardy. Ht. 3 ft. Fl. white; June 13 to Aug. 10.
- A. ramosum Renarni**. Pl. 1905. Hardy. Ht. 3 to 4 ft. Fl. white; July 6 to July 30.

AQUILEGIA, L. COLUMBINE.

(Ranunculaceae.)

The columbines are lovely, graceful flowers, and being nearly all natives of cold climates thrive well in Canada. Owing to the ease with which they hybridize there

are many improved varieties. Because they hybridize so readily, however, it is very difficult to get species true to name, seed from botanic gardens, even, being often impure. Some of the best species must be treated as biennials to get good results, *A. glandulosa* and *A. Stuarti* especially requiring this treatment, but as columbines grow readily from seed it is easy to propagate them. The long spurred varieties of columbine are very desirable, and may be obtained in many colours by growing seedlings. These varieties have come for the most part from hybrids between *A. cœrulea* and other species.

- A. alpina**, L. Europe, &c.
Pl., 1896. Tender.
- *A. arctica**, HORT.
Pl., 1905. Hardy. Ht. 3 ft. Fl. deep purple; June 5 to July 3.
- A. atropurpurea*, Miq. = *A. buergeriana*.
A. aurea, Janka. = *C. chrysantha*.
- A. buergeriana**, SIEB. & ZUCC. Japan.
Syn. A. atropurpurea, Miq.
Pl., 1901. Hardy. Fl. purple and white; June 3 to July 1.
- ***A. cœrulea**, JAMES. North-western America.
Pl., 1896. Hardy. Ht. 1 to 1½ ft. Fl. violet and white; May 25 to June.
- A. californica hybrida**.
Pl., 1896. Tender.
- A. californica hybrida alba**.
Pl., 1896. Tender.
- **A. canadensis**, L. Common Wild Columbine. North America.
Pl., 1895. Hardy. Ht. 1 to 2 ft. Fl. scarlet and yellow; May to June.
- A. canadensis nana**.
Pl., 1896. Tender.
- A. caryophylloides**, HORT.
Pl., 1907.
A. caucasia, Ledeb. = *A. olympica*.
- ***A. chrysantha**, GRAY. New Mexico.
Syn. A. aurea, Janka.
Pl., 1901. Hardy. Ht. 2½ to 3 ft. Fl. yellow; June 18 to July 21.
- **A. chrysantha flore pleno**.
Pl., 1901. Hardy. Ht. 2½ to 3 ft. Fl. yellow, semi-double; June 7 to July 12.
- A. chrysantha grandiflora alba**.
Pl., 1896.
- **A. chrysantha nana**.
Pl., 1901. Hardy. Ht. 2 ft. Fl. golden yellow; June 16 to July 16.
- A. dichroa**, FREYN. Europe.
Pl., 1901. Hardy. Fl. dark purple and white; June 2 to July 7.
- *A. einseliana thalictrifolia**.
Pl., 1901. Hardy. Ht. 1½ ft. Fl. bluish purple; June 10 to July 11.
- *A. flabellata**, SIEB. & ZUCC. Japan.
Pl., 1901. Hardy. Ht. 12 to 15 in. Fl. white tinged with violet rose; May 18 to June 18.
- ***A. flabellata nana alba**.
Pl., 1901. Hardy. Ht. 12 to 15 in. Fl. white with traces of lavender; May 19 to June 21.
- *A. flavescens rhodosepala**.
Pl., 1901. Hardy. Ht. 2 ft. Fl. white and yellow tinged with lilac on outside; June 7 to July 4.
- *A. formosa**, FISCH. Western North America.
Pl., 1903. Hardy. Ht. 2 ft. Fl. red with yellow centre; June 3 to July 17.
- A. fragrans**, BENTH. Himalayan regions.
Pl., 1907.
- ***A. glandulosa**, FISCH. Siberia.
Syn. A. jucunda, Fisch. & Lallem.
Pl., 1901. Hardy. Ht. 12 to 15 in. Fl. sepals bluish lavender, petals white; May 15 to June 1. A form of this grows 4 ft. high and has bloomed from May 28 to July 17.
- A. glandulosa longicalcarata**.
Pl., 1901. Hardy. Ht. 2½ ft. Fl. bluish purple; June 5 to July 9.

AQUILEGIA—*Con.*

- A. glandulosa intermedia.**
Pl., 1907.
- A. Helenæ.**
Pl., 1907.
- A. hybrida lucida flore pleno.**
Pl., 1896. Hardy.
- A. Jæschkani,** HORT. Garden Hybrid.
Pl., 1896. Hardy.
- A. jucunda,** Fisch. & Lallem. = *A. glandulosa.*
- **A. Kitaibelii,** SCHOTT. Asia Minor.
Syn. A. viscosa, Gouan.
Pl., 1901. Hardy. Ht. 1½ ft. Fl. dark purple; May 23 to June 30.
- **A. lapponica.**
Pl., 1901. Hardy. Ht. 2½ ft. Fl. purple; May 28 to July 2.
- A. nigrescens,** Baumg. = *A. vulgaris nigrescens.*
- A. nivea,** Baumg. = *A. vulgaris nivea.*
- **A. olympica,** BOISS. Orient.
Syn. A. caucasia, Ledeb.
Pl., 1901. Hardy. Ht. 3 ft. Fl. bluish purple; May 31 to July 6.
- A. olympica nana.**
Pl., 1907.
- *A. Ottonis,** ORPH. & BOISS.
Pl., 1905. Hardy. Ht. 1½ ft. Fl. dark purple; June 14 to July 2.
- ***A. oxysepala,** TRAUTV. & MEY. Russian Columbine. Northern Asia.
Pl., 1901. Hardy. Ht. 12 to 15 in. Fl. deep purplish blue with blue and yellow centre; May 8 to June 17.
- **A. Skinneri,** HOOK. Mexico.
Pl., 1896. Hardy.
- A. sibirica,** LAM. Siberia.
Syn. A. spectabilis, Lem.
Pl., 1907.

AQUILEGIA—*Con.*

- A. Skinneri hybrida flore pleno.**
Pl., 1896. Hardy.
- A. spectabilis,** Lem. = *A. sibirica.*
- A. stenopetala,** BOBBAS. Europe.
Pl., 1902. Hardy. Fl. purple; May 21 to June 15.
- A. stellata carminea plena.**
Pl., 1896. Hardy.
- ***A. Stuarti,** HORT. Garden Hybrid.
Pl., 1896. Hardy. Ht. 1 ft. Fl. purplish blue with white centre; mid to late May.
- **A. thalictrifolia,** SCHOTT. & KOTSCHY. Europe.
Pl., 1901. Hardy. Ht. 2 ft. Fl. bluish purple; June 10 to July 11.
- A. viridiflora,** PALL. Siberia.
Pl., 1896. Hardy.
- A. viscosa,** Gouan = *A. Kitaibelii.*
- A. vervænana atrocærulea.**
Pl., 1896. Hardy.
- A. vervænana foliis variegatis.**
Pl., 1896. Hardy.
- A. vulgaris alba.**
Pl., 1896. Hardy.
- A. vulgaris alba plena.**
Pl., 1896. Hardy.
- A. vulgaris atrata.**
Pl., 1901. Hardy. Ht. 2 ft. Fl. dark purple; May 31 to July 12.
- A. vulgaris atosanguinea.**
Pl., 1896, Hardy.
- A. vulgaris kermesiana plena.**
Pl., 1896, Hardy.
- ***A. vulgaris nivea.**
Syn. A. nivea, Baumg.
Pl., 1901. Hardy. Ht. 3 ft. Fl. white, semi-double. June 3 to July 7.

ARABIS, L. ROCK CRESS.

(Cruciferae.)

- A. albidâ,** STEV. Mediterranean region, &c.
Pl., 1897. Tender.
- A. Allionii,** DC. Northern Italy.
Pl., 1898. Tender.

ARABIS—*Con.*

- *A. alpina,** L. White Alyssum. Europe; North America.
Pl., 1894. Hardy. Ht. 6 in. Fl. white; May.
- A. androsacea,** FENZEL. Asia Minor.
Pl., 1895. Hardy.

ARABIS—Con.

- A. muralis**, BERTOL. Europe.
Pl., 1902. Tender.
- A. pumila**, JACQ. Alps, &c.
Pl., 1896. Hardy. Ht. 6 to 12 in.
Fl. white; May 19 to June 6.

ARALIA, TOURN. WILD SARSAPARILLA.
(*Araliaceæ.*)

- A. nudicaulis**, L. Wild Sarsaparilla.
North America.
Pl., 1895. Hardy. Ht. 2 to 3 ft.
Fl. greenish; May.
- A. quinquefolia**, DECNE. & PLANCH.
Ginseng.
Pl., 1895. Hardy. Ht. 8 to 15 in.
Fl. greenish yellow; July.
- ***A. racemosa**, L. American Sweet
Spikenard. North America.
Pl., 1895. Hardy. Ht. 3 to 6 ft.
Fl. greenish white; Aug.

ARENARIA, RUPP. SANDWORT.
(*Caryophyllaceæ.*)

- A. cæspitosa**, Ehrh. = *A. verna cæspitosa*.
- A. foliosa**, ROYLE. Himalayas.
Pl., 1905. Hardy.
- A. graminifolia**, SCHRAD. Eastern Europe; Northern Asia.
Pl., 1898. Hardy. Ht. 1½ ft. Fl. white; June 6 to July 7.
- A. pinifolia**, BIEB. Caucasus.
Syn. Alsine pinifolia, Fenzl.
- A. purpurascens**, RAYMOND. Pyrenees.
Pl., 1895. Hardy. Ht. 4 in. Fl. light lilac; May 26 to June 18.
- A. verna**, L. Europe; North America.
Pl., 1896. Hardy. Ht. 3 in. Fl. white; May.
- A. verna cæspitosa.**
Syn. A. cæspitosa, Ehrh.
Pl., 1898. Hardy. Ht. 3 in. Fl. white; May.

ARMERIA, L. THRIFT, SEA PINK.
(*Plumbaginaceæ.*)

- A. cephalotes rosea.**
Pl., 1898. Tender.

ARMERIA—Con.

- A. elongata**, HOFFM.
Syn. A. vulgaris, Willd.
Pl., 1901. Hardy. Ht. 1½ ft. Fl. pink; June 6 to Sept. 17.

- ***A. maritima lauchæana.**
Pl., 1896. Hardy.

- A. plantaginea**, WILLD. Europe.
Pl., 1895. Hardy.
- A. vulgaris**, Willd. = *A. elongata.*

ARNEBIA. See MACROTOMIA.

- A. echioides**, DC. = *Macrotomia echioides.*

ARNICA, RUPP.

(Compositæ.)

- A. Chamissonis**, LESS. North America.
Pl., 1894. Hardy. Ht. 2 to 3 ft.
Fl. yellow; June 29 to Aug. 27.

ARTEMISIA, L. WORMWOOD.

(Compositæ.)

- A. Absinthum**, L. Common Wormwood. Europe.
Pl., 1896. Hardy. Ht. 4½ ft. Fl. yellow; Aug. 1 to Aug. 20.
- A. norvegica**, FRIES. Norway.
Pl., 1896. Hardy. Ht. 3½ to 4½ ft.
F. yellow; Aug. 4 to Aug. 22.
- A. rupestris**, L. Europe; Siberia.
Pl., 1896. Hardy. Ht. 6 to 10 in.
Fl. greenish yellow; Aug. 8 to Aug. 29.
- A. selengensis**, Turcz. = *A. vulgaris.*
- A. stelleriana**, BESS. Old Woman. North America.
Pl., 1895. Hardy. Ht. 2 to 2½ ft.
Fl. yellow; June 30 to July 16.
- A. vulgaris**, L. Mugwort. Northern temperate regions.
Pl., 1896. Hardy. Ht. 6½ to 7 ft.
Fl. yellow; July 27 to Aug. 13.

ARUM, L.

(Araceæ.)

- A. palæstinum**, BOISS. Black Calla, Solomon Lily. Orient.
Pl., 1898. Tender.



1. RUSSIAN COLUMBINE—*Aquilegia oxysepala*.
3. LARKSPUR—*Delphinium maackianum*.

2. JAPANESE ANEMONE—*Anemone japonica*.
4. ERECT CLEMATIS—*Clematis recta*.

ASARUM, L.*(Aristolochiaceæ.)*

A. canadense, L. Wild Ginger, Canadian Snake-root. North Amer. Pl., 1894. Hardy. Ht. 8 in. Fl. brownish purple; April 23 to May 31,

A. europæum, L. Asarabacca. Europe, &c. Pl., 1898. Tender.

ASCLEPIAS, L. SWALLOW WORT, MILK WEED.*(Asclepiadaceæ.)*

A. Fremontii, Torr. California. Pl., 1906. Hardy. Ht. 3½ ft. Fl. pinkish purple; July 16 to July 30.

***A. incarnata, L.** Swamp Milk-weed North America. Pl., 1896. Hardy. Ht. 3 ft. Fl. rosy purple; June 30 to Aug. 18.

A. incarnata pulchra. Pl., 1897. Hardy. Ht. 3 ft. Fl. rosy purple; Aug. 10 to Sept. 12.

A. phytolaccoides, Lyon. North Am. Pl., 1895. Hardy.

****A. tuberosa, L.** Butterfly-weed. North America. Pl., 1894. Hardy. Ht. 2 ft. Fl. bright orange; July 3 to Aug. 4.

A. verticillata, L. North America. Pl., 1907.

ASPARAGUS, TOURN.*(Liliaceæ.)*

A. Broussonettii, Jacq. Northern Afr. Pl., 1907.

ASPARAGUS—Con.

A. officinalis, L. Asparagus. Europe, &c. Pl., 1898. Hardy.

ASPERULA, L.*(Rubiaceæ.)*

A. carpathica, Hort. = *A. suberosa.*

A. ciliata, Rochel. Eastern Europe. Pl., 1907.

A. Gusonii, Boiss. Sicily. *Syn. A. nitida.* Pl., 1908.

*****A. hexaphylla, All.** Italy and Hungary.

Pl., 1896. Hardy. Ht. 1 to 3 ft. Fl. white; June to Aug.

A. nitida, Guss. = *A. Gusonii.*

****A. odorata, L.** Woodruff. Europe, &c. Pl., 1905. Hardy. Ht. 1 ft. Fl. white; May 23 to July 8.

A. suberosa, Sibth. & Sm. Greece. *Syn. A. carpathica, Hort.* Pl., 1908.

A. taurina, L. Europe. Pl., 1908.

A. tinctoria, L. Dyer's Woodruff. Europe. Pl., 1901. Hardy. Ht. 1 to 1½ ft. Fl. white; June 10 to July 27.

ASPHODELINE, REICHB.*(Liliaceæ.)*

***A. lutea, Reichb.** Mediterranean region. Pl., 1896. Hardy. Ht. 3 ft. Fl. yellow; June.

ASTER, TOURN. STARWORT, MICHAELMAS DAISY.*(Compositæ.)*

There are so many species of asters growing wild in Canada, and they are so common that they have not yet become popular in this country as cultivated plants, but when grown in a mass they are very effective, and on account of their lateness in blooming make a show at a time when there are few perennials in flower. In England the Michaelmas daisy is very popular, and a large number of new varieties have been originated there, some of which are of great merit and are very ornamental. The two European species, *A. alpinus* and *A. Amellus*, and their varieties are very distinct. They have larger flowers than the American asters and are lower growing than most kinds. *A. alpinus* is not, however, very permanent, and must be renewed from time to time. Most asters increase very rapidly, and they are usually propagated by division

or from suckers, although they grow readily from seed as well, but the named varieties do not come true from seed. Unfortunately a large number of the named varieties suffer from mildew in this country, sometimes so badly that they do not bloom well. It has been noticed that this disease is not so troublesome when the plants have plenty of light and air.

- ***A. acris**, L. South Europe, &c.
Syn. A. punctatus, Waldst. & Kit.
 Pl., 1901. Hardy. Ht. 2 ft. Fl.
 lilac purple; Aug. 29 to Oct. 27.
- A. acris dracunculoides* = *A. dracuncu-*
loides.
- A. ascendens*, Torr. & Gray = *A. Fre-*
monti.
- A. adulterinus*, Willd. = *A. Novi Belgii*.
- A. æstivus*, Ait. = *A. longifolius*.
- ****A. alpinus**, L. Blue Mountain Daisy.
 Europe; North Asia.
 Pl., 1896. Hardy. Ht. 6 to 9 in.
 Fl. bluish purple; June.
- A. alpinus baldensis**.
 Pl., 1907.
- A. alpinus himalaicus**.
 Pl., 1908.
- A. alpinus speciosus**.
 Pl., 1896. Half hardy.
- *****A. alpinus superbus**.
 Pl., 1905. Hardy. Ht. 8 to 12 in.
 Fl. deep lavender with a lilac
 tinge; June 16 to July 6.
- *****A. Amellus amelloides**.
 Pl., 1901. Hardy. Ht. 2 ft. Fl.
 bright purple; Aug. 20 to Oct. 20.
- *****A. Amellus bessarabicus**.
 Pl., 1894. Hardy. Ht. 1½ to 2 ft.
 Fl. violet purple; Sept. 12 to
 Oct. 24.
- A. Amellus Distinction**.
 Pl., 1908.
- A. Amellus fastigiatus**.
 Pl., 1901. Hardy. Ht. 3½ ft. Fl.
 pale lilac changing to white;
 June 30 to Sept. 11.
- A. Amellus Little Gem**.
 Pl., 1908.
- *****A. Amellus major**.
 Pl., 1901. Hardy. Ht. 2 ft. Fl.
 bluish purple; Aug. 22 to Oct. 8.
- ****A. Amellus roseus**.
 Pl., 1903. Hardy. Ht. 1 ft. 10 in.
 Fl., rosy purple; Aug. 22 to
 Oct. 2.
- ****A. Amellus Standard**.
 Pl., 1905. Hardy. Ht. 2½ to 3½ ft.
 Fl. violet purple; Sept. 3 to
 Oct. 20.
- ****A. amethystinus**, Nutt. North Amer.
 Pl., 1903. Hardy. Ht. 4 to 4½ ft.
 Fl. lavender; Sept. 26 to Oct. 26.
- A. Chapmani**, Torr. & Gray. North
 America.
 Pl., 1903. Hardy. Ht. 5½ ft. Fl.
 lavender; Sept. 25 to Nov. 3.
- *****A. Coombe Fishacre**.
 Pl., 1901. Hardy. Ht. 4½ ft. Fl.
 pale lilac with dull purplish red
 centre; Sept. 22 to Oct. 27.
- A. commutatus**, A. Gray. North-west-
 ern America.
 Pl., 1903. Hardy. Ht. 2½ to 3½ ft.
 F. white to pale lilac, yellow
 centre; Sept. 15 to Oct. 26.
- ***A. cordifolius Albulus**.
 Pl., 1901. Hardy. Ht. 4 ft. Fl.
 white with faint lilac tinge; Sept.
 15 to Oct. 10.
- ****A. cordifolius Daisy**.
 Pl., 1901. Hardy. Ht. 4 ft. Fl.
 pale lilac with purplish red cen-
 tre; Sept. 24 to Oct. 27.
- A. cordifolius Diana**.
 Pl., 1901. Hardy. Ht. 5½ ft. Fl.
 rosy lilac; Sept. 24 to Nov. 3.
- *****A. cordifolius major**.
 Pl., 1901. Hardy. Ht. 5 ft. Fl.
 very pale lavender, almost white;
 Sept. 17 to Oct. 20.
- ****A. cordifolius Photograph**.
 Pl., 1901. Hardy. Ht. 3½ to 4½ ft.
 Fl. pale lavender, purplish cen-
 tre; Sept. 28 to Oct. 27.

ASTER—*Con.*

- A. Cornuti**, MILL.
Pl., 1907.
- A. Curtisii**, TORR. & GRAY. North Am.
Pl., 1896. Hardy.
- A. decorus*, Desf. = *A. laevis decorus*.
- A. decorus elegantissima* = *A. laevis decorus elegantissima*.
- A. diffusus**, AIT. North America.
Syn. A. miser, Nutt.
Pl., 1908.
- **A. diffusus Darchi**.
Pl., 1901. Hardy. Ht. 1½ to 2½ ft.
Fl. white, purplish red centre;
Sept. 26 to Oct. 17.
- A. diffusus horizontalis**.
Pl., 1900. Hardy.
- A. diffusus horizontalis pyramidalis**.
Pl., 1896. Hardy.
- A. diffusus horizontalis hybridus grandiflorus**.
Pl., 1896. Hardy. H. 4½ ft. Fl.
pale lilac, almost white; Aug. 20
to Sept. 24.
- A. diffusus pendulus**.
Pl., 1905. Hardy. Ht. 4 to 4½ ft.
Fl. white; Oct. 8 to Oct. 19.
- *A. discolor**.
Pl., 1897. Hardy. Ht. 4 ft. Fl.
pale lilac, almost white; Sept.
17 to Oct. 27.
- **A. dracunculoides**, LAM. Eastern Eu-
rope; North Asia.
Syn. A. acris dracunculoides.
Pl., 1901. Hardy. Ht. 4½ to 5 ft.
Fl. violet purple; Sept. 5 to
Oct. 8.
- A. Drummondii**, LINDL. North Amer.
Pl., 1896. Hardy. Ht. 4 ft. Fl.
pale lilac, purplish centre; Sept.
22 to Oct. 20.
- A. dumosus**, L. North America.
Syn. A. fragilis, Lindl.
Pl., 1896. Hardy. Ht. 1½ ft. Fl.
pale lilac, almost white, purplish
red centre; Sept. 18 to Oct. 23.
- *A. ericoides**, L. North America.
Pl., 1895. Hardy. Ht. 3 to 3½ ft.
Fl. white; Sept. 17 to Oct. 14.

ASTER—*Con.*

- **A. ericoides Clio**.
Pl., 1901. Hardy. Ht. 4 ft. Fl.
white; Sept. 8 to Oct. 20.
- **A. fastigiatus**, FISCH. Siberia, &c.
Pl., 1905. Hardy. Ht. 4 to 4½ ft.
Fl. pale lavender; July 11 to
Sept. 24.
- A. floribundus**, NUTT. North Amer.
Pl., 1896. Hardy. Ht. 3½ ft. Fl.
pale lilac; Sept. 2 to Oct. 8.
- *A. foliaceus**, LINDL. North-western
America.
Pl., 1902. Hardy. Ht. 1½ ft. Fl.
lavender with yellow centre;
June 26 to Aug. 29.
A. fragilis, Lindl. = *A. dumosus*.
- *A. Fremonti**, A. GRAY. Rocky Moun-
tains.
Syn. A. ascendens, Torr. & Gray.
Pl., 1896. Hardy. Ht. 2 ft. Fl.
pale lilac; July 8 to Sept. 5.
- A. grandiflorus**, L. Christmas Daisy.
Virginia to Georgia.
Pl., 1905. Tender.
- A. hybridus horizontalis grandiflorus**.
Pl., 1896. Hardy. Ht. 4½ ft. Fl.
heliotrope; July 26 to Sept. 21.
- *A. hybridus noveanus**.
Pl., 1896. Hardy. Ht. 3 ft. Fl.
lavender; Sept. 1 to Oct. 3.
A. horizontalis pyramidalis = *A. diffu-
sus horizontalis pyramidalis*.
A. incisus, Fisch. = *Boltonia incisa*.
- A. japonicus**, LESS. Japan.
Pl., 1895. Hardy. Ht. 3½ ft. Fl.
pinkish lilac changing to nearly
white; July 26 to Oct. 8.
- A. laevigatus*, Hort. = *A. longifolius
formosus*.
- A. laevis**, L. North America.
Syn. A. politus, Nees.
Pl., 1907.
- ***A. laevis Apollo**.
Pl., 1901. Hardy. Ht. 4½ ft. Fl.
lavender; Sept. 2 to Oct. 1.
- ***A. laevis Arcturus**.
Pl., 1903. Hardy. Ht. 3 to 4 ft.
Fl. deep lavender and rosy
purple; Sept. 1 to Oct. 29.

ASTER—Con.

- ***A. lævis Calliope.**
Pl., 1901. Hardy. Ht. 3½ to 4 ft.
Fl. pale lilac; Sept. 22 to Oct. 27.
- *****A. lævis decorus.**
Syn. A. decorus, Desf.
Pl., 1901. Hardy. Ht. 2½ to 4½ ft
Fl. lavender blue; Sept. 12 to
Oct. 14.
- A. lævis Harvardi.**
Pl., 1905. Hardy. Ht. 3 ft. Fl.
lavender; Sept. 24 to Oct. 19.
- *****A. lævis polyphyllus.**
Pl., 1901. Hardy. Ht. 3½ ft. Fl
white, yellow centre; Sept. 2 to
Oct. 14.
- A. lævis Virgil.**
Pl., 1905. Hardy. Ht. 3½ ft. Fl
lavender blue; Sept. 17 to Oct
27.
- A. leucanthemus, RAFIN.** North Amer
Pl., 1896. Hardy. Fl. pale purplish
pink, almost white; July 18 to
Sept. 19.
- A. linariifolius, L.** North America.
Pl., 1908.
- A. lindleyanus, TORR. & GRAY.** North
America.
Pl., 1901. Hardy. Ht. 4 ft. Fl
lavender; Aug. 22 to Oct. 11.
- A. Linosyris, BERNH.** Goldilocks. Eu-
rope.
Pl., 1901. Hardy. Ht. 2 to 2½ ft
Fl. yellow; Sept. 5 to Oct. 20.
- A. longifolius, LAM.**
Syn. A. æstivus, Ait.
Pl., 1896. Hardy. Ht. 3½ to 4 ft
Fl. white, sometimes with lilac
tinge, yellow centre; Sept. 1 to
Oct. 3.
- ****A. longifolius formosus.**
Syn. A. lævigatus, Hort.
Pl., 1901. Hardy. Ht. 1½ to 2 ft.
Fl. deep lilac; Aug. 27 to Oct. 3.
- *****A. Maackii, REGEL.** Japan.
Pl., 1901. Hardy. Ht. 2½ to 3 ft.
Fl. lavender blue; Aug. 13 to
Oct. 8

ASTER—Con.

- A. macrophyllus, L.** North America.
Pl., 1896. Hardy. Ht. 4 ft. Fl.
pale lilac, almost white; July 21
to Sept. 26.
- A. Mad. Cacheux.**
Pl., 1901. Hardy. Ht. 6 to 12 in.
Fl. flesh colour; Sept. 25 to
Oct. 27.
- A. Milleri, FORBES.** Hab?
Pl., 1901. Hardy. Ht. 2½ ft. Fl.
pale lavender; Aug. 4 to Sept. 15.
A. miser, Nutt. = A. diffusus Ait.
- A. mongolicus, FRANCH.** China.
Pl., 1907.
- A. multiflorus, AIT.** North America.
Pl., 1894. Hardy. Ht. 3½ to 4 ft
Fl. white; Sept. 19 to Oct. 27.
*A. Newry Seeding = A. Novi Belgii
Newry Seedling.*
- ***A. niveus, HORT.**
Pl., 1895. Hardy. Ht. 3½ to 4 ft.
Fl. white with faint lilac tinge;
Sept. 5 to Oct. 3.
- ***A. Novæ-Angliæ, L.** Starwort. New
England; North America.
Pl., 1894. Hardy. Ht. 4½ ft. Fl.
violet purple; Sept. 5 to Oct. 23.
- *****A. Novæ-Angliæ Mrs. J. F. Rayner.**
Pl., 1901. Hardy. Ht. 4½ to 5 ft
Fl. rosy purple; Sept. 8 to Nov.
10.
- *****A. Novæ-Angliæ præcox.**
Pl., 1901. Hardy. Ht. 5½ ft. Fl.
purple; Sept. 30 to Nov. 12.
- A. Novæ-Angliæ pulchellus.**
Pl., 1901. Hardy. Seems identical
with *præcox*.
- ****A. Novæ-Angliæ roseus.**
Pl., 1894. Hardy. Ht. 4½ ft. Fl.
rosy purple; Aug. 25 to Oct. 27.
- ****A. Novæ-Angliæ roseus.**
Pl., 1898. Hardy. Ht. 5 ft. Fl
rosy purple; Sept. 21 to Oct. 27.
- ****A. Novæ-Angliæ Wm. Bowman.**
Pl., 1897. Hardy. Ht. 5½ to 6 ft.
Fl. rosy purple; Sept. 15 to
Nov. 3.

ASTER—*Con.*

- ***A. Novi Belgii Archer Hind.**
Pl., 1901. Hardy. Ht. 4 to 5 ft.
Fl. lavender blue; Sept. 21 to
Oct. 25.
- A. Novi Belgii Aurora.**
Pl., 1901. Hardy. Ht. 4 ft. Fl.
mauve; Aug. 11 to Oct. 3.
- *****A. Novi Belgii Beatrice.**
Pl., 1901. Hardy. Ht. 4½ to 5 ft.
Fl. white, sometimes tinged with
lilac; Sept. 11 to Oct. 3.
- ****A. Novi Belgii Beauty.**
Pl., 1903. Hardy. Ht. 3 to 3½ ft.
Fl. rosy lilac; Aug. 27 to Oct. 8.
- ***A. Novi Belgii Berenice.**
Pl., 1901. Hardy. Ht. 4½ ft. Fl.
pale lavender, yellow centre;
Sept. 28 to Oct. 27.
- *****A. Novi Belgii candida.**
Pl., 1901. Hardy. Ht. 4 to 4½ ft.
Fl. white, sometimes tinged with
lilac, yellow centre; Sept. 8 to
Oct. 8.
- ***A. Novi Belgii densus.**
Pl. 1900. Hardy. Ht. 3½ to 4 ft.
Fl. lavender blue; Sept. 18 to
Oct. 27.
- A. Novi Belgii E. G. Lowe.**
Pl., 1901. Hardy. Ht. 4 to 5 ft.
Fl. rosy lilac; Sept. 24 to Oct. 27.
- *****A. Novi Belgii Edna Mercia.**
Pl., 1903. Hardy. Ht. 4 ft. Fl.
pinkish lilac; Aug. 23 to Oct. 20.
- ***A. Novi Belgii Ella.**
Pl., 1901. Hardy. Ht. 5½ ft. Fl.
lilac; Sept. 22 to Oct. 20.
- ***A. Novi Belgii Esme.**
Pl., 1901. Hardy. Ht. 2½ to 3 ft.
Fl. white; Sept. 5 to Oct. 10.
- *****A. Novi Belgii F. W. Burbidge.**
Pl., 1901. Hardy. Ht. 4½ ft. Fl.
pale lilac; Sept. 5 to Oct. 1.
- *****A. Novi Belgii Fanny.**
Pl., 1903. Hardy. Ht. 4 ft. Fl.
pale lavender, yellow centre;
Sept. 15 to Oct. 12.
- ***A. Novi Belgii Flora.**
Pl., 1901. Hardy. Ht. 4 to 5 ft.
Fl., lilac; Sept. 25 to Nov. 7.

ASTER—*Con.*

- ****A. Novi Belgii Grace.**
Pl., 1903. Hardy. Ht. 4 to 4½ ft.
Fl. lavender blue; Sept. 12 to
Oct. 8.
- ***A. Novi Belgii Harpur Crewe.**
Pl., 1901. Hardy. Ht. 2½ to 3 ft.
Fl. almost white; Sept. 8 to
Oct. 21.
- A. Novi Belgii Ianthé.**
Pl., 1901. Hardy. Ht. 3 to 3½ ft.
Fl. lilac; Sept. 13 to Oct. 22.
- ****A. Novi Belgii Janus.**
Pl., 1901. Hardy. Ht. 4½ to 5 ft.
Fl. white or tinged with lilac, yellow
centre; Sept. 8 to Sept. 26.
- *****A. Novi Belgii John Wood.**
Pl., 1901. Hardy. Ht. 5 ft. Fl.
white, with yellow centre; Sept.
5 to Oct. 8.
- ***A. Novi Belgii Juno.**
Pl., 1901. Hardy. Ht. 4½ ft. Fl.
lavender blue; Sept. 22 to Oct.
20.
- ***A. Novi Belgii Lady Trevellyn.**
Pl., 1895. Hardy. Fl. white; Sept.
8 to Oct. 3.
- ***A. Novi Belgii Maia.**
Pl., 1901. Hardy. Ht. 3½ to 4½ ft.
Fl. pinkish lilac; Sept. 22 to
Oct. 27.
- *****A. Novi Belgii Madonna.**
Pl., 1901. Hardy. Ht. 3 ft. Fl.
white, with yellow centre; Sept.
8 to Oct. 12.
- A. Novi Belgii Maiden's Blush.**
Pl., 1903. Hardy. Ht. 3½ ft. Fl.
lilac; Aug. 15 to Sept. 28.
- *****A. Novi Belgii Margaret.**
Pl., 1903. Hardy. Ht. 4 to 4½ ft.
Fl. lavender blue, yellow centre;
Sept. 11 to Oct. 27.
- ****A. Novi Belgii Minerva.**
Pl., 1903. Hardy. Ht. 3½ ft. Fl.
pale lavender, yellow centre;
Sept. 2 to Oct. 27.
- ***A. Novi Belgii Miss Stafford.**
Pl., 1901. Hardy. Ht. 1½ ft. Fl.
pinkish lilac; Aug. 29 to Sept.
26.

ASTER—*Con.*

- A. Novi Belgii Mrs. Davis Evans.**
Pl., 1906. Hardy. Ht. 2 ft. Fl. bluish lilac; Aug. 27 to Oct. 6.
- *A. Novi Belgii Mont Blanc.**
Pl., 1903. Hardy. Ht. 5 to 5½ ft. Fl. white, yellow centre; Sept. 12 to Oct. 10.
- ***A. Novi Belgii Newry Seedling.**
Pl., 1897. Hardy. Ht. 4 to 4½ ft. Fl. pale lilac, almost white; Sept. 11 to Oct. 26.
- ***A. Novi Belgii Pamela.**
Pl., 1901. Hardy. Ht. 4½ to 5 ft. Fl. lilac; Sept. 15 to Oct. 22.
- *A. Novi Belgii Perry's Pink.**
Pl., 1903. Hardy. Ht. 2 to 2½ ft. Fl. purplish pink; Sept. 11 to Oct. 12.
- A. Novi Belgii Profusion.**
Pl., 1908.
- *A. Novi Belgii Purity.**
Pl., 1901. Hardy. Ht. 5½ to 6 ft. Fl. white, yellow centre; Sept. 5 to Oct. 3.
- **A. Novi Belgii Robert Parker.**
Pl., 1901. Hardy. Ht. 4½ to 5 ft. Fl. pale lavender; Sept. 17 to Oct. 27.
- ***A. Novi Belgii Snowflake.**
Pl., 1901. Hardy. Ht. 4 to 4½ ft. Fl. white, yellow centre; Sept. 11 to Oct. 15.
- *A. Novi Belgii St. Brigid.**
Pl., 1901. Hardy. Ht. 4 ft. Fl. white or tinged with lilac; Sept. 5 to Oct. 4.
- **A. Novi Belgii Theodora.**
Pl., 1903. Hardy. Ht. 4½ ft. Fl. pale lavender, yellow centre; Sept. 22 to Oct. 22.
- ***A. Novi Belgii Top Sawyer.**
Pl., 1897. Hardy. Ht. 5½ to 6 ft. Fl., lavender; Sept. 13 to Oct. 20.
- ***A. Novi Belgii White Spray.**
Pl., 1901. Hardy. Ht. 4½ to 5½ ft. Fl. white, yellow centre; Sept. 11 to Oct. 3.

ASTER—*Con.*

- **A. Novi Belgii White Queen.**
Pl., 1897. Hardy. Ht. 5 to 5½ ft. Fl. white or tinged with lilac; Sept. 15 to Oct. 14.
- A. paniculatus, LAM.** North America.
Syn. A. salignus, Willd.
Pl., 1901. Hardy. Ht. 4½ ft. Fl. pale lilac; Sept. 17 to Oct. 22.
- *A. paniculatus W. J. Grant.**
Pl., 1905. Hardy. Ht. 4 to 4½ ft. Fl. pale mauve; Sept. 21 to Oct. 20.
- ***A. paniculatus W. J. Grant Improved.**
Pl., 1903. Hardy. Ht. 4½ ft. Fl. pinkish lilac, purplish red centre; Sept. 19 to Oct. 19.
- ***A. Panope.**
Pl., 1901. Hardy. Ht. 4½ ft. Fl. lavender, yellow centre; Sept. 12 to Oct. 13.
- A. patulus, LAM.** North America.
Pl., 1905. Hardy. Ht. 3 ft. Fl. pale lavender; Aug. 26 to Sept. 22.
- A. peregrinus, PURSH.** North America and Northern Asia.
Syn. A. salsuginosus, Hook.
Pl., 1896. Hardy. Ht. 3 ft. Fl. pale lilac; July 26 to Sept. 19.
- A. patens, AIT.** North America.
Pl., 1901. Hardy. Ht. 2 to 3 ft. Fl. lilac purple; Aug. 29 to Oct. 3.
- A. politus, Nees. = A. laevis.*
- A. polyphyllus, WILLD.** North Amer.
Pl., 1903. Hardy. Ht. 4 to 4½ ft. Fl. white; July 30 to Sept. 25.
- A. Porteri, A. GRAY.** Colorado.
Pl., 1902. Tender.
- A. prenanthoides, MUHL.** North Am.
Pl., 1907.
- **A. ptarmicoides, TORR. & GRAY.** North America.
Pl., 1901. Hardy. Ht. 2 ft. Fl. white; July 2 to Sept. 12.
- ***A. ptarmicoides lutescens.**
Pl., 1905. Hardy. Ht. 2 ft. Fl. sulphur yellow turning almost white; July 20 to Aug. 15.

ASTER—*Con.*

- A. pulcherrimus*—*A. puniceus pulcherrimus*.
- A. punctatus*, Waldst. & Kit. = *A. acris*.
Pl., 1908.
- A. puniceus*, L. North America.
Pl., 1894. Hardy. Ht. 5 to 5½ ft.
Fl. pale lavender; Aug. 6 to Sept. 26.
- **A. puniceus pulcherrimus*.
Pl., 1903. Hardy. Ht. 4 to 5 ft.
Fl. pale lavender, yellow centre;
Sept. 8 to Oct. 5.
- A. Radula*, AIT. North America.
Pl., 1896. Hardy. Ht. 3 ft. Fl.
pale lilac changing to white;
July 28 to Sept. 21.
- A. roseus grandiflorus*.
Pl., 1897. Hardy. Seems identical
with *A. puniceus pulcherrimus*.
- A. Rosy Morn*.
Pl., 1903.
- ***A. sagittifolius*, WEDEM. North Amer.
Pl., 1894. Hardy. Ht. 4 to 5 ft.
Fl. pale lavender; Sept. 6 to
Oct. 22.
- A. salsuginosus*, Hook. = *A. peregrinus*.
- A. salicifolius*, AIT. North America.
Pl., 1895. Hardy. Ht. 3 ft. Fl.
bluish lilac; July 18 to Aug. 25.
- A. salicifolia* Tresserve.
Pl., 1908.
- A. salignus*, Willd. = *A. paniculatus*.
Pl., 1907.
- A. Shortii*, LINDL. North America.
Pl., 1901. Hardy. Ht. 3½ ft. Fl.
purplish blue; Oct. 8 to Nov. 7.
- A. sibiricus*, L. Siberia; North Amer.
Pl., 1895. Hardy.
- A. spectabilis*, AIT. North America.
Pl., 1902. Hardy. Ht. 2 ft. Fl.
lavender; Aug. 1 to Oct. 10.
- A. spectabilis major*.
Pl., 1899. Hardy. Ht. 2 to 3 ft.
Fl. rosy purple; Aug. 29 to Oct.
23.

ASTER—*Con.*

- A. tenuifolius*, L. North America.
Pl., 1907.
- A. Thomsoni*, CLARKE. Himalayas.
Pl., 1899. Tender.
- A. Tradescanti*, L. Michaelmas Daisy.
North America.
Pl., 1903. Hardy. Ht. 4 to 4½ ft.
Fl. almost white; July 30 to
Sept. 26.
- A. trinervis*, DESF. Western Europe.
Pl., 1902. Hardy. Ht. 3 to 4 ft.
Fl. pale lavender; Aug. 29 to
Oct. 27.
- ****A. turbinellus*, LINDL. North Amer.
Pl., 1901. Hardy. Ht. 4 ft. Fl.
rosy lilac; Oct. 4 to Nov. 12.
- A. turbinellus albus*.
Pl., 1908.
- ***A. turbinellus elegans*.
Pl., 1903. Hardy. Ht. 4 to 4½ ft.
Fl. pale lilac, shading off white;
Sept. 21 to Oct. 27.
- A. umbellatus*, MILL. North America.
Pl., 1895. Hardy. Ht. 4½ ft. Fl.
white; July 11 to Sept. 5.
- A. undulatus*, L. North America.
Pl., 1897. Hardy. Ht. 4½ to 5 ft.
Fl. pale lilac, shading to white;
Sept. 25 to Nov. 3.
- A. versicolor*, WILLD. Eastern North
America.
Pl., 1895. Hardy.
- ****A. versicolor alba Improved*.
Pl., 1901. Hardy. Ht. 3½ to 4 ft.
Fl. white; Sept. 4 to Oct. 3.
- **A. versicolor nana*.
Pl., 1905. Hardy. Ht. 2 ft. 3 in.
Fl. pink turning to white; Sept.
1 to Oct. 24.
- **A. vimineus*, LAM. North America.
Pl., 1897. Hardy. Ht. 2 to 3 ft.
Fl. white; Aug. 27 to Oct. 7.
- **A. vimineus Cassiope*.
Pl., 1905. Hardy. Ht. 3 ft. Fl.
white; Aug. 31 to Oct. 3.

ASTILBE, BUCH-HAM.

(Saxifragaceæ.)

The astilbes while nearly all hardy in the ordinary meaning of the term do not thrive well at Ottawa. They need warmth, shade and moisture in order to do well. In the open border they are not a success. *Astilbe rivularis*, for instance, which is a fine plant, when well grown, does not begin to bloom at Ottawa until near the beginning of September, when it should bloom early in the summer. *Astilbe Lemoinei Panache* has done best in the perennial border. In Canada the astilbes are best used as greenhouse plants, the well known *Astilbe japonica* (*Spiræa japonica*) being one of the most satisfactory for this purpose.

**A. chinensis*, FRANCH & SAV. China and Japan.

Pl., 1895. Hardy. Ht. 2 ft. Fl. white with a purplish pink tinge; June 18 to July 31.

A. Davidii.

Pl., 1907.

**A. japonica compacta multiflora*.

Pl., 1899. Hardy. Ht. 1 ft. Fl. white; June 20 to July 13.

A. japonica foliis purpureis.

Pl. 1895. Hardy.

**A. japonica grandiflora*

Pl., 1897. Hardy. Ht. 1 ft. Fl. white; June 23 to July 10.

A. japonica reticulata aurea.

Pl., 1895. Half hardy.

**A. Lemoinei Gerbe d'Argent*.

Pl., 1899. Hardy. Ht. 1 ft. Fl. white; June 24 to Aug. 4.

***A. Lemoinei Panache*.

Pl., 1899. Hardy. Ht. 2 ft. Fl. white with pink anthers; July 6 to Aug. 4.

A. rivularis, BUCH-HAM. Himalayas.

Pl., 1900. Hardy. Ht. 4 ft. Fl. dull pale yellow; Aug. 29 to Sept. 21.

**A. Thunbergii*, MIQ. Japan.

Pl., 1895. Hardy. Ht. 2½ ft. Fl. white tinged with pink; July 27 to Aug. 15.

ASTRAGALUS, TOURN. MILK VETCH.

(Leguminosæ.)

**A. alopecuroides*, L. Siberia, &c.

Pl., 1896. Hardy. Ht. 3 to 4 ft. Fl. creamy white; June 24 to July 25.

**A. danicus albus*.

Syn. *A. hypoglottis albus*.

Pl., 1903. Hardy. Ht. 5 in. Fl. white; May 31 to June 27.

A. falcatus, LAM. Caucasus; Siberia.

Pl., 1902. Hardy. Ht. 1½ to 3 ft. Fl. greenish yellow; June 13 to July 5.

A. galegiformis, L. Caucasus.

Pl., 1896. Hardy. Ht. 4 to 4½ ft. Fl. greenish yellow; June 15 to July 21.

A. Glyciphyllus, L. Europe, &c.

Pl., 1898. Hardy. Ht. 3 ft. Fl. pale greenish yellow; June 27 to Aug. 4.

ASTRAGALUS—Con.

A. hypoglottis albus—*A. danicus albus*.

***A. monspessulanus*, L. South Europe; Caucasus.

Pl., 1896. Hardy. Ht. 8 to 9 in. Fl. rosy purple; May 23 to July 10.

A. ponticus, PALL. Asia Minor, &c.

Pl., 1895. Hardy. Ht. 2 ft. Fl. yellow; June.

A. reflexistipulus, MIQ. Japan.

Pl., 1901. Hardy. Ht. 2½ to 3½ ft. Fl. greenish yellow; July 11 to Aug. 15.

A. sulcatus, L. Siberia, &c.

Pl., 1902. Hardy. Ht. 2 to 2½ ft. Fl. pale violet and white tipped with brown; June 30 to Sept. 19.

**A. vulpinus*, WILLD. Turkestan.

Pl., 1898. Hardy. Ht. 3 to 4½ ft. Fl. greenish yellow; June 11 to July 21.

ASTRANTIA, L.*(Umbelliferae.)***A. Biebersteinii**, FISCH. & MEY. Caucasus.

Pl., 1895. Hardy. Ht. 2½ ft. Fl. grey; July 2 to Sept. 7.

A. major, L. Black Masterwort. Europe.

Pl., 1900. Hardy. Ht. 1 to 1½ ft. Fl. whitish with purplish pink pedicels; June 21 to Aug. 4.

A. major carinthiaca.

Pl., 1898. Hardy.

ATROPA, L. DWALE.*(Solanaceae.)***A. Belladonna**, L. Deadly Nightshade. Europe, &c.

Pl., 1895. Hardy.

BALLOTA, L. STINKING HOREHOUND.*(Labiatae.)***B. nigra ruderalis**.

Pl., 1905. Hardy. Ht. 1½ ft. Fl. purple; July 2 to Aug. 31.

B. nigra fol. var.

Pl., 1898. Hardy. Ht. 1½ ft. Fl. purple; July 7 to Aug. 11.

BAPTISIA, VENT.*(Leguminosae.)*****B. australis**, R. BR. North America.

Pl., 1895. Hardy. Ht. 4½ ft. Fl. deep blue; June 1 to Aug. 4.

B. tinctoria, R. BR. Wild Indigo. North America.

Pl., 1895. Hardy. Ht. 2 to 2½ ft. Fl. yellow; July 14 to Aug. 29.

BELAMACANDA, MÖENCH.*(Iridaceae.)****B. punctata**, MÖENCH. China.*Syn. Pardonthus sinensis*, V. Houtte.

Pl., 1895. Hardy. Ht. 3 to 3½ ft. Fl. orange spotted with purplish brown; July 3 to Aug. 29.

BELLIS, L.*(Compositae.)*****B. perennis**, L. English Daisy. Europe.

Pl., 1908. Half hardy. Ht. 3 to 6 in. Fl. pink, red, and white; May and June.

B. sylvestris, CYR. Mediterranean region.

Pl., 1897. Tender.

BERKHEYA, EHRH.*(Compositae.)***B. purpurea**, BENTH. & HOOK. F. South Africa.*Syn. Stobæa purpurea.*

Pl., 1901. Tender.

BLEPHILIA, RAFIN.*(Labiatae.)***B. hirsuta**, BENTH. North America.

Pl., 1905. Hardy. Ht. 2½ ft. Fl. lavender; July 3 to Aug. 16.

BLETTIA, RUIZ. & PAV.*(Orchidaceae.)******B. hyacinthina**, AIR. China; Japan.

Pl., 1897. Hardy. Ht. 1½ ft. Fl. purple; July 7 to July 18.

BOCCONIA, PLUM. PLUME POPPY.*(Papaveraceae.)*****B. cordata**, WILLD. Plume Poppy. China and Japan.

Pl., 1901. Hardy. Ht. 9 ft. Fl. creamy white in bud, buff when opened; July 12 to Aug. 15.

***B. microcarpa**, MAXIM. North China.

Pl., 1901. Hardy. Ht. 7 ft. Fl. buff in bud and when open; July 13 to Sept. 2.

BOLTONIA, L'HERIT.*(Compositae.)*****B. asteroides**, L'HÉRIT. False Starwort. North America.*Syn. B. glastifolia*, L'Hérit.

Pl., 1895. Hardy. Ht. 5 to 6 ft. Fl. white or purplish, yellow centre; Sept. 19 to Oct. 20.

BOLTONIA—*Con.******B. asteroides decurrens.**

Pl., 1907. Hardy. Ht. 6 ft. Fl. pinkish lilac; Oct.

B. glastifolia, L'Hérit = *B. asteroides*.

B. incisa, BENTH. Siberia, &c.

Pl., 1907.

****B. latisquama**, A. GRAY. North Amer.

Pl., 1896. Hardy. Ht. 4½ to 6 ft.

Fl. white, yellow centre; July 29 to Sept. 18.

BORAGO, L. BORAGE.

(*Boraginaceæ*.)

B. caucasica.

Pl., 1901. Hardy. Ht. 4 to 5 ft.

Fl. blue; June 11 to Aug. 18.

BOYKINIA, NUTT.

(*Saxifragaceæ*)

B. aconitifolia, NUTT. North Amer.

Pl., 1907.

BRODIAEA, SM. MISSOURI HYACINTH.

(*Liliaceæ*.)

B. coccinea, A. GRAY. California.

Pl., 1901. Tender.

B. grandiflora, SM. North-wester Amer.

Pl., 1901. Tender.

B. Hendersoni, S. WATS. Oregon.

Pl., 1901. Tender.

B. laxa, S. WATS. California.

Pl., 1901. Tender.

B. peduncularis, S. WATS. California.

Pl., 1901. Tender.

B. stellaris, S. WATS. California.

Pl., 1901. Tender.

BUPTHALMUM, L.

(*Compositæ*.)

B. speciosum, SCHREB. Europe.

Syn. Telekia speciosa.

Pl., 1895. Hardy. Ht. 3 to 4 ft.

Fl. golden yellow; June 21 to Aug. 29.

BUPLEURUM, L. HARE'S EAR.

(*Umbelliferae*.)

B. Candollei, WALL. Himalayas.

Pl., 1897. Hardy. Ht. 1½ ft. Fl.

golden yellow; Aug. 10.

BUTOMUS, L.

(*Alismaceæ*.)

B. umbellatus, L. Flowering Rush.

Europe, &c.

Pl., 1897. Tender. (Hardy in wet places.)

CACALIA SUAVEOLENS = **SENECIO SUAVEOLENS**.**CALAMINTHA**, LAM. CALAMINT.

(*Labiatae*.)

C. Acinos, CLAIRV. Basil, Thyme. Europe, &c.

Pl., 1898. Hardy. Ht. 6 in. Fl.

bluish purple with white spots; June 9 to Oct. 10.

C. alpina, LAM. Europe, &c.

Pl., 1901. Hardy. Ht. 7 in. Fl.

purple; May 31 to Aug. 15.

C. grandiflora, MÖENCH. Europe.

Pl., 1897. Hardy. Ht. 15 in. Fl.

rosy purple; June 13 to Sept. 11.

CALLIRHOE, NUTT. POPPY MALLOW.

(*Malvaceæ*.)

C. involucrata, A. GRAY. North Amer.

Pl., 1901. Hardy. Ht. 2 ft. Fl.

crimson; June 23 to Oct. 14.

CALTHA, L. MARSH MARIGOLD.

(*Ranunculaceæ*.)

***C. palustris flore pleno.**

Pl., 1901. Hardy. Ht. 1 ft. Fl.

double, yellow; May 9 to June 22.

CALYSTEGIA, R.BR. BEAR-BIND.

(*Convolvulaceæ*.)

C. japonica, CHAISI. Japan.

Pl., 1897. Tender.

C. oculata.

Pl., 1903. Hardy. Ht. 1 to 1½ ft.

Fl. white; June.

C. pubescens plena.

Pl., 1903. Tender.

CAMASSIA, LINDL.

(*Liliaceæ*.)

***C. esculenta**, LINDL. Quamash. North-western America.

Pl., 1901. Hardy. Ht. 1½ ft. Fl.

purplish blue; May 23 to June 20.

***C. Leichtlinii**, S. WATS. California.

Pl., 1901. Hardy. Ht. 3 to 3½ ft.

Fl. creamy white; May 26 to June 15.

CAMPANULA, L. BELL-FLOWER.

(Campanulaceæ.)

Among the bellflowers are to be found some of the best summer flowering perennials. The flowers are, for the most part, blue, purple or white in colour, and of delicate and pleasing shades. This with the bell-like shape of the flowers makes the campanulas very attractive. The larger growing kinds are easily propagated from seeds or the plants may be divided. One of the finest species, the Chimney Bell-Flower, *C. pyramidalis*, which is only half hardy at Ottawa, should be treated as a biennial to get best results, as plants more than one year old usually suffer badly in winter, and even young plants are often killed. The low growing kinds with fleshy roots and crowns near the surface are, on the whole, not so hardy as the taller ones, and old plants cannot be relied upon.

- **C. alliariæfolia*, WILLD. Caucasus, &c.
Syn. *C. lamiifolia*, Bieb.
Pl., 1902. Hardy. Ht. 2 to 3 ft.
Fl. white; July 3 to Sept. 8.
- **C. alliariæfolia macrophylla*.
Pl., 1902. Hardy. Ht. 3 ft. Fl.
white; July 6 to Aug. 21.
- C. alpina*, JACQ. Europe.
Pl., 1907.
- C. arcuata*, Schur. = *C. rotundifolia*.
- C. barbata*, L. Europe.
Pl., 1907.
- C. Baumgartenii* = *C. rotundifolia*
Baumgartenii.
- C. betonicæfolia*, SIBTH. Asia Minor.
Pl., 1907.
- C. bononiensis*, L. Europe.
Pl., 1905. Ht. 3 to 4 ft. Fl. pale
purple; July 14 to Oct. 8.
- C. Burghalti* = *C. latifolia Burghalti*.
- ***C. cæspitosa*, SCOP. Europe.
Pl., 1901. Hardy. Ht. 1 ft. Fl.
bluish violet; June 6 to Oct. 20.
- C. crnica*, SCHIEDE. Transylvania.
Pl., 1907.
- ***C. carpatica*, JACQ. Eastern Europe.
Pl., 1894. Hardy. Ht. 1 ft. Fl.
blue; June to Sept.
- ***C. carpatica alba*.
Pl., 1908. Hardy. Ht. 1 ft. Fl.
white; June to Sept.
- C. carpatica Isabel*.
Pl., 1908.
- C. carpatica Riverslea*.
Pl., 1908.
- ****C. carpatica turbinata*.
Pl., 1895. Hardy. Ht. 15 in. Fl.
bluish violet; June 20 to Sept.
12.
- C. celtidifolia*, Boiss. = *C. lactiflora*.
- C. cordata*, *C. Koch* = *C. rapunculoides*.
- C. crystallocalyx*.
Pl., 1907.
- C. eriocarpa*, Bieb. = *C. latifolia eriocarpa*.
- C. elegans*, ROEM. & SCHULT. Siberia.
Pl., 1902. Hardy. Ht. 2 to 2½ ft.
Fl. bluish purple; July 14 to
Aug. 16.
- C. Fergusoni*.
Pl., 1907.
- ***C. glomerata acaulis*.
Pl., 1906. Hardy. Ht. 6 to 8 in.
Fl. violet purple; July 3 to
Aug. 7.
- C. glomerata alba*.
Pl. 1901. Half hardy.
- ****C. glomerata dahurica*.
Pl., 1897. Hardy. Ht. 1½ to 2 ft.
Fl. violet purple; June 6 to July
14.
- **C. glomerata lilacina*.
Pl., 1903. Hardy. Ht. 1½ ft.
Fl. bluish purple; May 31 to
July 17.
- C. glomerata speciosa* = *C. glomerata dahurica*.
- C. Grossekkii*, HEUFFL. Eastern Europe.
Pl., 1895. Hardy. Ht. 3 ft. Fl.
lilac purple; June 23 to Sept.

CAMPANULA—Con.

- ****C. lactiflora*, BIEB. Caucasus.
Syn. C. celtidifolia, Boiss.
 Pl., 1901. Hardy. Ht. 3½ to 4 ft.
 Fl. white tinged with pale bluish
 violet to bluish violet with white
 base; June 27 to Aug. 5.
- C. lamifolia*, Bieb. = *C. alliariaefolia*.
 Pl., 1907.
- ***C. latifolia*, L. Europe, &c.
 Pl., 1895. Hardy. Ht. 3 ft. to 3 ft.
 8 in. Fl. purple; June 14 to
 July 6.
- ***C. latifolia* Burghalti.
Syn. C. Burghalti.
 Pl., 1903. Hardy. Ht. 2 to 3 ft.
 Fl. white tinged with pale lilac;
 June 27 to July 21.
- ***C. latifolia* eriocarpa.
Syn. C. eriocarpa, Bieb.
 Pl., 1901. Hardy. Ht. 4 to 4½ ft.
 Fl. bluish purple; June 16 to
 July 3.
- ****C. latifolia* macrantha.
 Pl., 1895. Hardy. Ht. 3½ to 4 ft.
 Fl. purple; June 17 to July 7.
- C. latifolia* macrantha alba.
 Pl., 1901. Half hardy.
- ***C. latifolia* Van Houttei.
 Pl., 1903. Hardy. Ht. 2½ ft. Fl.
 bluish violet; June 28 to July 22.
- C. linifolia*, Scor. Europe.
 Pl., 1907.
- C. longistyla*, FOM.
 Pl., 1907.
- C. multiflora*, WALDST. & KIT. Hun-
 gary.
 Pl., 1907.
- C. nobilis*, Lindl. = *C. punctata*.
- ***C. persicifolia*, L. Europe, &c.
 Pl., 1906. Hardy. Ht. 2½ to 3½ ft.
 Fl. pale bluish violet; June 18 to
 Sept. 21.
- ****C. persicifolia* Backhousei = *C. persici-
 folia grandiflora alba*.
- ****C. persicifolia* cærulea flore pleno.
 Pl., 1896. Hardy. Ht. 2 ft. Fl.
 blue, semi-double; June to Sept.

CAMPANULA—Con.

- C. persicifolia* Daisy Hill.
 Pl., 1908.
- ****C. persicifolia* grandiflora alba.
Syn. C. persicifolia Backhousei.
 Pl., 1905. Hardy. Ht. 2 ft. Fl.
 white; June 14 to Sept. 28.
- ****C. persicifolia* Mœrheimi.
 Pl., 1906. Hardy. Ht. 2 ft. Fl.
 white, semi-double; June to Oct.
- C. persicifolia* Newry Giant.
 Pl., 1908.
- **C. pilosa*, PALL. Western North Ame-
 rica; Siberia.
 Pl., 1905. Hardy. Ht. 4 ft. Fl.
 violet; July 13 to Aug. 16.
- C. punctata*, LAM. China, Japan, &c.
Syn. C. nobilis, Lindl.; *C. nobilis
 alba*.
 Pl., 1901. Hardy. Ht. 1 ft. Fl.
 pale reddish violet spotted inside
 with purple.
- **C. punctata* alba.
Syn. C. nobilis alba.
 Pl., 1901. Hardy. Ht. 1 ft. Fl.
 white spotted inside with purple;
 June 28 to Aug. 16.
- ***C. pusilla*, HÆNKE. Europe.
 Pl., 1901. Hardy. Ht. 1 ft. Fl.
 bluish purple; June 1 to Oct. 20.
- ****C. pyramidalis*, L. Chimney Campa-
 nula. Europe.
 Pl. 1901. Half hardy. Ht. 3 to 5
 ft. Fl. blue; July 18 to Sept. 4.
- C. pyramidalis* alba.
 Pl., 1897. Tender.
- ****C. pyramidalis* alba compacta.
 Pl., 1905. Hardy. Ht. 4 ft. Fl.
 white; July 27 to Oct. 10.
- **C. Raineri*, PERPENT. Italy.
 Pl., 1895. Hardy. Ht. 3 in. Fl.
 bluish purple; June to Sept.
- **C. rapunculoides*, L. Europe, &c.
Syn. C. cordata, *C. Koch*.
 Pl., 1902. Hardy. Ht. 2½ ft. Fl.
 violet purple; July 4 to Aug. 7.

CAMPANULA—*Con.****C. rotundifolia* Baumgartenii.

Syns. C. Baumgartenii; C. arcuata, Schur.

Pl., 1896. Hardy. Ht. 14 to 20 in. Fl. bluish violet; June 4 to Aug. 1.

****C. rotundifolia flore pleno.*

Pl., 1907. Ht. 1 ft 4 in. Fl. bluish violet; July 25 to Sept. 11.

***C. sarmatica*, KER-GAWL. Caucasus.

Pl., 1901. Hardy. Ht. 1 ft. 10 in. Fl. pale bluish violet; June 16 to July 16.

C. Saxifragia, BIEB. Caucasus.

Pl., 1907.

C. sibirica Hohenackeri.

Pl., 1907.

***C. Steveni dasycarpa.*

Pl., 1907. Hardy. Ht. 1½ ft. Fl. violet; July 16 to Sept. 3.

***C. subpyrenaica*, TIMB. Europe.

Pl., 1901. Hardy. Ht. 3 ft. Fl. pale bluish violet. June 18 to Aug. 22.

C. tomassiniana.

Pl., 1907.

***C. Trachelium*, L. Throatwort. Europe, &c.

Syn. C. urticæfolia, Schmidt.

Pl., 1898. Hardy. Ht. 2 ft. Fl. white; July 4 to July 30.

C. urticæfolia Schmidt = C. Trachelium L.

C. vernalis.

Pl., 1907.

C. Vesula, ALL. Piedmont.

Pl., 1907.

CARDUUS, L. THISTLE.

(*Compositæ.*)

C. cernuus, STEUD. Siberia.

Pl., 1896. Hardy.

C. stenolepis, BENTH. Central Asia.

Pl., 1896. Hardy.

CAREX, L. SEDGE.

(*Cyperaceæ.*)

C. brunnea variegata.

Pl., 1895. Hardy. Ht. 1 to 1½ ft. Foliage variegated.

C. leporina, L. Northern Temperate regions.

Pl. 1905. Half hardy.

C. pilulifera, L. Europe, &c.

Pl., 1895. Hardy.

CARLINA, L. CARLINE THISTLE.

(*Compositæ.*)

C. acaulis, L. Europe.

Pl., 1898. Half hardy.

CATANANCHE, L.

(*Compositæ.*)

**C. cærulea*, L. Blue Cupidone. Western Mediterranean region.

Pl., 1901. Hardy. Ht. 2½ ft. Fl. bluish purple; July 6 to Sept. 24.

C. cærulea alba.

Pl., 1908.

CENTAUREA, L. Knapweed.

(*Compositæ.*)

C. austriaca, WILLD. Europe; Caucasus.

Pl., 1901. Hardy. Ht. 4½ ft. Fl. magenta; July 10 to Sept. 8.

**C. babylonica*, L. Asia Minor.

Pl., 1901. Hardy. Ht. 6½ ft. Fl. yellow; Aug. 15 to Oct. 14.

C. Debeauxii, Godr. & Gren. = C. nigra, L.

***C. glastifolia*, L. Asia Minor, &c.

Pl., 1903. Hardy. Ht. 4½ ft. Fl. golden yellow; July 4 to Aug. 8.

C. Jacea lacera.

Pl., 1901. Hardy. Ht. 4 ft. Fl. purplish pink; July 10 to Sept. 28.

***C. macrocephala*, PUSCHK. Great Knapweed. Armenia.

Pl., 1894. Hardy. Ht. 2½ to 3½ ft. Fl. golden yellow; July 4 to Aug. 11.

CENTAUREA—*Con.*

- **C. montana*, L. Mountain Bluet.
Europe.
Pl., 1895. Hardy. Ht. 1½ ft. Fl.
violet; May 28 to Aug. 12.
- ***C. montana alba*.
Pl., 1895. Hardy. Ht. 1½ ft. Fl.
white; May 26 to Sept. 20.
- ***C. montana cærulea*.
Pl., 1901. Hardy. Ht. 2 ft. Fl.
purplish blue; purple in centre;
May 28 to July 12.
- C. montana grandiflora*.
Pl., 1907.
- ***C. montana* Lady Florence Hastings.
Pl., 1895. Hardy. Ht. 1½ ft. Fl.
white; May 28 to Sept. 17.
- **C. montana rubra*.
Pl., 1895. Hardy. Ht. 1½ ft. Fl.
lilac; May 26 to Aug. 12.
- C. nigra*, L. Black Knapweed. Europe.
Syn. C. Debeauxii, Godr. & Gren.
Pl., 1901. Hardy. Ht. 3½ to 4½ ft.
Fl. magenta; July 6 to Sept. 8.
- C. nigrescens*, WILLD. Europe, &c.
Pl., 1901. Hardy. Ht. 4 ft. Fl.
lilac; June 30 to Aug. 29.
- C. picta*.
Pl., 1901. Hardy. Ht. 2½ to 3½ ft.
Fl. pinkish purple; July 2 to
Sept. 9.
- C. ruthenica*, LAM. Caucasus and Si-
beria.
Pl., 1898. Hardy. Ht. 3½ ft. Fl.
sulphur yellow; July 6 to Aug. 1.
- C. salmantica*, L. Europe, &c.
Pl., 1901. Half hardy.
- C. Scabiosa*, L. Greater Knapweed.
Europe.
Pl., 1905. Hardy. Ht. 4½ to 5 ft.
Fl. rosy purple; July 3 to Sept.
11.

CEPHALARIA, SCHRAD.

(Dipsacæ.)

- C. radiata*, GRISEB. & SCHENK. Tran-
sylvania.
Pl., 1903. Half hardy; Ht. 2½ ft.
Fl. creamy white; Aug. 15 to
Sept. 11.
- ***C. tatarica*, SCHRAD. Siberia, &c.
Syn. Scabiosa gigantea, Ledeb.
Pl., 1898. Hardy. Ht. 6½ to 7 ft.
Sulphur yellow; July 2 to Aug. 4.
- CERASTIUM, L. MOUSE-EAR CHICKWEED.
(Caryophyllacæ.)
- C. arvense compactum*.
Pl., 1895. Hardy. Ht. 5 in.
- C. purpurascens*, ADAMS. Asia Minor,
&c.
Pl., 1901. Hardy. Ht. 4 in. Fl.
white; June 6 to July 16.
- C. tomentosum*, L. Europe, &c.
Pl., 1895. Hardy. Ht. 6 in. Fl.
white; June 6 to June 17.

CHELIDONIUM, TOURN. CELANDINE.

(Papaveracæ.)

- C. majus*, L. Celandine. Europe, &c.
Pl., 1894. Hardy. Ht. 2 ft. Fl.
yellow; May 20 to Aug.
- C. majus laciniatum*.
Pl., 1904. Hardy. Has cut leaves.

CHELONE, L. TURTLE HEAD.

(Schropulariacæ.)

- C. barbata*, Cav. = *Pentstemon barbatus*, Roth.
- C. glabra alba*.
Pl., 1895. Hardy. Ht. 2½ to 3 ft.
Fl. white; Aug. 29 to Sept. 29.
- **C. Lyoni*, PURSH. North America.
Pl., 1895. Hardy. Ht. 2½ to 3½ ft.
Fl. rosy purple; Aug. 18 to Oct. 8.
- C. nemorosa*, DOUGL. North America.
Pl., 1907.

CHIOGENES, SALISB.

(Vacciniacæ.)

- Chiogenes serpyllifolia*, SALISB. North
America, &c.
Pl., 1895. Hardy.

CHRYSANTHEMUM, L.

(Compositæ.)

The hardy oxeye daisies or marguerites are most useful plants as they are graceful, attractive in appearance, good for cutting, and have a long blooming season. The well known Oxeye Daisy, *C. Leucanthemum*, gives some idea of what the cultivated varieties of *C. maximum* are like, but the flowers of the former are much smaller than those of the latter. They are profuse bloomers, and on account of their great size and white colour are very striking. The varieties vary much in habit of plant and character of flowers, some being much more graceful than others in both respects. The hardy marguerites increase rapidly by division of the plants, and best results will be obtained by dividing the old clumps every two years. Seedlings are easily grown, and while they may not resemble the parent variety a large proportion of them may be almost or quite as good. In unfavourable winters some varieties kill out, but on the whole they may be considered hardy. There are other species and varieties of hardy marguerites than those mentioned, but the varieties of *C. maximum* are the most useful.

The pyrethrums are, in this bulletin, included with the chrysanthemums, following the Kew nomenclature. They are not nearly so hardy as the marguerites, and on the whole cannot be considered more than half hardy, although some of the varieties live longer than others. The named varieties of *Chrysanthemum coccineum* are very numerous, and they are quite showy and attractive, and some of them should be found in every large garden. Pyrethrums grow readily from seed, and in this way new varieties are obtained. The named varieties are propagated by division.

C. anserinæfolium, HAUSSKN. & BORN.
Orient.

Pl., 1901. Hardy. Ht. 12 to 16 in.
Fl. white; June 10 to July 3.

***C. carneum**, STEUD. Caucasus.
Pl., 1901. Hardy. Ht. 1½ ft. Fl.
deep pink; June 16 to July 11.

C. Clusii = *C. corymbosum*.
Pl., 1908.

***C. coccineum Achilles**.
Pl., 1901. Half hardy. Ht. 1½ ft.
Fl. dull crimson, double; June 3
to June 18.

*****C. coccineum Beauty**.
Pl., 1901. Hardy. Ht. 1½ to 2 ft.
Fl. bright crimson, double.

C. coccineum Capt. Nares.
Pl., 1896. Half hardy.

*****C. coccineum Mont Blanc**.
Pl., 1896. Hardy. Ht. 1½ ft. Fl.
white, double; May 31 to June 27.

****C. corymbosum**, L. Europe; Caucasus,
&c.

Syn. C. Clusii.
Pl., 1902. Hardy. Ht. 3½ ft. Fl.
white with golden yellow centre;
June 21 to Aug. 4.

***C. lacustre**, BROT. Marsh Oxeye Daisy.
South-western Europe.

Syn. C. latifolium, DC.
Pl., 1897. Hardy. Ht. 2 to 2½ ft.
Fl. white; July 29 to Oct. 24.

C. lacustre grandiflorum.
Pl., 1901. Half hardy.

C. lacustre Miss Henshaw.
Pl., 1905. Half hardy.

*****C. lacustre Top Sawyer**.
Pl., 1901. Hardy. Ht. 2 to 3 ft.
Fl. white; July 24 to Oct. 24.

C. lacustre Triumph.
Pl., 1905. Tender.

C. latifolium, DC. = *C. lacustre*.

****C. Leucanthemum**, L. Oxeye Daisy.
Europe, &c.

Pl., 1903. Hardy. Ht. 2 ft. Fl.
pure white; June to July.

*****C. maximum Duchess of Abercorn**.
Pl., 1907. Ht. 1 ft. 8 in. Fl. white,
cut at ends of petals; July to
Oct.

*****C. maximum elegans**.
Pl., 1901. Hardy. Ht. 3½ ft. Fl.
white; July 12 to Oct. 17.

CHRYSANTHEMUM—Con.****C. maximum filifera.**

Pl., 1907. Ht. 1 ft. 10 in. Fl. white, petals cut at ends; July to Sept.

****C. maximum G. H. Sage.**

Pl., 1903. Hardy. Ht. 2½ to 3 ft. Fl. white; July 3 to Sept. 5.

****C. maximum grandiflorum.**

Pl., 1905. Hardy. Ht. 3 to 3½ ft. Fl. white; July 16 to Oct. 22.

****C. maximum J. Cocker.**

Pl., 1901. Hardy. Ht. 3 ft. Fl. white; July 18 to Oct. 14.

*****C. maximum King Edward.**

Pl., 1906. Ht. 2½ ft. Fl. white; July 22 to Oct. 22.

****C. maximum magnificum.**

Pl., 1901. Hardy. Ht. 2½ to 3 ft. Fl. white; July 7 to Sept. 15.

C. maximum Mikado.

Pl., 1908.

CHRYSANTHEMUM—Con.**C. maximum Mrs. Head.**

Pl., 1908.

*****C. maximum splendens.**

Pl., 1901. Hardy. Ht. 3 ft. Fl. pure white; July 12 to Oct. 14.

****C. maximum W. H. Gabb.**

Pl., 1907. Ht. 2 ft. Fl. white; July to Oct.

C. præaltum, VENT. Caucasus, &c.

Pl., 1902. Hardy. Ht. 3 ft. Fl. white; June 24 to Aug. 12.

****C. Shasta Daisy.**

Pl., 1903. Half hardy. Ht. 1½ ft. Fl. white; June 23 to Oct. 24.

C. Tchihatchewii, Hort. Kew. = *Matricaria Tchihatchewii, Hort. Kew.*

****C. uliginosum, PERS. Giant Daisy. Eastern Europe.**

Pl., 1896. Hardy. Ht. 3 to 3½ ft. Fl. white; Sept. 8 to Oct. 24.

CICUTA, L.

(*Umbelliferae.*)

C. occidentalis, DOUGL. North Amer.

Pl., 1905. Hardy. Ht. 4 ft. Fl. white; June 30 to Aug. 16.

CIMICIFUGA, L. BUGWORT.

(*Ranunculaceae.*)

C. acerina.

Pl., 1906.

*****C. americana, MICHX. North America.**

Pl., 1900. Hardy. Ht. 5½ to 6½ ft. Fl. white; July 6 to Aug. 6.

*****C. cordifolia, PURSH. North America.**

Pl., 1901. Hardy. Ht. 4 to 5½ ft. Fl. white; Aug. 10 to Oct. 1.

C. davurica, MAXIM. China, &c.

Pl., 1895. Hardy. Ht. 5 to 8 ft. Fl. white; July 20 to Aug. 15.

CIMICIFUGA—Con.**C. japonica, SPRENG. Japan.**

Syn. Actæa japonica, Thunb.

Pl., 1906. Hardy. Ht. 3 ft. Fl. white; Sept. 30 to Oct. 8.

C. japonica major.

Pl., 1908.

*****C. racemosa, NUTT. Black Snake Root. North America.**

Pl., 1895. Hardy. Ht. 6 to 6½ ft. Fl. white; July 9 to Aug. 13.

C. simplex, WORMSK. Japan.

Pl., 1905. Hardy. Ht. 2 to 2½ ft. Fl. white; Oct. 14 to Oct. 20.

CLAYTONIA, GRONOW. SPRING BEAUTY.

(*Portulacaceae.*)

C. sibirica, L. North America, North Asia.

Pl., 1903. Tender.



1. HARDY MARGUERITE—*Chrysanthemum maximum elegans*.
2. AMERICAN BUGBANE—*Cimicifuga americana*.
3. TALL PLANTAIN-LEAVED LEOPARD'S BANE—*Doronicum plantaginicum excelsum*.
4. WHITE PEACH-LEAVED BELL FLOWER—*Campanula persicifolia alba*.

CLEMATIS, DILL TRAVELLER'S JOY.

(Ranunculaceæ.)

In this bulletin, only the herbaceous clematis are described, those with woody stems not being dealt with. The herbaceous clematis are not, as a rule, tall growing, and some of them are comparatively low, and may be treated as ordinary herbaceous perennials. Most of the herbaceous kinds can be propagated from seeds without difficulty, the most useful species, *C. recta*, being one of the easiest to propagate in this way. They may also be increased by dividing the plants.

- C. connata*, DC. Himalayas.
Syn. *C. montana*, Hort.
Pl., 1907.
- ****C. coccinea*, ENGELM. Texas.
Syn. *C. Pitcheri*, Carr.
Pl., 1901. Hardy. Ht. 9 ft. Fl. scarlet outside; creamy white inside; July 4 to Oct. 11.
- C. davidiana purpurea*.
Pl., 1908.
- C. Fremonti*, S. WATSON. Kansas and Missouri.
Pl., 1905. Hardy. Ht. 1 ft. Fl. greenish yellow, purplish outside; June 14 to June 25.
- C. fusca*, TURCZ. China, Japan.
Pl., 1894. Hardy. Ht. 6 ft. Fl. dark purplish brown; July 17 to Aug. 11.
- C. heracleæfolia*, DC. China.
Syn. *C. tubulosa*, Turcz.
Pl., 1895. Hardy. Ht. 3½ ft. Fl. bluish violet; Aug. 20 to Sept. 25.
- C. heracleæfolia davidiana*.
Pl., 1895. Hardy. Ht. 3½ to 4½ ft. Fl. bluish violet; Aug. 10 to Sept. 24.
- ***C. integrifolia*, L. South Europe, &c.
Syn. *C. ovata*, Hort.
Pl., 1895. Hardy. Ht. 3 ft. Fl. violet; June 12 to Aug. 27.
- ***C. integrifolia alba*.
Pl., 1896. Hardy. Ht. 1½ to 2½ ft. Fl. white; June 21 to Aug. 29.
- C. integrifolia parvifolia*.
Pl., 1903. Hardy. Ht. 3 to 5 ft. Fl. white; June 8 to July 17.
- C. Lavalleyi*, DECNE. Japan.
Pl., 1902. Hardy. Ht. 6½ to 7 ft. Fl. pale blue, nearly white; Sept. 4 to Oct. 10.
- C. montana*, Hort. = *C. connata*, DC.
C. ovata, Hort. = *C. integrifolia*, L.
C. Pitcheri, Carr. = *C. coccinea*, Engelm.
- ****C. recta*, L. South Europe.
Pl., 1896. Hardy. Ht. 4 ft. Fl. white; mid June to late July.
- C. recta lathyrifolia*.
Pl., 1898. Hardy. Ht. 4 ft. Fl. white; June 16 to July 19.
- ****C. recta lathyrifolia glauca*.
Pl., 1898. Hardy. Ht. 4½ ft. Fl. white; June 7 to July 27.
- ***C. Stans*, SIEB. & ZUCC. Japan.
Pl., 1895. Hardy. Ht. 3½ to 4 ft. Fl. lavender; July 21 to Sept. 19.
C. tubulosa, Turcz. = *C. heracleæfolia*, DC.

CODONOPSIS, WALL.

(Campanulaceæ.)

- C. lanceolata*, BENTH. & HOOK., F. Temperate Asia.
Pl., 1897. Tender.
- **C. ovata*, BENTH. Western Himalayas.
Pl., 1905. Hardy. Ht. 1 ft. Fl. dull white veined with pale blue; purple, white and yellow at base inside.

CODONOPSIS—Con.

- C. rotundifolia*, ROYLE. Western Himalayas.
Pl., 1905. Hardy. Ht. 3½ to 4 ft. Fl. purple and white tinged with yellow; July 14 to Aug. 16.
- COLCHICUM, L. MEADOW SAFFRON.
(Liliaceæ.)
- ***C. autumnale*, L. Meadow Saffron; Autumn Crocus. Europe.
Pl., 1901. Hardy. Ht. 1 to 1½ ft. Fl. purple; Sept. 21 to Oct. 27.

CONVALLARIA, L. LILY OF THE VALLEY.*(Liliaceæ.)******C. majalis, L. Lily of the Valley.**

North temperate regions.

Pl., 1895. Hardy. Ht. 8 to 10 in.
Fl. white; May 16 to June 3.*****C. majalis Fortin.**Pl., 1898. Hardy. Ht. 8 to 10 in.
Fl. white; May.**C. majalis prolificus.**

Pl., 1906.

C. majalis variegata.Pl., 1905. Hardy. Ht. 6 in. Fl.
white; May 16 to June 17.*C. Polygonatum, L. = Polygonatum of-
ficinale.**C. Thunbergii, Steud. = Polygonatum
latifolium.**C. verticillata, L. = Polygonatum ver-
cillatum.***COPTIS, SALISB.***(Ranunculaceæ.)***C. brachypetala, SIEB. & ZUCC.** Japan
Pl., 1905. Tender.**COREOPSIS, L. TICKSEED.***(Compositæ.)****C. auriculata, L. South United States.**Pl., 1901. Hardy. Ht. 3 to 3½ ft.
Fl. golden yellow; July 21 to
Sept. 18.****C. delphinifolia, LAM. North Amer.**Pl., 1895. Hardy. Ht. 2 to 2½ ft.
Fl. golden yellow; July 7 to Oct.
17.*****C. grandiflora, NUTT. Southern United
States.**Pl., 1903. Hardy. Ht. 2½ to 3 ft.
Fl. rich golden yellow; June to
Oct.*****Coreopsis grandiflora Eldorado.**Pl., 1904. Hardy. Ht. 3 ft. Fl.
rich golden yellow. June to Oct.*****Coreopsis grandiflora Golden Fleece.**Pl., 1906. Hardy. Ht. 3 ft. Fl.
rich golden yellow; June to Oct.*****C. lanceolata, L. North America.**Pl., 1895. Hardy. Ht. 1½ to 2 ft.
Fl. rich golden yellow; June 17
to Oct. 20.**COREOPSIS—Con.****C. tripteris, L. Golden Crown. United
States.**

Pl., 1898. Half hardy.

****C. verticillata, L. North America.**Pl., 1895. Hardy. Ht. 1½ ft. Fl.
golden yellow; June 27 to Sept.
15.**CORYDALIS, VENT.***(Papaveraceæ.)*****C. bulbosa, DC. Holeywort. Europe.**Pl., 1897. Hardy. Ht. 7 in. Fl.
rosy purple; April 29 to May 13.****C. capnoides, WAHLENB. Europe.**Pl., 1901. Hardy. Ht. 1½ to 2 ft.
Fl. white and golden yellow;
May 10 to Oct. 20.**C. lutea, DC. Yellow Fumitory. Eu-
rope.**

Pl., 1905. Tender.

***C. nobilis, PERS. Siberia.**Pl., 1897. Hardy. Ht. 1 ft. Fl.
yellow; May.**CRAMBE, TOURN. KALE.***(Cruciferae.)***C. cordifolia, STEVEN. Caucasus.**

Pl., 1908.

CREPIS, L. HAWK'S BEARD.*(Compositæ.)***C. blattarioides, VILL. Europe.**

Pl., 1905. Tender.

C. sibirica, L. Europe; Asia.Pl., 1905. Hardy. Ht. 4 to 5 ft.
Fl. golden yellow; July 9 to
Aug. 21.**CYCLAMEN, L.***(Primulaceæ.)***C. europæum, L. Europe, &c.**

Pl., 1900. Tender.

CROCUS, L.*(Iridaceæ.)******C. Cultivated Varieties Mixed.**Pl., 1901. Hardy. Ht. 5 to 9 in.
Fl. white, yellow, purple, etc.

DELPHINIUM, *TOURN.* LARKSPUR.*(Ranunculaceæ.)*

The vivid colour of the flowers of most larkspurs and the great height to which many of them grow make them among the most striking of the summer flowering perennials. The small number of good blue flowering plants available also makes the larkspurs almost a necessity in the hardy border where a good colour scheme is planned. Larkspurs thrive well in almost any good loamy soil, but for best results with the tall ones and the named varieties the soil should be rich and well supplied with moisture in the middle of summer, which is their blooming season. A second bloom may be obtained by cutting the flowering stems off near the ground as soon as the first flowers are over, but this practice, by which much of the foliage is destroyed, may eventually weaken the plants. The tall larkspurs need staking, as they break down easily. The best named sorts are very fine, but they are high priced, and as excellent varieties may be obtained by planting the seed of the named ones it is more economical and more interesting to grow them from seed. If sown in the autumn or early in the spring the seed germinates readily, and fine young plants will be obtained in one season which will bloom the next. Old plants divide readily, and good kinds are propagated in this way.

****D. Bella Donna.*

Pl., 1901. Hardy. Ht. 4½ ft. Fl. sky blue; June 18 to July 28.

****D. Blue Butterfly.*

Pl., 1904. Half hardy. Ht. 1½ to 2 ft. Fl. blue; July 3 to Aug. 8.

D. cardinalis, HOOK. California.

Pl., 1905. Tender.

****D. cashmirianum*, ROYLE. Himalayas.

Pl., 1903. Hardy. Ht. 1½ to 2 ft. Fl. blue; July and Aug.

***D. cashmirianum album.*

Pl., 1905. Hardy. Ht. 1½ to 2 ft. Fl. white; July and Aug.

***D. caucasicum*, C. A. MEY. Caucasus.

Pl., 1901. Hardy. Ht. 7 to 7½ ft. Fl. deep blue; June 29 to Aug. 4.

***D. cheilanthum*, FISCH. Siberia.

Pl., 1901. Hardy. Ht. 3½ to 4 ft. Fl. deep blue; June 27 to Aug. 1.

D. chinense, Fisch. = *D. grandiflorum chinense*.

D. corymbosum, REGEL. Turkestan.

Pl., 1907.

D. crassifolium, Schrad. = *D. speciosum*.

D. cuneatum, Stev. = *D. elatum*.

D. dictyocarpum, Steud. = *D. dactyocarpum*.

D. Duhmbergi, HUTH.

Pl., 1905. Hardy. Ht. 5 ft. Fl. purple, whitish at base; July 22 to Aug. 16.

****D. dactyocarpum*, DC. Siberia.

Pl., 1905. Hardy. Ht. 5½ ft. Fl. pale blue; July 6 to Aug. 6.

****D. elatum*, L. Europe, &c.

Syn. D. cuneatum, Stev.

Pl., 1901. Hardy. Ht. 8 ft. Fl. deep blue; July 4 to Aug. 10.

D. elatum intermedium.

Pl., 1901. Hardy. Ht. 3½ ft. Fl. purplish blue; July 4 to July 23.

***D. elatum saphirum.*

Pl., 1901. Hardy. Ht. 8 ft. Fl. deep blue; June 27 to Aug. 4.

D. fissum, Waldst. & Kit. = *D. hybridum*.

****D. grandiflorum*, L. Siberia.

Syn. D. chinense.

Pl., 1901. Hardy. Ht. 2 to 3½ ft. Fl. blue; July 2 to Aug. 15.

D. grandiflorum album.

Pl., 1908.

****D. grandiflorum chinense album.*

Pl., 1903. Hardy. Ht. 3 ft. Fl. white; July and Aug.

****D. hybridum*, STEPH. Europe and Orient.

Syn. D. fissum, Waldst. & Kit.

Pl., 1898. Hardy. Ht. 4 to 5 ft. Fl. blue; June 21 to Aug. 1.

DELPHINIUM—Con.

****D. laxiflorum**, DC. Siberia.
Pl., 1895. Hardy. Ht. 4½ to 5 ft.
Fl. deep blue; June 30 to Aug. 3.

****D. maackianum**, REGEL. Amurland.
Pl., 1901. Hardy. Ht. 8 ft. Fl.
deep blue; July 6 to Aug. 29.

D. Menziesii, DC. North America.
Pl., 1908.

*****D. occidentale**, S. WATS. North-west-
ern America.

Pl., 1901. Hardy. Ht. 4 to 6 ft.
Fl. deep blue; June 29 to July
30.

D. speciosum, BIEB. Caucasus.

Syn. D. crassifolium, Schrad.

Pl., 1902. Half hardy.

DELPHINIUM—Con.

D. speciosum glabratum.
Pl., 1905. Tender.

D. speciosum trichocarpum.
Pl., 1901. Hardy. Ht. 3½ ft. Fl.
dull bluish purple; June 27 to
July 14.

D. tatsienense, FRANCH. China.
Pl., 1901. Hardy. Ht. 2 ft. Fl.
blue; July 14 to Aug. 18.

D. triste, FISCH. Siberia.
Pl., 1905. Hardy. Ht. 2½ to 3 ft.
Fl. dark brown; June 23 to July
20.

D. vestitum, WALL. Himalayas.
Pl., 1908.

DIANTHUS, L. PINK, CARNATION.

(*Caryophyllaceæ.*)

There are few flowers with as delicate and agreeable a fragrance as the pink and carnation, and a garden without at least a few of the hardiest species and varieties would be lacking some of the most useful plants. The number of hardy wild species is very numerous, there being over one hundred, but of these there are a few which are distinctly better than the others. The Garden Pink, *Dianthus plumarius*, is the parent of many of the best cultivated varieties. Some of these are hardier than others. the double white variety Mrs. Sinkins appearing to be the hardiest of the doubles; in fact it is the only cultivated named variety of the Garden Pink, of those tested at Ottawa, which may be called hardy, the others being either tender or comparatively short lived.

The carnation was derived from *D. Caryophyllus*. It is tenderer than the Garden Pink, though with care it can be carried over at least one winter. The so-called Alpine pinks have, for the most part, comparatively small flowers, but many of them are quite hardy. Some of these are not scented.

The pinks and carnations may be propagated from seeds, layers, or cuttings, the seeds usually germinating well and the cuttings and layers striking readily. For best results pinks should be planted in warm, well drained soil, which will dry off quickly in the spring but which will retain moisture during the summer. The early spring is the critical time with pinks. They should be protected with a light, loose covering of straw in the autumn to guard them against the sudden changes of temperature in winter or spring when the ground is bare and they are in a soft condition.

****D. anatolicus**, BOISS. Asia Minor ;
Thibet.
Pl., 1905. Hardy. Ht. 12 to 16 in.
Fl. white with a pink tinge ;
June 14 to July 22.

D. ambiguus, PANC. Europe.
Pl., 1905. Half hardy.

****Dianthus arenarius**, L. Europe.
Pl., 1894. Hardy. Ht. 1 ft. Fl.
white; June 13 to July 13.

D. atrorubens, ALL. South Europe.
Pl., 1904. Tender.

D. brachyanthus, BOISS. Spain.
Pl., 1907.

****D. cæsius**, SM. Cheddar Pink. Europe.
Pl., 1903. Hardy. Ht. 6 in. Fl.
rosy pink; June 17 to July 13.

D. cæsius Bickham.
Pl., 1907.

DIANTHUS—*Con.*

- D. calocephalus*, BOISS. Asia Minor.
Pl., 1907.
- D. Carthusianorum*, L. Europe, &c.
Pl., 1904. Tender.
- ****D. chinensis*, L. Central Asia.
Syn. D. montanus, Bieb.
Pl., 1905. Hardy. Ht. 15 to 18 in.
Fl. white and pale pink; July 11
to July 30.
- ***D. ciliatus*, GUSS. Italy, &c.
Pl., 1895. Hardy. Ht. 1 ft. 4 in.
Fl. white with traces of pink
about centre; June 5 to July 14.
- **D. controversus*, GANUD.
Pl., 1901. Hardy. Ht. 1 ft. Fl.
pink with spots of crimson about
centre; June 11 to July 9.
- D. crinitus*, SM. Asia Minor.
Pl., 1907.
- D. cruentus*, GRISEB. Greece, &c.
Pl., 1904. Tender.
- ***D. deltoides*, L. Maiden Pink. Eu-
rope, &c.
Pl., 1901. Hardy. Ht. 8 to 12 in.
Fl. rosy crimson with darker line
about centre; June 13 to Aug. 23.
- ***D. deltoides glaucus*.
Pl., 1903. Hardy. Ht. 6 in. Fl.
much resembling *D. deltoides*;
June 19 to Aug. 16.
- ***D. furcatus*, BALB. Piedmont.
Pl., 1905. Hardy. Ht. 1½ to 2 ft.
Fl. white with crimson centre;
June 22 to Aug. 7.
- D. giganteus*, URV. Eastern Europe.
Pl., 1903. Half hardy.
- D. glaucus*, L. = *D. deltoides glaucus*.
- **D. hirtus*, VILL. France.
Pl., 1904. Hardy. Ht. 9 to 12 in.
Fl. white tinged with pale pink;
June 15 to July 9.
- D. liburnicus*, BARTL. & WENDL. South
Europe.
Pl., 1907.
- D. marsicus*, Tenore = *D. monspessu-
lanus*.
- **D. monspessulanus*, L. South Europe.
Syn. D. marsicus, Tenore.
Pl., 1901. Hardy. Ht. 1½ ft. Fl.
magenta; July 4 to Sept. 29.

DIANTHUS—*Con.*

- D. montanus*, Bieb. = *D. chinensis*, L.
- D. pelviformis*, HEUFF. Servia, &c.
Pl., 1905. Hardy. Ht. 1½ to 2 ft.
Fl. mauve; June 17 to July 5.
- ***D. plumarius*, L. Europe, &c.
Pl., 1898. Hardy. Ht. 16 to 18 in.
Fl. pink, paler at centre; June
11 to Aug. 6.
- D. pinifolius*, SIBTH. & SM. Greece.
Pl., 1903. Half hardy.
- D. plumarius flore pleno*.
Pl., 1895. Hardy.
- ****D. plumarius Mrs. Sinkins*.
Pl., 1895. Hardy. Ht. 1 ft. Fl.
white; June 14 to July 21.
- D. Sternbergii*, SIBTH. Crimea.
Pl., 1907.
- D. rupicolus*, Jord. = *D. sylvestris*.
- ***D. Seguieri*, VILL. Europe, &c.
Pl., 1895. Hardy. Ht. 18 to 20 in.
Fl. rosy crimson; June 27 to
Sept. 2.
- D. Seguieri montanus*.
Pl., 1905. Hardy. Ht. 1½ to 2 ft.
Fl. rosy magenta, paler in cen-
tre; July 13 to Oct. 20.
- D. squarrosus*, BIEB. Crimea, &c.
Pl., 1901. Hardy. Ht. 1 ft. Fl.
white, faint pink about centre;
June 9 to July 23.
- ***D. sylvestris*, WULF. Europe.
Syn. D. rupicolus, Jord.
Pl., 1901. Hardy. Ht. 1½ to 2 ft.
Fl. lilac pink; July 29 to Sept.
29.
- ***D. symphrestens*.
Pl., 1905. Hardy. Ht. 1 to 1½ ft.
Fl. white with a pink tinge and
with crimson centre; June 19 to
Oct. 10.
- ***D. tener*, BALB. Piedmont.
Pl., 1896. Hardy. Ht. 1 ft. 3 in.
Fl. white with lilac or crimson
about centre; June 7 to July 14.
- D. Waldsteinii*, STERNB. Eastern Alps.
Pl., 1904. Half hardy.

DICENTRA, BERNH.*(Papaveraceæ.)*

- ****D. eximia**, TORR. North America.
Pl., 1898. Hardy. Ht. 1½ ft. Fl.
bright crimson pink shading
paler; June 9 to Aug. 8.
- ****D. formosa**, WALP. North-western Ame-
rica.
Pl., 1895. Hardy. Ht. 1 to 2 ft.
Fl. crimson pink shading lighter;
May 3 to Aug. 27.
- *****D. spectabilis**, LEM. Bleeding Heart.
Japan and China.
Pl., 1895. Hardy. Ht. 2½ to 3 ft.
Fl. crimson and white; May 12
to July 7.
- ***D. spectabilis, alba.**
Pl., 1895. Hardy. Ht. 2½ ft. Fl.
creamy white tinged with pink.

DICTAMNUS, L. GAS PLANT, FRAXINELLA.
(Rutaceæ.)

- *****D. albus**, L. Fraxinella. Europe, &c.
Pl., 1895. Hardy. Ht. 2 to 2½ ft.
Fl. white; June 2 to June 29.
- ****D. albus purpureus.** Burning Bush.
Pl., 1895. Hardy. Ht. 2½ to 3½ ft.
Fl. pale purple and rosy purple;
June 1 to June 30.
- D. albus caucasicus.**
Pl., 1901. Hardy. Resembles *D.*
albus purpureus.
- D. Fraxinella, Pers. = D. albus, L.*
- D. giganteus.**
Pl., 1908.

DIGITALIS, L. FOXGLOVE.*(Schropulariaceæ.)*

- ***D. ambigua**, MURR. Europe, &c.
Syn. D. grandiflora, Lam.
Pl., 1898. Hardy. Ht. 3 to 3½ ft.
Fl. dull yellow; June 21 to
Aug. 15.
- D. argyrostigma.**
Pl., 1907.
- D. eriostachya**, BESS. Hab?
Pl., 1905. Hardy. Ht. 5½ ft. Fl.
pale greenish yellow; June 25 to
Aug. 6.

DIGITALIS—Con.

- D. Fontanesii**, STEUD.
Origin uncertain.
Pl., 1907.
- D. grandiflora, Lam. = D. ambigua.*
- D. lævigata**, WALDST. & KIT. Eastern
Europe.
Pl., 1907.
- D. lutea**, L. Europe.
- D. lindleyana**, TAUSCH.
Pl., 1907.
Syn. D. micrantha, Roth.
Pl., 1901. Hardy. Ht. 3½ to 4 ft.
Fl. pale greenish yellow; June
24 to Aug. 4.
- D. mariana**, BOISS. Spain.
Pl., 1907.
- D. micrantha, Roth = D. lutea.*
- D. media**, ROTH. South Europe.
Pl., 1901. Hardy. Ht. 3½ to 4½ ft.
Fl. pale yellow; June 26 to July
21.
- D. sibirica**, LINDL. Siberia.
Pl., 1907.
- ***D. Thapsi**, L. Spain.
Pl., 1903. Half hardy. Ht. 4 ft.
Fl. rosy purple to paler; June
20 to July 20.
- D. tomentosa**, LINK AND HOFFMGG. Por-
tugal.
Pl., 1903. Tender.
- DORONICUM, TOURN. LEOPARD'S BANE.**
(Compositæ.)
- D. austriacum**, JACQ. Europe.
Pl., 1901. Hardy. Ht. 2 ft. Fl.
golden yellow; May 13 to June
12.
- *****D. caucasicum**, BIEB. Europe, &c.
Pl., 1895. Hardy. Ht. 18 in. Fl.
golden yellow; May 4 to June 12.
- D. Clusii, Tausch. = D. glaciale, Nym.*
- D. Columnæ**, TENORE. South Europe,
&c.
Pl., 1905. Hardy. Ht. 18 in. Fl.
golden yellow; May 28 to June
18.

DORONICUM—*Con.*

D. glaciale, NYM. Europe.

Syn. D. Clusii, Tausch.

Pl., 1898. Half hardy. Ht. 2 ft.
Fl. golden yellow; May 10 to June.

D. magnificum, PERRY.

Resembles D. plantagineum excelsum.

****D. plantagineum excelsum.*

Pl., 1895. Hardy. Ht. 3 ft. Fl.
golden yellow; May 13 to June 13.

D. plantagineum Harpur Crewe = *D. plantagineum excelsum.*

DRACOCEPHALUM, L. DRAGON'S HEAD.

(*Labiatae.*)

D. argunense, Fisch. = *D. Ruyschiana*, L.

***D. integrifolium*, BUNGE. Siberia.

Pl., 1905. Hardy. Ht. 1½ ft. Fl.
bluish purple; June 22 to Aug. 16.

***D. Ruprechtii*, REGEL. Tibet and Turkestan.

Pl., 1907. Hardy. Ht. 1 ft. Fl.
pale bluish purple; July 11 to Aug. 20.

****D. Ruyschiana*, L. Europe, &c.

Syn. D. argunense, Fisch.

Pl., 1901. Hardy. Ht. 1 to 2 ft.
Fl. purplish blue; June 11 to Aug. 1.

D. virginicum, L. = *Physostegia virginiana.*

ECHINACEA, MCENCH. PURPLE CONE-FLOWER.

(*Compositae.*)

**E. angustifolia*, DC. North America.

Pl., 1901. Hardy. Ht. 4 ft. Fl.
rosy purple; July 30 to Oct. 1.

ECHINACEA—*Con.*

****E. purpurea*, MCENCH. North America.

Syn. Rudbeckia purpurea, L.

Pl., 1898. Hardy. Ht. 2½ to 3 ft.
Fl. lilac rose to reddish purple;
July 23 to Oct. 8.

****E. purpurea* Winchmore Hill.

Pl., 1901. Hardy. Ht. 3 ft. Fl.
bright reddish purple; July 18
to Sept. 29.

ECHINOPS, L. GLOBE THISTLE.

(*Compositae.*)

**E. exaltatus*, SCHRAD. Hungary.

Syn. E. globifer, Janka.

Pl., 1902. Hardy. Ht. 7 to 7½ ft.
Fl. dull white; Aug. 10 to Sept. 8.

E. giganteus, Hort. = *E. sphærocephalus.*

E. globifer, Janka = *E. exaltatus*, Schrad.

E. horridus, Link. = *E. sphærocephalus.*

E. monstrosus.

Pl., 1908.

E. niveus, WALL. Western Himalayas.

Pl., 1897. Hardy. Ht. 6 ft. Fl.
in heads, dull white; July 20 to Aug. 27.

***E. Ritro*, L. Mediterranean region.

Pl., 1898. Hardy. Ht. 3½ ft. Fl.
bluish violet; July 27 to Sept. 19.

***E. sphærocephalus*, L. Europe, &c.

Syns. E. horridus, Link.; *E. ruthenica*, Reichb.; *E. giganteus*, Hort.

Pl., 1897. Hardy. Ht. 6½ to 7 ft.
Fl. in large heads, lavender,
changing to white; July 24 to Aug. 22.

EPILOBIUM, DILL. WILLOW HERB.

(*Onagraceae.*)

E. hirsutum, L. Codlins and Cream. Europe, &c.

Pl., 1898. Hardy. Ht. 3 to 5 ft.
Fl. magenta; July 7 to Sept. 12.

EPIMEDIUM, L. BARRENWORT.*(Berberidaceæ.)*

A few words regarding this charming genus are desirable, as the barrenworts are comparatively little grown in Canadian gardens. They bloom during the latter part of May when flowers are much appreciated and when there are fewer good herbaceous perennials in bloom than later on. They are graceful little plants with small delicate flowers of attractive colours, and having long stems they are very useful for cutting. The foliage, which has a bronzy tinge, goes well with the flowers when cut. Epimediums succeed well in average garden soil, and while they will do best in a partially shaded place they give good satisfaction in bright sunlight. They may be increased readily by dividing the clumps.

****E. alpinum rubrum.**

Pl., 1898. Half hardy. Ht. 7 to 15 in. Fl. crimson and white; May 13 to June 2.

E. angustifolium.

Pl., 1895. Half hardy. Ht. 8 to 12 in. Fl. white; May 11 to May 22.

****E. grandiflorum.**

Pl., 1905. Hardy. Ht. 5 to 12 in. Fl. white; May 19 to June 8.

*****E. Ikariso.**

Pl., 1895. Hardy. Ht. 6 to 12 in. Fl. white; May 10 to May 25.

E. macranthum, MORR & DECNE. Japan.

Pl., 1897. Half hardy. Ht. 6 in. Fl. bright red and violet; May.

E. macranthum album.

Pl., 1906.

***E. macranthum violaceum.**

Syn. E. violaceum, Morr & Decne.

Pl., 1905. Hardy. Ht. 8 in. Fl. pinkish violet; May 16 to June 6.

E. muschianum, MORR. & DECNE. Japan.

Pl., 1895. Hardy. Ht. 12 to 15 in. Fl. dull white; May 13 to May 31.

E. muschianum rubrum.

Pl., 1895. Hardy. Ht. 1 ft. Fl. crimson and dull white; May 10 to May 31.

E. niveum = E. macranthum niveum.

E. macranthum niveum.

Syn. E. niveum.

Pl., 1900. Half hardy. Ht. 9 to 12 in. Fl. white; May 11 to June 6.

E. perralderianum, Coss. Algeria.

Pl., 1908.

*****E. pinnatum, FISCH. Persia.**

Syn. E. sulfureum, Hort.

Pl., 1895. Hardy. Ht. 12 to 18 in. Fl. yellow; May 8 to June 15.

***E. pinnatum Colchicum.**

Pl., 1897. Hardy. Ht. 12 to 15 in. Fl. yellow; May 10 to June 3.

E. pulchellum.

Pl., 1908.

*****E. rubrum, MORR. Japan.**

Pl., 1895. Hardy. Ht. 14 to 18 in. Fl. bright crimson and pale yellow; May 8 to May 25.

E. sulfureum, Hort. = E. pinnatum.

E. violaceum, Morr. & Decne. = E. macranthum violaceum.

EREMURUS, BIEB.*(Liliaceæ.)****E. altaicus, STEV. Siberia, &c.**

Pl., 1894. Hardy. Ht. 6 to 7 ft. Fl. golden yellow; June 23 to July 14.

E. robustus, REGEL. Turkestan.

Pl., 1900. Tender.

ERIGERON, L. FLEABANE.*(Compositæ.)***E. aurantiacus, REGEL. Orange Daisy. Turkestan.**

Pl., 1897. Tender.

E. Coulteri, PORTER & COULTER. North-western America.

Pl., 1902. Tender.

ERIGERON—Con.

- ***E. glabellus*, NUTT. North America.
Pl., 1898. Hardy. Ht. 8 to 18 in.
Fl. lilac; June 26 to Aug. 1.
- **E. grandiflorus albus*.
Pl., 1898. Hardy. Ht. 8 to 10 in.
Fl. white; June 13 to July 6.
- ***E. macranthus*, NUTT. North-western
America.
Pl., 1895. Hardy. Ht. 15 to 18 in.
Fl. lavender blue; June 16 to
July 28.
- E. salsuginosus*, GRAY. North-western
America.
Syn. Aster salsuginosus, Rich.
Pl., 1903. Half hardy. Ht. 18 in.
Fl. violet purple; June.
- E. species. (?)*
Pl., 1908.
- ***E. speciosus*, DC. Fleabane. North
western America.
Pl., 1895. Hardy. Ht. 1 to 1½ ft.
Fl. lavender; July 4 to Aug. 8.
- E. speciosus major*.
Pl., 1895. Half hardy.
- E. speciosus splendens*.
Pl., 1908.
- ****E. speciosus superbus*.
Pl., 1905. Hardy. Ht. 3 ft. Fl.
deep lavender; July 3 to Aug. 16.

ERYNGIUM, L. ERYNGO, SEA HOLLY.
(*Umbelliferae.*)

- ***E. alpinum*, L. Alpine Sea Holly. Eur.
Pl., 1901. Hardy. Ht. 2½ ft. Fl.
metallic blue; June 20 to July 28.
E. aquaticum, L. = *E. yuccæfolium*.
- E. Bourgati*, GOUAN. Spain.
Pl., 1901. Tender.
- E. dichotomum*, DESF. Mediterranean
region.
Pl., 1902. Hardy. Ht. 2½ to 3 ft.
Fl. blue; Aug.
- E. giganteum*, BIEB. Armenia.
Pl., 1898. Tender.
- E. oliverianum*, DELAR. Orient.
Pl., 1898. Hardy. Ht. 5 ft. Fl.
blue; July 23 to Sept. 21.

ERYNGIUM—Con.

- E. planum*, L. Europe, &c.
Pl., 1898. Half hardy.
- E. yuccæfolium*, MICHX. North Amer.
Syn. E. aquaticum, L.
Pl., 1898. Tender.
- ERYSIMUM, L. PERENNIAL WALL-FLOWER.**
(*Cruciferae.*)
- E. ochroleucum helveticum*.
Pl., 1903. Tender.
Erythrochæte palmatifida = *Senecio
japonicus.*
- EULALIA. See MISCANTHUS.**
- EUPATORIUM, L. HEMP AGRIMONY.**
(*Compositæ.*)
- **E. ageratoides*, L. White Snake-root.
North America.
Pl., 1898. Hardy. Ht. 3 to 4 ft.
Fl. white; Aug. and Sept.
- E. occidentale*, HOOK. Western North
America.
Pl., 1898. Hardy. Ht. 1 to 2 ft.
F. dull pink; July 17 to Aug. 29.
- E. purpureum*, L. Joe-Pyeweed. North
America.
Pl., 1898. Hardy. Ht. 4 ft. Fl.
purple; Aug. 13 to Sept. 24.

EUPHORBIA, L. SPURGE.

(Euphorbiaceæ.)

- ****E. corollata*, L. Flowering Spurge.
North America.
Pl., 1895. Hardy. Ht. 2 to 3 ft.
Fl. white; June 30 to Oct. 10.
- E. epithymoides*, L. Europe.
Syn. E. polychroma, Kern.
Pl., 1908.
- E. pilosa major*.
Pl., 1908.
- E. polychroma*, Kern. = *E. epithymoi-
des.*
- E. species. (?)*
Pl., 1908.

FESTUCA, L. FESCUE GRASS.
(*Gramineæ.*)

- **F. glauca*, L. Europe.
Pl., 1895. Hardy. Ht. 1 ft.

FRAGARIA, L. STRAWBERRY.

(Rosaceæ.)

F. chilensis, DUCHESNE. West Coast of America.

Pl., 1895. Hardy.

F. virginiana, DUCHESNE. Scarlet or Virginian Strawberry. North America.

Pl., 1896. Hardy.

FRITILLARIA, L. FRITILLARY.

(Liliaceæ.)

****F. aurea, SCHOTT.** Asia Minor.

Pl., 1901. Hardy. Ht. 8 in. Fl. yellow; May 1 to May 16.

***F. camschatcensis, KER-GAWL.** North Asia.*Syn. Lilium kamschatkense, Hoffmgg.*

Pl., 1901. Hardy. Ht. 1 ft. Fl. dark purplish brown; May 18 to June 15.

****F. delphinensis Moggridgei.**

Pl., 1901. Hardy. Ht. 1 ft. Fl. bright yellow spotted with reddish brown; April 27 to May 16.

FRITILLARIA—Con.*****F. Imperialis, L.** Crown Imperial. Orient.

Pl., 1897. Half hardy. Ht. 2 to 3 ft. Fl. yellow to crimson. Many named varieties; April 29 to May 25.

F. lanceolata, PURSH. North-western America.

Pl., 1901. Hardy. Ht. 1 to 1½ ft. Fl. pale purple; May.

F. libanotica, BAKER. Syria.

Pl., 1900. Half hardy.

F. lutea, MILL. Caucasus, &c.

Pl., 1900. Hardy. Ht. 6 to 12 in. Fl. greenish yellow; May.

****F. persica, L.** Asia Minor.

Pl., 1900. Hardy. Ht. 1 ft. Fl. lilac purple. May.

F. plurifolia, TORR. California.

Pl., 1900. Half hardy.

F. pyrenaica, L. Pyrenees.

Pl., 1900. Half hardy.

F. recurva, BENTH. California.

Pl., 1901. Half hardy.

FUNKIA, SPRENG. PLANTAIN LILY, DAY LILY.

(Liliaceæ.)

The funkias are grown more for their foliage than for their flowers, and they are very desirable plants to have where foliage effects are wanted. The leaves, when the plants are well grown, are large and they vary in colour from attractive shades of green to bluish, and, in some varieties, are variegated with white or yellow. The flowers while helping to make the plants more effective are not particularly attractive, the best in this respect being *Funkia subcordata*, which, taking everything into consideration, is the most desirable species. The soil for funkias should be rich and of good depth as, to be most effective, the plants should remain in one place for a long time. A good supply of moisture is also essential. Funkias are usually increased by dividing the clumps.

F. albo-marginata, Hook. = *F. lancifolia albo-marginata.****F. Aoki.**

Pl., 1898. Hardy. Ht. 3 ft. Fl. white tinged with lavender; June 20 to Aug. 15.

F. aurea = *F. ovata aurea.**F. cærulea, Sweet.* = *F. ovata.**F. cucullata, Siebold.* = *F. Fortunei.**F. forma fol. albo var. resembles F. lancifolia stricta.*****F. Fortunei, BAKER.** Japan.*Syn. F. cucullata, Siebold.*

Pl., 1897. Hardy. Ht. 1½ to 2 ft. Fl. pale lilac; July 9 to July 30.

****F. Fortunei variegata.**

Pl., 1897. Hardy. Ht. 1½ ft. Fl. white. Fol. glaucous and yellow; June 21 to July 23.

FUNKIA—Con.

- F. glauca*, SIEB. Japan.
Pl., 1898. Hardy. Ht. 3 to 3½ ft.
Fl. white; July 12 to Aug. 22.
- F. grandiflora*, Sieb. & Zucc. = *F. subcordata*.
- F. japonica gigantea alba* = *F. lancifolia gigantea alba*.
- F. japonica fol. aur. var. resembles F. ovata aurea*.
- F. japonica gigantea resembles F. sieboldiana marmorata*.
- **F. lancifolia*, SPRENG. Japan.
Pl., 1895. Hardy. Ht. 3 ft. Fl. bluish violet suffused with white; Aug. 4 to Sept. 17.
- **F. lancifolia argentea stricta*.
Pl., 1897. Hardy. Ht. 1½ to 2½ ft.
Foliage variegated.
- **F. lancifolia gigantea alba*.
Pl., 1898. Hardy. Ht. 1½ to 2 ft.
Fl. white; Aug. 7 to Aug. 29.
- **F. lancifolia undulata medio var.*
Syn. F. undulata medio var.
Pl., 1898. Hardy. Ht. 2½ to 4 ft.
Fol. with white margin.
- F. liliiflora*, Hort. = *F. subcordata*.
- F. maculata resembles F. lancifolia*.
Pl., 1895. Hardy. Ht. 2½ to 3 ft.
- F. minor alba resembles F. lancifolia gigantea alba*.
- ***F. ovata*, SPRENG. Japan.
Syn. F. cœrulea, Sweet.
Pl., 1898. Hardy. Ht. 2½ to 3 ft.
Fl. bluish purple and white; July 20 to Aug. 7.
- **F. ovata aurea*.
Syn. F. aurea.
Pl., 1897. Hardy. Ht. 2½ to 3 ft.
Foliage yellowish.
- ***F. ovata argentea vittata*.
Pl., 1898. Hardy. Ht. 3 to 3½ ft.
Foliage variegated green and whitish.

FUNKIA—Con.

- **F. ovata aurea striata*.
Pl., 1898. Hardy. Ht. 3 ft. Fol. yellowish.
- **F. ovata fol. aureo var.*
Pl., 1897. Hardy. Ht. 3 ft. Fol. yellow and green.
- ***F. ovata Large-leaved*.
Pl., 1898. Hardy. Ht. 3½ to 4 ft.
Fl. white; July 17 to Aug. 10.
- **F. ovata univittata*.
Pl., 1898. Hardy. Ht. 2½ to 3 ft.
Fl. bluish lilac. July 12 to Aug. 11.
- ***F. ovata variegata*.
Syn. F. spathulata fol. var.
Pl., 1898. Hardy. Ht. 2½ to 4 ft.
Fl. bluish violet suffused with white; Fol. variegated green and white; July 12 to Sept. 8.
- ***F. sieboldiana*, HOOK. Japan.
Pl., 1894. Hardy. Ht. 2½ to 3 ft.
Fl. pale lilac and white; July 21 to Aug. 22.
- ****F. sieboldiana fol. luteis marmorata*.
Pl., 1894. Hardy. Ht. 3 ft. Fl. pale lilac, almost white; foliage variegated with yellow.
- F. sinensis*, Siebold. = *F. sieboldiana marmorata*.
- F. sinensis marmorata* = *F. sieboldiana marmorata*.
- F. spathulata fol. var.* = *F. ovata variegata*.
- ****F. subcordata*, SPRENG. Corfu Lily. Japan.
Syns. F. grandiflora, Sieb. & Zucc.;
F. liliiflora, Hort.
Pl., 1895. Hardy. Ht. 1½ to 2½ ft.
Fl. white; Aug. 27 to Oct. 1.
- F. subcordata liliiflora* = *F. subcordata*.
- F. undulata medio var.* = *F. lancifolia undulata medio var.*
- F. univittata* = *F. ovata univittata*.
- F. viridis resembles F. ovata*.

GAILLARDIA, FOUGER. BLANKET FLOWER.*(Compositæ.)******G. aristata**, PURSH. Blanket Flower. North America.

Syn. F. grandiflora, Hort.
Pl., 1895. Hardy. Ht. 2 ft. Fl. yellow. Many named varieties varying in colour from yellow to crimson; June 11 to Oct. 20.

*****G. aristata**, PURSH. Blanket Flower. Pl., 1904. Hardy. Ht. 1 to 1½ ft. Flowers in many shades. More compact than the species.

GALANTHUS, L. SNOWDROP.*(Amaryllidaceæ.)*

****G. cilicicus**, BAKER. Cilicia. Pl., 1900. Hardy. Ht. 4 to 6 in. Fl. white; April to May.

*****G. Elwesii**, HOOK, F. Asia Minor. Pl., 1901. Hardy. Ht. 6 in. Fl. white; April to May.

*****G. nivalis**, L. Common Snowdrop. Europe. Pl., 1908. Hardy. Ht. 4 to 6 in. Fl. white; April to May.

GALEGA, TOURN. GOAT'S RUE.*(Leguminosæ.)*

G. biloba splendens = *G. officinalis splendens*.

***G. officinalis**, L. Goat's Rue. Europe, &c. Pl., 1897. Hardy. Ht. 2 to 3 ft. Fl. purplish blue; July and Aug.

****G. officinalis alba**. Pl., 1901. Hardy. Ht. 2½ ft. Fl. white; July 3 to Aug. 25.

****G. officinalis compacta alba**. Pl., 1905. Hardy. Ht. 1 to 2 ft. Fl. white; July 6 to Sept. 1.

G. officinalis splendens.
Syn. G. biloba splendens.
Pl., 1908.

***G. orientalis**, LAM. Caucasus. Pl., 1895. Hardy. Ht. 2 to 3 ft. Fl. mauve; June 7 to July 28.

G. patula, STEV. Tauria. Pl., 1903. Tender.

GALTONIA, DECNE. GIANT SUMMER HYACINTH.*(Liliaceæ.)*

*****G. candicans**, DECNE. South Africa. *Syn. Hyacinthus candicans*. Pl., 1898. Hardy. Ht. 3 to 4 ft. Fl. white; Aug. 22 to Oct. 8.

GENTIANA, TOURN. GENTIAN.*(Gentianaceæ.)*

G. alba, MUHL. North America. Pl., 1905. Hardy. Ht. 1½ to 2 ft. Fl. dull white tinged with purple and with greenish spots; July 17 to Aug. 7.

G. asclepiadea, L. Willow Gentian. Europe. Pl., 1895. Hardy. Ht. 2 ft. Fl. deep blue; July 1 to Aug. 6.

G. cernua, H. B. & K. Ecuador. Pl., 1907.

****G. excisa**, KOCH. Europe. Pl., 1895. Hardy. Ht. 1½ to 2 ft. Fl. bright blue; July 9 to Sept. 1.

G. Fetisowi, REGEL & WINKLER. Turkestan. Pl., 1895. Hardy. Ht. 1½ ft. Fl. deep blue; June 11 to Aug. 5.

G. Kesselringi, REGEL. Turkestan. Pl., 1905. Half hardy.

G. macrophylla, PALL. Siberia. Pl., 1906.

***G. Pneumonante**, L. Calathian Violet. Europe, &c. Pl., 1895. Hardy. Ht. 6 to 12 in. Fl. deep blue; July.

G. scabra Buergeri. Pl., 1897. Hardy. Ht. 8 in. Fl. deep blue.

G. septemfida, PALL. Caucasus, &c. Pl., 1907.

G. tibetica, KING. Himalayas, &c. Pl., 1902. Hardy. Ht. 1½ to 2 ft. Fl. blue; July 4 to July 24.

GERANIUM, L. CRANES-BILL.

(Geraniaceæ.)

- G. aconitifolium*, L'Hérit = *G. rivulare*, Vill.
- ***G. armenum*, BOISS. Orient.
Pl., 1897. Hardy. Ht. 1 ft. 8 in.
Fl. rosy purple, black at base;
June 3 to July 9.
- G. balkanum*, Hort. = *G. macrorrhizon*, L.
- G. bohemicum*, L. Bohemia.
Pl., 1907.
- G. cinereum*, CAV. Pyrenees.
Pl., 1905. Hardy. Ht. 2 to 2½ ft.
Fl. pale red with darker stripes.
- ***G. Endressi*, J. GRAY. Pyrenees.
Pl., 1895. Hardy. Ht. 1½ to 2½ ft.
Fl. rosy purple with darker veins;
June 6 to July 27.
- G. gymnocaulon*, DC. = *G. ibericum*, Cav.
- ***G. ibericum*, CAV. Iberian Cranes-bill.
Caucasus.
Syn. G. gymnocaulon, DC.
Pl., 1901. Hardy. Ht. 1½ ft. Fl.
bluish violet and purple; June
2 to July 11.
- ***G. ibericum platypetalum*.
Pl., 1895. Hardy. Fl. larger than
G. ibericum.
- **G. ibericum platypetalum album*.
Pl., 1895. Hardy. Ht. 2½ ft. Fl.
white; June 17 to July 21.
- **G. incisum*, NUTT. North America.
Pl., 1897. Hardy. Ht. 2 ft. 3 in.
Fl. magenta lilac, with paler
markings in places; May 28 to
July 16.
- **G. Londesii*, FISCH. Siberia.
Pl., 1895. Hardy. Ht. 2½ to 3½ ft.
Fl. purple and violet; June 13
to July 21.
- **G. macrorrhizon*, L. Eastern Europe.
Syns. G. balkanum, Hort.; *G. pel-*
tatum.
Pl., 1901. Hardy. Ht. 1 ft. Fl.
magenta; May 28 to June 27.

GERANIUM—Con.

- ***G. maculatum*, L. Wild or Spotted
Cranes-bill. North America.
Pl., 1894. Hardy. Ht. 1 ft. Fl.
lilac or rosy; May 21 to June 24.
- G. nepalense*, SWEET. Nepal Cranes-
bill. India, &c.
Pl., 1901. Hardy. Ht. 1 to 1½ ft.
Fl. fosey purple; June 3 to July
14.
- G. peltatum* = *G. macrorrhizon*.
- **G. pratense album*.
Pl., 1897. Hardy. Ht. 3½ ft. Fl.
white, with traces of bluish
purple; June 13 to July 11.
- **G. pratense flore pleno*.
Pl., 1895. Hardy. Ht. 3 ft. Fl.
double, bluish purple.
- G. rivulare*, VILL. Europe.
Syn. G. aconitifolium, L'Hérit.
Pl., 1897. Hardy. Ht. 14 to 20 in.
Fl. white; May 16 to July 4.
- G. rotundifolium*, L. Round-leaved
Cranes-bill.
Syn. G. viscidulum, Fries.
Pl., 1907.
- ***G. sanguineum*, L. Europe, &c.
Pl., 1895. Hardy. Ht. 18 to 20 in.
Fl. deep magenta; May 29 to
Aug. 15.
- ***G. sanguineum album*.
Pl., 1903. Hardy. Ht. 15 to 18 in.
Fl. white; June 3 to July 9.
- ***G. sanguineum lancastricense*.
Pl., 1897. Hardy. Ht. 12 to 15 in.
Fl. rosy magenta; June 4 to
Aug. 6.
- G. sylvaticum*, L. Europe, &c.
Pl., 1901. Hardy. Ht. 2½ to 3 ft.
Fl. purple; May 26 to July 2.
- G. sylvaticum flore pleno*.
Pl., 1899. Hardy. Ht. 2½ to 3½ ft.
Fl. double, rosy purple; July 11
to Aug. 22.
- G. viscidulum*, Fries. = *G. rotundifo-*
lium.
- G. Wilfordi*, MAXIM. Mandshuria.
Pl., 1897. Hardy. Ht. 2 ft. Fl.
white; June 30 to Aug. 18.

GEUM, L. AVENS.*(Rosaceæ.)****G. coccineum atrosanguineum flore pleno.**

Pl., 1901. Hardy. Ht. 1 ft. Fl. double, scarlet; June 20 to July 19.

***G. coccineum plenum.**

Pl., 1901. Half hardy. Ht. 1 ft. Fl. double, scarlet; June 13 to Aug. 4.

***G. Eweni, HORT.**

Pl., 1901. Hardy. Ht. 1 ft. Fl. orange; May 26 to June 23.

***G. chilense miniatum.**

Pl., 1901. Hardy. Ht. 1½ ft. Fl. orange scarlet; May 29 to June 22.

***G. montanum maximum.**

Pl., 1901. Hardy. Ht. 12 to 20 in. Fl. golden yellow; May 16 to June 16.

G. radiatum, MICHX. North America.

Pl., 1895. Hardy. Ht. 1 ft. Fl. yellow; July.

G. strictum, AIT. North Temperate regions.

Pl., 1902. Hardy. Ht. 3 ft. Fl. yellow; July 17 to Sept. 21.

G. triflorum, PURSH. North America.

Pl., 1895. Hardy. Ht. 8 to 12 in. Fl. sepals purplish red, petals white tipped with purplish red; May 13 to June 21.

GILLENIA, MÆNCH.*(Rosaceæ.)*****G. stipulacea, NUTT. American Ipecacuanha.**

North America. Pl., 1895. Hardy. Ht. 3 to 3½ ft. Fl. white; pinkish on outside; June 11 to July 18.

****G. trifoliata, MÆNCH. Indian Physic.**North America. Pl., 1895. Hardy. Ht. 4 to 4½ ft. Fl. white, pinkish on outside; June 3 to July 16. Much like *G. stipulacea*.**GRINDELIA, WILLD. - GUM PLANT.**
California.*(Compositæ.)***G. integrifolia, DC. British Columbia.**

Pl., 1901. Half hardy. Ht. 1 ft. Fl. yellow; July 21 to Sept. 11.

GYPSOPHILA, L. CHALK PLANT.*(Caryophyllaceæ.)***G. acutifolia, FISCH. Caucasus.**

Pl., 1897. Half hardy.

G. altissima, L. Siberia.

Pl., 1907.

G. collina, Stev. = G. fastigiata.****G. fastigiata, L. Europe.***Syn. G. collina, Stev.*
Pl., 1898. Hardy. Ht. 5 to 5½ ft. Fl. pink; July 13 to Oct. 12.**G. libanotica, BOISS. Asia Minor.**

Pl., 1903. Tender.

*****G. paniculata, L. Baby's Breath. Europe, &c.**

Pl., 1900. Hardy. Ht. 2½ to 3 ft. Fl. white; July 7 to Aug. 15.

*****G. paniculata compacta.**Pl., 1903. Hardy. Ht. 3 ft. Resembles *G. paniculata*, except more compact.*****G. paniculata flore pleno.**

Pl., 1903.

G. perfoliata, L. Spain.

Pl., 1905. Tender.

****G. repens, L. Europe, &c.**

Pl., 1897. Hardy. Ht. 7 to 12 in. Fl. white and pale pink; June 6 to Nov. 3.

G. repens monstrosa.

Pl., 1903.

****G. Rokejeka, DELILE. Egypt, &c.**

Pl., 1896. Hardy. Ht. 4 to 5 ft. Fl. pink; July 20 to Aug. 23.

G. Sundermannii.

Pl., 1903.

G. transylvanica, SPRENG. Eastern Europe.

Pl., 1907.

GYPSOPHILA—Con.

- G. trichotoma**, WENDER. * Caucasus ;
Turkestan.
Pl., 1901. Hardy. Ht. 4½ to 5 ft.
Fl. pink; July 18 to Sept. 27.

HABERLEA, FRIVALD.

(Gesneraceæ.)

- H. rhodopensis**, FRIVALD. Greece.
Pl., 1908.

HABLITZIA, BIEB.

(Chenopodiaceæ.)

- H. tamnoides**, BIEB. Caucasus.
Pl., 1908.

HARPALIUM, CASS = HELIANTHUS.**HEDYSARUM, L.**

(Leguminosæ.)

- H. esculentum**, LEDEB. Siberia.
Pl., 1901. Hardy. Ht. 2½ ft. Fl.
greenish yellow; June 7 to July
20.

HELENIUM, L. SNEEZE WEED.

(Compositæ.)

- H. autumnale**, L. North America.
Pl., 1895. Hardy. Ht. 2½ to 3½ ft.
Fl. yellow; July 15 to Aug. 29.
- H. autumnale compactum bicolor.**
Syn. H. grandicephalum compac-
tum bicolor.
Pl., 1908.
- **H. autumnale Defiance.**
Pl., 1903. Hardy. Ht. 3½ ft. Fl.
deep sunflower yellow, disk dull
yellow; July 27 to Sept. 22.
- **H. autumnale grandiflorum.**
Pl., 1901. Hardy. Ht. 6½ to 7 ft.
Fl. yellow; Aug. 29 to Oct. 23.

HELENIUM—Con.

- ***H. autumnale pumilum.**
Pl., 1895. Hardy. Ht. 1 to 2 ft.
Fl. yellow; July 11 to Sept. 2.
- ***H. autumnale pumilum magnificum.**
Pl., 1901. Hardy. Ht. 3 ft. Fl.
golden yellow; July 6 to Oct. 14.
- ***H. autumnale striatum.**
Pl., 1898. Hardy. Ht. 4 ft. 8 in.
to 5½ ft. Fl. reddish brown and
yellow; Aug. 13 to Oct. 20.
- **H. autumnale superbum.**
Pl., 1901. Hardy. Ht. 7½ ft. Fl.
yellow; Sept. 1 to Oct. 27.
- H. Bigelovii**, A. GRAY. California.
Pl., 1900. Tender.
- **H. Bolanderi**, A. GRAY. California.
Pl., 1901. Hardy. Ht. 1½ to 2 ft.
Fl. yellow with dark brown
centre.
- ***H. Bolanderi Golden Queen.**
Pl., 1905. Hardy. Ht. 2 ft. Fl.
deep golden yellow with dark
centre; July 3 to Oct. 12.
- H. grandicephalum*, Hort. = *H. autum-*
nale, L.
- H. grandicephalum compactum bicolor*
= *H. autumnale compactum bi-*
color.
- H. grandicephalum striatum* = *H. au-*
tumnale striatum.
- ***H. Hoopesii**, GRAY. North-western
America.
Pl., 1897. Hardy. Ht. 2½ ft. Fl.
orange yellow; June.
- H. pumilum*, Willd. = *H. autumnale*
pumilum.

HELIANTHUS, L. SUNFLOWER.

(Compositæ.)

Among the most useful herbaceous perennials which bloom in the summer and autumn are the perennial sunflowers. They are tall, have large, or very large flowers of attractive shades of yellow, and are very free and continuous bloomers. The flowers also have very long stems, which help to make them desirable for cutting. With so many points in their favour it is no wonder that the perennial sunflowers are popular. The chief objection to some kinds is that they spread more rapidly than is desirable. When such is the case, the roots may be confined if desired by burying

a box full of soil and planting in it. When there is sufficient room sunflowers are very effective when planted in masses and given all the space they seek. *Helianthus multiflorus* and its varieties do not spread so rapidly as some other sorts. Sunflowers do best in bright sunlight. They are readily propagated by division or from the root stalks.

- ***H. doronicoides*, LAM. North America.
Pl., 1895. Hardy. Ht. 7 ft. Fl.
sunflower yellow; July 29 to
Sept. 5.
- ***H. giganteus*, L. Indian Potato. North
America.
Pl., 1894. Hardy. Ht. 9 ft. Fl.
lemon yellow; July 12 to Sept.
21.
- **H. grosse-serratus*, MARTENS. North
America.
Pl., 1905. Hardy. Ht. 6 ft. Fl.
golden yellow; Sept. 14 to Oct.
16.
- ****H. hybridus* H. G. Moon.
Pl., 1905. Hardy. Ht. 4 to 4½ ft.
Fl. deep rich sunflower yellow;
Aug. 13 to Oct. 5.
- ****H. hybridus* Daniel Dewar.
Pl., 1903. Hardy. Ht. 5 to 5½ ft.
Fl. deep rich sunflower yellow;
July 18 to Sept. 12.
- **H. hybridus* perennis.
Pl., 1898. Hardy. Ht. 6½ to 7 ft.
Fl. chrome yellow; Aug. 16 to
Sept. 22.
- ****H. lætiflorus*, PERS. Showy Sunflower.
North America.
Pl., 1895. Hardy. Ht. 4 to 5 ft.
Fl. golden yellow; Sept. 18 to
Oct. 17.
- ****H. lætiflorus* Wolley Dodd.
Pl., 1903. Hardy. Ht. 6 to 7 ft.
Fl. golden yellow; Sept. 17 to
Oct. 17.
- H. microcephalus*, Torr. & Gray = *H.*
parviflorus.
- ***H. Maximiliani*, SCHRAD. North Amer.
Pl., 1894. Hardy. Ht. 5½ to 6 ft.
Fl. lemon yellow; July 6 to Aug.
29.
- ****H. mollis*, LAM. North America.
Pl., 1898. Hardy. Ht. 4½ to 5½ ft.
Fl. sunflower yellow; Aug. 6 to
Oct. 10.
- ***H. multiflorus*, L. North America.
Pl., 1897. Hardy. Ht. 5 to 7 ft.
Fl. deep chrome yellow; July 7
to Sept. 29.
- ****H. multiflorus* Boquet d'Or.
Pl., 1901. Hardy. Ht. 4 to 5½ ft.
Fl. double, sunflower yellow;
Aug. 15 to Oct. 10.
- ***H. multiflorus* major.
Pl., 1901. Hardy. Ht. 4½ ft. Fl.
deep chrome yellow; July 12 to
Oct. 10.
- ***H. multiflorus* maximus.
Pl., 1903. Hardy. Ht. 6½ ft. Fl.
golden yellow; July 26 to Oct. 14.
- H. multiflorus* maximus flore pleno.
Pl., 1908.
- ****H. multiflorus* Meteor.
Pl., 1899. Hardy. Ht. 6 to 6 ft. 5
in. Fl. semi-double, ray florets
chrome yellow, disc florets golden
yellow; July 25 to Oct. 10.
- ****H. multiflorus* Mrs. Moon.
Pl., 1903. Hardy. Ht. 4 to 5 ft.
Fl. golden yellow; Aug. 12 to
Oct. 2.
- ***H. multiflorus* Soleil d'Or.
Pl., 1899. Hardy. Ht. 4 to 5 ft.
Fl. double, golden yellow; July
16 to Oct. 10.
- ****H. Nuttallii*, TORR. & GRAY. North-
western America.
Pl., 1907. Hardy. Ht. 5 ft. Fl.
rich golden yellow; July 16 to
Sept. 7.
- ***H. orgyalis*, DC. North-western Amer.
Pl., 1901. Hardy. Ht. 7 to 8 ft.
F. lemon yellow; Sept. 8 to Oct.
14.
- H. parviflorus*, BERNH. North Amer.
Syn. H. microcephalus, Torr. &
Gray.
Pl., 1907.
- H. pumilus*, NUTT. North America.
Pl., 1905. Half hardy



1. GOLD-BANDED LILY—*Lilium auratum*.

3. AMERICAN TURK'S CAP LILY—*Lilium superbum*.

2. ASA GRAY'S LILY—*Lilium Grayi*.

4. RED BARRENWORT—*Epimedium rubrum*.

HELIANTHUS—*Con.*

- ***H. rigidus*, DESF. Prairie Sunflower.
North America.
Pl., 1895. Hardy. Ht. 5 ft. Fl.
deep sunflower yellow; July 18 to
Aug. 20.
- ****H. rigidus Diana*.
Pl., 1907. Hardy. Ht. 5 ft. 8 in.
Fl. deep rich sunflower yellow;
Aug. 9 to Sept. 14.
- ****H. rigidus elegans*.
Pl., 1907. Hardy. Ht. 5½ to 6 ft.
Fl. deep rich sunflower yellow;
Aug. 10 to Sept. 14.
- H. rigidus Latest of All*.
Pl., 1907.
- ****H. rigidus Miss Mellish*.
Pl., 1908. Hardy. Ht. 6 ft. Fl.
deep rich sunflower yellow; July
and August.
- ****H. rigidus semi-plenus*.
Pl., 1900. Hardy. Ht. 4½ to 5 ft.
Fl. rich orange yellow; Aug. 26
to Oct. 5.
- H. trachelifolius*, MILL. North Amer.
Pl., 1907.
- H. tuberosus*, L. Jerusalem Artichoke.
North America.
Pl., 1908. Hardy. Ht. 6 to 7 ft.
Fl. yellow.

HELIOPSIS, PERS. ORANGE SUNFLOWER.
(*Compositæ.*)

- ***H. lævis*, PERS. North America.
Pl., 1898. Hardy. Ht. 5 to 6 ft.
Fl. deep golden yellow; July 4 to
Oct. 2.
- ****H. padula*, WENDER. HAB?
Pl., 1905. Hardy. Ht. 6 to 7 ft.
Fl. orange yellow; July 20 to
Oct. 7.
- H. pitcheriana* = *H. scabra pitcheriana*.
- ***H. scabra major*.
Pl., 1898. Hardy. Ht. 4½ to 5½ ft.
Fl. orange yellow; June 29 to
Oct. 15.
- ****H. scabra P. Ladhams*.
Pl., 1900. Hardy. Ht. 5 ft. Fl.
orange yellow; July 3 to Oct. 8.
- ****H. scabra pitcheriana*.
Syn. H. pitcheriana.
Pl., 1897. Hardy. Ht. 7 to 7½ ft.
Fl. orange yellow; June 27 to
Oct. 14.

HELLEBORUS, L. BEARFOOT.

(Ranunculaceæ.)

- **H. niger*, L. Christmas Rose. Europe.
Pl., 1898. Hardy. Ht. 1 ft. Fl.
white; April 21 to May 18.

HEMEROCALLIS, L. DAY LILY.

(Liliaceæ.)

This old and popular garden flower is of the easiest culture, which probably accounts for its being found in many gardens. Little need be said about it here except to state that there is much confusion in the nomenclature of it. This confusion seems to have arisen partly from the fact that the day lily grows readily from seeds, and as the seedlings differ somewhat in time of blooming and also slightly in the colour and size of the flower, when obtained from different sources, it may be found after testing them that they vary considerably, suggesting different species, when in reality they may be the same. The species cross readily, also, which has resulted in hybrids, which also may have caused confusion. The day lilies succeed well in the open border, but for best results they need moist soil and partial shade. They may be propagated either from seeds or by division; the latter is the ordinary method.

HEMEROCALLIS—Con.

- H. aurantiaca**, BAKER. Japan (?)
Pl., 1908.
- *****H. aurantiaca major**.
Pl., 1897. Hardy. Ht. 3 to 4 ft.
Fl. orange yellow; July 6 to
Aug. 31.
- ****H. citrina**.
Pl., 1905. Hardy. Ht. 4½ to 5½ ft.
Fl. canary yellow; July 30 to
Sept. 21.
- ****H. Dumortierii**, MORR. Japan, &c.
Syn. H. rutilans, Hort.
Pl., 1895. Hardy. Ht. 2 ft. Fl.
orange yellow, slightly bronzed
on outside; June.
- *****H. flava**, L. Lemon Lily. Europe;
Temperate Asia.
Pl., 1898. Hardy. Ht. 3½ to 4 ft.
Fl. lemon yellow; June 5 to June
26.
- *****H. flava major**.
Pl., 1903. Hardy. Ht. 3 to 3½ ft.
Fl. lemon yellow; June 11 to
June 28.
- H. fulva disticha* = *H. fulva*.
- ****H. fulva**, L. Europe; Temperate
Asia.
Pl., 1895. Hardy. Ht. 4 ft. 8 in.
to 5 ft. Fl. bronzy orange; June
24 to Aug. 6.
- ****H. fulva Kwanso**.
Pl., 1898. Hardy. Ht. 3 ft. 10 in.
to 4 ft. 8 in. Fl. double, bronzy
orange; July 31 to Oct. 10.
- H. fulva variegata**.
Pl., 1895. Hardy. Has variegated
foliage.
- H. graminifolia, Hort.* = *H. minor*.
- H. hybrida Apricot**.
Pl., 1908.
- *****H. hybrida Flamid**.
Pl., 1903. Hardy. Ht. 3 to 3½ ft.
Fl. orange; June 6 to July 14.
- *****H. hybrida Gold Dust**.
Pl., 1905. Hardy. Ht. 2½ ft. Fl.
orange, bronze on outside; June
14 to July 5.

HEMEROCALLIS—Con.

- *****H. hybrida Orange Man**.
Pl., 1906. Hardy. Ht. 2½ ft. Fl.
bright orange; June 8 to July 2.
- *****H. hybrida Sovereign**.
Pl., 1905. Hardy. Ht. 2½ to 3 ft.
Fl. orange yellow, bronze on out-
side; June 11 to June 28.
- *****H. Middendorffii**, TRAUTV. & MEY.
Amurland.
Pl., 1895. Hardy. Ht. 1½ to 2 ft.
Fl. rich orange; June.
- ****H. minor**, MILL. China, Japan, &c.
Syn. H. graminifolia, Hort.
Pl., 1896. Hardy. Ht. 1 ft. Fl.
deep yellow; June.
H. rutilans, Hort. = *H. Dumortierii*.
- *****H. Thunbergii**, BAKER. Japan.
Pl., 1895. Hardy. Ht. 4 to 4½ ft.
Fl. golden yellow; June 30 to
Aug. 11.

HERACLEUM, L. COW PARSNIP.*(Umbelliferae.)*

- H. candicans**, WALL. Himalayas.
Pl., 1901. Hardy. Ht. 5 ft. Fl.
white; July 7 to July 28.
- H. eminens, Lange* = *H. platytænium*.
- H. giganteum, Fisch.* = *H. villosum*.
- H. mantegazzianum**, LEVIER & SOMM.
Caucasus.
Pl., 1908.
- H. platytænium**, BOISS. Asia Minor.
Syn. H. eminens, Lange.
Pl., 1895. Hardy.
- *****H. villosum**, FISCH. Caucasus.
Syn. H. giganteum, Fisch.
Pl., 1895. Hardy. Ht. 6 ft. Fl.
in very large heads, white; June
8 to July 9.

HESPERIS, L.*(Cruciferae.)*

- ****H. matronalis**, L. Rocket, Dame's Vio-
let. Europe, &c.
Pl., 1897. Hardy. Ht. 2½ to 4 ft.
Fl. varying in colour from white
to purple; May 28 to Aug. 4.

HESPERIS—*Con.*

- *****H. matronalis alba.**
Pl., 1904. Hardy. Ht. 2½ to 4 ft.
Fl. white; June.
- *****H. matronalis nana alba.**
Pl., 1904. Hardy. Ht. 2 to 3 ft.
Fl. white; June.

HEUCHERA, L. ALUM ROOT.
(*Saxifragaceæ.*)

- H. americana, L.** Alum Root. North America.
Pl., 1895. Hardy. Ht. 2½ to 3½ ft.
Fl. greenish; June 18 to Sept. 9.
- *****H. brizoides, HORT.** Garden origin.
Pl., 1906. Hardy. Ht. 2 ft. Fl.
rosy pink, paler at base; June
20 to Sept. 20.
- H. brizoides Flambeau.**
Pl., 1908.
- *****H. brizoides gracillima.**
Pl., 1905. Hardy. Ht. 2 ft. Fl.
rosy pink, paler at base. Smaller
but more graceful than the
species; June 8 to Sept. 7.
- H. erubescens, A. Br. & Bouché* = *H. micrantha.*
- H. hybrida grandiflora.**
Pl., 1907.
- H. hispida, PURSH.** Satin Leaf. North America.
Syn. H. Richardsoni, R.Br.
Pl., 1908.
- H. micrantha, DOUGL.** North-western America.
Syn. H. erubescens, A. Br. & Bouché.
Pl., 1895. Hardy. Ht. 2 to 2½ ft.
Fl. white; June 7 to July 17.
- H. micrantha rosea.**
Pl., 1908.
- H. Richardsoni, R. Br.* = *H. hispida.*
- H. rosea* = *H. sanguinea rosea.*
- *****H. sanguinea, ENGELM.** Coral Bells; Crimson Bells. New Mexico.
Pl.; 1895. Hardy. Ht. 1½ ft. Fl.
bright crimson; June 6 to Aug. 4.

HEUCHERA—*Con.*

- ***H. sanguinea alba.**
Pl., 1901. Hardy. Ht. 2 to 2½ ft.
Fl. white; June 9 to Aug. 8.
- H. sanguinea grandiflora.**
Pl., 1908.
- ***H. sanguinea rosea.**
Pl., 1897. Hardy. Ht. 1½ ft. Fl.
rosy pink.
- *****H. sanguinea splendens.**
Pl., 1901. Hardy. Ht. 1½ to 2 ft.
Fl. bright crimson; July 4 to
Sept. 7.
- H. sanguinea Walker's variety.**
Pl., 1908.
- H. villosa, MICHX.** North America.
Pl., 1895. Hardy. Ht. 1½ ft. Fl.
purplish and white; June 26 to
Sept. 15.
- H. Zabeliana.**
Pl., 1908.
- HIBISCUS, L.** MARSH MALLOW; ROSE MALLOW.
(*Malvaceæ.*)
- ****H. californicus, KELLOGG.** California.
Pl., 1895. Hardy. Ht. 4 to 5 ft.
Fl. white; Aug. 21 to Oct. 10.
- ****H. incanus, WENDL.** Southern States.
Pl., 1895. Hardy. Ht. 5 ft. Fl.
creamy white; Sept. 1 to Oct. 10.
- H. Manihot, L.** Tropics.
Pl., 1907.
- H. militaris, CAV.** United States.
Pl., 1907.
- *****H. Moscheutos, L.** Eastern States and Ontario.
Syn. H. roseus, Thore.
Pl., 1903. Hardy. Ht. 5 to 6 ft.
Fl. crimson pink suffused with
white; Aug. 4 to Sept. 17.
- ****H. Moscheutos albus.**
Pl., 1895. Hardy. Ht. 5½ ft. Fl.
white, crimson at centre; Aug.
21 to Oct. 10.

HIBISCUS—Con.*****H. Moscheutos Crimson Eye.**

Pl., 1895. Hardy. Ht. 4 to 5½ ft.
Fl. white, crimson at centre ;
Aug. 29 to Oct. 10.

*****H. Moscheutos rubrus.**

Pl., 1895. Hardy. Ht. 6½ ft. Fl.
mauve rose suffused with white ;
Aug. 21 to Oct. 10.

H. roseus, Thore. = *H. Moscheutos*.

HIERACIUM, L. HAWKWEED.

(*Compositæ.*)

H. aurantiacum, L. Orange Hawk-
weed. Europe.

Pl., 1901. Hardy. Ht. 2 to 2½ ft.
Fl. deep orange ; June 13 to
July 26.

HUMULUS, L. HOP.

(*Urticaceæ.*)

H. Lupulus, L. Hop. Europe and
North America.

Pl., 1895. Hardy. Ht. 11 ft. Fl.
greenish yellow ; July 7 to Aug.
22.

**HYACINTHUS CANDICANS, BAKER.
= GALTONIA CANDICANS.****HYDROPHYLLUM, L. WATER-LEAF.**

(*Hydrophyllaceæ.*)

H. canadense, L. North America.

Pl., 1895. Hardy. Ht. 1 ft. Fl.
greenish white ; July 4 to Aug.
14.

**HYPERICUM, TOURN. ST. JOHN'S
WORT.**

(*Hypericaceæ.*)

H. Ascyron, L. Great St. John's Wort
North America.

Syn. H. pyramidatum, Ait.

Pl., 1895. Hardy. Ht. 4 ft. Fl.
deep yellow ; July 12 to Aug. 18.

H. perforatum, L. St. John's Wort.
Europe, &c.

Pl., 1895. Hardy. Ht. 1 to 3 ft.
Fl. yellow ; June to Sept.

H. pyramidatum, Ait. = *H. Ascyron*.

IBERIS, DILL. CANDY-TUFT.

(*Cruciferae.*)

I. corifolia, Hort. = *I. correæfolia*.

*****I. correæfolia, HORT.** Garden origin.
Pl., 1895. Hardy. Ht. 7 in. Fl.
pure white ; May 25 to June 30

I. saxatilis, L. South Europe.

Pl., 1895. Half hardy. Ht. 6 to 8
in. Fl. white ; May 10 to June
15.

****I. sempervirens, L.** Evergreen Candy-
tuft. South Europe.

Pl., 1895. Hardy. Ht. 7 in. Fl.
white, later tinged with pink ;
May 15 to June 12.

***I. sempervirens flore pleno.**

Pl., 1905. Hardy. Ht. 1 ft. Fl.
double, white ; June 3 to June
20.

*****I. sempervirens garrexiiana.**

Pl., 1895. Hardy. Ht. 1 ft. Fl.
white, later tinged with pink ;
May 15 to June 13.

***I. sempervirens Little Gem.**

Pl., 1903. Hardy. Ht. 6 in. Fl.
white ; May 16 to June 12.

****I. sempervirens superba.**

Pl., 1905. Hardy. Ht. 8 to 12 in.
Fl. white tinged with pink at
first ; May 28 to June 13.

*****I. sempervirens superba Snowflake.**

Pl., 1906. Hardy. Ht. 1 ft. Fl.
pure white ; June.

I. tenoreana, DC. Italy.

Pl., 1899. Tender.

INCARVILLEA, JUSS.

(*Bignoniaceæ.*)

*****I. Delavayi, BUREAU & FRANCH.** China.
Pl., 1899. Hardy. Ht. 2 to 2½ ft.
Fl. rosy magenta, brown and yel-
low in throat ; June 9 to July 13.

I. grandiflora, BUREAU & FRANCH.
China.

Pl., 1906. Tender. Flowers much
like *I. Delavayi* but darker in
colour.

INCARVILLEA—*Con.*

- I. Olga**, REGEL. Turkestan.
Pl., 1895. Hardy. Ht. 3 to 3½ ft.
Fl. rose; July 18 to Aug. 29.
- I. sinensis**, LAM. China.
Pl., 1907.

INULA, L.*(Compositæ.)*

- ***I. ensifolia**, L. South Europe, &c.
Pl., 1901. Hardy. Ht. 7 to 12 in.
Fl. golden yellow; June 30 to
Sept. 8.
- ****I. glandulosa**, PUSCHK. Caucasus.
Pl., 1901. Hardy. Ht. 1½ ft. Fl.
deep golden yellow; June 20 to
July 9.
- *****I. grandiflora**, WILLD. Himalayas, &c.
Pl., 1903. Hardy. Ht. 2 ft. Fl.
orange yellow; June 23 to July
13.

INULA—*Con.*

- I. hirta**, L. Europe, &c.
Pl., 1908.
- I. Hookeri**, C. B. CLARKE. Himalayas.
Pl., 1908.
- ***I. macrocephala**, BOISS.
Pl., 1895. Hardy. Ht. 5½ to 6 ft.
Fl. lemon yellow; July 10 to
Aug. 25.
- I. montana**, L. South Europe.
Pl., 1907.
- ***I. Helenium**, L. Elecampane. Eu-
rope, &c.
Pl., 1903. Hardy. Ht. 5 ft. Fl.
golden yellow; June 21 to Aug.
12.
- I. royleana**, DC. Himalayas.
Pl., 1905. Tender.
- I. thapsoides**, SPRENG. Caucasus.
Pl., 1903. Tender.

IRIS, TOURN. FLAG.*(Iridaceæ.)*

There is no group of plants which affords more delight to the lover of garden flowers than the iris, and there are several good reasons why they are so much admired. In the species and varieties of this charming plant may be found more shades of colour than in any other genus of hardy flowers with, perhaps, the exception of the tulip. The light and delicate texture of the flowers combined with their graceful form are points which are much in their favour, and the attractiveness of the flowers is still more enhanced in some varieties by their sweet fragrance. As cut flowers the irises are very useful, the buds on the flower stalks opening readily in the house when the latter are kept in water. The long blooming season made by the different species is also very much in their favour. Beginning almost as soon as the snow is gone with *I. reticulata* and other early species and continuing until the end of July there is a constant succession of bloom, which is closed by the Japanese varieties, the rich colours of which are very suggestive of orchids. The advantages of the iris are not confined to the flowers alone. The plants are of very easy culture, most of them succeeding in almost any soil which is not too dry. The bulbous kinds do best on the warmer, drier and best drained soils. The German and some of the species succeed on well drained soils having a good supply of moisture, though not requiring soil which would be called wet; and the Japanese, Siberian and others doing best in wet soils, though succeeding fairly well under average conditions in the open border.

The irises are propagated very readily by dividing the plants, which increase rapidly. Planting may be done successfully in autumn or spring. The most important group of iris is the so-called German group. This is composed of varieties of several species and of hybrids between them. Among the parents are *I. germanica*, *I. squalens*, *I. sambucina*, *I. neglecta*, *I. hybrida (amoena)*, *I. variegata*, *I. pallida*, *I. florentina*, *I. plicata*, *I. flavescens* and *I. Swertii*. Attempts are made in the trade to classify the varieties of German iris under these species, but often it is difficult to determine to which section a variety belongs, and many of them are simply called 'German Iris.'

Varieties of the species given above and those known simply as German are taken out of the general alphabetical arrangement in this bulletin and grouped alphabetically under 'German Iris' so as to bring them together for greater ease in reference. The Japanese iris have been given English names by many of the nurserymen, and as some varieties have been given several different names it has led to considerable confusion, so that in ordering Japanese iris one is much more likely to obtain duplicates than in obtaining German iris.

LIST OF TWELVE BEST GERMAN IRIS.

- | | |
|--|--------------------------------------|
| 1. <i>Iris florentina</i> . | 7. " <i>Iris pallida dalmatica</i> . |
| 2. " <i>germanica Amas (macrantha)</i> . | 8. " <i>pallida Mandraliscæ</i> . |
| 3. " <i>germanica Black Prince</i> . | 9. " <i>plicata Madame Chereau</i> . |
| 4. " <i>hybrida (amœna) Mrs. H. Darwin</i> . | 10. " <i>squalens Jacquesiana</i> . |
| 5. " <i>hybrida (amœna) Victorine</i> . | 11. " <i>variegata Gracchus</i> . |
| 6. " <i>neglecta Sappho</i> . | 12. " <i>variegata Maori King</i> . |

(s) = standard; (f) = falls.

I. alba grandiflora = *I. sibirica alba grandiflora*.

I. anthomaria, DESF.

Pl., 1905. Hardy. Ht. 3 to 4 ft.
Fl. (s. & f.) white tinged with pale lilac, golden yellow towards base; late June.

I. aphylla, L. Europe, &c.

Syn. I. Schmidtii, Hort.
Pl., 1907.

****I. aphylla hungarica**.

Syn. I. hungarica, Waldst.
Pl., 1894. Hardy. Ht. 2 ft. Fl. deep purple; May 24 to June 15.

I. atomaria, BOISS.

Pl., 1907.

*****I. aurea**, LINDL. Himalayas.

Pl., 1895. Hardy. Ht. 3 to 4 ft.
Fl. (s) golden yellow, (f) golden yellow; June 30 to July 18.

I. aurea flore croceo.

Pl., 1908.

I. balkana, JANKA. Balkans.

Pl., 1895. Hardy. Ht. 1 ft. 2 in.
Fl. bright lilac purple; May 26 to June 15.

***I. benancensis**, KERL. South Tyrol.

Pl., 1903. Hardy. Ht. 1½ ft. Fl. (s) bluish purple, (f) deep purple with brownish purple veins on dull yellow near base; May 20 to June 9.

***I. biflora**, L. Portugal.

Syn. I. nudicaulis, Hook, f.
Pl., 1895. Hardy. Ht. 1 ft. 3 in.
Fl. bluish purple; May 19 to June 14.

I. Bloudovii, Hort. = *I. flavissima Bloudovii*.

I. bosniaca, G. BECK. Bosnia.

Pl., 1906. Tender.

I. brachycarpa, LEDEB.

Pl., 1907.

I. brachycuspis, Fisch. = *I. setosa*.

****I. Chamæiris**, BERTOL. South Europe.

Pl., 1895. Hardy. Ht. 1 ft. Fl. bright yellow and brown; latter half of May.

I. cochnariensis, HOOK.

Pl., 1907.

I. cœlestina, SWEET. North America.

Pl., 1907.

I. columnaris.

Pl., 1907.

I. coreana = *I. sibirica coreana*.

I. crenulata, HORT.

Pl., 1907.

I. cretica, Herb. = *I. cretensis*.

I. cretensis, JANKA. Greece, &c.

Pl., 1907.

IRIS—Con.

***I. cristata*, AIT. South-eastern United States.

Pl., 1895. Hardy. Ht. 6 in. Fl. pale lilac and bluish lilac; May 19 to June 12.

I. cuprea, Pursh. = *I. fulva*, Muhl. United States.

I. Clarkei, BAKER. Sikkim. Pl., 1908.

I. decora, Wall. = *I. nepalensis*.

I. Delavayi, MICHEL. Yunnan. Pl., 1908.

I. dichotoma, PALL. Dahuria. Pl., 1907.

***I. douglasiana pygmæa*.

Pl., 1905. Hardy. Ht. 2½ ft. Fl. (s) violet, (f) deep bluish violet; June 11 to June 25.

I. ensata, THUNB. Japan, &c. Pl., 1894. Hardy. Ht. 2 ft. Fl. lilac; May 24 to June 12.

I. ensata biglumis. Pl., 1894. Hardy. Ht. 2 ft. Fl. (s) pale lilac, (f) pale lilac, yellow at base; May 31 to June 23.

I. ensata oxypetala. Pl., 1894. Hardy. Ht. 1½ ft. Fl. bluish lilac; May 24 to June 20.

I. erratica, Tod. = *I. lutescens*.

I. falcifolia, BUNGE. Afghanistan; Turkestan. Pl., 1907.

I. fischeriana. Pl., 1907.

**I. flavissima Bloudovii*.

Syn. *I. Bloudovii*, Hort.

Pl., 1895. Hardy. Ht. 1 ft. 3 in. Fl. yellow; June.

I. flexuosa = *I. sibirica flexuosa*.

I. fœtida fol. var. = *I. fœtidissima variegata*.

I. fœtidissima variegata.

Pl., 1896. Half hardy. Ht. 2 ft. Foliage variegated.

IRIS—Con.

I. fulva, MUHL. United States

Syn. *I. cuprea*, Pursh.

Pl., 1905. Hardy. Ht. 3 ft. Fl. reddish brown; June 25 to July 5.

GERMAN IRIS.

I. amœna, DC. = *I. hybrida*.

***I. flavescens*, DC. Caucasus, &c.

Pl., 1895. Hardy. Ht. 2½ ft. Fl. (s. & f.) sulphur yellow; May 28 to June 23.

****I. florentina*, L. Orris Root. Central and Southern Europe.

Pl., 1894. Hardy. Ht. 2 ft. Fl. (s. & f.) white faintly suffused with pale greyish lavender; May 23 to June 17.

I. florentina alba.

Pl., 1906. Hardy. Ht. 2 ft. Fl. resembles *I. florentina*.

I. florentina albicans Princess of Wales.

Pl., 1903. Hardy. Ht. 1 ft. 9 in. Fl. resembles *I. germanica alba* and *I. florentina*.

I. florentina purpurea.

Pl., 1906. Hardy. Fl. resembles *I. germanica asiatica* and *I. germanica Astarte*.

I. florentina cœrulea.

Pl., 1906. Hardy. Ht. 2 ft. Fl. resembles *I. germanica Purple King*.

***I. germanica*, L. German Flag. Europe.

Pl., 1895. Hardy. Ht. 2½ ft. Fl. (s.) purple, (f.) deep purple; May 21 to June 10.

I. germanica alba.

Pl., 1903. Hardy. Ht. 1½ ft. Fl. (s. & f.) white faintly suffused with pale greyish lavender. Resembles *I. florentina*; June.

****I. germanica Amas (macrantha)*.

Pl., 1903. Hardy. Ht. 2 ft. 4 in. Fl. (s) mauve, (f.) deep purple; first half of June.

IRIS—Con.****I. germanica asiatica.**

Pl., 1895. Hardy. Ht. 2 ft. Fl. (s.) purple, (f.) deep purple; May 27 to June 17.

*****I. germanica Black Prince.**

Pl., 1901. Hardy. Ht. 2 ft. Fl. (s.) purple, (f.) very dark purple edged with a lighter shade; second to fourth weeks of June.

*****I. germanica Kharput.**

Pl., 1895. Hardy. Ht. 2 ft. 2 in. Fl. (s.) purple, (f.) deep purple; May 26 to June 23.

*****I. germanica Purple King.**

Pl., 1895. Hardy. Ht. 1 ft. 4 in. Fl. (s.) dark purple, (f.) dark purple; May 26 to June 20.

****I. hybrida Calypso.**

Pl., 1895. Hardy. Ht. 2 ft. Fl. (s.) white, (f.) white veined and tipped with violet; first three weeks of June.

****I. hybrida Comte de St Clair.**

Pl., 1903. Hardy. Ht. 2½ ft. Fl. (s.) white, (f.) violet edged and lined with white.

****I. hybrida Crebillon.**

Pl., 1895. Hardy. Ht. 2½ ft. Fl. (s.) greyish white, (f.) purple heavily veined with white; first three weeks of June.

****I. hybrida Donna Maria.**

Pl., 1903. Hardy. Ht. 2 ft. 2 in. F. (s.) pure white, (f.) white veined with brown near base; first three weeks of June.

*****I. hybrida Duc de Nemours.**

Pl., 1895. Hardy. Ht. 2 ft. 4 in. Fl. (s.) pure white, (f.) bright purple veined and edged with white; first three weeks of June.

*****I. hybrida Julie Grise.**

Pl., 1895. Hardy. Ht. 2 ft. 2 in. Fl. (s.) white suffused with lavender, (f.) purple heavily veined with white and edged with lavender; May 28 to June 23.

IRIS—Con.***I. hybrida Maria Theresa.**

Pl., 1895. Hardy. Ht. 1 ft. 8 in. Fl. (s.) creamy white, (f.) veined white and violet; May 28 to June 15.

*****I. hybrida Mrs. H. Darwin.**

Pl., 1895. Hardy. Ht. 2 ft. 2 in. Fl. (s.) white, (f.) white reticulated with violet near base; June 3 to June 23.

*****I. hybrida Unique.**

Pl., 1903. Hardy. Ht. 2½ ft. Fl. (s.) pure white tipped with pale lavender, (f.) violet purple, paler towards tip and veined with white near base; first three weeks of June.

****I. hybrida Victor Lemoine.**

Pl., 1895. Hardy. Ht. 2 ft. Fl. (s.) dull white with violet blotches, (f.) veined violet and white, tipped with violet; May 28 to June 23.

*****I. hybrida Verschnur.**

Pl., 1905. Hardy. Ht. 2 ft. 8 in. (s.) sulphur changing to white, (f.) pure white veined with purple near base; May 29 to June 23.

*****I. hybrida Victorine.**

Pl., 1903. Hardy. Ht. 2 ft. 2 in. Fl. (s.) pure white blotched and edged with purple, (f.) dark velvety purple veined with white near base; first three weeks of June.

*****I. neglecta Agathe.**

Pl., 1895. Hardy. Ht. 2½ ft. Fl. (s.) lavender, paler at centre, (f.) purple veined with white towards base; first three weeks of June.

****I. neglecta Ariadne.**

Pl., 1895. Hardy. Ht. 2 ft. Fl. (s.) white mottled with purple, (f.) purple veined heavily with white; June 3 to June 25.

I. neglecta Arlequin Milanarre.

Pl., 1895. Hardy. Ht. 2 ft. 3 in. Fl. resembles I. neglecta Du Bois de Milan.

IRIS—*Con.*

- I. neglecta Cordelia.**
Pl., 1903. Half hardy.
- *I. neglecta Esther.**
Pl., 1895. Hardy. Ht. 2½ ft. Fl. (s.) dull smoky yellow, (f.) white and yellow veined with maroon; May 30 to June 23.
- **I. neglecta Fairy Queen.**
Pl., 1903. Hardy. Ht. 1 ft. 9 in. Fl. (s. & f.) white and lavender veined and tipped with violet; first three weeks of June.
- **I. neglecta Du Bois de Milan.**
Pl., 1895. Hardy. Ht. 2½ ft. Fl. (s.) lavender, (f.) purple veined with white; first three weeks of June.
- **I. neglecta Hericartiana.**
Pl., 1895. Hardy. Ht. 2½ ft. Fl. (s.) deep lavender, (f.) violet and white veined, heavily tipped with violet; first three weeks of June.
- **I. neglecta Poiteau.**
Pl., 1903. Hardy. Ht. 2 ft. Fl. (s.) white tinged with lavender, (f.) rich deep purple veined with white; first three weeks of June.
- ***I. neglecta Salvatori.**
Pl., 1895. Hardy. Ht. 2½ ft. Fl. (s.) lavender, (f.) violet purple veined with white and edged with brown near base; first three weeks of June.
- ***I. neglecta Sappho.**
Pl., 1895. Hardy. Ht. 2 ft. 4 in. Fl. (s.) deep bluish purple, (f.) rich dark violet purple veined with white near base; May 30 to June 20.
- **I. neglecta Schotel.**
Pl., 1895. Hardy. Ht. 1 ft. 8 in. Fl. (s.) pale lavender, (f.) violet heavily veined with white; June 3 to June 26.
- **I. neglecta Teresita.**
Pl., 1905. Hardy. Ht. 2 ft. 4 in. Fl. resembles *I. neglecta* Agathe.

IRIS—*Con.*

- ***I. neglecta Walneri.**
Pl., 1897. Hardy. Ht. 2 ft. 8 in. Fl. (s.) lavender, (f.) violet veined with white towards base; first half of June.
- ***I. pallida, LAM.** South Europe, &c.
Pl., 1895. Hardy. Ht. 2 ft. 2 in. Fl. (s.) lavender, (f.) deep lavender; May 28 to June 22.
- I. pallida Albert Victor.**
Pl., 1908.
- ***I. pallida Celeste.**
Pl., 1903. Hardy. Ht. 3 ft. Fl. (s.) pale lavender, (f.) lavender; June 1 to June 23.
- **I. pallida Chameleon.**
Pl., 1895. Hardy. Ht. 2 ft. Fl. (s.) lavender and deep lavender, (f.) violet; June 1 to June 23.
- ***I. pallida dalmatica.**
Pl., 1905. Hardy. Ht. 2 ft. 10 in. Fl. (s. & f.) rich bluish lavender; June 14 to June 25.
- ***I. pallida lilacina.**
Pl., 1895. Hardy. Ht. 2 ft. Fl. (s.) clear bluish violet, (f.) violet veined with white near base; June 2 to June 25.
- ***I. pallida Madame Pacquette.**
Pl., 1903. Hardy. Ht. 2 ft. 4 in. Fl. resembles *I. germanica* Queen of May.
- ***I. pallida Mandraliscæ.**
Pl., 1895. Hardy. Ht. 2 ft. Fl. (s.) violet, (f.) violet; May 26 to June 15.
- ***I. pallida Queen of May.**
Pl., 1903. Hardy. Ht. 2 ft. 9 in. Fl. (s.) purplish pink, (f.) pinkish purple veined with white near base; first three weeks of June.
- **I. pallida racemosa.**
Pl., 1903. Hardy. Ht. 2 ft. 4 in. Fl. (s.) lavender and deep lavender, (f.) violet; June 3 to June 19.

IRIS—*Con.*

- **I. pallida Plumeri.**
Pl., 1903. Hardy. Ht. 2 ft. 7 in.
Fl. (s.) violet, (f.) pinkish purple;
first three weeks of June.
- **I. pallida speciosa.**
Pl., 1905. Hardy. Ht. 2 ft. Fl.
(s.) pale smoky purple, (f.)
purple veined with white and
edged with yellow near base;
June 5 to June 20.
- *I. plicata, LAM.** Origin unknown.
Pl., 1895. Hardy. Ht. 2½ ft. Fl.
(s.) pale bronze or smoky, (f.)
dull purple veined with white and
edged with bronze; June 2 to
June 24.
- I. plicata Bridesmaid.**
Pl., 1903. Half hardy.
- I. plicata Clara.**
Pl., 1895. Hardy. Ht. 1 ft. 8 in.
Fl. resembles *I. plicata* Emma.
- I. plicata Delicatissima.**
Pl., 1908.
- **I. plicata Emma.**
Pl., 1895. Hardy. Ht. 1 ft. 3 in.
Fl. (s.) lavender reticulated with
white, (f.) white lined with lavender;
May 28 to June 23.
- ***I. plicata Gazelle.**
Pl., 1903. Hardy. Ht. 2 ft. 9 in.
Fl. (s.) violet reticulated white,
(f.) white edged with violet;
May 27 to June 21.
- ***I. plicata Lord Seymour.**
Pl., 1895. Hardy. Ht. 2½ ft. Fl.
(s.) white and pale lavender, (f.)
sulphur yellow or whitish edged
with yellow; May 28 to June 26.
- ***I. plicata Madame Chereau.**
Pl., 1897. Hardy. Ht. 3 ft. Fl.
(s.) white deeply edged and reticulated
with rich bluish lavender, (f.) white
edged with lavender;
June 1 to June 29.
- **I. plicata Penelope.**
Pl., 1903. Hardy. Ht. 2 ft. Fl.
(s.) white mottled with lilac towards
base, (f.) veined white and
lilac; first three weeks of June.

IRIS—*Con.*

- **I. plicata Prince Frederic.**
Pl., 1895. Hardy. Ht. 2½ ft. Fl.
(s.) white edged and reticulated
with lavender, (f.) sulphur yellow
or whitish edged with lavender;
June 1 to June 26.
- ***I. plicata Reine des Belges.**
Pl., 1895. Hardy. Ht. 2 ft. 3 in.
Fl. (s.) violet showing white, (f.)
white heavily veined with violet;
May 29 to June 23.
- **I. sambucina Le Vesuve.**
Pl., 1903. Hardy. Ht. 2 ft. 9 in.
Fl. (s.) greyish purple, (f.) violet
purple veined with white towards
base; second and third
weeks of June.
- **I. sambucina Malvine.**
Pl., 1895. Hardy. Ht. 1 ft. 10 in.
Fl. (s.) dusky yellow, (f.) purple
veined with white; first three
weeks of June.
- *I. sambucina Phydias.**
Pl., 1895. Hardy. Ht. 1 ft. 10 in.
Fl. (s.) greyish yellow, (f.)
purple veined with white; May
25 to June 17.
- *I. sambucina Virgile.**
Pl., 1897. Hardy. Ht. 2 ft. 4 in.
Fl. (s.) pale dull bronze purple,
(f.) purple veined with white;
first three weeks of June.
- ***I. sambucina Solomon.**
Pl., 1895. Hardy. Ht. 2 ft. 8 in.
Fl. (s.) dull yellow, (f.) purple
veined with yellow and white
with smoky margin; first three
weeks of June.
- **I. squalens, L.** Central Europe, &c.
Pl., 1895. Hardy. Ht. 2 ft. 4 in.
Fl. (s.) pale lavender edged with
yellow, (f.) lilac purple veined
with brown and white near base;
May 28 to June 23.
- **I. squalens Agnes Sorell.**
Pl., 1895. Hardy. Ht. 2½ ft. Fl.
(s.) pale lavender tinged with
yellow, (f.) lavender with yellow
and white veining near base;
May 27 to June 20.

IRIS—*Con.****I. squalens Albion.**

Pl., 1895. Hardy. Ht. 2½ ft. Fl. (s.) dull smoky yellow, (f.) purple veined with white; May 28 to June 23.

*****I. squalens Arnolds.**

Pl., 1903. Hardy. Ht. 2 ft. 2 in. Fl. (s.) pale purple with faint yellow suffusion, (f.) velvety purple, white veined with brown near base; second and third weeks of June.

I. squalens Bigotini.

Pl., 1895. Hardy. Ht. 2 ft. Fl. resembles *I. squalens* Murad Efendi; May 30 to June 26.

***I. squalens Bronze Stoffel.**

Pl., 1895. Hardy. Ht. 2 ft. 4 in. Fl. (s.) pale bronze or smoky, (f.) dull purple veined with white and edged with bronze; June 5 to June 23.

***I. squalens Cerberus.**

Pl., 1895. Hardy. Ht. 2 ft. 3 in. Fl. (s.) dull smoky yellow, (f.) white and yellow veined with maroon; June 1 to June 23.

***I. squalens Dina.**

Pl., 1895. Hardy. Ht. 2 ft. Fl. (s.) bronze and purple, (f.) violet heavily veined with white and yellow; May 27 to June 23.

*****I. squalens Dr. Bernice.**

Pl., 1905. Hardy. Ht. 2½ ft. Fl. (s.) dull yellow with a suffusion of pale purple, (f.) rich reddish brown maroon veined with white near base; June 11 to June 25.

***I. squalens Dr. Margolin.**

Pl., 1895. Hardy. Ht. 1 ft. 9 in. Fl. (s.) sulphur yellow, (f.) veined white and purple; first three weeks of June.

I. squalens Haydee.

Pl., 1895. Fl. resembles *I. squalens* Minerva.

I. squalens Hector.

Pl., 1895. Hardy. Ht. 2½ ft. Fl. resembles *I. squalens* Lord Grey.

IRIS—*Con.****I. squalens Hugh Black.**

Pl., 1895. Hardy. Ht. 1 ft. 3 in. Fl. pale smoky yellow and lavender, (f.) purplish lavender and white veined with brown near base; first three weeks of June.

***I. squalens Indian Queen.**

Pl., 1896. Hardy. Ht. 2 ft. Fl. (s.) fawn and yellow, (f.) violet heavily veined with white and yellow near base; first three weeks of June.

*****I. squalens Jacquesiana.**

Pl., 1895. Hardy. Ht. 3 ft. 2 in. Fl. (s.) pale purple suffused with yellow near base, (f.) rich maroon veined with white near base; second and third weeks of June.

***I. squalens La Baronne.**

Pl., 1895. Hardy. Ht. 2 ft. Fl. (s.) brownish purple, (f.) dusky purple with yellow tinge; May 28 to June 25.

***I. squalens La Marmosa.**

Pl., 1895. Hardy. Ht. 2 ft. 4 in. Fl. (s.) greyish lavender and dull yellow, (f.) purple edged with lavender and veined with white; first three weeks of June.

***I. squalens Lady Seymour.**

Pl., 1895. Hardy. Ht. 3 ft. Fl. (s.) dull smoky yellow, (f.) purple heavily veined with white and yellow; first three weeks of June.

****I. squalens La Tristesse.**

Pl., 1895. Hardy. Ht. 3 ft. Fl. (s.) dull smoky yellow, (f.) purple heavily veined with white and yellow; May 29 to June 26.

****I. squalens Lady Jane.**

Pl., 1895. Hardy. Ht. 2 ft. 4 in. Fl. (s.) light lilac tinged with yellow, (f.) rosy purple heavily veined with white and traces of yellow at edge; first three weeks of June.

***I. squalens Lord Grey.**

Pl., 1895. Hardy. Ht. 2 ft. 4 in. Fl. (s.) buff yellow, (f.) brown and buff yellow with paler veins; first three weeks of June.

IRIS—*Con.*

- **I. squalens Lucretia.**
Pl., 1903. Hardy. Ht. 2 ft. Fl. (s.) greyish shading to yellow towards base, (f.) white and purplish lavender veined with brown near base.
- **I. squalens marginata.**
Pl., 1895. Hardy. Ht. 1 ft. 3 in. Fl. (s.) dull yellow and brown, (f.) white and sulphur yellow veined with brown near edge and towards base; May 28 to June 23.
- *I. squalens Minerva.**
Pl., 1895. Hardy. Ht. 3 ft. Fl. (s.) dull pale purple tinged with dull yellow near edge, (f.) purple veined with white; first three weeks of June.
- **I. squalens Mons. Poiteau.**
Pl., 1895. Hardy. Ht. 2 ft. Fl. (s.) dull yellow and lilac, mottled, (f.) white mottled and veined with lilac; first three weeks of June.
- ***I. squalens Mrs. Shaw.**
Pl., 1903. Hardy. Ht. 2 ft. 8 in. Fl. (s.) greenish yellow suffused with lilac, (f.) maroon veined with white; first three weeks of June.
- **I. squalens Murad Effendi.**
Pl., 1895. Hardy. Ht. 2 ft. Fl. (s.) dull smoky yellow, (f.) white veined and tipped with maroon; May 30 to June 26.
- *I. squalens Queen of Spain.**
Pl., 1895. Hardy. Ht. 2½ ft. Fl. (s.) fawn and yellow, (f.) purple veined with white and yellow near base; May 28 to June 26.
- *I. squalens Raphael.**
Pl., 1897. Hardy. Ht. 1½ ft. Fl. (s.) dull smoky yellow, (f.) white veined and tipped with maroon; first three weeks of June.
- **I. squalens Reine des Belges.**
Pl., 1895. Hardy. Ht. 2 ft. 9 in. Fl. (s.) lavender, (f.) lilac purple edged with lavender and veined with white towards base; May 27 to June 13.

IRIS—*Con.*

- I. squalens Spectabilis.**
Pl., 1897. Hardy. Ht. 2½ ft. Fl. resembles *I. squalens* Agnes Sorell.
- **I. squalens Tarquin.**
Pl., 1895. Hardy. Ht. 2 ft. Fl. (s.) pale pinkish purple veined with white at base; May 27 to June 23.
- I. squalens Thalia.**
Pl., 1895. Hardy. Ht. 2½ ft. Fl. resembles *I. squalens* Cerberus.
- I. variegata, L. Eastern Europe, &c.**
Pl., 1895. Hardy. Ht. 1½ ft. Fl. (s.) golden yellow, (f.) deep brown veined with yellow; May 28 to June 20.
- **I. variegata Abou Hassan.**
Pl., 1903. Hardy. Ht. 1½ ft. Fl. (s.) golden yellow, (f.) white and yellow veined and mottled with brown; first three weeks of June.
- *I. variegata Argueto.**
Pl., 1895. Hardy. Ht. 1½ ft. Fl. (s.) golden yellow, (f.) maroon veined with yellow; first three weeks of June.
- **I. variegata Assuerus.**
Pl., 1895. Hardy. Ht. 2 ft. Fl. (s.) pinkish purple, (f.) pinkish purple veined with white.
- I. variegata aurea.**
Pl., 1903. Tender.
- ***I. variegata Coquette.**
Pl., 1895. Hardy. Ht. 2 ft. 2 in. Fl. (s.) pale pinkish purple, (f.) pale pinkish purple veined with white and brown near base; May 26 to June 18.
- **I. variegata Cornelia.**
Pl., 1895. Hardy. Ht. 1 ft. 9 in. Fl. (s.) golden yellow, (f.) brown heavily veined with white and yellow; first three weeks of June.
- ***I. variegata Darius.**
Pl., 1895. Hardy. Ht. 1 ft. 9 in. Fl. (s.) pure yellow, (f.) sulphur yellow and white veined and flushed with violet purple and brown; first three weeks of June.

IRIS—*Con.*****I. variegata Fulgori.**

Pl., 1895. Hardy. Ht. 1 ft. 3 in.
Fl. (s.) golden yellow blotched
with brown, (f.) white and yellow
veined with rich brown; first
three weeks of June.

*****I. variegata Ganymede.**

Pl., 1895. Hardy. Ht. 3 ft. Fl.
(s.) sulphur yellow, (f.) sulphur
yellow to whitish reticulated with
brown near base; May 27 to
June 26.

I. variegata Golden King.

Pl., 1908.

*****I. variegata Gracchus .**

Pl., 1895. Hardy. Ht. 2 ft. Fl.
(s.) pale yellow, (f.) white veined
with purple and edged with yellow;
May 28 to June 20.

****I. variegata Henry Havard.**

Pl., 1895. Hardy. Ht. 1 ft. 7 in.
Fl. (s.) orange yellow with traces
of brown, (f.) yellow and white
veined with brown; May 28 to
June 23.

*****I. variegata Honourable.**

Pl., 1895. Hardy. Ht. 2 ft. 1 in.
Fl. (s.) golden yellow, (f.) yellow
veined with brown. Resembles *I.*
germanica Prince of Orange;
June 1 to June 23.

****I. variegata Idion.**

Pl., 1895. Hardy. Ht. 1 ft. 9 in.
Fl. (s.) golden yellow, (f.) rich
brown veined with white and
edged with yellow; first three
weeks of June.

*****I. variegata Innocenza.**

Pl., 1893. Hardy. Ht. 2 ft. 9 in.
Fl. (s.) pure white, (f.) pure
white veined with violet and
brown at base; June 3 to June
26.

****I. variegata Louis Meyer.**

Pl., 1905. Hardy. Ht. 2 ft. Fl.
(s.) smoky yellow, (f.) deep velvety
purple veined with white
and edged with yellow; first three
weeks of June.

IRIS—*Con.******I. variegata Maori King.**

Pl., 1900. Hardy. Ht. 7 in. Fl.
(s.) golden yellow, (f.) deep maroon
veined with white and edged
with yellow; June 3 to 23.

****I. variegata Mexicana.**

Pl., 1895. Hardy. Ht. 1 ft. 9 in.
Fl. (s.) pure yellow, (f.) deep
purple veined with yellow; first
three weeks of June.

****I. variegata Mimico.**

Pl., 1895. Hardy. Ht. 1½ ft. Fl.
(s.) sulphur yellow, (f.) white
veined with purple and heavily
edged with yellow; May 29 to
June 23.

****I. variegata Minos.**

Pl., 1895. Hardy. Ht. 2 ft. Fl.
(s.) yellow, (f.) rich brown at tip
then white pencilled with brown;
June 1 to June 23.

****I. variegata Mrs. A. F. Barron.**

Pl., 1903. Hardy. Ht. 1 ft. 9 in.
Fl. (s.) pale and golden yellow,
(f.) white veined with rosy violet
and edged with yellow; first
three weeks of June.

*****I. variegata Mrs. Neubronner.**

Pl., 1905. Hardy. Ht. 2 ft. 5 in.
(s.) golden yellow, (f.) golden
yellow with traces of white near
base; first three weeks of June.

***I. variegata Multicolor.**

Pl., 1895. Hardy. Ht. 1 ft. 8 in.
Fl. (s.) golden yellow, (f.) white
and yellow veined with maroon
and edged with yellow; first three
weeks of June.

*****I. variegata Ossian.**

Pl., 1895. Hardy. Ht. 2 ft. 4 in.
Fl. (s.) pale yellow, (f.) rosy violet
veined with white near base;
first three weeks of June.

I. variegata Pancrace.

Pl., 1895. Hardy. Ht. 2 ft. Fl.
resembles *I. variegata Mimico*.

*****I. variegata Prince of Orange.**

Pl., 1903. Hardy. Ht. 2½ ft. Fl.
(s.) golden yellow, (f.) yellow
veined with brown; May 30 to
June 26.

IRIS—*Con.*****I. variegata Rigolette.**

Pl., 1903. Hardy. Ht. 1 ft. 8 in.
Fl. (s.) golden yellow, (f) white
and yellow veined and mottled
with brown; first three weeks of
June.

*****I. variegata Robt. Burns.**

Pl., 1903. Hardy. Ht. 2 ft. 2 in.
Fl. (s.) dull golden yellow, (f.)
deep maroon veined with white
and edged with yellow; first three
weeks of June.

****I. variegata Samson.**

Pl., 1895. Hardy. Ht. 1 ft. 7 in.
Fl. (s.) golden yellow, (f.) yellow
veined with rich brown; May 21
to June 23.

I. variegata Sans-souci.

Pl., 1903. Half hardy. Fl. (s.)
golden yellow, (f.) pencilled
brown, yellow and white; June.

****I. variegata Souvenir.**

Pl., 1895. Hardy. Ht. 2 ft. 3 in.
Fl. (s.) golden yellow, (f.) white
and yellow veined with brown;
May 28 to June 20.

I. (German) Exquisite.

Pl., 1908.

I. (German) Isoline.

Pl., 1908.

I. (German) Magnifica.

Pl., 1908.

I. (German) Mercedes.

Pl., 1908.

I. (German) Nuée d'Orange.

Pl., 1908.

GERMAN IRIS—*Concluded.***I. Grant-Duff, BAKER. Palestine.**

Pl., 1908.

I. gigantea, Carr. = I. orientalis.

I. gracilis, Bigelow = I. prismatica.

I. graminea, L. Europe, &c.

Pl., 1902. Hardy. Ht. 2 ft. Fl.
rosy purple; June 7 to June 19.

IRIS—*Con.****I. guldenstædtiana, LEPECH. Europe;**
Asia.

Pl., 1902. Hardy. Ht. 3 to 3½ ft.
Fl. (s. & f.) white and pale yellow,
golden yellow at base; second
to fourth weeks of June.

I. guldenstædtiana cœrulescens.

Pl., 1894. Hardy. Ht. 3 ft. Fl.
lilac; May 23 to June 14.

*I. halophylla, Ker-Gawl = I. spuria
notha.*

***I. heterophylla, HORT. Europe.**

Pl., 1905. Hardy. Ht. 4 ft. Fl.
(s.) pale lavender, (f.) white
veined with pale lavender, orange
yellow at base; June.

I. hexagoni Lamancei.

Pl., 1908.

*I. hungarica, Waldst. = I. aphylla hun-
garica.*

I. Kämpferi, Sieb. = I. lævigata.

I. lacustris, Nutt. North America.

Pl., 1897. Hardy. Ht. 5 to 6 in.
Fl. bluish lilac; May 12 to May
26.

*****I. lævigata, FISCH. Japanese Iris.**
Japan.

Syn. I. Kämpferi, Sieb.

Pl., 1895. Hardy. Ht. 2 to 3 ft.
Fl. purple. Many varieties.

*****I. lævigata Kakujakuro.**

Pl., 1897. Hardy. Ht. 1 ft. 7 in.
Fl. lavender blending with mauve,
golden yellow at base; July.

****I. lævigata Gei-sho-ui.**

Pl., 1897. Hardy. Ht. 2 ft. Fl.
crimson purple; July.

*****I. lævigata Gekka-no-nami.**

Pl., 1897. Hardy. Ht. 1 ft. 8 in.
Fl. white; July.

*****I. lævigata Hana-aoi.**

Pl., 1897. Hardy. Ht. 2 ft. Fl.
white veined with blue; July.

*****I. lævigata Iso-no-nami.**

Pl., 1897. Hardy. Ht. 2 ft. 2 in.
Fl. lavender heavily veined with
deep bluish and golden yellow at
first, then mostly lavender; July.

IRIS—*Con.*

- ***I. lævigata* Kimi-no-megumi.
Pl., 1897. Hardy. Ht. 1 ft. 8 in.
Fl. white with purple centre;
July.
- ***I. lævigata* Kuma-fungin.
Pl., 1897. Hardy. Ht. 1 ft. 10 in.
Fl. pinkish purple, white in mid-
dle and golden yellow near base;
July.
- ****I. lævigata* Kumoma-no-sora.
Pl., 1897. Hardy. Ht. 1 ft. 10 in.
Fl. white mottled with bluish
purple; July.
- ***I. lævigata* Meiran.
Pl., 1897. Hardy. Ht. 1 ft. 10 in.
Fl. white with rosy purple mark-
ings; July.
- ***I. lævigata* Oniga-shima.
Pl., 1897. Hardy. Ht. 1 ft. 6 in.
Fl. dark crimson purple; July.
- ***I. lævigata* Osho-kun.
Pl., 1897. Hardy. Ht. 1 ft. 9 in.
Fl. purplish blue, semi-double;
July.
- ***I. lævigata* Oyodo.
Pl., 1897. Hardy. Ht. 1 ft. 5 in.
Fl. rosy purple veined with white.
- ***I. lævigata* Sano-watashi.
Pl., 1897. Hardy. Ht. 2 ft. 4 in.
Fl. white with yellow blotches;
July.
- ****I. lævigata* Senjo-no-hora.
Pl., 1897. Hardy. Ht. 2 ft. Fl.
rosy purple spotted with white;
July.
- ***I. lævigata* Shiga-no-uranami.
Pl., 1897. Hardy. Ht. 2½ ft. Fl.
deep purple veined with lavender
and golden yellow near base;
July.
- ***I. lævigata* Shishi-ikari.
Pl., 1897. Hardy. Ht. 2 ft. Fl.
rosy purple and white; July.
- ***I. lævigata* Shiohiukwa.
Pl., 1897. Hardy. Ht. 1 ft. 8 in.
Fl. rose veined with white; July.
- ***I. lævigata* Taiheiraku.
Pl., 1897. Hardy. Ht. 1 ft. 9 in.
Fl. crimson purple with yellow
blotches tipped with bluish pur-
ple; July.

IRIS—*Con.*

- ****I. lævigata* Tomoshiraga.
Pl., 1897. Hardy. Ht. 1½ to 2 ft.
Fl. white; July.
- ***I. lævigata* Tsurugi-no-mai.
Pl., 1897. Hardy. Ht. 2 ft. Fl.
rosy purple; July.
- ***I. lævigata* Yedo Kagami.
Pl., 1897. Hardy. Ht. 2 ft. Fl.
bluish purple; July.
- ****I. lævigata* Yomo-no-umi.
Pl., 1897. Hardy. Ht. 2 ft. Fl.
bluish purple veined with white;
July.
- ***I. lævigata* Wairai-hotri.
Pl., 1897. Hardy. Ht. 2 ft. Fl.
blue with a slight purplish tinge;
July.
- ***I. lævigata* Wakamurasaki.
Pl., 1897. Hardy. Ht. 2 ft. Fl.
magenta and white; July.
- I. longipetala* superba.
Pl., 1905. Hardy. Ht. 2 ft. 4 in.
Fl. (s.) lavender, (f.) pale blue
veined with white; June 2 to
June 18.
- I. lutescens*, LAM., South Europe.
Syn. I. erratica, Tod.
Pl., 1907.
- ****I. Madonna*.
Pl., 1905. Hardy. Ht. 1½ ft. Fl.
(s. & f.) violet blue; late June.
- I. Madonna* alba.
Pl., 1905. Tender.
- I. Milesii*, FOSTER. Himalayas.
Pl., 1905. Tender.
- I. missouriensis*, NUTT. North Amer.
Pl., 1906.
- I. mongolica*, FISCH.
Pl., 1907.
- ***I. Monnieri*, DC. Crete, &c.
Pl., 1900. Hardy. Ht. 3 ft. Fl.
(s. & f.) lemon yellow; July 4 to
July 19.
- I. monspur* (*I. Monnieri* x *spuria*).
Pl., 1906.
- I. nepalensis*, D. DON. Himalayas.
Pl., 1908.
- I. nudicaulis*, Hook, f. = *I. biflora*.

IRIS—Con.

- I. ochraurea** (*I. aurea* x *ochroleuca*).
(T. SMITH.)
Pl., 1908.
- I. ochroleuca*, L. = *I. orientalis*.
- I. ochroleuca sulphurea* = *I. orientalis sulphurea*.
- I. orientalis*, Hort. = *I. sibirica orientalis*.
- *****I. orientalis**, MILL. Asia Minor.
Syn. I. ochroleuca, L.; *I. gigantea*, Carr.
Pl., 1895. Hardy. Ht. 3 to 4 ft.
Fl. (s.) white and yellow, (f.) white and yellow; June 22 to July 12.
- I. orientalis sulphurea**.
Syn. I. ochroleuca sulphurea.
Pl., 1908.
- ****I. persica**, L. Asia Minor, &c.
Pl., 1901. Hardy. Ht. 4 in. Fl. pale lilac with a dark purple blotch; April.
- ****I. Polakii**, STAPP. Persia.
Pl., 1903. Hardy. Ht. 2½ to 3½ ft.
Fl. (s.) white, (f.) lavender and white; first two weeks of June.
- I. prismatica**, PURSH. Northern United States.
Syn. I. gracilis, Bigelow.
Pl., 1894. Hardy. Ht. 2 ft. Fl. lilac and purple; May 26 to June 20.
- ***I. prismatica purpurea**.
Syn. I. virginica purpurea.
Pl., 1903. Hardy. Ht. 1½ to 2 ft.
Fl. (s.) violet purple, (f.) violet purple veined with white towards base; June 12 to June 30.
- *****I. Pseudacorus**, L. Europe, &c.
Pl., 1905. Hardy. Ht. 2½ to 3 ft.
Fl. (s.) golden yellow, (f.) golden yellow with orange spot at base; June 19 to June 30.
- I. Pseudacorus albus**.
Pl., 1908.
- I. Pseudacorus variegata**.
Pl., 1897. Hardy. Ht. 2 ft. Has variegated foliage.

IRIS—Con.

- ****I. pumila**, L. Europe, &c.
Pl., 1895. Hardy. Ht. 7 to 10 in.
Fl. bright lilac purple, and other colours.
- *****I. pumila cærulea**.
Syn. I. pumila violacea.
Pl., 1895. Hardy. Ht. 9 in. Fl. almost cærulean blue; May 12 to May 26.
- ****I. (pumila x olbiensis) Beauty**.
Pl., 1900. Hardy. Ht. 1 ft. Fl. (s.) pale yellow, (f.) pale yellow flushed with purple; May 15 to June 20.
- I. (pumila x olbiensis) Blue Beard**.
Pl., 1900. Hardy. Ht. 1 ft. 3 in.
Fl. dull white and bluish purple; May 16 to June 13.
- ****I. (pumila x olbiensis) Canary Bird**.
Pl., 1901. Hardy. Ht. 2½ ft. Fl. resembles *I. flavescens*; June 11 to June 25.
- I. (pumila x olbiensis) Golden Ball**.
Pl., 1903. Tender.
- I. (pumila x olbiensis) Golden Dwarf**.
Pl., 1905. Tender.
- *****I. (pumila x olbiensis) Innocence**.
Pl., 1905. Hardy. Ht. 2½ ft. Fl. (s.) white, (f.) white striped and flushed with purple; June 11 to June 28.
- I. (pumila x olbiensis) King of the Blues**.
Pl., 1900. Tender.
- I. (pumila x olbiensis) Leander**.
Pl., 1905. Half hardy.
- ****I. (pumila x olbiensis) Princess Louise**.
pl., 1903. Hardy. Ht. 1 ft. Fl. (s.) lavender blue, (f.) deep lavender blue; late May to early June.
- ***I. (pumila x olbiensis) Sambo**.
Pl., 1903. Hardy. Ht. 1 ft. Fl. deep purple; late May to early June.
- I. ruthenica**, DRYAND. Northern Asia, &c.
Pl., 1895. Hardy. Ht. 2½ to 3½ ft.
Fl. lilac purple; May 16 to June 13.



1. ORIENTAL POPPY—*Papaver orientale* Novelty.

2. GERMAN IRIS—*Iris germanica*.

3. GLOBE FLOWER—*Trollius europaeus* Orange Globe.

4. CHINESE BELL FLOWER—*Platycodon grandiflorum*.

IRIS—*Con.*

- I. Schmidtii*, Hort. = *I. aphylla*.
- **I. setosa*, PALL. Eastern Siberia, &c.
Syn. I. brachycuspis, Fisch.
Pl., 1894. Hardy. Ht. 2 to 3 ft.
Fl. (s.) violet edged with lilac,
(f.) violet; first three weeks of
June.
- **I. sibirica*, L. Europe, &c.
Syn. I. trigonocarpa, A. Br. &
Bouché.
Pl., 1894. Hardy. Ht. 3 ft. Fl.
bright lilac blue with lighter
markings; May 29 to June 23.
- **I. sibirica acuta*.
Pl., 1895. Hardy. Ht. 3 ft. Fl.
(s.) bluish violet, (f.) white
veined with bluish violet; first
three weeks of June.
- ***I. sibirica alba*.
Pl., 1894. Hardy. Ht. 3 ft. Fl.
(s. & f.) white; first three weeks
of June.
- ***I. sibirica azurea*.
Pl., 1905. Hardy. Ht. 3 ft. 10 in.
Fl. (s.) violet, (f.) bluish violet,
white in centre and yellow at
base; first two weeks of June.
- **I. sibirica Baxteri*.
Pl., 1905. Hardy. Ht. 4 ft. Fl.
(s.) purple, (f.) white veined
with violet; early June.
- I. sibirica constantinopolitana*.
Pl., 1895. Hardy. Ht. 3 ft. Fl.
dull white, slightly tinged with
rosy purple; June 3 to June 20.
- I. sibirica coreana*.
Syn. I. coreana.
Pl., 1907.
- **I. sibirica flexuosa*.
Pl., 1905. Hardy. Ht. 3½ ft. Fl.
(s.) white, (f.) white, yellow at
base.
- **I. sibirica furcata*.
Pl., 1896. Hardy. Ht. 2 ft. 8 in.
Fl. white; May 23 to June 23.
- **I. sibirica longifolia*.
Pl., 1895. Hardy. Ht. 1 ft. 9 in.
Fl. bluish violet; May 31 to June
20.

IRIS—*Con.*

- **I. sibirica maritima*.
Pl., 1895. Hardy. Ht. 2½ ft. Fl.
bluish violet; May 31 to June 21.
- I. sibirica major*.
Pl., 1908.
- ****I. sibirica maxima*.
Pl., 1905. Hardy. Ht. 4 to 5 ft.
Fl. (s.) violet, (f.) bluish violet
veined with white in middle and
yellow near base; June.
- I. sibirica Melpomene*.
Pl., 1907.
- ****I. sibirica nigrescens*.
Pl., 1895. Hardy. Ht. 2 ft. Fl.
very dark purple; June 12 to
June 29.
- ****I. sibirica orientalis*.
Pl., 1897. Hardy. Ht. 4 ft. Fl.
(s.) violet, (f.) rich bluish violet;
June 9 to June 29.
- ****I. sibirica orientalis Snow Queen*.
Pl., 1906. Hardy. Ht. 3 ft. 4 in.
Fl. (s.) white, (f.) white, golden
yellow at base; June 10 to
July 3.
- **I. sibirica tenuifolia*.
Pl., 1895. Hardy. Ht. 2 ft. 2 in.
Fl. (s.) bluish violet, (f.) bluish
violet, marked with white and yellow
at base; May 31 to June 17.
- ***I. sibirica violacea*.
Pl., 1895. Hardy. Ht. 1 ft. 8 in.
Fl. bluish violet and purple;
June 7 to June 26.
- ***I. spuria*, L. Mediterranean region.
Pl., 1902. Hardy. Ht. 3 ft. 3 in.
Fl. (s.) bluish lilac, (f.) bluish
lilac veined with white, golden
yellow at base; June 22 to July 3.
- **I. spuria notha*.
Syn. I. halophylla, Ker.
Pl., 1902. Hardy. Ht. 3 ft. Fl.
(s.) lavender blue edged with yellow
near base, (f.) lavender blue
veined with white and edged with
yellow near base; June 27 to
July 9.
- I. tectorum*, MAXIM. China and Japan.
Syn. I. tomiolopha, Hance.
Pl., 1895. Tender.

IRIS—*Con.*

I. trigonocarpa, A. Br. & Bouché = *I. sibirica*.
Pl., 1907.

I. tomiolopha, Hance = *I. tectorum*.

I. tridentata, PURSH. North America.
Pl., 1905. Tender.

I. trojana, KERN. TROAD; Asia Minor.
Pl., 1905. Tender.

***I. verna*, L. United States.
Pl., 1895. Hardy. Ht. 6 to 8 in.
Fl. violet purple, yellow at base;
May 23 to June 14.

IRIS—*Con.*

**I. versicolor*, L. North America.
Pl., 1903. Hardy. Ht. 2 to 3 ft.
Fl. bluish purple and purple;
June 16 to July 5.

I. virescens, DC. Switzerland.
Pl., 1895. Hardy. Ht. 1½ ft. Fl.
(s. & f.) pale greenish yellow;
May 24 to June 15.

I. virginica, A. Gray = *I. prismatica*,
Pursh.

I. virginica purpurea = *I. prismatica*
purpurea.

ISATIS, *TOURN.*

(*Cruciferae.*)

I. Boissieriana, REICHB. F. Samarkand.
Pl., 1907.

I. glauca, AUCH. Asia Minor.
Pl., 1904. Tender.

JABOROSA, *JUSS.*

(*Solanaceae.*)

J. integrifolia, LAM. Buenos Ayres.
Pl., 1908.

JUNCUS, *L. RUSH.*

(*Juncaceae.*)

J. effusus fol. aureis striatis.
Pl., 1898. Half hardy.

J. effusus spiralis.
Pl., 1898. Tender.

KNEIFFIA, *SPACH.* = *CENOTHERA*.KNIPHOFIA, *MÖNCH.* TORCH LILY.

(*Liliaceae.*)

K. aloides grandis.
Pl., 1897. Tender.

K. aloides glaucescens.
Pl., 1903. Tender.

K. aloides nobilis.
Pl., 1898. Half hardy.

***K. corallina*, HORT. Garden origin.
Pl., 1903. Hardy. Ht. 2½ to 3½ ft.
Fl. coral red; Aug. 18 to Oct. 20.

K. hybrida Heroine.
Pl., 1903. Tender.

KNIPHOFIA—*Con.*

****K. hybrida Max Leichtlin*.
Pl., 1898. Half hardy. Fl. scarlet
and golden; Aug. 22 to Oct. 10.

****K. hybrida Otto Mann*.
Pl., 1898. Half hardy. Ht. 5 ft. 4
in. Fl. golden over scarlet; Aug.
13 to Sept. 19.

****K. hybrida Pfitzeri*.
Pl., 1898. Half hardy. Fl. bright
orange scarlet; Aug. and Sept.

K. Leichtlinii distachya.
Pl., 1903. Tender.

K. Macowanii, BAKER. South Africa.
Pl., 1903. Tender.

***K. Tuckii*, BAKER. Cape Colony.
Pl., 1901. Half hardy. Ht. 5 ft. 4
in. Fl. yellow tinged with red at
first; July 7 to July 18.

K. Tysoni, BAKER. South Africa.
Pl., 1905. Tender.

K. Uvaria, Hook. = *K. aloides*.

LACTUCA, *L. LETTUCE.*

(*Compositae.*)

L. alpinum, BENTH. & HOOK, F. Blue
Sowthistle. Europe.
Syn. Mulgedium alpinum.
Pl., 1908.

L. Bourgaei.
Syn. Mulgedium Bourgaei, Boiss.
Pl., 1908.

LACTUCA—Con.**L. giganteum.***Syn. Mulgedium giganteum.*

Pl., 1908.

***L. perennis, L. Europe.**

Pl., 1903. Hardy. Ht. 1½ to 2½ ft.

Fl. bluish lilac; June 15 to July 5.

LAPORTEA, GAUD.*(Urticaceæ.)***L. canadensis, GAUD. Wood-nettle.**

North America.

Pl., 1895. Hardy. Ht. 2½ to 3½ ft.

Fl. greenish; Aug.

LATHYRUS, L.*(Leguminosæ.)*****L. Drummondii, HORT. HAB?**

Pl., 1897. Hardy. Ht. 5 to 6 ft.

Fl. brick red; June 3 to July 28.

L. Gorgoni, PARL. Sicily.

Pl., 1907.

L. grandiflorus, SIBTH. & SM. Everlasting Pea, Two-flowered Pea.

South Europe.

Pl., 1905. Half hardy.

****L. latifolius, L. Common Everlasting Pea. Europe.**

Pl., 1894. Hardy. Ht. 6½ to 7 ft.

Fl. rose; June 23 to Aug. 27.

L. latifolius albus.

Pl., 1908.

L. latifolius Scarlet.

Pl., 1907.

L. latifolius Splendens.

Pl., 1907.

L. luteus, BAKER. Europe, &c.

Pl., 1907.

L. montanus, BERNH. Heath Pea. Europe.*Syn. Orobus luteus, L.*

Pl., 1907.

L. niger, BERNH. Black Pea, Black Bitter Vetch. Europe, &c.*Syn. Orobus niger, L.*

Pl., 1895. Hardy. Ht. 1 to 1½ ft.

Fl. rosy purple; June 5 to July 7.

730—5½

LATHYRUS—Con.**L. pratensis, L. Meadow Pea. Northern temperate regions.**

Pl., 1907.

L. pyrenaicus, Jord. = L. sylvestris.**L. rotundifolius, WILLD. Persian Everlasting Pea. Orient.**

Pl., 1905. Tender.

L. Sibthorpii, Baker. = L. undulatus.

Pl., 1907.

L. sylvestris, L. Flat Pea. Europe.*Syn. L. pyrenaicus, Jord.*

Pl., 1907.

L. sylvestris Wagneri.

Pl., 1895. Hardy. Ht. 6 ft. Fl

rose and purple; June 18 to Aug. 12.

L. undulatus, BOISS. Shores of Dardanelles.*Syn. L. Sibthorpii, Baker.*

Pl., 1907.

*****L. vernus, BERNH. Spring Bitter Vetch. Europe, &c.***Syn. Orobus vernus, L.*

Pl., 1898. Hardy. Ht. 1 to 1½ ft.

Fl. bluish violet and purple; May 4 to May 31.

***L. vernus albus.**

Pl., 1903. Hardy. Ht. 1 ft. Fl.

dull white; May 15 to May 28.

L. vernus albus roseus.

Pl., 1908.

L. vernus roseus.

Pl., 1908.

LAVATERA, L.*(Malvaceæ.)***L. thuringiaca, L. South Europe.**

Pl., 1903. Hardy. Ht. 5 ft. Fl.

pink; June 30 to Aug. 21.

LEONTOPODIUM, R.BR.*(Compositæ.)***L. alpinum, CASS. Edelweiss. Europe, &c.**

Pl., 1905. Half hardy. Ht. 6 in.

Fl. yellow, among white floral leaves; June and July.

L. alpinum bimaculatum.

Pl., 1895. Half hardy.

LEPACHYS, RAFIN.*(Compositæ.)*

L. columnaris, TORR. & GRAY. North-western America.
Pl., 1895. Hardy. Ht. 3 ft. Fl. yellow; July.

***L. pinnata**, TORR. & GRAY. United States.

Syns. L. pinnatifida; Rudbeckia pinnata, Vent.

Pl., 1897. Hardy. Ht. 3 to 3½ ft. Fl. yellow; July 21 to Oct. 1.

LEUCANTHEMUM, TOURN. = CHRYSANTHEMUM.

LEUCOJUM, L. SNOWFLAKE.*(Amaryllidaceæ.)*

*****L. æstivum**, L. Summer Snowflake. Europe, &c.

Pl., 1901. Hardy. Ht. 2 ft. Fl. white tipped with green; May 10 to June 15.

L. autumnale, L. Autumn Snowflake. Mediterranean region.

Pl., 1901. Hardy. Ht. 9 to 10 in. Fl. white; Aug. 12 to Sept. 15.

L. pulchellum, SALISB. Balearic Islands.

Pl., 1901. Hardy. Ht. 1½ to 2 ft. Fl. white with green spots; May 13 to June 15.

***L. vernum**, L. Spring Snowflake. Eur. Pl., 1901. Hardy. Ht. 8 to 12 in.

Fl. white tipped with green; April 20 to May 9.

****L. vernum carpaticum**.

Pl., 1901. Hardy. Ht. 8 to 12 in. Fl. white tipped with yellow; April 20 to May 6.

LIATRIS, SCHREB. BUTTON SNAKE-ROOT.*(Compositæ.)*

****L. elegans**, WILLD. Blazing Star. North America.

Pl., 1901. Hardy. Ht. 3 ft. Fl. bright rosy purple; July 17 to Aug. 20.

L. graminifolia dubia.

Pl., 1908.

L. grandiflora.

Pl., 1908.

L. punctata, HOOK. North America.

Pl., 1901. Hardy. Ht. 2 ft. Fl. rosy purple; Aug. 29 to Oct. 10.

***L. pycnostachya**, MICHX. Kansas Gay Flower. North America.

Pl., 1901. Half hardy. Ht. 3 to 5 ft. Fl. pale purple; Aug. 22 to Sept. 26.

****L. scariosa**, WILLD. North America.

Pl., 1894. Hardy. Ht. 2 to 3 ft. Fl. lavender purple; August.

L. scariosa magnifica.

Pl., 1901. Half hardy.

***L. spicata**, WILLD. North America.

Pl., 1894. Hardy. Ht. 3 ft. Fl. rosy purple; July 21 to Sept. 6.

L. spicata montana.

Pl., 1901. Half hardy.

LIGULARIA, CASS. = SENECEO.

LIGUSTICUM, L. LOVAGE.

(Umbelliferæ.)

L. Grayi. Rocky Mountains.

Pl., 1901. Hardy. Ht. 3 ft. Fl. yellowish; May 11 to June 10.

LILIUM, TOURN. LILY.*(Liliaceæ.)*

Although the lily is one of the best known flowers, there are too few of them in Canadian gardens. The two most often met with are the tiger and orange lilies, but while these are hardy and very free bloomers they are much surpassed in beauty by some others. The Japanese lilies, *L. auratum*, *L. speciosum* and *L. longiflorum* are very desirable sorts, but are short lived in most parts of Canada, and cannot be depended upon for more than two or three years. Most species of lilies are propagated from bulbs or the scales of bulbs. Propagation from seeds is a slow process with most kinds, but *Lilium tenuifolium* propagates readily from seed and will bloom the second

or third season. Lilies require well drained soil, and with the exception of a few kinds such as *L. superbum* and *L. tigrinum* do not do well in heavy soils. While lilies do best if the soil is comparatively rich the bulbs suffer if manure comes in contact with them, hence if manure is used it should be thoroughly incorporated with the soil or applied as a top dressing. Lily bulbs should be planted comparatively deep as they will not be so subject to frost and they will do better in hot weather than if the bulbs were near the surface. Lilies may be planted either in the fall or spring.

- ****L. auratum*, LINDL. Gold-banded Lily.
Japan.
Pl., 1897. Half hardy. Ht. 2 to 4 ft. Fl. white dotted with purple, yellow bands; mid July to Sept.
- ****L. Brownii*, MIELLE. China and Japan.
Pl., 1908. Hardy. Ht. 3 to 4 ft. Fl. white inside, violet purple outside; mid July to Aug.
- ****L. canadense*, L. North America.
Pl., 1895. Hardy. Ht. 2 ft. Fl. orange and orange yellow with brown spots; June 28 to July 14.
- ****L. candidum*, L. Bourbon Lily, Madonna Lily. South Europe, &c.
Pl., 1901. Hardy. Ht. 3½ to 4½ ft. Fl. white; July 4 to July 21.
- ***L. croceum*, CHALK. Orange Lily. South Europe.
Pl., 1908. Hardy. Ht. 3 to 5 ft. Fl. bright orange spotted with black; June.
- ***L. dauricum*, KER-GAWL. Siberia.
Syn. L. davuricum, Hort.
Pl., 1898. Hardy. Ht. 3 ft. Fl. orange red; June 13 to July 3.
- ***L. elegans alutaceum*.
Pl., 1908. Hardy. Ht. 8 to 10 in. Fl. yellow dotted with purple; July.
- ****L. elegans atrosanguinea*.
Pl., 1908. Hardy. Ht. 12 to 15 in. Fl. deep but vivid red; July.
- ***L. elegans Van Houttei*.
Pl., 1908. Hardy. Ht. 15 to 18 in. Fl. rich deep red; July.
- ****L. elegans Wallacei*.
Pl., 1900. Hardy. Ht. 6 to 12 in. Fl. apricot-orange spotted with black; Aug. 19 to Sept. 6.
L. excelsum, Hort. = *L. testaceum*.
- ***L. Grayi*, S. WATS. North America.
Pl., 1895. Hardy. Ht. 4½ to 5 ft. Fl. brownish red with purple spots inside; June 21 to July 7.
- ***L. Hansoni*, LEICHTL. Japan.
Pl., 1897. Hardy. Ht. 4 to 4½ ft. Fl. reddish orange with purple spots; June 24 to July 13.
L. kamschatkaense, Hoffmgg. = *Fritillaria camschatcensis*.
- ****L. longiflorum*, THUNB. China and Japan.
Pl., 1908. Half hardy. Ht. 2 to 3 ft. Fl. white; late July to early Aug.
- L. pyrenaicum*, GOUAN. Pyrenees.
Pl., 1900. Hardy. Ht. 2 ft. Fl. yellow; June 3 to June 20.
- ****L. speciosum albiflorum*.
Pl., 1897. Half hardy. Ht. 2 ft. Fl. white; Sept.
- ****L. speciosum rubrum*.
Pl., 1905. Half hardy. Ht. 2 to 3 ft. Fl. white suffused and spotted with crimson; Sept.
- ****L. superbum*, L. American Turk's Cap Lily. Eastern United States and Western Ontario.
Pl., 1895. Hardy. Ht. 4½ to 7 ft. Fl. bright reddish orange with dark spots; June 29 to Aug. 11.
- ****L. tenuifolium*, FISCH. Siberian Coral Lily. Siberia.
Pl., 1898. Hardy. Ht. 1 to 2 ft. Fl. bright scarlet; June 10 to June 27.
- ****L. testaceum*, LINDL. Nankeen Lily. Garden origin.
Syn. L. excelsum, Hort.
Pl., 1900. Hardy. Ht. 4 to 6 ft. Fl. buff or apricot colour; July.

LILIUM—*Con.*

*****L. tigrinum**, KER-GAWL. Tiger Lily.
China and Japan.

Pl., 1908. Hardy. Ht. 2 to 4 ft.
Fl. deep orange spotted thickly
with purplish black; late July to
Sept.

L. tigrinum splendens.
Pl., 1908.

L. Wallacei, Baker. = *L. elegans Wal-*
lacei.

LINARIA, *TOURN.*

(*Scrophulariaceæ.*)

L. anticaria, BOISS. & REUT. Spain.
Pl., 1907.

*****L. dalmatica**, MILL.. Dalmatia, &c.
Pl., 1901. Hardy. Ht. 3½ ft. Fl.
pure yellow; May 31 to Aug. 18.

***L. genistifolia**, MILL. Europe, &c.
Pl., 1901. Hardy. Ht. 3½ ft. Fl.
pure yellow; June 24 to Aug. 18.

*****L. macedonica**, GRISEB. Macedonia.
Pl., 1907. Ht. 2 to 3 ft. Fl. pure
yellow; July.

***L. pallida**, TENORE. Italy.
Pl., 1901. Hardy. Ht. 4 to 6 in.
Fl. violet purple with yellow and
white centre; May 23 to Oct. 5.

L. pelisseriana, MILL. Jersey Toad
Flax. South Europe; Asia Minor.
Pl., 1905. Hardy. Ht. 3 to 4 ft.
Fl. lilac and white; June 16 to
Oct. 17.

***L. purpurea**, MILL. Europe.
Pl., 1902. Hardy. Ht. 3½ to 4½ ft.
Fl. bluish purple; June 20 to
Oct. 21.

L. repens alba.
Pl., 1901. Tender.

L. spectabilis.
Pl., 1894. Hardy. Ht. 2½ ft. Fl.
lilac; May 26 to June 27.

L. triornithophora, WILD. Portugal.
Pl., 1908.

L. valenovskya.
Pl., 1905. Hardy. Ht. 2½ to 3½ ft.
Fl. lilac and white; June 25 to
Oct. 17.

LINDELOFIA, *LEHM.*

(*Boraginaceæ.*)

L. spectabilis, LEHM. Himalayas.
Pl., 1898. Hardy. Ht. 18 in. Fl.
pale blue and pink; May 26 to
June 27.

LINUM, *TOURN.* **FLAX.**

(*Linaceæ.*)

L. alpinum, L. Europe, &c.
Syn. L. Leonii, Schultz.
Pl., 1907.

L. angustifolium, HUDS.. Europe, &c.
Pl., 1897. Tender.

L. austriacum, L. Europe, &c.
Syn. L. provinciale, Jord.
Pl., 1902. Tender.

*****L. flavum**, L. South Europe, &c.
Pl., 1894. Half hardy. Ht. 1 ft.
Fl. yellow; June and July.

L. Leonii, Schultz = *L. alpinum*.

L. maritimum, L. Mediterranean re-
gion.
Pl., 1907.

L. narbonense, L. South Europe.
Pl., 1907.

L. nervosum, WALDST. & KIT. South
Europe, &c.
Pl., 1897. Tender.

L. Muelleri, MORIS. Sardinia.
Pl., 1905. Hardy. Ht. 1½ ft. Fl.
blue; June 15 to Oct. 5.

*****L. perenne**, L. Perennial Flax. North
temperate regions.
Pl., 1898. Half hardy. Ht. 1 to 1½
ft. Fl. azure blue; June to Sept.

L. perenne Lewisii.
Pl., 1907.

L. provinciale, Jord. = *L. austriacum*.

LIRIOPE, *LOUR.*

(*Hæmodoraceæ.*)

L. spicata fol. var.
Syn. Ophiopogon spicatus fol. var.
Pl., 1897. Tender.

L. spicata fol. aur. var.
Pl., 1897. Half hardy.

LITHOSPERMUM, L. GROMWELL.*(Boraginaceæ.)*

L. officinale, L. Europe; North Asia.
Pl., 1905. Hardy. Ht. 3 to 4 ft.
Fl. yellowish white; June 22 to
July 9.

L. prostratum, LOISEL. Europe.
Pl., 1898. Half hardy.

LOBELIA, PLUM.*(Campanulaceæ.)*

*****L. cardinalis, L.** Cardinal Flower.
North America.
Pl., 1898. Half hardy. Ht. 2 to 3
ft. Fl. scarlet; Aug.

L. fulgens Queen Victoria.
Pl., 1898. Tender.

LOPANTHUS, BENTH.*(Labiatae.)*

L. anisatus, BENTH. North America.
Pl., 1896. Hardy. Ht. 5 ft. Fl.
ageratum blue; June 24 to
Sept. 2.

LUPINUS, L. LUPINE.*(Leguminosæ.)*

L. arboreus, SIMS. Tree Lupine. Cali-
fornia.
Pl., 1897. Tender.

L. argenteus, PURSH. North-western
America.
Pl., 1897. Tender.

L. Dicksoni, HORT.
Pl., 1907.

****L. nootkatensis, DON.** North America,
&c.
Pl., 1894. Hardy. Ht. 3 to 3½ ft.
Fl. violet purple, blue and white;
May 31 to July 21.

*****L. polyphyllus, LINDL.** California.
Pl., 1898. Hardy. Ht. 2½ to 3½ ft.
Fl. violet and blue; June 1 to
July 23.

*****L. polyphyllus albiflorus.**
Pl., 1902. Hardy. Ht. 3 ft. Fl.
white; June 7 to Aug. 1.

L. polyphyllus Foxii.
Pl., 1905. Half hardy.

LUPINUS—Con.

L. polyphyllus roseus.
Pl., 1907.

L. rivularis latifolius.
Pl., 1907.

LYCHNIS, L. CAMPION.*(Caryophyllaceæ.)*

L. alba, MILL. White or Evening Cam-
pion. Europe.
Pl., 1902. Hardy. Ht. 2 to 3 ft.
Fl. white; June 15 to Oct. 19.

L. alpina, L. Northern and Arctic
regions.
Pl., 1897. Hardy. Ht. 2 ft. Fl.
rosy purple; July 18 to Aug. 29.

*****L. chalcedonica, L.** Jerusalem Cross.
Russia.
Pl., 1901. Hardy. Ht. 4 ft. Fl.
scarlet. June 20 to Aug. 16.

***L. chalcedonica alba.**
Pl., 1898. Hardy. Ht. 3 ft. Fl.
white; June 20 to Aug. 16.

L. chalcedonica carnea.
Pl., 1906.

****L. chalcedonica flore pleno.**
Pl., 1905. Hardy. Ht. 2 to 3 ft.
Fl. double, scarlet; July.

***L. chalcedonica flore albo pleno.**
Pl., 1897. Hardy. Ht. 2 to 3 ft.
Fl. double, white; July.

***L. coronaria, DESR.** Crowned Cam-
pion. South Europe, &c.
Pl., 1901. Half hardy. Ht. 1 to 2
ft. Fl. crimson; late June and
July.

L. coronaria atropurpurea.
Pl., 1896. Half hardy.

L. coronaria bicolor.
Pl., 1901. Half hardy.

L. coronaria grandiflora.
Pl., 1897. Tender.

L. coronaria oculata.
Pl., 1901. Tender.

***L. dioica, L.** Red Champion. Europe,
&c.
Pl., 1903. Half hardy. Ht. 2 ft.
Fl. magenta; June 13 to Sept.
17.

LYCHNIS—*Con.*

***L. Flos-jovis**, DESR. Rose Champion,
Ragged Robin. Europe.
Pl., 1901. Hardy. Ht. 1 to 1½ ft.
Fl. bright rose; June 12 to Aug.
15.

****L. fulgens**, FISCH. Siberia.
Syn. L. Sieboldii, Van Houtte.
Pl., 1901. Hardy. Ht. 3 ft. Fl.
scarlet; June 24 to Aug. 22.

L. grandiflora, JACQ. China; Japan.
Pl., 1907.

*****L. haageana**, LEMAIRE. Japan.
Pl., 1903. Half hardy. Ht. 8 to 12
in. Fl. orange red, scarlet or
crimson; July 4 to Aug. 8.

L. Preslii, SEKERA. Bolivia.
Pl., 1905. Half hardy. Ht. 3 ft.
Fl. magenta; July 13 to Oct. 24.

****L. Senno variegata**.
Pl., 1905. Half hardy. Ht. 1 ft.
Fl. scarlet, striped with white;
July 3 to Aug. 10.

L. Sieboldii, Van Houtte. = L. fulgens.

L. Viscaria, L. German Catchfly. Eu-
rope, &c.
Pl., 1903. Half hardy. Ht. 1½ ft.
Fl. rose; June 7 to June 27.

L. Viscaria alba grandiflora.
Pl., 1901. Tender.

L. Viscaria flore pleno.
Pl., 1898. Half hardy.

L. Viscaria splendens.
Pl., 1898. Half hardy.

LYSIMACHIA, *L.* LOOSE-STRIFE.

(*Primulaceæ.*)

L. atropurpurea, L. Greece and Asia
Minor.
Pl., 1902. Half hardy.

***L. clethroides**, DUBY. Japan.
Pl., 1895. Hardy. Ht. 2 to 2½ ft.
Fl. white; July 18 to Sept. 13.

***L. Nummularia**, L. Creeping Jenny.
Europe.
Pl., 1897. Hardy. Creeping. Fl.
yellow; June 18 to Sept. 12.

LYSIMACHIA—*Con.*

***L. punctata**, L. Europe, &c.
Syn. L. verticillata, Bieb.
Pl., 1896. Hardy. Ht. 1½ ft. Fl.
yellow; June 11 to Aug. 16.

L. verticillata, Bieb. = L. punctata.

LYTHRUM, *L.* PURPLE LOOSE-STRIFE.

(*Lythraceæ.*)

L. alatum, PURSH. North America.
Pl., 1908.

****L. Salicaria**, L. Common purple Loose-
stife. North temperate regions.
&c.
Pl., 1898. Hardy. Ht. 5 to 5½ ft.
Fl. purplish rose; June 16 to
Aug. 22.

L. Salicaria roseum superbum.
Pl., 1903. Hardy. Ht. 4 to 4½ ft.
Fl. deep rose; June 27 to Sept. 5.

MACROTOMIA, *DC.*

(*Boraginaceæ.*)

*****M. echoides**, BOISS. Prophet Flower.
Orient.

Syn. Arnebia echoides, DC.

Pl., 1896. Hardy. Ht. 15 to 18 in.
Fl. golden yellow with black
spots changing to pale yellow;
May 11 to June 3.

MALVA, *L.* MALLOW.

(*Malvaceæ.*)

***M. Alcea**, L. Vervain Mallow. Europe.
Pl., 1898. Hardy. Ht. 5 ft. Fl.
pink; July 3 to Sept. 5.

****M. moschata alba**. White Musk Mal-
low.
Pl., 1898. Hardy. Ht. 2½ ft. Fl.
white; June 14 to Oct. 17.

MATRICARIA, *L.*

(*Compositæ.*)

***M. Tschihatchewii**. HORT. Turfing
Daisy. Kew.
Syn. Chysanthemum Tschihatchewii.
Pl., 1895. Hardy. Ht. 1 in. Fl.
white; May 23 to July 7.

MEGASEA, HARD. = SAXIFRAGA.

MENTHA, L. MINT.*(Labiatae.)***M. gentilis variegata.**

Pl., 1895. Hardy. Ht. 2 ft. Foliage variegated.

M. piperita, L. Common Peppermint. Europe, &c.

Pl., 1894. Hardy. Ht. 3 to 3½ ft. Fl. purple; Aug. and Sept.

MERTENSIA, ROTH. SMOOTH LUNGWORT.*(Boraginaceae.)***M. lanceolata, DC.** Western North America.

Pl., 1907.

***M. paniculata, G. DON.** North America, &c.

Pl., 1895. Hardy. Ht. 18 in. Fl. pink in bud, deep blue when open; May 16 to June 27.

*****M. pulmonarioides, ROTH.** Virginian Cowslip. North America.*Syn. M. Virginica, Link.*

Pl., 1903. Hardy. Ht. 1 to 2 ft. Fl. pale blue, bud pink at base; May 10 to 31.

*M. virginica, Link. = M. pulmonarioides, Roth.*****M. sibirica, G. DON.** Siberia, &c.*Syn. Pulmonaria sibirica, L.*

Pl., 1903. Half hardy. Ht. 1 to 2 ft. Fl. blue; May 13 to May 31.

MEUM, ADAMS. BALDMONEY, SPIGNEL.*(Umbelliferae.)***M. athamanticum, JACQ.** Europe.

Pl., 1900. Hardy. Ht. 1½ ft. Fl. white; May 26 to June 26.

MISCANTHUS, ANDERSS.*(Gramineae.)****M. sinensis gracillimus.***Syn. Eulalia gracillima univittata.*

Pl., 1895. Hardy. Ht. 5½ to 6 ft. Foliage ornamental.

MOLINIA, SCHRANK.*(Gramineae.)****M. caerulea variegata.**

Pl., 1895. Hardy. Ht. 1 to 2½ ft. Foliage variegated.

MONARDA, L. HORSEMINT.*(Gramineae.)***M. bradburniana, BECK.** Middle United States.

Pl., 1907.

*****M. didyma, L.** Oswego Tea. North America.

Pl., 1901. Hardy. Ht. 3 to 4 ft. Fl. bright crimson to scarlet; July 3 to Sept. 15.

***M. didyma alba.**

Pl., 1903. Hardy. Ht. 2 to 3 ft. Fl. dull white; July 21 to Aug. 26.

****M. didyma carminata.**

Pl., 1901. Hardy. Ht. 3 ft. 2 in. Fl. rosy crimson; July 9 to Sept. 2.

****M. didyma rosea.**

Pl., 1905. Hardy. Ht. 3 to 3½ ft. Fl. rosy crimson; July 14 to Aug. 23.

***M. fistulosa, L.** Wild Bergamot. North America.

Pl., 1902. Hardy. Ht. 3 ft. Fl. heliotrope; July 24 to Aug. 23.

MONTBRETIA, DC. = TRITONIA, KER-GAWL.**MULGEDIUM, CASS. = LACTUCA.****MYOSOTIS, DILL.** FORGET-ME-NOT. SCORPION GRASS.*(Boraginaceae.)******M. alpestris, F. W. SCHMIDT.** Europe, &c.

Pl., 1904. Hardy. Ht. 1 ft. Fl. blue; May 22 to Aug. 6.

M. sylvatica, HOFFM. Wood Forget-me-not. Northern regions.

Pl., 1901. Hardy. Ht. 1 to 2 ft. Fl. blue; May to Aug.

NARCISSUS, L. DAFFODIL.*(Amaryllidaceae.)******N. incomparabilis** Sulphur Phoenix.

Pl., 1901. Half hardy. Ht. 12 to 18 in. Fl. creamy white; April 29 to May 28.

NARCISSUS—Con.

N. Jonquilla flore pleno.
Pl., 1900. Tender.

N. polyanthus = *N. Tazetta*.

*****N. poeticus**, L. Poet's Daffodil, Pheasant's Eye Narcissus.

Pl., 1897. Hardy. Ht. 12 to 18 in.
Fl. white, cup edged with scarlet;
middle of May to early June.

****N. Pseudo-narcissus major.**

Pl., 1897. Half hardy. Ht. 1 ft.
Fl. deep yellow; late April to
May.

****N. Tazetta gloriosus.**

Syn. N. polyanthus gloriosus.
Pl., 1901. Half hardy. Fl. white,
cup orange; April 25 to May 28.

NEPETA, RIV. CAT MINT.

(*Labiatae*.)

N. grandiflora, BIEB. Caucasus.

Pl., 1905. Hardy. Ht. 4 to 5 ft.
Fl. purple; July 9 to Aug. 31.

***N. macrantha**, FISCH. Siberia.

Pl., 1905. Hardy. Ht. 4 to 4½ ft.
Fl. bluish purple and purple;
June 30 to Sept. 26.

N. nuda, L. South Europe, &c.

Pl., 1905. Hardy. Ht. 4 ft. 8 in.
Fl. white tinged with lilac, purple
spots; June 28 to Aug. 2.

NIEREMBERGIA, RINZ. & PAV.

(*Solanaceae*.)

N. frutescens, DUR. Chili.

Pl., 1908.

ENOTHERA, L. EVENING PRIMROSE.

(*Onagraceae*.)

****Æ. fruticosa**, L. Sundrops. North
America.

Syn. Kneiffia fruticosa.

Pl., 1905. Hardy. Ht. 1½ ft. Fl.
yellow; June 30 to Oct. 10.

*****Æ. fruticosa Youngii.**

Pl., 1895. Hardy. Ht. 1 to 2 ft.
Fl. yellow; June 19 to Oct. 10.

*****Æ. glauca Fraseri.**

Pl., 1900. Hardy. Ht. 2 ft. Fl.
yellow; June 21 to Sept. 18.

ENOTHERA—Con.

Æ. Johnsoni, PARRY. Western North
America.

Pl., 1907.

Æ. macrocarpa, Pursh. = **Æ. missouriensis**.

*****Æ. missouriensis**, SIMS. North Amer.

Syn. Æ. macrocarpa, Pursh.

Pl., 1895. Hardy. Ht. 1 to 1½ ft.
Fl. primrose yellow; June 30 to
Oct. 17.

Æ. Pilgrimi.

Pl., 1907.

Æ. rubrinervis.

Pl., 1907.

Æ. Sellowii, LINK & OTTO. Eastern
America.

Pl., 1907.

Æ. speciosa, NUTT. North America.

Pl., 1901. Tender. Ht. 1½ ft. Fl.
white; June 23 to Aug. 25.

Æ. speciosa rosea.

Pl., 1905. Tender.

OMPHALODES, TOURN. NAVEL-WORT.

(*Boraginaceae*.)

***O. verna alba.**

Pl., 1905. Hardy. Creeping. Fl.
white; May.

OPHIOPOGON SPICATUS FOL. VAR.

= **LIRIOPE SPICATA FOL.**
VAR.

O. spicatus fol. aur. var. = *Liriope spicata fol. aur. var.*

ONONIS, L. REST HARROW.

(*Leguminosae*.)

O. Columnæ, ALL. Mediterranean re-
gion.

Pl., 1907.

O. hircina, JACQ. Europe; North Asia.

Pl., 1905. Hardy. Ht. 3½ ft. Fl.
rose; July 3 to Aug. 7.

O. spinosa, L. Europe.

Pl., 1907.

ORNITHOGALUM, L. STAR OF BETHLEHEM.*(Liliaceæ.)***O. arabicum, L.** Mediterranean region.
Pl., 1901. Tender.***O. narbonense, L.** Mediterranean region.
Pl., 1901. Hardy. Ht. 1 to 1½ ft.
Fl. white; May 15 to June 12.****O. umbellatum, L.** Common Star of Bethlehem. Europe, &c.
Pl., 1901. Hardy. Ht. 1 ft.
Fl. white and green striped with white; May 18 to June 12.**OROBUS, L. = LATHYRUS.***O. aurantius, Stev. = Vicia aurantia.***OROBUS FORMOSUS = PISUM FORMOSUM.****OROBUS LATHYROIDES, L. = VICIA OROBOIDES.***O. luteus, L. = Lathyrus montanus.***OSMORRHIZA, RAFIN.***(Umbelliferae.)***O. brevistylis, DC.** North America.
Pl., 1895. Hardy. Ht. 3 ft. Fl. white; May to June.**OSTROWSKIA, REGEL.***(Campanulaceæ.)***O. magnifica, REGEL.** Central Asia.
Pl., 1897. Tender.**PACHYSANDRA, MICHX.***(Euphorbiaceæ.)*****P. terminalis, SIEB. & ZUCC.** Japan.
Pl., 1897. Hardy. Ht. 10 to 12 in.
Fol. evergreen.**P. terminalis fol. var.**
Pl., 1897 Half hardy.**PÆONIA, L. PÆONY.***(Ranunculaceæ.)*

The pæony is one of the best known hardy herbaceous perennials, and its popularity was never greater than it is to-day. During recent years it has been planted much more largely than ever before, and judging by the great interest taken in it at the present time it is likely to remain for a long time one of the most popular flowers. The number of varieties of pæonies now offered for sale is almost unlimited. In 'A Pæony Check List,' by J. E. Coit, published by Cornell University and the American Pæony Society, no less than 2,706 names of pæonies are given, and while many of these are, doubtless, synonyms, it gives some indication of the enormous number of varieties in the trade.

The original parents of most cultivated varieties of pæonies may be traced to two species, *P. albiflora* and *P. officinalis*, the blending of which by cross-breeding having given the good characteristics of both in the seedlings. The re-crossing of the hybrids gave new forms, until now the raising of seedlings of the named varieties results in a wonderful variety of form and colour. From the thousands of seedlings which are grown the best are selected, named and introduced. While these seedlings are easily grown, it takes at least five years from the sowing of the seed before they bloom sufficiently to judge of their true merits. Unfortunately many varieties of pæonies are sold under more than one name, which causes confusion to the purchaser. The varieties are propagated by dividing the roots, each division of which should have at least one bud. Division and planting are most successfully done early in autumn, about September 1 being a good time. Planted then they make some rootlets before winter, which is important, as if planted late or in the spring they start growing before there are sufficient rootlets and the growth they make the first season is feeble. Pæonies succeed in a great variety of soils, but should have a deep, rich, fairly moist but well drained soil. They succeed best in full sunlight. Before planting the ground should be trenched at least two feet deep, at the same time mixing with it a liberal quantity of rotted barnyard manure. The plants should be set so that the crown will be about two inches below the surface. As the plants eventually become very large and improve

with age it is important to give them plenty of room, about three feet apart each way being a suitable distance. The surface soil should be kept loose throughout the summer, and late in the autumn the soil should have a top-dressing of manure about four inches in depth for winter protection and for turning under to enrich the soil in the spring. There is no general collection of the finer cultivated varieties of pæonies in the Arboretum and Botanic garden, the pæonies there being confined to the original wild forms of this genus and a few of the old-fashioned cultivated varieties. There is, however, a large collection of about one hundred and fifty different sorts arranged in large beds on the ornamental grounds. This large collection was imported chiefly from Holland and France about ten or twelve years ago by Dr. Wm. Saunders, who has had personal charge of the lawns and grounds. With such a fine collection it is difficult to make a small list which will include all the very desirable sorts, but twelve varieties are named below which, in the writer's judgment, are among the best. There are many good pæonies, and much diversity of opinion exists as to their relative merits. The second list was prepared by Mr. R. B. Whyte, Ottawa, from his own experience, he having planted the best pæonies from the best lists from various sources. The third list was prepared by Dr. A. P. Saunders, Hamilton College, Clinton, N.Y., who has made a specialty of growing the best pæonies.

LIST OF TWELVE BEST PÆONIES. C. E. F. COLLECTION.

- Artémise.—Rosy pink, flesh colour in centre, faint perfume; very free bloomer.
 Berlioz.—Rosy red; free bloomer, late.
 Charlemagne.—Pink, shading to white at edge, sweet scented; very free bloomer.
 Festiva Maxima.—White, some centre petals tipped with carmine.
 Lucrèce.—Rosy pink, very large; free bloomer.
 Madame d'Hour.—Flesh colour, tipped with carmine; free bloomer.
 Madame Lemoine.—Pink, with creamy white centre.
 Marie Lemoine.—Flesh colour, changing to white.
 Monsieur Dupont.—White, showing yellow beneath; faint fragrance.
Officinalis—Old Double Rose.—Deep rose; free bloomer, early.
Officinalis Rubra.—Crimson; free bloomer, early.
 Rubra Superba.—Purplish crimson; very free bloomer.

LIST OF TWELVE BEST PÆONIES. PREPARED BY MR. R. B. WHYTE, OTTAWA.

- Asa Gray.—Salmon pink, very large; free bloomer.
 Claire Dubois.—Light rose, very large; late bloomer.
 Floral Treasure (Delicatissima).—Blush pink, very large, fragrant; free bloomer.
 Festiva Maxima.—White, some petals tipped with carmine, very handsome.
 La Rosière.—White, with yellow centre, semi-double, very sweet scented; very free bloomer.
 Lady Leonora Bramwell.—Silvery rose, very fragrant; very free bloomer.
 Madame d'Hour.—Flesh colour, tipped with carmine, very large; very free bloomer.
 Monsieur Jules Elie.—Silvery pink, very large.
 Marie Lemoine.—Flesh colour, changing to white.
 Queen Victoria.—White, yellow centre and red stamens.
 Rubra Superba.—Purplish crimson; very free bloomer.

Also the four early blooming varieties:—

- P. officinalis alba plena*,
P. officinalis rosea plena,
P. officinalis rubra plena, and
P. tenuifolia flore pleno.

LIST OF TWELVE BEST PÆONIES. PREPARED BY DR. A. P. SAUNDERS, HAMILTON COLLEGE,
CLINTON, N.Y.

White—

- Mont Blanc (synonym, *Alba Sulfurea*), fine, large bloom, early.
 Festiva Maxima.—Midseason, white, with crimson flakes, fine in every way.
 Marie Lemoine.—Creamy white, late, superb variety.
 La Rosière.—Semi-double; very fine for garden decoration, and equally lovely for cutting.

Flesh coloured and pink—

- Delicatissima (synonym *Floral Treasure*).—Good shade of pale pink, fragrant, and free bloomer.
 Triomphe de l'Exposition de Lille.—Pale pink, covered with minute spots of a deeper colour. Like Asa Gray but a shade brighter in colour.
 Richardson's Perfection.—Superb, pale pink, late.
 Richardson's Grandiflora.—Superb, pale pink, late.
 Eugène Verdier.—Pale salmon pink, extra fine.

Deep red—

- Adolphe Rousseau.—Fine, very dark red, quite free from magenta.

Tricolour—

- Agnes Mary Kelway.—Delightful garden plant. Light rose guard petals, yellow petaloids; tuft of flesh pink in the centre.
 Jeanne d'Arc.—Vigorous, free, dwarf; very good.

In the *officinalis* section—

- Off. rubra plena*.—The old double red.
Off. Sabinii.—A fine deep red single.
Off. Otto Froebel.—Single cherry red.

A very desirable plant for the garden—

- Albiflora*, The Bride.—Single white, very large; the whole plant a mass of bloom.

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| <p>*<i>P. albiflora</i>, PALL. Siberia, &c.
Pl., 1899. Hardy. Ht. 4 ft. Fl. white or pink; June 10 to June 26.</p> <p>*<i>P. anomala</i>, L. Siberia, &c.
Pl., 1899. Hardy. Ht. 1½ ft. Fl. bright crimson; May 25 to May 31.</p> <p>**<i>P. anomala insignis</i>.
Pl., 1899. Hardy. Ht. 2 ft. Fl. deep crimson; May 28 to May 31.</p> <p>**<i>P. anomala insignis</i> Peter Barr.
Pl., 1899. Hardy. Ht. 2 ft. Fl. deep crimson; May 23 to June 11.</p> <p>*<i>P. anomala intermedia</i>.
Pl., 1899. Hardy. Ht. 2½ ft. Fl. deep crimson; May 25 to June 11.</p> <p><i>P. arietina</i>, ANDERS. Orient.
Pl., 1899. Hardy. Ht. 1 ft. Fl. dark red; late May to early June.</p> | <p>**<i>P. arietina alba</i>.
Pl., 1899. Hardy. Ht. 15 in. Fl. white; May 31 to June 14.</p> <p>*<i>P. arietina Andersonii</i>.
Pl., 1899. Hardy. Ht. 14 in. Fl. purplish rose; May 23 to June 5.</p> <p><i>P. arietina Baxteri</i>.
Pl., 1899. Half hardy.</p> <p>**<i>P. arietina Crown Prince</i>.
Pl., 1899. Hardy. Ht. 1 ft. 4 in. Fl. purplish crimson; May 31 to June 19.</p> <p>*<i>P. arietina Diogenes</i>.
Pl., 1899. Hardy. Ht. 1 ft. 10 in. Fl. crimson; May 28 to June 12.</p> <p><i>P. arietina Matador</i>.
Pl., 1899. Half hardy.</p> <p>*<i>P. arietina Northern Glory</i>.
Pl., 1899. Hardy. Ht. 2 ft. 4 in. Fl. purplish pink; May 26 to June 9.</p> |
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PÆONIA—Con.**P. arietina Penelope.**

Pl., 1899. Half hardy.

***P. arietina Purple Emperor.**

Pl., 1899. Hardy. Ht. 2 ft. Fl. crimson purple; May 28 to June 11.

***P. arietina Rosy Gem.**

Pl., 1899. Hardy. Ht. 1 ft. 9 in. Fl. rose pink; May 28 to June 12.

***P. Bakeri, LYNCH.**

Pl., 1899. Hardy. Ht. 2 ft. Fl. purplish pink; May 23 to June 11.

P. Broteri, BOISS. & REUT. Spain.

Pl., 1899. Hardy. Ht. 1 ft. 8 in. Fl. magenta; June 16 to June 30.

P. corallina, RETZ. Europe, &c.*Syn. P. flavescens, Presl.*
Pl. 1899. Half hardy.**P. corallina Russii.**

Pl., 1899. Hardy. Ht. 1 ft. 8 in. Fl. rose; May 19 to June 8.

P. coriacea, BOISS. Spain.

Pl., 1899. Hardy. Ht. 2 ft. Fl. rose; June 3 to June 19.

P. cretica, SABINE. Crete.

Pl., 1899. Half hardy.

P. decora, ANDERS. Thrace; Asia Minor.

Pl., 1899. Half hardy.

***P. decora elatior.**

Pl., 1899. Hardy. Ht. 1 to 2 ft. Fl. purplish rose; May 26 to June 12.

***P. decora Gertrude Jekyll.**

Pl., 1899. Hardy. Ht. 2 ft. 2 in. Fl. crimson; May 31 to June 12.

P. decora Monte Glar.

Pl., 1899. Hardy. Ht. 1 ft. 4 in. Fl. pink; May 26 to June 3.

P. decora Pallasii.

Pl., 1899. Hardy. Ht. 2 ft. Fl. rose; May 28 to June 17.

*P. flavescens, Presl. = P. corallina.***PÆONIA—Con.****P. humilis, RETZ. Europe.**

Pl., 1899. Hardy. Ht. 1 ft. 4 in. Fl. bright red; May 28 to June 11.

***P. microcarpa, BOISS. & REUT. Spain.**

Pl., 1899. Hardy. Ht. 1 ft. 10 in. Fl. deep purplish pink; May 28 to June 12.

***P. microcarpa Jonathan Gibson.**

Pl., 1899. Hardy. Ht. 1 ft. 4 in. Fl. purplish pink; May 26 to June 11.

P. mollis, ANDERS. Siberia.

Pl., 1899. Half hardy.

****P. officinalis, L. Common Garden Pæony. Europe.***Syn. P. pubens, Sims.*

Pl., 1901. Hardy. Ht. 1 ft. 4 in. Fl. dark crimson; May 26 to May 31.

****P. officinalis anemonæflora.**

Pl., 1899. Hardy. Ht. 2 ft. Fl. deep crimson, stamens edged with yellow; May 28 to June 16.

*****P. officinalis atrorubens plena.**

Pl., 1899. Hardy. Ht. 2 ft. 2 in. Fl. double, deep blood red; June 3 to June 22.

***P. officinalis blanda.**

Pl., 1899. Hardy. Ht. 1 ft. 10 in. Fl. deep purplish rose; May 23 to June 6.

****P. officinalis Double Flowered Anemone Rose.**

Pl., 1899. Hardy. Ht. 1 ft. 9 in. Fl. double, deep rose; June 7 to June 21.

***P. officinalis Excelsior.**

Pl., 1899. Hardy. Ht. 1 ft. 6 in. Fl. deep purplish rose; May 26 to June 9.

***P. officinalis Old Double Flesh White.**

Pl., 1899. Hardy. Ht. 2½ ft. Fl. double, pale blushed pink; May 31 to June 22.

*****P. officinalis Old Double Red.**

Pl., 1899. Hardy. Ht. 1 ft. 9 in. Fl. double, crimson; May 28 to June 22.

PÆONIA—Con.

- ****P. officinalis* Old Double Rose.
Pl., 1899. Hardy. Ht. 2 ft. Fl.
deep rose; June 3 to June 22.
- ****P. officinalis* Otto Frœbel.
Pl., 1899. Hardy. Ht. 2 ft. 3 in.
Fl. deep rose; May 28 to June
20.
- ***P. officinalis* rosea.
Pl., 1899. Hardy. Ht. 2½ ft. Fl.
rose; May 28 to June 19.
- ****P. officinalis* Sabinii.
Pl., 1899. Hardy. Ht. 2 ft. 2 in.
Fl. bright crimson; May 23 to
June 15.
- **P. officinalis* Sunbeam.
Pl., 1899. Hardy. Ht. 1 ft. 5 in.
Fl. cherry red; May 28 to June
20.
- P. paradoxa*, ANDERS. South Europe.
Pl., 1899. Hardy. Ht. 1 ft. 8 in.
Fl. purplish red; May 28 to
June 19.
- ***P. paradoxa* fimbriata.
Pl., 1899. Hardy. Ht. 1 ft. Fl.
deep rose; May 28 to June 19.
- P. peregrina*, MILL. Orient.
Pl., 1901. Hardy. Ht. 1½ ft. Fl.
rosy magenta; May 26 to June
11.
- **P. peregrina* Brilliant.
Pl., 1899. Hardy. Ht. 1 ft. 9 in.
Fl. rose with a purplish tinge.
- P. peregrina* Blushing Maid.
Pl., 1899. Hardy. Ht. 2 ft. Fl.
reddish pink; May 23 to June 5.
- P. peregrina* byzantina.
Pl., 1899. Hardy. Ht. 2 ft. Fl.
rosy magenta; May 28 to June
11.

PÆONIA—Con.

- P. peregrina* compacta.
Pl., 1899. Hardy. Ht. 2 ft. 2 in.
Fl. rosy magenta; May 28 to
June 5.
- **P. peregrina* Exquisite.
Pl., 1899. Hardy. Ht. 1 ft. 9 in.
Fl. purplish pink; May 26 to
June 17.
- **P. peregrina* Ruby Queen.
Pl., 1899. Hardy. Ht. 2 ft. 5 in.
Fl. deep purplish pink; May 28
to June 11.
- P. peregrina* Seraph.
Pl., 1899. Hardy. Ht. 1 ft. 8 in.
May 28 to June 11.
- P. pubens*, Sims = *P. officinalis*.
- ****P. tenuifolia*, L. Europe.
Pl., 1898. Hardy. Ht. 1½ ft. Fl.
bright crimson; May 16 to
June 2.
- ****P. tenuifolia* flore pleno.
Pl., 1899. Hardy. Ht. 1 to 1½ ft.
Fl. double, crimson; late May to
early June.
- ***P. tenuifolia* hybrida.
Pl., 1899. Hardy. Ht. 1 ft. 8 in.
Fl. rich crimson; May 23 to
June 5.
- P. triternata*, PALL. Siberia, &c.
Pl., 1899. Hardy. Ht. 1 ft. 4 in.
Fl. purplish pink; May 23 to
June 8.
- ***P. wittmanniana*, HARTWISS. Orient.
Pl., 1900. Hardy. Ht. 2 ft. 3 in.
Fl. pale yellow; May 9 to May
31.

PANCRATIUM, DILL.*(Amaryllidaceæ.)*

- P. maritimum*, L. Mediterranean region.
Pl., 1898. Tender.

PAPAVER, *TOURN.* POPPY.*(Papaveraceæ.)*

The perennial poppies, like the annual varieties, are very showy, and no herbaceous border should be without them. The Iceland poppy begins to bloom about the middle of May, just after the early tulips, when there is usually little bloom, and with the exception of a few weeks in midsummer continues to bloom until late in the autumn. Being a small plant it takes but little room, and it may be used with good effect scattered throughout the border near other larger plants. In this way it brightens up certain parts of the border which might be without bloom. It seeds itself, and though it is classed as a perennial should be really treated as a biennial to get the best results. The oriental poppy and its varieties have gorgeous flowers, most of which are of vivid shades of scarlet and crimson. They are very striking in the border, both on account of their brilliant colour and the immense size of the flowers, the largest grown at the Experimental Farm measuring 9½ inches in diameter. The clumps of oriental poppies improve with age, and while new varieties may readily be obtained from seed, named sorts can be propagated by dividing the plants.

****P. alpinum*, L. Alpine Poppy. Alpine and Arctic Europe, &c.
Pl., 1907. Hardy. Ht. 6 in. Fl. yellow or white; May and June.

P. armeniacum, Lam. = *P. caucasicum*.
Pl., 1908.

P. atlanticum, Haage & Schmidt. = *P. rupifragum atlanticum*.

P. bracteatum = *P. orientale bracteatum*.

P. caucasicum, BIEB. CAUCASUS.
Syn. P. armeniacum.
Pl., 1907.

P. Heldreichii, BOISS. Asia Minor.
Pl., 1907.

****P. involucreatum maximum*.
Pl., 1895. Hardy. Ht. 2 to 3 ft.
Fl. scarlet with black blotches;
June 13 to June 23.

P. monanthum, TRAUTV. Region of
Caucasus.
Pl., 1907.

****P. nudicaulis*, L. Iceland Poppy. Arctic and Alpine regions.
Syn. P. radicum, Rottb.
Pl., 1905. Hardy. Ht. 9 to 15 in.
Fl. yellow or white; May to Oct.

***P. orientale*, L. Oriental Poppy. Asia Minor.
Pl., 1895. Hardy. Ht. 2 to 2½ ft.
Fl. scarlet, sometimes with a dark purplish black spot at base of petals; May 27 to June 15.

**P. orientale Blush Queen*.
Pl., 1896. Hardy. Ht. 1½ to 3 ft.
Fl. dull pink with black blotches near base; June 7 to June 20.

***P. orientale bracteatum*.
Pl., 1893. Hardy. Ht. 2 to 2½ ft.
Fl. scarlet, sometimes with a dark purple spot at base of petal; bracts beneath petals; June 6 to June 20.

P. orientale Darkness.
Pl., 1908.

****P. orientale bracteatum Duke of Teck*.
Pl., 1906. Hardy. Ht. 3 ft. Fl. fiery scarlet, with black blotches at base; June 6 to June 22.

****P. orientale bracteatum Mogul*.
Pl., 1905. Hardy. Ht. 3 to 4 ft.
Fl. cardinal with black blotches at base; June 16 to June 21.

****P. orientale bracteatum Nancy*.
Pl., 1905. Hardy. Ht. 3½ ft. Fl. blood red, with black blotches at base; June 14 to June 25.

****P. orientale bracteatum nanum splendens*.
Pl., 1895. Hardy. Ht. 2½ ft. Fl. scarlet with black blotches; June 3 to June 25.

****P. orientale grandiflorum*.
Pl., 1898. Hardy. Ht. 2½ ft. Fl. scarlet with black blotches at base; June 13 to June 23.



1. CUT-LEAVED GOAT'S BEARD—*Spiraea Aruncus Kneiffi*. 2. GOAT'S BEARD—*Spiraea Aruncus*.
3. EARLY BLOOMING PERENNIAL PHLOX—*Phlox glaberrima suffruticosa Snowden*.
4. DELAVAY'S INCARVILLEA—*Incarvillea Delavayi*.

PAPAVER—*Con.*

- ***P. orientale Little Gem.**
Pl., 1901. Hardy. Fl. dusky pink;
June 3 to June 23.
- ****P. orientale Medusa.**
Pl., 1901. Hardy.
purplish pink; June 10 to July 2.
- *****P. orientale Mrs. Marsh.**
Pl., 1901. Hardy. Ht. 3 ft. Fl.
crimson scarlet showing white
with black blotches at base; June
7 to June 23.
- *****P. orientale Novelty.**
Pl., 1901. Hardy. Ht. 4 ft. Fl.
rosy crimson with black blotches
at base; June 10 to 29.
- P. orientale Parkmanni.**
Pl., 1907.
- *****P. orientale Royal Scarlet.**
Pl., 1901. Hardy. Ht. 3½ ft. Fl.
bright scarlet with black blotches
at base; June 3 to June 23.
- ****P. orientale semi-plenum.**
Pl., 1905. Hardy. Ht. 3 ft. Fl.
semi-double, bright fiery red, with
black blotches at base.
- P. orientale Sintenisii.**
Pl., 1907.
- *****P. orientale Stewart's Variety.**
Pl., 1908. Hardy. Ht. 3 ft. Fl.
rich deep cardinal; mid to late
June.
- *****P. orientale Tulip.**
Pl., 1901. Hardy. Ht. 2½ ft. Fl.
rich scarlet with black blotches
at base; June 7 to June 26.
- P. orientale Vesta.**
Pl., 1908.
- *****P. pilosum, SIBTH. & SM.** Greece.
Pl., 1902. Hardy. Ht. 2½ ft. Fl.
light scarlet, whitish at base;
first two weeks of June.
- P. pinnatifidum, MORIS.** Italy.
Pl., 1907.
- P. radicum, Rottb. = P. nudicaule.*
- P. rupifragum atlanticum.**
Syn. P. atlanticum, Haage &
Schmidt.
Pl., 1907.

- PARADISEA, MAZZUC.** St. BRUNO'S
LILY.
(*Liliaceæ.*)
- P. Liliastrum, BERTOL.** Europe.
Syn. Anthericum Liliastrum, L.
Pl., 1895. Half hardy.
- ****P. Liliastrum major.**
Pl., 1898. Hardy. Ht. 1½ to 2 ft.
Fl. white; June 9 to June 22.
- PENTSTEMON, MITCH.** BEARD TONGUE.
(*Schrophulariaceæ.*)
- P. acuminatus, DOUGL.** North Amer.
Pl., 1907.
- P. angustifolius, Nutt. = P. cæruleus.*
- *****P. barbatus, ROTH.** Western United
States.
Pl., 1898. Hardy. Ht. 3 to 4 ft.
Fl. bright carmine or nearly scar-
let, yellow throat, sometimes
pink; July 3 to Aug. 22.
- *****P. barbatus Torreyi.**
Pl., 1895. Hardy. Ht. 3 to 4 ft.
Fl. crimson scarlet; June 30 to
Aug. 29.
- P. Bradburnii, Pursh. = P. grandiflorus.*
- P. Bridgesii, A. GRAY.** North America.
Pl., 1907.
- ***P. cæruleus, NUTT.** Western United
States.
Syn. P. angustifolius, Nutt.
Pl., 1901. Hardy. Ht. 1½ ft. Fl.
deep lilac tipped with blue; June
9 to Aug. 20.
- P. campanulatus, WILLD.** Mexico.
Pl., 1903. Tender.
- ****P. Cobæa, NUTT.** Western United
States.
Pl., 1897. Half hardy. Ht. 2 ft.
Fl. reddish purple to white; July
2 to July 21.
- P. diffusus, DOUGL.** Western North
America.
Pl., 1895. Tender.
- P. Digitalis = P. levigatus Digitalis.*
- P. frutescens, LAMB.** Unalaska; Kam-
schatica; Japan.
Pl., 1907.

PENTSTEMON—Con.

- P. glaber**, PURSH. Western United States.
Syn. P. speciosa, Dougl.
Pl., 1902. Tender.
- P. glaber cyananthus**.
Pl., 1907. Tender.
- P. glandulosus**, DOUGL. Western North America.
Pl., 1907.
- P. glaucus**, R. GRAH. Rocky Mountains.
Pl., 1907.
- P. grandiflorus**, FRAS. North America.
Syn. P. Bradburii.
Pl., 1907.
- P. hybrida** Newbury Gem.
Pl., 1908.
- P. lævigatus**, SOLAND. United States.
Pl., 1896. Hardy. Ht. 2½ to 3½ ft.
Fl. white tinged with lilac; June 21 to Aug. 2.
- **P. lævigatus Digitalis.**
Syn. P. Digitalis.
Pl., 1901. Hardy. Ht. 2 to 3 ft.
Fl. white faintly tinged with lilac; June 23 to Aug. 6.
- P. linarioides**, A. GRAY. New Mexico.
Pl., 1905. Tender.
- P. Menziesii**, HOOK. North-western America.
Pl., 1895. Half hardy.
- **P. ovatus**, DOUGL. North-western Am.
Pl., 1902. Hardy. Ht. 2 ft. 3 in.
Fl. bluish and lilac purple; June 13 to July 13.
- **P. pubescens**, SOLAND. North America.
Pl., 1898. Hardy. Ht. 1½ ft. Fl. purplish rose and white; June 11 to July 18.
- P. Richardsonii**, DOUGL. Oregon, &c.
Pl., 1896. Tender.
- P. speciosus, Dougl. = P. glaber.*
- *P. tubiflorus**, NUTT. North-western America.
Pl., 1905. Hardy. Ht. 2 ft. Fl. white tinged with lilac; June 26 to July 17.

PETALOSTEMON, MICHX. PRAIRIE CLOVER.*(Leguminosæ.)*

- **P. violaceus**, MICHX. North-western America.
Pl., 1895. Hardy. Ht. 1 to 1½ ft.
Fl. violet; July 3 to Aug. 22.

PETASITES, L. BUTTER BURR.*(Compositæ.)*

- *P. japonicus giganteus**, F. SCHMIDT. Island of Sachalin.
Pl., 1901. Hardy. Ht. 1½ to 2 ft.
Fl. greenish; April 20 to May 19.

PEUCEDANUM, L. HOG'S FENNEL.*(Umbelliferae.)*

- P. macrocarpum**, NUTT. North-western America.
Pl., 1897. Hardy.

PHALARIS, L. CANARY REED.*(Gramineæ.)*

- **P. arundinacea variegata.**
Syn. P. arundinacea picta.
Pl., 1895. Hardy. Ht. 2 to 3½ ft.
Foliage variegated.
- P. arundinacea picta = P. arundinacea variegata.*

PHLOMIS, L. JERUSALEM SAGE.*(Labiatae.)*

- *P. cashmiriana**, ROYLE. Himalayas.
Pl., 1903. Hardy. Ht. 2½ to 3 ft.
Fl. rosy lilac.
- P. chrysophylla**, BOISS. Syria.
Pl., 1907.
- P. pratensis**, KAR & KIR. Siberia.
Pl., 1907.
- *P. tuberosa**, L. South Europe, Asia Minor, &c.
Pl., 1898. Hardy. Ht. 3 to 5 ft.
Fl. purplish lilac; June 13 to July 26.
- P. russelliana, Lag. = P. viscosa, Poir.*
- P. viscosa**, POIR. Syria.
Syn. P. russelliana, Lag.
Pl., 1905. Tender.

PHLOX, L.

(Polemoniaceae.)

While the different species and varieties of phlox give a succession of bloom from spring until autumn, in thinking of this flower one usually has in mind the varieties which bloom in the summer and commonly called 'perennial phlox,' as they constitute the largest proportion of the named sorts. These summer blooming phloxes, which are comprised mainly of the varieties of *P. paniculata*, more commonly known under the name of *P. decussata*, are of many shades of colour ranging from pure white to deep purple. While they are recognized as varieties of *P. paniculata*, it is believed that some of them, at least, have blood of *P. maculata*. An earlier blooming section of the phloxes known as the *Suffruticosa* section is referred to *P. glaberrima suffruticosa*. This is not yet as important a group as the last, as there is not as good a range of colour and the flowers are smaller, but there are very attractive varieties among them, and they have an advantage in that they bloom from two to three weeks earlier, lengthening the season of the summer blooming phloxes very much. The foliage of the varieties in the *Suffruticosa* section is more or less glossy, which makes the plants more attractive than the later kinds.

Next in importance are the Moss Pinks, of which there are a number of good varieties. They are low growing, creeping phloxes, varieties of *P. subulata* (*P. setacea*), and are covered with bright coloured flowers in May, forming a veritable carpet of bloom. There are several other species of phloxes, descriptions of which will be found in this list, but there are few named varieties in them.

The phloxes of the *Paniculata* and *Suffruticosa* section require rich soil, with a constant and plentiful supply of moisture. In dry seasons they will suffer very much unless a good supply of moisture is maintained. The spring flowering species delight in warm, well drained soil, the surface of which dries off rapidly. Where water lies *Phlox subulata*, especially, is liable to rot.

While phloxes will succeed undisturbed for many years, if the soil is manured, the best results will be obtained if new clumps are made every three or four years, or before the old ones begin to fail. Phloxes are propagated easily by dividing the old clumps, the outside of the clump furnishing the best young plants. The phloxes produce seed very freely, and new varieties are quickly obtained by raising seedlings.

LIST OF TWELVE BEST PHLOX PANICULATA (DECUSSATA).

Aurore Boréale, or Frau von Speman.
Cameron, or Magicien.
Consul H. Trost.
Coquelicot.
Eclaireur.
Etna, or Mounet-Sully.

Fiancée, or Pyramide.
Lamartine, or Charles Flahault.
Le Cygne.
Pantheon, or Torpilleur.
Tapis Blanc.
Wm. Robinson, or Selma.

****P. amcena*, SIMMS. North America.
Pl., 1895. Hardy. Ht. 5 to 6 in.
Fl. bright rosy pink; May 10 to
June 23.

P. canadensis, Sweet. = *P. divaricata*.

P. carolina, L. = *P. ovata*.

P. decussata, Hort. = *P. paniculata*.

****P. divaricata*, L. Wild Sweet William.
North America.

Syn. *P. canadensis*, Sweet.

Pl., 1895. Hardy. Ht. 6 to 12 in.
Fl. lilac to mauve; May 14 to
June 10.

P. suffruticosa, Hort. = *P. glaberrima
suffruticosa*.

***P. glaberrima*, L. North America.
Pl., 1902. Hardy. Ht. 1 to 1½ ft.
Fl. magenta pink; June 21 to
July 13.

P. glab. suffruticosa Beauty.
Pl., 1903. Hardy. Ht. 2 ft. Fl.
white with traces of mauve;
June 24 to Sept. 27.

****P. glab. suffruticosa* Beauty of Edin-
burgh.

Pl., 1905. Hardy. Ht. 2 ft. Fl.
white shaded with light lilac;
July 10 to Oct. 9.

PHLOX—Con.

- **P. glab. suffruticosa Burns.**
Pl., 1905. Hardy. Ht. 2 ft. Fl. rosy purple; July 14 to Oct. 7.
- **P. glab. suffruticosa Clouded Gem.**
Pl., 1905. Hardy. Ht. 2 ft. Fl. white shaded with rosy purple; July 5 to Sept. 26.
- **P. glab. suffruticosa Cybele.**
Pl., 1905. Hardy. Ht. 1½ ft. Fl. white shaded with lilac; July 1 to Oct. 5.
- *P. glab. suffruticosa Cyrene.**
Pl., 1905. Hardy. Ht. 2 ft. 4 in. Fl. rosy purple with crimson eye; July 3 to Oct. 22.
- **P. suffruticosa Forerunner.**
Pl., 1903. Hardy. Ht. 3 to 3½ ft. Fl. creamy white; July 21 to Sept. 27.
- *P. glab. suffruticosa Harrison's Seedling.**
Pl., 1905. Hardy. Ht. 2 to 3 ft. Fl. white with pink centre; July 3 to Sept. 25.
- P. glab. suffruticosa Malcolm McLean.**
Pl., 1903. Hardy. Ht. 2 to 2½ ft. Fl. magenta; June 29 to Oct. 24.
- P. glab. suffruticosa Miss Lingard.**
Pl., 1908.
- ***P. glab. suffruticosa Snowdon.**
Pl., 1905. Hardy. Ht. 2½ ft. Fl. pure white, rosy centre; June 29 to Oct. 7.
- P. nivalis* = *P. subulata nivalis*.
- ***P. ovata, L.** North America.
Syn. P. carolina, Linn.
Pl., 1895. Hardy. Ht. 12 to 14 in. Fl. deep pink; June 10 to July 18.
- P. ovata carolina* = *P. carolina*.
- P. paniculata, L.** Perennial Phlox. North America.
Syn. P. decussata, Hort.
Pl., 1907. Hardy.
- **P. pan. Acropole.**
Pl., 1903. Hardy. Ht. 3 ft. Fl. rosy violet shaded carmine, with white centre; July 3 to Sept. 22.

PHLOX—Con.

- **P. pan. Adam Braun.**
Pl., 1900. Hardy. Ht. 3 ft. Fl. reddish violet; July 26 to Sept. 12.
- **P. pan. Adonis.**
Pl., 1900. Hardy. Ht. 3½ ft. Fl. white; Aug. 8 to Oct. 13.
- ***P. pan. Albatre.**
Pl., 1903. Hardy. Ht. 2½ ft. Fl. white; July 18 to Oct. 11.
- ***P. pan. Albion.**
Pl., 1908. Fl. white, with inconspicuous purplish red splashes about centre.
- *P. pan. Alceste.**
Pl., 1896. Hardy. Ht. 3½ ft. Fl. lilac and white with bluish violet centre; July 15 to Sept. 18.
- **P. pan. Alhambra.**
Pl., 1903. Hardy. Ht. 3 ft. Fl. pinkish mauve with white centre; July 18 to Sept. 21.
- **P. pan. Amphion.**
Pl., 1900. Hardy. Ht. 3½ ft. Fl. carmine with darker centre; July 9 to Oct. 24.
- **P. pan. Amphitryon.**
Pl., 1896. Hardy. Ht. 3½ ft. Fl. magenta suffused with white, darker centre; July 13 to Sept. 18.
- ***P. pan. Antonin Mercié.**
Pl., 1903. Hardy. Ht. 3½ ft. Fl. bright violet suffused with white, large white centre; July 12 to Sept. 12.
- ***P. pan. Argon.**
Pl., 1903. Hardy. Ht. 2 ft. 9 in. Fl. lilac pink suffused with white with narrow rosy ring about centre; July 10 to Sept. 22.
- ***P. pan. Aurore Boreale.**
Pl., 1895. Hardy. Ht. 3½ ft. Fl. salmon red with darker centre; July 18 to Oct. 7.
- ***P. pan. Avalanche.**
Pl., 1905. Hardy. Ht. 1½ to 2 ft. Fl. white; June 25 to Sept. 21.

PHLOX—Con.

- P. pan. Banfly.**
Pl., 1905. Hardy. Ht. 3½ ft. Fl. deep magenta purple; July 30 to Sept. 26.
- *****P. pan. Beatrice.**
Pl., 1903. Hardy. Ht. 2 ft. 4 in. Fl. crimson pink suffused with white, rosy magenta centre; July 17 to Oct. 20.
- *****P. pan. Bérénice.**
Pl., 1896. Hardy. Ht. 3½ ft. Fl. pure white; July 21 to Oct. 23.
- ****P. pan. Blanche Fleur.**
Pl., 1895. Hardy. Ht. 3 to 3½ ft. Fl. pure white; July 20 to Sept. 27.
- P. pan. Boule de Feu.**
Pl., 1908.
- P. pan. Bridesmaid.**
Pl., 1908.
- ****P. pan. Brilliant.**
Pl., 1903. Hardy. Ht. 3 ft. Fl. salmon carmine with rose centre; Aug. 1 to Sept. 28.
- *****P. pan. Cameron.**
Pl., 1904. Hardy. Ht. 3 ft. Fl. pure white with bright purplish red centre; July 26 to Oct. 7.
- *****P. pan. Capt. Wilhelmy.**
Pl., 1908. Hardy. Fl. Tyrian rose.
- ****P. pan. Carillon.**
Pl., 1903. Hardy. Ht. 2 to 3 ft. Fl. rose; July 23 to Sept. 21.
- *****P. pan. Charles Flahault.**
Pl., 1903. Hardy. Ht. 2 to 3 ft. Fl. pure white suffused with bright violet; July 18 to Sept. 22.
- ***P. pan. Chateaubriand.**
Pl., 1903. Hardy. Ht. 3 ft. Fl. bluish violet edged with lilac; July 31 to Sept. 21.
- *****P. pan. Comte de Hochberg.**
Pl., 1908. Fl. dark rosy magenta.
- *****P. pan. Consul H. Trost.**
Pl., 1908. Fl. pure red, with French purple centre.

PHLOX—Con.

- *****P. pan. Coquelicot.**
Pl., 1901. Hardy. Ht. 2½ ft. Fl. orange scarlet with purplish centre; July 15 to Sept. 8.
- ***P. pan. Cyclon.**
Pl., 1895. Hardy. Ht. 2½ ft. Fl. rosy magenta with white centre; July 27 to Sept. 18.
- *****P. pan. D. Bois.**
Pl., 1903. Hardy. Ht. 2½ ft. Fl. bright rosy magenta; July 24 to Sept. 22.
- *****P. pan. Daniel Lesueur.**
Pl., 1903. Hardy. Ht. 3 ft. Fl. bright violet and white; July 17 to Sept. 27.
- P. pan. Defiance.**
Pl., 1908.
- ****P. pan. Derviche.**
Pl., 1903. Hardy. Ht. 4 ft. Fl. magenta purple shading to white, deeper in centre; July 12 to Oct. 23.
- P. pan. Diadem.**
Pl., 1908.
- *****P. pan. Eclairer.**
Pl., 1903. Hardy. Ht. 2½ to 3 ft. Fl. bright rosy magenta shading lighter; July 4 to Oct. 23.
- *****P. pan. Edmond Rostand.**
Pl., 1908. Fl. reddish violet, with large white centre.
- ****P. pan. Emmanuel Héré.**
Pl., 1903. Hardy. Ht. 3½ ft. Fl. rosy mauve shading to white; July 27 to Sept. 27.
- *****P. pan. Espérance.**
Pl., 1903. Hardy. Ht. 3 ft. 4 in. Fl. purplish mauve with large white centre; July 12 to Sept. 27.
- *****P. pan. Etna.**
Pl., 1905. Hardy. Ht. 2 ft. 8 in. Fl. bright crimson red with darker centre; July 26 to Sept. 11.
- ****P. pan. Evénement.**
Pl., 1903. Hardy. Ht. 2½ to 3 ft. Fl. rosy magenta shading lighter; July 20 to Oct. 24.

PHLOX—Con.

- P. pan. F. G. Von Lassburg.**
Pl., 1908.
- *****P. pan. Fanfuche.**
Pl., 1905. Hardy. Ht. 2 to 2½ ft.
Fl. mauve flushed with white
with rosy centre; July 20 to
Oct. 8.
- *****P. pan. Faust.**
Pl., 1895. Hardy. Ht. 3 to 3½ ft.
Fl. pure white with large mauve
centre; Aug. 6 to Oct. 1.
- *****P. pan. Fédora.**
Pl., 1903. Hardy. Ht. 3½ ft. Fl.
mauve suffused with white; July
21 to Oct. 24.
- *****P. pan. Fernand Cortez.**
Pl., 1908. Fl. Tyrian rose.
- *****P. pan. Fiancée.**
Pl., 1908. Hardy. Ht. 3 ft. Fl.
white; late July to Sept.
- P. pan. Figaro.**
Pl., 1900. Hardy. Fl. white; July
28 to Sept. 8.
- *****P. pan. Frau von Speman.**
Pl., 1908. Hardy. Ht. 3½ ft. Fl.
crimson pink with deep crimson
centre; late July to Sept.
- *****P. pan. Girondin.**
Pl., 1903. Hardy. Ht. 2 to 2½ ft.
Fl. deep rose splashed with white;
June 26 to Sept. 12.
- ****P. pan. Glory of St. Marc.**
Pl., 1896. Hardy. Ht. 3½ to 4 ft.
Fl. reddish violet, with white centre;
July 12 to Oct. 23.
- ****P. pan. Hercules.**
Pl., 1903. Hardy. Ht. 2 ft. Fl.
deep magenta pink, rosy centre;
June 26 to Aug. 26.
- ****P. pan. Huxley.**
Pl., 1903. Hardy. Ht. 3 to 3½ ft.
Fl. white with lilac border; Aug.
4 to Sept. 22.
- ****P. pan. Japonais.**
Pl., 1897. Hardy. Ht. 4 to 4½ ft.
Fl. crimson carmine with darker
centre; July 24 to Sept. 27.

PHLOX—Con.

- ****P. pan. Jeanne d'Arc.**
Pl., 1900. Hardy. Ht. 3½ ft. Fl.
white; Aug. 8 to Oct. 11.
- *****P. pan. Jocelyn.**
Pl., 1903. Hardy. Ht. 2 to 3 ft.
Fl. crimson carmine shading
paler; July 17 to Sept. 20.
- ****P. pan. John Laing, Jr.**
Pl., 1903. Hardy. Ht. 3½ to 4 ft.
Fl. bright crimson; July 4 to
Sept. 28.
- ***P. pan. Kossuth.**
Pl., 1896. Hardy. Ht. 3 ft. Fl.
rose, purplish red centre; July 20
to Sept. 24.
- ***P. pan. La Framée.**
Pl., 1903. Hardy. Ht. 3 ft. Fl.
magenta with white centre; July
21 to Sept. 12.
- P. pan. La Vague.**
Pl., 1908.
- *****P. pan. Lamartine.**
Pl., 1903. Hardy. Ht. 3 to 3½ ft.
Fl. bright violet with large white
centre; July 24 to Oct. 24.
- *****P. pan. Le Cygne.**
Pl., 1903. Hardy. Ht. 3½ to 4 ft.
Fl. creamy white; July 23 to
Oct. 1.
- P. pan. Le Donon.**
Pl., 1896. Hardy. Ht. 2 to 2½ ft.
Fl. mauve, white tipped, petals
cut; July 20 to Sept. 15.
- *****P. pan. Le Soleil.**
Pl., 1903. Hardy. Ht. 3 ft. Fl.
crimson pink flushed with white
with rosy centre; July 9 to Oct. 8.
- *****P. pan. Leon Guignard.**
Pl., 1903. Hardy. Ht. 2 ft. 3 in.
Fl. bright rose shading to white;
July 13 to Oct. 23.
- *****P. pan. Leonard de Vinci.**
Pl., 1895. Hardy. Ht. 3½ to 4 ft.
Fl. pure white with rosy magenta
centre; July 26 to Oct. 26.
- P. pan. Lothair.**
Pl., 1908.

PHLOX—Con.

- **P. pan. Madagascar.**
Pl., 1896. Hardy. Ht. 3½ to 4 ft.
Fl. magenta well suffused with
white; July 21 to Sept. 22.
- *P. pan. Madame A. Denis.**
Pl., 1895. Hardy. Ht. 3½ to 4½ ft.
Fl. white with traces of purplish
red, bright purplish red centre ;
Aug. 1 to Oct. 7.
- *P. pan. Madeleine Leturque.**
Pl., 1897. Hardy. Ht. 4½ ft. Fl.
bright rosy pink shading to white
at centre; Aug. 4 to Sept. 24.
- ***P. pan. Madsen.**
Pl., 1900. Hardy. Ht. 4 to 4½ ft.
Fl. white flushed with rosy ma-
genta and centre of latter; July
29 to Oct. 12.
- ***P. pan. Magicien.**
Pl., 1908. Hardy. Fl. white with
mauve centre.
- P. pan. Margaret Black.**
Pl., 1908.
- P. pan. Margaret Elliott.**
Pl., 1908.
- ***P. pan. Marquis de St Paul.**
Pl., 1897. Hardy. Ht. 4 to 4½ ft.
Fl. white flushed pink, rosy ma-
genta centre; July 21 to Sept.
24.
- **P. pan. Marius Vachon.**
Pl., 1903. Hardy. Ht. 2½ to 3 ft.
Fl. purple; July 13 to Oct. 24.
- P. pan. Maximilien.**
Pl., 1908.
- ***P. pan. Monsieur Kind.**
Pl., 1905. Hardy. Ht. 2½ to 3 ft.
Fl. bright crimson red with
darker centre; July 23 to Sept.
13.
- P. pan. Mont Blanc.**
Pl., 1908.
- ***P. pan. Mounet-Sully.**
Pl., 1908. Fl. old carmine red, with
crimson carmine centre.
- P. pan. Mrs. Jenkins.**
Pl., 1908.

PHLOX—Con.

- *P. pan. Mrs. Keynes.**
Pl., 1905. Hardy. Ht. 3½ ft. Fl.
white lightly splashed with rose;
July 26 to Oct. 3.
- ***P. pan. Oberon.**
Pl., 1900. Hardy. Ht. 4 ft. Fl.
crimson carmine; July 20 to Oct.
20.
- **P. pan. Offenbach.**
Pl., 1908. Fl. bright violet with
large white centre..
- ***P. pan. Pantheon.**
Pl., 1895. Hardy. Ht. 2 to 2½ ft.
Fl. crimson pink suffused with
white about centre; July 17 to
Oct. 11.
- **P. pan. Parachute.**
Pl., 1899. Hardy. Ht. 2½ ft. Fl.
reddish purple with white centre;
July 12 to Oct. 5.
- **P. pan. Pharaon.**
Pl., 1908. Fl. purple shading to
white at centre.
- ***P. pan. Pierre le Grand.**
Pl., 1903. Hardy. Ht. 2½ to 3 ft.
Fl. crimson pink with magenta
and white centre; July 6 to Oct.
24.
- ***P. pan. Pyramide.**
Pl., 1903. Hardy. Ht. 3 to 3½ ft.
Fl. pure white; July 20 to Oct.
23.
- P. pan. R. Comte.**
Pl., 1908.
- ***P. pan. R. P. Struthers.**
Pl., 1908. Fl. carmine purple with
crimson carmine centre.
- **P. pan. Renoméé.**
Pl., 1903. Hardy. Ht. 2 to 2½ ft.
Fl. rosy magenta with white cen-
tre; July 18 to Oct. 20.
- **P. pan. rubra splendens.**
Pl., 1900. Hardy. Ht. 4 to 4½ ft.
Fl. reddish purple with crimson
centre; July 27 to Sept. 18.

PHLOX—Con.

- *****P. pan. Selma.**
Pl., 1908. Fl. lilac rose with conspicuous crimson eye.
- *****P. pan. Sir Richard Wallace.**
Pl., 1908. Hardy. Ht. 3½ ft. Fl. pure white with rosy magenta centre; late July to Sept.
- ****P. pan. Stanislaus.**
Pl., 1903. Hardy. Ht. 3 ft. Fl. magenta, crimson centre; July 15 to Sept. 5.
- ****P. pan. Surprise.**
Pl., 1895. Hardy. Ht. 3½ ft. Fl. reddish violet shading to white about centre; July 24 to Sept. 18.
- *****P. pan. Tapis Blanc.**
Pl., 1906. Hardy. Ht. 1½ ft. Fl. pure white; July 19 to Sept. 21.
- ****P. pan. The Lady Eva.**
Pl., 1905. Hardy. Ht. 2½ ft. Fl. white suffused with mauve about centre; July 23 to Aug. 27.
- *****P. pan. Torpilleur.**
Pl., 1897. Hardy. Ht. 3 ft. Fl. crimson pink suffused with white; June 24 to Oct. 23.
- *****P. pan. Tragédie.**
Pl., 1908. Hardy. Fl. carmine with darker centre.
- ****P. pan. Virginal.**
Pl., 1905. Hardy. Ht. 2 to 3 ft. Fl. white; Aug. 10 to Sept. 14.
- P. pan. Von Goethe.**
Pl., 1908.
- ****P. pan. Waverley.**
Pl., 1905. Hardy. Ht. 3 ft. Fl. Solferino red and violet rose; July 14 to Oct. 8.
- *****P. pan. Wm. Robinson.**
Pl., 1895. Hardy. Ht. 3½ ft. Fl. violet rose suffused with white, darker centre; July 15 to Oct. 5.
- ****P. pilosa, L.** North America.
Pl., 1895. Hardy. Ht. 2 ft. 3 in. Fl. pale pinkish lilac; June 22 to July 30.

PHLOX—Con.

- ***P. reptans, MICHX.** North America.
Pl., 1895. Hardy. Ht. 5 to 6 in. Fl. rosy purple; May 19 to June 17.
- P. Stellaria, A. GRAY.** Southern Illinois, &c.
Pl., 1897. Tender.
- ****P. subulata atropurpurea.**
Pl., 1897. Hardy. Ht. 6 to 8 in. Fl. purplish rose; May 10 to June 15.
- P. subulata Alice Wilson.**
Pl., 1900. Tender.
- P. subulata annulata.**
Pl., 1908.
- P. subulata Brightness.**
Pl., 1908.
- P. subulata Daisy Hill.**
Pl., 1908.
- P. subulata Eventide.**
Pl., 1908.
- P. subulata Fairy.**
Pl., 1908.
- ***P. subulata frondosa.**
Pl., 1895. Hardy. Ht. 6 in. Fl. rose; May to June.
- P. subulata Leila.**
Pl., 1908.
- ***P. subulata lilacina.**
Pl., 1897. Hardy. Ht. 6 to 9 in. Fl. lilac shading to mauve at centre; May to June.
- ***P. subulata Model.**
Pl., 1895. Hardy. Ht. 6 to 8 in. Fl. rose; May 16 to June 18.
- ****P. subulata Newry Seedling.**
Pl., 1895. Hardy. Ht. 6 to 8 in. Fl. lilac, paler towards centre; May 9 to June 20.
- P. subulata Seraph.**
Pl., 1908.
- ****P. subulata verna.**
Pl., 1895. Hardy. Ht. 6 in. Fl. deep rose; May 18 to June 12.

PHRAGMITES, TRIN. REED.*(Gramineæ.)***P. communis fol. var.**Pl., 1898. Hardy. Ht. 2 to 3 ft.
Foliage variegated.**PHYSALIS, L. WINTER CHERRY.***(Solanaceæ.)*****P. Alkekengi**, L. Bladder Herb. Eur.
Pl., 1898. Hardy. Ht. 1 ft. Fl.
whitish. Fruit red; June 29 to
Oct. 22.*****P. Francheti**, MAST. Chinese Lantern.
Japan.
Pl., 1898. Hardy. Ht. 2 ft. Fl.
whitish. Fruit bright orange red;
June 18 to Sept. 18.**PHYSOSTEGIA, BENTH. FALSE DRAGON'S
HEAD.***(Labiatae.)*****P. virginiana**, BENTH. North America.
Syn. Dracocephalum virginicum, L.
Pl., 1895. Hardy. Ht. 3 to 3½ ft.
Fl. purplish mauve; July 26 to
Sept. 11.****P. virginiana alba**.
Pl., 1897. Hardy. Ht. 3 ft. Fl.
white; July 21 to Aug. 13.**PHYTEUMA, L. RAMPION.***(Campanulaceæ.)***P. canescens**, WALDST & KIT. Hungary
and Caucasus
Pl., 1905. Hardy. Ht. 1½ ft. Fl.
bluish purple; Aug. 25 to Oct. 4.**P. lobelioides**, WILLD. Asia Minor.
Pl., 1907.***P. orbiculare**, L. Europe.
Pl., 1895. Hardy. Ht. 1½ to 2 ft.
Fl. deep violet; June 9 to July
24.**P. Scheuchzeri**, ALL. Europe.
Pl., 1907.**PHYTOLACCA, TOURN. POKEWEEED.***(Phytolaccaceæ.)***P. decandra**, L. Virginian Pokeweed.
North America.
Pl., 1901. Hardy. Ht. 7½ ft. Fl.
white and pink, ovary green.**PIMPINELLA, L. BURNET SAXIFRAGE.***(Umbelliferae.)***P. magna**, L. Europe, &c.Pl., 1905. Hardy. Ht. 3 to 3½ ft.
Fl. white; July 9 to Aug. 7.**PLATYCODON, A. DC. CHINESE BELL-
FLOWER.***(Campanulaceæ.)******P. grandiflorum**, A. DC. Chinese Bell-
flower. Balloon Flower. China
and Japan.Pl., 1895. Hardy. Ht. 2 to 3 ft.
Fl. bright bluish violet; July and
Aug.*****P. grandiflorum album**.
Pl., 1895. Hardy. Ht. 2½ ft. Fl.
white with traces of bluish violet;
June 30 to Aug. 12.**P. grandiflorum glaucum**.
Pl., 1908.*****P. grandiflorum Mariesii**.
Syn. P. grandiflorum pumilum.
Pl., 1895. Hardy. Ht. 1 to 2 ft.
Fl. bright bluish violet; July and
Aug.*****P. grandiflorum Mariesii album**.
Pl., 1898. Hardy. Ht. 1 to 2 ft.
Fl. white with traces of bluish
violet; July and Aug.**P. grandiflorum Mariesii major**.
Pl., 1908.*P. grandiflorum pumilum* = *P. grandiflorum Mariesii*.**PODOPHYLLUM, L. DUCK FOOT.***(Berberidaceæ.)***P. Emodi**, WALL. Himalaya May Apple.
Himalayas.
Pl., 1898. Half hardy. -****P. peltatum**, L. May Apple, Man-
drake. North America.
Pl., 1898. Hardy. Ht. 18 to 22 in.
Fl. white; May 25 to June 12.**POLEMONIUM, L. JACOB'S LADDER.***(Polemoniaceæ.)***P. boreale**, ADAMS. Siberia.
Pl., 1907.

POLEMONIUM—Con.

****P. cæruleum**, L. Great Valerian, Jacob's Ladder. Northern temperate regions.

Syn. P. villosum, Rudolph.

Pl., 1901. Hardy. Ht. 2½ to 3 ft. Fl. blue; May 28 to July 7.

P. cæruleum acutiflorum.

Pl., 1901. Half hardy.

P. cæruleum album.

Pl., 1895. Hardy. Ht. 1½ ft. Fl. white; June 6 to July 9.

P. dissectum, Reichb. = *P. sibiricum*.

P. flavum, GREENE. New Mexico.

Pl., 1907.

P. foliosissimum, A. GRAY. New Mexico, Colorado, &c.

Pl., 1905. Hardy. Ht. 2 ft. Fl. cream colour; June 8 to Oct. 8.

P. gracile, WILLD. Dahuria.

Pl., 1907.

P. grandiflorum, Hort. = *P. himalayana*.

****P. himalayanum**, BAKER. Himalayas.

Pl., 1901. Hardy. Ht. 2½ ft. Fl. blue; May 28 to July 3.

*****P. humile**, WILLD. North America.

Syn. P. Richardsonii, Grah.

Pl., 1895. Hardy. Ht. 6 to 12 in. Fl. pale blue. May and June.

****P. humile pulchellum**.

Syns. P. pulchellum, Bunge.; *P. pulcherrimum*, Hook.

Pl., 1895. Hardy. Ht. 6 in. Fl. blue; May and June.

P. lacteum, Lehm. = *P. sibiricum*, D. Don.

P. pauciflorum, S. WATS. Mexico.

Pl., 1907.

P. pulcherrimum, Hook. = *P. humile pulchellum*.

***P. reptans**, L. North America.

Pl., 1894. Hardy. Ht. 18 in. Fl. blue; May 18 to June 12.

P. Richardsonii, Grah. = *P. humile*.

POLEMONIUM—Con.

P. sibiricum, D. DON. Siberia.

Syns. P. lacteum, Lehm.; *P. dissectum*, Reichb.

Pl., 1901. Hardy. Ht. 2 to 2½ ft. Fl. blue; June 14 to July 20.

P. villosum, Rudolph. = *P. cæruleum*.

P. virginianum, H. CAMBE.

Pl., 1901. Hardy. Ht. 2 ft. Fl. blue; June 6 to July 16.

POLYGONATUM, ADANS. SOLOMON'S SEAL.

(*Liliaceæ.*)

P. biflorum, ELL. North America.

Pl., 1895. Hardy. Ht. 1½ ft. Fl. greenish; May 28 to June 12.

P. latifolium, DESF. Europe, &c.

Syn. Convallaria Thunbergii, Steud.

Pl., 1898. Hardy. Ht. 1½ to 2 ft. Fl. greenish and white; May 28 to June 23.

P. latifolium commutatum.

Pl., 1895. Hardy. Ht. 3 ft. Fl. greenish; June 13 to June 25.

P. macrophyllum, Sweet = *P. verticillatum*.

****P. multiflorum**, ALL. Solomon's Seal, David's Harp. Europe, &c.

Pl., 1900. Hardy. Ht. 1½ ft. Fl. white; May 31 to June 18.

***P. officinale**, ALL. Europe, Himalayas, &c.

Pl., 1900. Hardy. Ht. 2 ft. Fl. greenish white; May 18 to June 12.

P. Thunbergii, Morr. & Decne. = *P. latifolium*, Desf.

***P. verticillatum**, ALL. Europe, &c.

Syn. P. macrophyllum, Sweet.

Pl., 1900. Hardy. Ht. 2 ft. Fl. white; May 18 to June 19.

POLYGONUM, L. KNOT GRASS.

(*Polygonaceæ.*)

****P. alpinum**, ALL. South Europe, &c.

Pl., 1898. Hardy. Ht. 5 ft. Fl. creamy white; June 17 to Aug. 25.

POLYGONUM—Con.

- P. amplexicaule**, D. DON. Mountain Fleece. Himalayas.
Pl., 1901. Hardy. Ht. 3½ to 4½ ft.
Fl. rosy red; June 20 to Oct. 17.
- **P. amplexicaule oxyphyllum.**
Pl., 1898. Hardy. Ht. 5½ ft. Fl. white on reddish peduncles; Oct. 2 to Oct. 17. Resembles *P. molle*.
- P. chinense**, L. China, &c.
Pl., 1908.
- *P. cuspidatum**, SIEB. & ZUCC. Japan.
Syn. P. Sieboldii, Hort.
Pl., 1895. Hardy. Ht. 7 to 8 ft.
Fl. creamy white; Aug. 24 to Sept. 22.
- P. cynosum, Roxb. = P. chinense.*
- **P. molle**, D. DON. Himalayas.
Pl., 1897. Hardy. Ht. 6 ft. Fl. white on reddish peduncles; Sept. 22 to Oct. 20.
- P. sachalinense**, F. SCHMIDT. Sacaline. Island of Sachalin, &c.
Pl., 1895. Hardy. Ht. 12 to 13 ft.
Fl. greenish; Aug. 15 to Sept. 24.
- P. Sieboldii, Hort. = P. cuspidatum, Sieb. & Zucc.*

POTENTILLA, L. CINQUEFOIL.*(Rosaceæ.)*

- P. alba**, L. Europe; Caucasus.
Pl., 1899. Hardy. Ht. 1 ft. Fl. white; May 10 to May 29; Sept. 27 to Nov. 3.
- P. alpestris**, HALL, F. Europe, &c.
Pl., 1903. Hardy. Ht. 10 in. Fl. golden yellow; May 25 to June 20.
- *P. alpestris pyrenaica.**
Syn. P. pyrenaica, Ram.
Pl., 1901. Hardy. Ht. 1½ ft. Fl. golden yellow; May 28 to June 28.
- *P. argyrophylla**, WALL. Himalayas.
Pl., 1901. Hardy. Ht. 2 ft. Fl. yellow or orange red; June 23 to Aug. 11.
- P. astracanicæ, Jacq. = P. recta.*
- POTENTILLA—Con.**
- P. chrysantha**, TREVIR. Russia, &c.
Pl., 1905. Hardy. Ht. 1 ft. Fl. golden yellow; June 6 to July 12.
- P. dealbata**, BUNGE. Siberia.
Pl., 1895. Hardy. Ht. 1 ft. Fl. pale yellow; June 8 to Aug. 3.
- P. Fragariastrum**, EHRH. Europe.
Pl., 1905. Hardy. Ht. 2 ft. Fl. golden yellow; July 8 to Aug. 27.
- *P. grandiflora**, L. Europe.
Pl., 1897. Hardy. Ht. 2½ ft. Fl. pale yellow; June 15 to Aug. 4.
- *P. hopwoodiana**, SWEET. Garden origin.
Pl., 1901. Hardy. Ht. 2½ to 3½ ft.
Fl. deep rose, pale rose and whitish; June 23 to Sept. 2.
- *P. hybrida Mad. Rouillard.**
Pl., 1898. Hardy. Fl. double, pale orange; June 30 to Aug. 11.
- **P. hybrida purpurea plena.**
Pl., 1900. Hardy. Ht. 3 ft. Fl. semi-double, red maroon; June 24 to Aug. 25.
- **P. hybrida versicolor.**
Pl., 1895. Hardy. Ht. 2½ to 3 ft.
Fl. semi-double, scarlet orange, golden yellow at base; June 24 to Aug. 27.
- *P. hybrida Victor Lemoine.**
Pl., 1900. Hardy. Ht. 2 ft. Fl. double, dark orange red and yellow; July 3 to Sept. 7.
- *P. Hybrida Wm. Rollison.**
Pl., 1898. Hardy. Ht. 2½ ft. Fl. double, rich orange; June 23 to Aug. 11.
- **P. nepalensis**, HOOK. Himalayas.
Pl., 1901. Hardy. Ht. 1½ to 2½ ft.
Fl. deep rosy red, crimson blotches in centre; July 18 to Oct. 14.
- P. pyrenaica, Ram. = P. alpestris pyrenaica.*
- P. recta obscura.**
Pl., 1905. Hardy. Ht. 3 ft. Fl. yellow; June 25 to July 20.

POTENTILLA—Con.

P. rupestris, L. Europe, &c.

Pl., 1895. Hardy. Ht. 1½ ft. Fl. white; May 26 to July 11.

P. tridentata, SOLAND. North Amer.

Pl., 1895. Hardy. Ht. 4 to 6 in. Fl. white; June.

POTERIUM, L. BURNET.

(*Rosaceæ.*)

P. canadense, A. GRAY. Canadian Burnet. North America.

Syn. Sanguisorba canadensis, Rupp. Pl., 1908.

PRIMULA, L. PRIMROSE.

(*Primulaceæ.*)

P. Auricula, L. Bear's Ears. Europe. Pl., 1908. Tender.

***P. cortusoides*, L. Japan, Siberia, &c.

Pl., 1905. Half hardy. Ht. 6 to 12 in. Fl. rose; May.

P. denticulata, SM. Himalayas.

Pl., 1905. Tender.

****P. elatior* Harry Mitchell.

Pl., 1905. Half hardy. Ht. 6 in. Fl. pale yellow; May.

P. officinalis microcalyx.

Pl., 1907.

****P. Sieboldii*, MORR. Japan.

Pl., 1905. Hardy. Ht. 6 to 9 in. Fl. varies in colour from deep rose to white; late May to June.

PRUNELLA, L. SELF HEAL.

(*Labiataæ.*)

P. alba, Pall. = *P. laciniata*.

P. laciniata, L. Europe; North Africa

Syn. P. alba, Pall.

Pl., 1902. Half hardy. Ht. 1½ ft. Fl. white; July 10 to Aug. 21.

P. vulgaris, L. Common Self Heal Temperate regions.

Pl., 1901. Hardy. Ht. 6 to 12 in. Fl. violet. June to Sept.

PUSCHKINIA, ADAMS.

(*Liliaceæ.*)

P. libanotica, Zucc. = *P. scilloides*.

****P. scilloides*, ADAMS. Striped Squill. Asia Minor, &c.

Syn. P. libanotica.

Pl., 1901. Hardy. Ht. 6 in. Fl. white striped with pale blue; April to May.

PULMONARIA, -L. LUNGWORT.

(*Boraginaceæ.*)

P. angustifolia, L. Europe.

Pl., 1903. Hardy. Ht. 1 ft. Fl. pink changing to deep purplish blue; May 20 to June 20.

P. arvernense, HORT. Origin uncertain.

Pl., 1903. Hardy. Ht. 1 to 1½ ft. Fl. deep blue; May 25 to June 12.

P. maculata, F. G. Dietr. = *P. officinalis*.

P. mollis, Wolff. = *P. montana*.

**P. montana*, LEJ. Central Europe.

Syn. P. mollis, Wolff.

Pl., 1905. Hardy. Ht. 1 ft. Fl. deep purplish blue, somewhat rosy in bud. May 19 to June 16

**P. officinalis*, L. Common Lungwort. Europe.

Syn. P. maculata, F. G. Dietr.

Pl., 1895. Hardy. Ht. 6 to 12 in. Fl. red, then violet; May.

P. officinalis alba.

Pl., 1905. Hardy. Ht. 1 ft. Fl. white.

**P. saccharata*, MILL. Bethlehem Sage. Europe.

Pl., 1895. Hardy. Ht. 1 ft. Fl. purplish blue and pink; May 16 to June 21.

P. sibirica, L. = *Mertensia sibirica*, G. Don.

RAMONDIA, RICH.

(*Gesneriaceæ.*)

R. pyrenaica, RICH. Rosette Mullein. Pyrenees.

Pl., 1905. Tender.

RANUNCULUS, L. BUTTERCUP, CROW-FOOT.*(Ranunculaceæ.)*****R. aconitifolius flore pleno.**

Pl., 1901. Hardy. Ht. 1 to 1½ ft.
Fl. double, white; May 16 to June 27.

R. acris, L. Buttercup. Europe, &c.

Pl., 1898. Hardy. Ht. 1 to 3 ft.
Fl. yellow; May to October.

R. acris flore pleno.

Pl., 1908.

R. amplexicaulis, L. South Europe.

Pl., 1908.

****R. bulbosus flore pleno.**

Syn. R. speciosus flore pleno.

Pl., 1895. Hardy. Ht. 1½ ft. Fl.
double yellow; May 19 to July 4.

R. speciosus flore pleno = *R. bulbosus flore pleno.*

RESEDA, TOURN. MIGNONETTE.*(Resedaceæ.)***R. complicata, BORY. Spain.**

Pl., 1895. Hardy. Ht. 1½ ft. Fl.
creamy white; May 23 to Aug.
13.

RHEUM, L. RHUBARB.*(Polygonaceæ.)***R. collinianum, BAILL. China.**

Pl., 1907.

R. compactum, L. Mongolia.

Pl., 1905. Hardy. Ht. 4 ft.; May
31 to June 11.

RHEUM—Con.**R. Emodi, WALL. Himalayas.**

Pl., 1901. Hardy. Ht. 7 to 8 ft.
Fl. white; June 15 to July 6.

R. Franzenbachii, MUEENT. Temperate Asia.

Pl., 1905. Hardy. Ht. 4½ ft. Fl.
white; May 28 to June 12.

R. leucorrhizum, PALL. Siberia.

Pl., 1907.

R. microcarpum, MEISSN. HAB.?

Pl., 1905. Hardy. Ht. 4 ft. Fl.
white; June 11 to June 22.

***R. officinale, BAILL. Medicinal Rhubarb. Thibet.**

Pl., 1895. Hardy. Ht. 2 to 4 ft.
Fl. creamy white; May 25 to
June 12.

R. palmatum, L. China.

Pl., 1894. Hardy. Ht. 5 to 9 ft.
Fl. white; June 7 to June 29.

R. Rhaponticum, L. Garden Rhubarb. Siberia.

Pl., 1905. Hardy. Ht. 4 ft. Fl.
white; May 31 to June 11.

RODGERSIA, A. GRAY.*(Saxifragaceæ.)***R. podophylla, A. GRAY. Japan.**

Pl., 1897. Half hardy. Ht. 2 ft.
Fl. white; June.

ROSCEA, SM.*(Scitamineæ.)***R. purpurea, SM. Himalayas.**

Pl., 1908.

RUDBECKIA, L. CONE-FLOWER.*(Compositæ.)*

The Rudbeckia Golden Glow has come into prominence so rapidly that other good kinds have, in a measure, been forgotten, but attention should be drawn to the great merits of such species as *R. maxima*, *R. speciosa* (*Newmanni*) and *R. subtomentosa*, all of which are very desirable. *Rudbeckia nitida* would be classed among the best plants also if it did not bloom when there are so many good yellow flowering perennials which are a little better than it. The cone flowers all do best in a moist situation, but thrive well under average conditions. Most of the species increase rapidly and are easily propagated by division. The genus *Echinacea* is closely allied to the *Rudbeckia*, and the best species, *E. purpurea*, is often sold under the name of *Rudbeckia purpurea*.

RUDBECKIA—Con.

- R. Autumn Glory*, Hort. = *R. nitida*.
R. digitata, Mill. = *R. laciniata angustifolia*.
R. fulgida, Arr. North America.
 Pl., 1908.
R. laciniata, L. North America.
 Pl., 1894. Hardy. Ht. 6 to 6½ ft.
 Fl. buttercup yellow; July 16 to Sept. 8.
 ***R. laciniata angustifolia**.
Syn. R. digitata, Mill.
 Pl., 1902. Hardy. Ht. 6½ to 7 ft.
 Fl. yellow; July 10 to Sept. 21.
 *****R. laciniata fl. pl. Golden Glow**.
 Pl., 1897. Hardy. Ht. 7 to 8 ft.
 Fl. double, buttercup yellow;
 July 18 to Sept. 24.
 *****R. maxima**, Nutt. Texas.
 Pl., 1896. Hardy. Ht. 5½ to 6 ft.
 Fl. deep, rich golden yellow with
 prominent black disk; July 11 to
 Sept. 8.

RUDBECKIA—Con.

- R. Newmanni*, Hort. = *R. speciosa*.
 ****R. nitida**, Nutt. North America.
Syn. R. Autumn Glory, Hort.
 Pl., 1901. Hardy. Ht. 5½ to 6 ft.
 Fl. buttercup yellow; Aug. 4 to
 Oct. 14.
R. pinnata, Vent. = *Lepachys pinnata*.
R. purpurea, L. = *Echinacea purpurea*.
 *****R. speciosa**, WENDR. North America.
Syn. R. Newmanni, Hort.
 Pl., 1898. Hardy. Ht. 2 to 2½ ft.
 Fl. rays deep golden yellow, black
 disk; July 27 to Oct. 17.
 *****R. subtomentosa**, Pursh. North America.
 Pl., 1901. Hardy. Ht. 3 ft. 4 in.
 to 3 ft. 9 in. Fl. rays gamboge
 yellow, dark brown disk; Aug.
 10 to Oct. 14.

RUELLIA, PLUM.*(Acanthaceæ.)*

- R. strepens**, L. North America.
 Pl., 1907.

RUTA, L. RUE.*(Rutaceæ.)*

- R. graveolens**, L. Common Rue. South
 Europe.
 Pl., 1898. Hardy. Ht. 2½ ft. Fl.
 greenish yellow; June 30 to Oct.
 20.

SALVIA, L. SAGE.*(Labiataæ.)*

- S. acetabulosa**, L. Asia Minor.
 Pl., 1907.
S. Æthiopsis, L. Eastern Europe.
 Pl., 1907.
S. angustifolia, Cav. Mexico.
 Pl., 1907.
S. austriaca, Jacq. Eastern Europe.
 Pl., 1905. Tender.
 *****S. azurea grandiflora**.
Syn. S. Pitcheri, Torr.
 Pl., 1898. Hardy. Ht. 4½ ft. Fl.
 sky blue; Sept. 1 to Oct. 20.

SALVIA—Con.

- S. Beckeri**, Trautv. Caucasus.
 Pl., 1905. Hardy. Ht. 3 ft. Fl.
 pale violet purple; June 28 to
 Aug. 4.
S. carduaca, Benth. California.
 Pl., 1907.
S. ceratophylla, L. Asia Minor; Persia.
 Pl., 1907.
S. glutinosa, L. Jupiter's Distaff. Eu-
 rope, &c.
 Pl., 1898. Hardy. Ht. 2 ft. Fl.
 dull yellow spotted with brown;
 July 17 to Sept. 11.
S. microstegia, Boiss & Bal. = *S. ver-
 bascofolia*.
S. napifolia, Jacq. Asia Minor.
 Pl., 1907.
S. Pitcheri, Torr. = *S. azurea grandiflora*.
 ****S. pratensis**, L. Meadow Sage. Eu-
 rope, &c.
 Pl., 1901. Hardy. Ht. 2½ to 3 ft.
 Fl. violet; May 23 to Aug. 13.
S. pratensis alba.
 Pl., 1908.

SALVIA—*Con.***S. pratensis Tenorei.**

Pl., 1908.

***S. regeliana, TRAUTV.** Caucasus.

Pl., 1905. Hardy. Ht. 2½ to 3 ft.

Fl. violet purple; June 30 to Aug. 3.

****S. Sclarea, L. CLARY.** Mediterranean region.

Pl., 1903. Hardy. Ht. 2 to 3 ft.

Fl. lavender, whitish at base; July 12 to Aug. 25.

S. Sclarea turkestanica.

Pl., 1907.

S. taraxicifolia, COSS & BAL. Morocco.

Pl., 1907.

S. verbascifolia, BIEB. Asia Minor.*Syn. S. microstegia, Boiss. & Bal.*
Pl., 1907.**S. Verbenaca, L.** Vervain Sage. Europe, &c.

Pl., 1901. Hardy. Ht. 4 ft. Fl. bluish purple; July 7 to Aug. 20.

****S. virgata, ART.** Europe, &c.Pl., 1903. Hardy. Ht. 2½ to 3 ft.
Fl. violet; June 20 to Oct. 24.**SAMBUCUS, TOURN.** ELDER.*(Caprifoliaceæ.)***S. Ebulus, L.** Ground Elder, Dandelion. Europe; Orient.Pl., 1902. Hardy. Ht. 2 to 4 ft.
Fl. white tipped with pink; July 14 to Sept. 21.**SANGUISORBA, RUPP.=POTERIUM.****SANICULA, L.** SANICLE.*(Umbelliferæ.)***S. canadensis, L.** North America.

Pl., 1898. Hardy. Ht. 1 ft. Fl. greenish; June.

S. marilandica, L. North America.

Pl., 1896. Hardy. Ht. 3 ft. Fl. greenish white; June.

SAPONARIA, L. SOAPWORT.*(Caryophyllaceæ.)****S. officinalis, L.** Common Soapwort, Bouncing Bet. Europe, &c.Pl., 1895. Hardy. Ht. 2½ to 3½ ft.
Fl. lilac, white, or lilac and white; July 14 to Oct. 17.*Satureia Clinopodium, Carnel.=Calamintha Clinopodium.***SAURURUS, PLUM.** LIZARD'S TAIL.*(Piperaceæ.)***S. Loureiri, DECNE.** China; Japan.

Pl., 1897. Tender.

SAXIFRAGA, TOURN. ROCK-FOIL.*(Saxifragaceæ.)***S. bronchialis, L.** Northern and Arctic regions.

Pl., 1898. Tender.

S. cæspitosa, L. Northern and Arctic regions.

Pl., 1895. Tender.

S. gigantea.*Syn. Megasea gigantea.*
Pl., 1908.****S. ligulata, WALL.** Himalayas.*Syn. S. Schmidtii, Regel.*
Pl., 1895. Hardy. Ht. 1 ft. Fl. rosy purple; May 4 to June 3.**S. ligulata speciosa.**

Pl., 1898. Hardy. Ht. 1½ ft. Fl. pink; April 29 to May 19.

***S. peltata, TORR. & GRAY.** Umbrella Plant. California.Pl., 1905. Hardy. Ht. 18 to 24 in.
Fl. white and pink; May 13 to May 31.**S. Progress.***Syn. Megasea Progress.*
Pl., 1908.**S. rotundifolia, L.** Europe.

Pl., 1898. Tender.

*S. Schmidtii, Regel.=S. ligulata.***S. Stracheyi, HOOK. F. & THOMS.** Himalayas.

Pl., 1898. Tender.

SCABIOSA, L. SCABIOUS.*(Dipsacæ.)*****S. balcanica.**

Pl., 1905. Hardy. Ht. 5 ft. Fl. creamy white; July 3 to Oct. 10.

S. candolliana, WALL. Himalayas.

Pl., 1903. Hardy. Ht. 1 to 2 ft. Fl. lilac purple; June 29 to Oct. 24.

*****S. caucasica, BIEB. Caucasus, &c.**

Pl., 1895. Hardy. Ht. 2 ft. Fl. lilac blue; June 30 to Aug. 20.

S. caucasica alba.

Pl., 1908.

S. Columbaria, L. Europe.

Pl., 1907.

*S. gigantea, Ledeb. = Cephalaria tatarica.****S. graminifolia, L. South Europe.**

Pl., 1898. Hardy. Ht. 18 to 22 in. Fl. bluish lilac, paler in centre; June 27 to Oct. 5.

S. leucophylla, BORBAS. Central Eur.

Pl., 1900. Hardy. Ht. 1½ ft. Fl. rosy lilac; June 21 to Oct. 17.

****S. lucida, VILL. Europe.**

Pl., 1905. Hardy. Ht. 2½ ft. Fl. lavender; June 28 to Oct. 19.

S. sylvatica, L. Europe, &c.

Pl., 1901. Hardy. Ht. 2 ft. Fl. white tinged with purple, also violet purple; June 20 to Oct. 3.

SCILLA, L. SQUILL.*(Liliacæ.)***S. autumnalis, L. Autumn Squill. Europe, &c.**

Pl., 1900. Hardy. Ht. 5 to 6 in. Fl. pale dull purple; Sept. 24 to Oct. 10.

****S. bifolia, L. Europe; Asia Minor.**

Pl., 1897. Hardy. Ht. 5 to 6 in. Fl. deep blue; April to May.

****S. festalis, SALISB. Bluebell. Western Europe.***Syn. S. nutans, Sm.*

Pl., 1900. Hardy. Ht. 1 to 2 ft. Fl. blue or white; May 31 to June 20.

SCILLA—Con.*****S. festalis alba.**

Pl., 1900. Hardy. Ht. 1 to 2 ft. Fl. white; May 23 to June 17.

***S. festalis rosea.**

Pl., 1900. Hardy. Ht. 1 to 2 ft. Fl. rose pink; May 28 to June 17.

*S. nutans, Sm. = S. festalis, Salisb.******S. sibirica, ANDREWS. Asia Minor, &c.**

Pl., 1897. Hardy. Ht. 5 to 6 in. Fl. deep blue; April to May.

****S. sibirica alba.**

Pl., 1901. Hardy. Ht. 5 to 6 in. Fl. white; April to May.

SCIRPUS, L. CLUB RUST.*(Cyperacæ.)****S. Holoschœnus variegatus.**

Pl., 1895. Hardy. Ht. 2 ft. Foliage variegated.

SCROPHULARIA, TOURN. FIGWORT.*(Scrophulariacæ.)***S. lateriflora, TRAUTV. Caucasus.**

Pl., 1895. Hardy.

SCUTELLARIA, RIV. SKULL CAP.*(Labiatae.)****S. alpina, L. Europe, &c.**

Pl., 1898. Hardy. Ht. 3½ ft. Fl. purple; June 9 to Aug. 20.

SEDUM, TOURN. STONECROP.*(Crassulacæ.)***S. acre, L. Biting Stonecrop. Europe, &c.**

Pl., 1895. Hardy. Ht. 3 in. Fl. yellow; June 18 to July 14.

***S. Aizoon, L. Siberia.**

Pl., 1901. Hardy. Ht. 1½ to 2 ft. Fl. yellow; June 30 to July 30.

***S. album, L. Worm Grass. Europe, &c.**

Pl., 1902. Half hardy. Ht. 8 in. Fl. white; July 10 to Aug. 3.

S. Anacampseros, L. Evergreen Opine. Europe.

Pl., 1898. Hardy. Ht. 6 in. Fl. violet; July 18 to Aug. 6.

SEDUM—Con.

- S. anglicum**, HUDS. Europe.
Pl., 1898. Tender.
- S. asiaticum**, SPRENG. Himalayas.
Pl., 1898. Tender.
- S. Douglasii**, HOOK. North-western
America.
Pl., 1898. Half hardy.
- S. Ewersii**, LEDEB. Siberia, &c.
Pl., 1898. Hardy. Ht. 4 to 6 in.
- S. glaucum*, Waldst. & Kit. = *S. hispanicum*.
- S. japonicum*, Hort. = *S. spectabile*.
- S. kamschaticum**, FISCH. & MEY. East-
ern Asia.
Pl., 1894. Hardy. Ht. 1 ft. Fl.
yellow; June 20 to Aug. 6.
- S. maximum**, SUTER. Europe, &c.
Pl., 1898. Hardy. Ht. 1½ to 2 ft.
Fl. magenta, white at base.
- S. lydium**, BOISS. Asia Minor.
Pl., 1900. Hardy. Ht. 2 to 3 in.
Fl. white; June.
- ***S. Maximowiczii**, REGEL. Japan.
Pl., 1905. Hardy. Ht. 1½ to 2½ ft.
Fl. yellow; June 30 to July 30.
- S. occidentale*, Bor. = *S. Telephium*.
- S. populifolium**, PALL. Siberia.
Pl., 1898. Hardy. Ht. 8 to 12 in.
- S. purpurascens*, Koch = *S. Telephium*.
- S. roseum**, SCOP. Rose Root. Northern
temperate regions.
Pl., 1898. Hardy. Ht. 4 to 6 in.
Fl. reddish purple; May to June.
- S. Selskianum**, REGEL & MAACK. AMUR
region.
Pl., 1905. Hardy. Ht. 8 in. Fl.
yellow; July 3 to July 29.
- ***S. spectabile**, BOR. Showy Sedum.
Japan.
Pl., 1898. Hardy. Ht. 2½ to 3 ft.
Fl. rosy pink and white; Sept. 8
to Oct. 17.
- ***S. spectabile macrophyllum albo mar-**
ginata.
Pl., 1898. Hardy. Ht. 2 ft. Fl.
pink and white. Foliage varie-
gated; Sept. 6 to Oct. 22.

SEDUM—Con.

- *****S. spectabilis atropurpurea**.
Pl., 1906. Hardy. Ht. 1 ft. 3 in.
Fl. crimson pink; Sept. 3 to
Sept. 30.
- S. spurium**, BIEB. Caucasus.
Pl., 1905. Hardy. Ht. 3 to 6 in.
Fl. white; July 9 to July 23.
- S. Telephium**, L. Europe, &c.
Syns. S. purpurascens, Koch; S. occidentale, Bor.
Pl., 1898. Half hardy.
- SEMPERVIVUM**, L. HOUSELEEK.
(*Crassulaceæ.*)
- S. acuminatum**, JACQUEM. Himalayas.
Pl., 1898. Hardy. Ht. 1½ ft. Fl.;
July 6 to Aug. 21.
- S. Allionii**, NYM. France.
Syn. S. cornutum, Hort.
Pl., 1898. Hardy.
- S. Albernellii**.
Pl., 1898. Hardy. Ht. 4 in.
- S. anomalum*, Hort. = *S. pumilum*.
- S. arachnoideum**, L. Cobweb House
Leek. Europe.
Syn. S. Pseudo-arachnoideum, La-
motte.
Pl., 1895. Hardy. Creeping. Fl.
reddish; June 18 to July 30.
- S. arenarium**, KOCH. Tyrol, &c.
Pl., 1898. Hardy.
- S. beugesiacum**, JORD. & FOURR.
France.
Syn. S. boulicicum, Hort.
Pl., 1895. Hardy. Ht. 4 in. Fl.;
July 12 to Aug. 11.
- S. blandum**, SCHOTT. Transylvania.
Syn. S. rubicundum, Schur.
Pl., 1898. Hardy. Ht. 3 in. Fl.;
July 6 to Aug. 3.
- S. boulicicum*, Hort. = *S. beugesiacum*,
Jord. & Fourr.
- S. boutignyanum**, BILLOT & GREN. Py-
renees, &c.
Pl., 1898. Hardy. Ht. 16 to 18 in.
Fl. pale rose; July 9 to Aug. 12.

SEMPERVIVUM—Con.

- S. brachiatum**, LAMOTTE. Europe.
Pl., 1898. Hardy.
- S. californicum*, Hort. = *S. calcareum*.
- S. calcareum**, JORD. & FOURR. Dauphiny.
Syn. S. californicum, Hort.
Pl., 1900. Hardy.
- S. Chaboisseauti**.
Pl., 1898. Hardy. Ht. 11 in. Fl.;
July 18 to Aug. 21.
- S. Comollii*, Rota. = *S. glaucum*.
- S. Corni di Canzo**.
Pl., 1898. Hardy. Ht. 1½ to 2 ft.
Fl.; July 9 to Aug. 18.
- S. cornutum*, Hort. = *S. Allionii*.
- S. fimbriatum**, SCHNITTSP. Tyrol.
Pl., 1895. Hardy. Ht. 9 to 10 in.
Fl. red; June 24 to July 30.
- S. glaucum**, TENORE. Italy.
Syn. S. Comollii, Rota.
Pl., 1900. Hardy. Ht. 12 to 14 in.
Fl. red; June 21 to Aug. 4.
- S. globiferum**, L. Hen and Chickens.
Europe, &c.
Syn. S. soboliferum, Sims.
Pl., 1898. Hardy. Ht. 10 to 12 in.
Fl. pale yellow; June 6 to July
16.
- S. grandiflorum**, HARV. Native country
uncertain.
Pl., 1895. Hardy. Ht. 18 in. Fl.
pale yellow; July 27 to Aug. 24.
- S. mettenianum**, SCHNITTSP. Switzer-
land.
Pl., 1899. Hardy.
- S. montanum**, L. Alps and Pyrenees.
Pl., 1895. Hardy. Creeping. Fl.
bright mauve purple; June.
- S. murale**.
Pl., 1898. Hardy. Ht. 1 ft. Fl.;
July 20 to Sept. 3.
- S. Pittonii**, SCHOTT., NYM. and KOT-
SCHY. Styria.
Pl., 1895. Hardy. Ht. 12 to 14 in.
Fl. red; June 24 to July 21.
- S. Pseudo-arachnoideum*, Lamotte = *S.*
arachnoideum.

SEMPERVIVUM—Con.

- S. pumilum**, BIEB.
Syn. S. anomalum, Hort.
Pl., 1895. Hardy. Ht. 12 to 15 in.
Fl.; July 4 to Aug. 6.
- S. Reginæ-Amaliæ.**, BAKER. Origin un-
certain.
Pl., 1895. Hardy. Ht. 15 in. Fl.
pale yellow; July 23 to Aug. 23.
- S. Rudenii**, HORT. Origin uncertain.
Pl., 1895. Hardy. Ht. 6 to 12 in.
Fl.; June 11 to July 9.
- S. rubicundum*, Schur. = *S. blandum*.
- S. ruthenicum**, KOCH. Transylvania.
Pl., 1895. Hardy. Ht. 8 in. Fl.
pale yellow; July 14 to July 28.
- S. soboliferum*, Sims. = *S. globiferum*.
- S. Schmittspahni**, LAGG. Europe.
Pl., 1898. Hardy.
- S. tenellum**.
Pl., 1895. Hardy. Ht. 1½ ft. Fl.;
June 27 to Aug. 6.
- S. Verloti**, LAMOTTE. Dauphiny.
Pl., 1898. Hardy. Ht. 6 in. Fl.
rose red; July 21 to Aug. 18.
- S. Wulfeni**, HOPPE. Austria.
Pl., 1895. Hardy. Ht. 1½ ft. Fl.
yellow; June 10 to July 7.

SENECIO, L. GROUNDSEL.*(Compositæ.)*

- S. adonidifolius**, LOISEL. Europe.
Pl., 1905. Hardy. Ht. 1½ ft. Fl.
golden yellow; July 2 to Oct. 24.
- S. aureus Balsamitæ.**
Pl., 1896. Hardy. Ht. 1 ft. Fl.
golden yellow; June 8 to Aug. 1.
- S. clivorum**, MAXIM. China and Japan.
Pl., 1908.
- *S. Doronicum**, L. Leopard's Bane.
Pl., 1901. Hardy. Ht. 2 ft. Fl.
golden yellow; June 12 to Aug.
26.
- S. Doria**, L. Europe, &c.
Pl., 1908.
- S. erucifolius**, L. Europe, &c.
Pl., 1901. Hardy. Ht. 5 ft. Fl.
golden yellow; Aug. 6 to Oct. 11.

SENECIO—Con.

- ***S. japonicus**, SCH. BIP. Japan.
Syn. Erythrochæte palmatifida,
Sieb. & Zucc.
 Pl., 1898. Hardy. Ht. 4 to 4½ ft.
 Fl. golden yellow; July 10 to
 July 28.
- S. Koempferi**, DC. Japan.
 Pl., 1905. Tender.
- ***S. Ledebourii**, SCH. BIP. Japan.
Syn. Ligularia macrophylla, DC.
 Pl., 1895. Hardy. Ht. 4 ft. Fl.
 yellow; June 20 to July 7.
- ****S. pulcher**, HOOK & ARN. Uruguay, &c.
 Pl., 1901. Half hardy. Ht. 1½ ft.
 Fl. purplish crimson; Sept. 2 to
 Oct. 20.
- S. sagittifolius**, BAKER. Uruguay.
 Pl., 1897. Tender.
- S. soongaricus**, SCHRENK. Soongaria.
 Pl., 1907.
- S. suaveolens**, ELL. American Sweet
 Century. North America.
Syn. Cocalia suaveolens, L.
 Pl., 1905. Hardy. Ht. 3 ft. Fl.
 creamy white; late Sept. to Oct.
- S. tanguticus**, MAXIM. China.
 Pl., 1908.

SERRATULA, DILL. SAWWORT.*(Compositæ.)*

- S. coronata**, L. Siberia.
 Pl., 1898. Hardy. Ht. 7 to 7½ ft.
 Fl. rosy purple; July 17 to Oct. 5.

SIDALCEA, A. GRAY.*(Malvaceæ.)*

- ****S. candida**, A. GRAY. New Mexico.
 Pl., 1895. Hardy. Ht. 3 to 4 ft.
 Fl. white; June 13 to Aug. 4.
- ****S. Listeri**, HORT. Garden origin.
 Pl., 1903. Hardy. Ht. 3½ ft. Fl.
 pink; June 29 to Aug. 12.
- S. malvæflora atropurpurea**.
 Pl., 1903. Hardy. Ht. 4½ to 5 ft.
 Fl. purplish rose; July 7 to Aug.
 12.

SILENE, L. CATCHFLY.*(Caryophyllaceæ.)*

- S. inflata*, Sm. = *S. Cucubalus*.
- S. Cucubalus**, WIBEL. Bladder Cam-
 pion. Europe, &c.
Syn. S. inflata, Sm.
 Pl., 1901. Hardy. Ht. 2 ft. Fl.
 white; June 10 to Aug. 13.
- ***S. maritima**, WITH. Witch's Thimble.
 Europe.
 Pl., 1903. Hardy. Ht. 1 to 1½ ft.
 Fl. white; June 11 to Oct. 5.
- S. stellata**, AIT. United States.
 Pl., 1895. Half hardy.
- S. stylosa**, BUNGE. Siberia.
 Pl., 1897. Hardy. Ht. 1½ to 2 ft.
 Fl. yellowish white; June 18 to
 Aug. 13.

SILPHIUM, L. ROSIN WEED.*(Compositæ.)*

- ****S. laciniatum**, L. Compass Plant.
 North America.
 Pl., 1903. Hardy. Ht. 9½ to 10½ ft.
 Fl. yellow; Aug. 7 to Oct. 8.

SISYRINCHIUM, L. SATIN FLOWER.*(Iridaceæ.)*

- S. Bermudiana**, L. Blue-eyed Grass.
 Bermuda.
 Pl., 1895. Hardy. Ht. 8 to 12 in.
 Fl. purplish blue; June 3 to June
 20.

**SMILACINA, DESF. FALSE SOLOMON'S
SEAL.***(Liliaceæ.)*

- S. racemosa**, DESF. False Spikenard.
 North America.
 Pl., 1895. Hardy. Ht. 2 ft. Fl.
 white; May 22 to June 21.

SOLIDAGO, L. GOLDEN ROD.*(Compositæ.)*

- S. arguta**, AIT. North America.
 Pl., 1895. Hardy.
- S. cæsia**, L. North America.
 Pl., 1894. Half hardy.
- S. canadensis**, L. North America.
 Pl., 1894. Hardy. Ht. 4½ ft. Fl.
 golden yellow; July 26 to Sept. 8.

SOLIDAGO—Con.**S. canadensis procera.**

Pl., 1895. Hardy. Ht. 3 to 3½ ft.
Fl. deep golden yellow; July 18
to Sept. 5.

***S. elongata, NUTT.** North America.

Pl., 1902. Hardy. Ht. 3½ to 4 ft.
Fl. golden yellow; July 4 to Aug.
18.

S. gigantea, AIT. North America.

Syn. S. serotina gigantea.
Pl., 1897. Hardy. Ht. 5½ ft. Fl.
golden yellow; July 26 to Sept.
21.

S. humilis, PURSH. North America.

Pl., 1895. Hardy.

S. juncea, AIT. North America.

Pl., 1894. Hardy. Ht. 4 to 4½ ft.
Fl. golden yellow; July 16 to
Aug. 29.

***S. missouriensis, NUTT.** North Amer.

Pl., 1895. Hardy. Ht. 1½ ft. Fl.
golden yellow; July 14 to Aug. 9.

***S. nemoralis, AIT.** North America.

Pl., 1895. Hardy. Ht. 2 ft. Fl.
bright golden yellow; July 29 to
Sept. 19.

S. puberula, NUTT. North America.

Pl., 1895. Hardy.

S. puberula, NUTT. North America.

Pl., 1908.

****S. rigida, L.** North America.

Pl., 1895. Hardy. Ht. 2 to 2½ ft.
Fl. golden yellow; June 24 to
Aug. 29.

SOLIDAGO—Con.**S. odora, AIT.** Eastern and South-east-
ern United States.

Pl., 1905. Half hardy.

S. sempervirens, L. North America.

Pl., 1898. Hardy. Ht. 3 to 4½ ft.
Fl. golden yellow; Aug. 4 to
Oct. 3.

S. serotina, AIT. North America.

Pl., 1901. Hardy. Ht. 6 ft. Fl.
golden yellow; Aug. 4 to Oct. 8.

S. serotina gigantea = *S. gigantea*.

***S. Shortii, TORR. & GRAY.** Arkansas.

Pl., 1902. Hardy. Ht. 3 to 3½ ft.
Fl. golden yellow; Aug. 10 to
Sept. 17.

S. ulmifolia, MUHL. North America.

Pl., 1907.

S. Virgaurea compacta = *S. Virgaurea*
nana.

***S. Virgaurea nana.**

Syn. S. Virgaurea compacta.
Pl., 1905. Hardy. Ht. 1 to 1½ ft.
Fl. golden yellow; July 16 to
Aug. 11.

SPHÆRALCEA, A. ST. HILL.

(*Malvaceæ.*)

S. munroana, SPACH. North-western
America.

Pl., 1908.

SPIGELIA, L. WORM GRASS.

(*Loganiaceæ.*)

*****S. marilandica, L.** North America.

Pl., 1901. Hardy. Ht. 1½ to 2 ft.
Fl. cardinal outside, greenish yel-
low inside; July 7 to Aug. 27.

SPIRÆA, L.

(*Rosaceæ.*)

The spiræas are among the most graceful hardy herbaceous perennials, and are very ornamental and useful in borders. The majority of them are moisture-loving plants, and to give the best results should be planted in rich moist soil. The strong growing species such as *Spiræa Aruncus* and *Spiræa camtschatica* (*S. gigantea*), require a large space in which to develop properly. They make effective individual specimens, or may be used with good effect in the shrubbery. Propagation is effected by dividing the clumps, and as these increase rapidly in size a good plant can soon be multiplied.

SPIRÆA—Con.

*****S. Aruncus**, L. Goat's Beard. Northern temperate regions.

Pl., 1895. Hardy. Ht. 4½ ft. Fl. creamy white; June 10 to July 9.

*****S. Aruncus Kneiffi**.

Pl., 1900. Hardy. Ht. 5 ft. Fl. creamy white; June 18 to July 12.

*****S. Aruncus plumosa**.

Pl., 1897. Hardy. Ht. 3½ to 4 ft. Fl. creamy white; June 7 to July 18.

S. astilboides, T. MOORE. Japan.

Pl., 1895. Half hardy.

****S. astilboides floribunda**.

Pl., 1895. Hardy. Ht. 1½ ft. Fl. white; June 24 to July 21.

****S. camtschatica**, PALL. Kamtschatka.

Syn. S. gigantea, Hort.

Pl., 1895. Hardy. Ht. 5½ to 6½ ft. Fl. creamy white; July 4 to Aug. 13.

*****S. camtschatica elegans**.

Pl., 1901. Ht. 4½ ft. Fl. crimson pink in bud, white with crimson pink anthers when open; July 13 to Aug. 13.

S. caucasica.

Pl., 1895. Hardy. Ht. 3½ to 4 ft. Fl. creamy white; June 13 to June 26.

****S. digitata glabra**.

Pl., 1895. Hardy. Ht. 4 to 5 ft. Fl. white with pink anthers; June 24 to July 16.

****S. Filipendula**, L. Dropwort. Europe, &c.

Pl., 1895. Hardy. Ht. 2 to 2½ ft. Fl. creamy white with rosy spots outside; June 16 to July 16.

*****S. Filipendula flore pleno**.

Pl., 1895. Hardy. Ht. 2 to 2½ ft. Fl. double, white; June 11 to July 16.

S. gigantea, Hort. = S. camtschatica.

****S. gigantea sp.** Japan.

Pl., 1898. Hardy. Ht. 4½ to 6½ ft. Fl. creamy white; July 6 to Aug. 1.

SPIRÆA—Con.

S. Hacquetii, FENZEL & C. KOCH. Tyrol.

Syn. S. pubescens, Hort.

Pl., 1895. Hardy. Ht. 3½ to 4½ ft. Fl. white; June 27 to July 12.

***S. Humboldtii**, HORT.

Pl., 1895. Hardy. Ht. 3½ to 4 ft. Fl. white; June 14 to July 4.

S. japonica, Makoy = Astilbe japonica.

*****S. lobata**, JACQ. North America.

Syn. S. venusta lobata.

Pl., 1895. Hardy. Ht. 3½ to 4 ft. Fl. deep pink; July 15 to Aug. 6.

S. lobata vera.

Pl., 1908.

***S. macrophylla**, HORT.

Pl., 1895. Hardy. Ht. 5 to 5½ ft. Fl. white; June 13 to July 9.

*****S. palmata**, THUNB. Japan.

Pl., 1895. Hardy. Ht. 3 to 3½ ft. Fl. carmine; late June to Aug.

S. palmata alba.

Pl., 1908.

****S. palmata elegans**.

Pl., 1895. Hardy. Ht. 4 ft. Fl. pink and white; June 27 to July 20.

S. palmata major.

Pl., 1908.

S. pubescens, Hort. = S. Hacquetii.

***S. Ulmaria**, L. Meadow Sweet. Europe, &c.

Pl., 1895. Hardy. Ht. 3½ to 4 ft. Fl. sulphury white; June 30 to Aug. 13.

****S. Ulmaria flore pleno**.

Pl., 1895. Hardy. Ht. 4 ft. Fl. double, creamy white; July 1 to Aug. 13.

****S. Ulmaria foliis variegatis**.

Pl., 1898. Hardy. Ht. 4½ to 5½ ft. Fl. sulphury white; leaves variegated; July 9 to Aug. 22.

*****S. venusta**, HORT. Origin unknown.

Pl., 1895. Hardy. Ht. 4½ to 5½ ft. Fl. crimson pink; July 6 to Aug. 15.

S. venusta lobata = S. lobata, Jacq.

****S. venusta pallida**.

Pl., 1897. Hardy. Ht. 4 to 5 ft. Fl. pink; July 1 to Aug. 1.

STACHYS, L. WOUNDWORT.*(Labiatae.)***S. alpina, L. Europe.**

Pl., 1905. Hardy. Ht. 3 to 3½ ft.
Fl. magenta lilac; July 9 to
Aug. 7.

***S. Betonica, BENTH. Wood Betony.**

Europe, &c.
Pl., 1898. Hardy. Ht. 3 to 3½ ft.
Fl. reddish purple; July 7 to
Aug. 27.

***S. Betonica superba.**

Pl., 1895. Hardy. Ht. 1½ ft. Fl.
pink and pale pink; July 4 to
Aug. 6.

S. germanica, L. Lamb's Ear. Europe,

&c.
Pl., 1897. Hardy. Ht. 1½ ft. Fl.
pale pink and white; June 25 to
Aug. 8.

***S. lanata, JACQ. Woolly Woundwort.**

Caucasus, &c.
Pl., 1897. Hardy. Ht. 1 ft. Fl.
purple; July 2 to Aug. 13.

S. recta, L. Europe, &c.

Pl., 1905. Hardy. Ht. 3 ft. Fl.
creamy white; June 19 to Aug. 7.

S. sylvatica, L. Hedge Nettle. Eur.

Pl., 1905. Hardy. Ht. 2 ft. Fl.
dull red; July 29 to Oct. 1.

STATICE, TOURN. SEA LAVENDER.*(Plumbaginaceae.)******S. excelsa, HORT.**

Pl., 1897. Hardy. Ht. 2½ to 3 ft.
Fl. ageratum blue; July 23 to
Sept. 18.

***S. eximia, SCHRENK. Central Asia.**

Syn. S. scoparia, Hort.
Pl., 1897. Hardy. Ht. 2½ ft. Fl.
ageratum blue; July 23 to Sept. 5.
S. Fortunei, Lindl. = S. sinensis.

****S. elegans, HORT.**

Pl., 1897. Hardy. Ht. 2 ft. Fl.
bluish violet; July 29 to Oct. 1.

****S. latifolia, SM. Large Sea Lavender.**

Bulgaria, &c.
Pl., 1895. Hardy. Ht. 3 ft. Fl.
ageratum blue; July 30 to Oct. 3.

STATICE—Con.***S. latifolia macrophylla.**

Pl., 1897. Hardy. Ht. 2½ ft. Fl.
ageratum blue; July 9 to Sept.
15.

*****S. Limonium, L. Europe, &c.**

Pl., 1897. Hardy. Ht. 2½ to 3 ft.
Fl. ageratum blue; Aug. 1 to
Oct. 8.

***S. Limonium alba.**

Pl., 1903. Hardy. Ht. 2 to 2½ ft.
Fl. dull white; July 23 to Sept.
15.

S. longifolia, HORT.

Pl., 1897. Hardy. Ht. 2½ ft. Fl.
ageratum blue; July 23 to Sept.
22.

S. minuta, L. Mediterranean region.

Pl., 1908.

***S. Schroderi.**

Pl. 1895. Hardy. Ht. 3 ft. Fl.
bluish violet; Aug. 1 to Sept. 17.

S. scoparia, Hort. = S. eximia.

****S. Simonii.**

Pl., 1895. Hardy. Ht. 3 to 4 ft.
Fl. bluish violet; July 29 to
Sept. 17.

S. sinensis, GIRARD. China.

Syn. S. Fortunei, Lindl.
Pl., 1903. Tender.

***S. species Tauride.**

Pl., 1897. Hardy. Ht. 1½ to 2 ft.
Fl. ageratum blue; Aug. 10 to
Oct. 1.

*****S. Sewerzowi, HERD. Turkestan.**

Pl., 1895. Hardy. Ht. 2½ to 3 ft.
Fl. ageratum blue; Aug. 5 to
Oct. 8.

****S. tatarica, L. Caucasus, &c.**

Pl., 1895. Hardy. Ht. 2½ to 3 ft.
Fl. bluish violet; July 24 to Sept.
19.

STELLARIA, L. STICHWORT.*(Caryophyllaceae.)***S. graminea aurea.**

Pl. 1898. Hardy. Ht. 7 in. Fl.
white. Fol. pale golden yellow;
June 13 to Aug. 22.

STENANTHIUM, KUNTH.*(Liliaceæ.)***S. angustifolium, KUNTH.** North America.

Pl. 1895. Hardy. Ht. 2 ft. Fl. greenish white; Aug. 22 to Sept. 24.

S. robustum, S. WATS. Mountain Feather Fleece. North Carolina. Pl., 1908. Tender.**STOKESIA, L'HERIT. STOKE'S ASTER.***(Compositæ.)***S. cyanea, L'HERIT.** Stoke's Aster. North America.

Pl., 1908. Tender.

STOBÆA, THUNB. = BERKHEYA.**SYMPHYTUM, TOURN. COMFREY.***(Boraginaceæ.)***S. asperrimum, DONN.** Forage Comfrey, Prickly Comfrey. Caucasus, &c.

Pl., 1895. Hardy. Ht. 3½ to 4 ft. Fl. dull purplish pink; May 31 to July 28.

TANACETUM, TOURN. TANSY.*(Compositæ.)***T. vulgare, L.** Common Tansy. Europe, &c.

Pl., 1895. Hardy. Ht. 3½ to 5 ft. Fl. golden yellow; July 20 to Sept. 7.

TEUCRIUM, L. GERMANDER.*(Labiatae.)***T. Chamædrys, L.** Germander. Europe, &c.

Pl., 1898. Half hardy.

T. pyrenaicum, L. Pyrenees.

Pl., 1905. Hardy. Ht. 4 in. Fl. white; June 22 to Sept. 24.

TELEKIA, BAUMG. = BUPHTHALMUM.**THALICTRUM, TOURN. MEADOW RUE.***(Ranunculaceæ.)***T. adiantifolium = T. minus adiantifolium.****THALICTRUM—Con.****T. alpicolum, Jord. = T. simplex.**
Pl., 1907.****T. alpinum, L.** Northern and Arctic regions.

Pl., 1902. Hardy. Ht. 4 to 4½ ft. Fl. pale yellow; June 21 to July 8.

T. anemonoides, MICHX. Rue Anemone. North America.

Pl., 1908.

T. angustifolium, L. Europe, &c.

Pl., 1895. Hardy. Ht. 3 ft. Fl. pale yellow; July.

*****T. aquilegifolium, L.** Feathered Columbine. Europe, &c.*Syn. T. rubellum, Sieb. & Zucc.*

Pl., 1894. Hardy. Ht. 4 to 5 ft. Fl. white; June 20 to July 10.

****T. aquilegifolium atropurpureum.**

Pl., 1895. Hardy. Ht. 2 to 3 ft. Fl. white with dark purple stamens; May 31 to June 27.

****T. aquilegifolium purpureum.***Syn. T. roseum.*

Pl., 1905. Hardy. Ht. 4 to 5 ft. Fl. lilac; June 6 to July 3.

T. aquilegifolium roseum = T. aquilegifolium purpureum.**T. calabricum, SPRENG.** Central Italy.

Pl., 1902. Hardy. Ht. 3½ to 4 ft. Fl.; June 23 to July 6.

T. collinum, Wall. = T. minus collinum.****T. corynellum, DC.** North America.*Syn. T. polygamum, Mühl.*

Pl., 1901. Hardy. Ht. 5 to 5½ ft. Fl. pure yellow; June 27 to July 10.

T. Delavayi, FRANCH. China.

Pl., 1908.

T. dioicum, L. North America.

Pl., 1895. Hardy. Ht. 1 ft. Fl. greenish; May 13 to May 25.

T. exaltatum, GAUD. Europe.

Pl., 1907.

T. flavum, L. Common Meadow Rue. Europe, &c.

Pl., 1898. Hardy. Ht. 5½ ft. Fl. pure yellow; July 14 to Aug. 1.

THALICTRUM—*Con.******T. flavum heterophyllum.**

Pl., 1905. Hardy. Ht. 5½ ft. Fl.
pure yellow; July 14 to Aug. 5.

****T. flavum sphærocarpum.**

Pl., 1898. Hardy. Ht. 4½ to 5 ft.
Fl. pure yellow; June 30 to July
30.

****T. glaucum, DESF.** South Europe.

Pl., 1905. Hardy. Ht. 5½ to 6 ft.
Fl. pure yellow; July 3 to July
26.

T. kemense, Fries. = *T. minus.*

T. majus, JACQ. Europe.

Pl., 1905. Hardy. Ht. 3 to 3½ ft.
Fl.; June 22 to July 19.

T. minus, L. Europe.

Syn. T. kemense, Fries.

Pl., 1897. Hardy. Ht. 4 to 6 ft.
Fl. yellow and green; June 24 to
July 8.

****T. minus adiantifolium.**

Syn. T. adiantifolium.

Pl., 1903. Hardy. Ht. 1½ to 2 ft.
Fl. yellow and green; June 21 to
July 14.

T. minus affine.

Pl., 1898. Hardy. Ht. 5½ ft. Fl.
yellow and green; June 29 to
July 28.

T. minus collinum.

Pl., 1902. Hardy. Ht. 4 to 4½ ft.
Fl. yellow and green; June 21 to
July 17.

T. minus elatum.

Pl., 1898. Hardy. Ht. 5 to 5½ ft.
Fl. yellow and green; June 21 to
July 14.

T. minus flexuosum.

Pl., 1902. Hardy. Ht. 4 to 5 ft.
Fl. yellow and green; June 24 to
July 8.

T. minus nutans.

Pl., 1907.

T. minus purpurascens.

Pl., 1898. Hardy. Ht. 5 ft. Fl.
yellow and green; June 21 to
July 11.

T. polygamum, Mühl. = *T. corynellum.*

THALICTRUM—*Con.*

T. roseum = *T. aquilegifolium purpu-*
reum.

T. rubellum, Sieb. & Zucc. = *T. aquile-*
gifolium.

T. simplex, L. Europe.

Syn. T. alpicolum, Jord.
Pl., 1907.

T. simplex dubium.

Pl., 1903. Hardy. Ht. 5 to 5½ ft.
Fl.; July 6 to July 20.

T. squarrosus, STEPHAN. Siberia.

Pl., 1898. Hardy. Ht. 4½ to 5 ft.
Fl.; June 23 to July 11.

THASPIUM, NUTT. MEADOW PARSNIP.

(*Umbelliferae.*)

T. aureum trifoliatum.

Pl., 1895. Hardy. Ht. 2 ft. Fl.
yellow; May 27 to June 20.

THERMOPSIS, R. BR.

(*Leguminosae.*)

****T. caroliniana, M. A. CURT.** North America.

Pl., 1895. Hardy. Ht. 6 ft. Fl.
pure yellow; June 16 to July 21.

***T. fabacea, DC.** Kamtchatka.

Pl., 1895. Hardy. Ht. 2 ft. Fl.
yellow; May 16 to July 10.

***T. montana, NUTT.** North America.

Pl., 1898. Hardy. Ht. 2 ft. Fl.
yellow; May 23 to June 12.

THLADIANTHA, BUNGE.

(*Cucurbitaceae.*)

***T. dubia, BUNGE.** China.

Pl., 1895. Hardy. Ht. 8 ft. Fl.
lemon yellow; July 16 to Aug.
20.

THYMUS, TOURN. THYME.

(*Labiatae.*)

T. Chamædryis montanus albus.

Pl., 1895. Hardy. Ht. 2 in. Fl.
white; June 13 to Aug. 6.

T. micans = *T. Serpyllum micans.*

T. Serpyllum lanuginosus.

Pl., 1898. Half hardy.

T. Serpyllum micans.

Pl., 1898. Tender.

TIARELLA, L. FALSE MITREWORT.*(Saxifragaceæ.)******T. cordifolia albiflora.**

Pl., 1905. Hardy. Ht. 1 ft. Fl. white; May to June.

TRACHELIUM, TOURN. THROAT-WORT.*(Campanulaceæ.)***T. cæruleum album.**

Pl., 1895. Half hardy.

TRADESCANTIA, RUPP. SPIDER-WORT.*(Commelinaceæ.)****T. virginiana, L.** Common Spider-wort, Flower of a Day. North America.

Pl., 1895. Hardy. Ht. 2½ to 3 ft. Fl. violet; June 3 to Sept. 17.

****T. virginiana alba.**

Pl., 1895. Hardy. Ht. 2½ ft. Fl. white, with traces of purple; June 3 to Aug. 13.

****T. virginiana alba grandiflora.**

Pl., 1905. Hardy. Ht. 2½ ft. Fl. white; June 5 to Aug. 4.

***T. virginiana cærulea.**

Pl., 1895. Hardy. Ht. 2½ ft. Fl. purplish violet, bluer than the type; June 3 to Oct. 17.

***T. virginiana coccinea.**

Pl., 1895. Hardy. Ht. 2½ ft. Fl. rosy magenta; June 6 to Oct. 22.

T. virginiana pilosa.

Pl., 1895. Hardy. Ht. 3 ft. Fl. purplish lilac; May 28 to Sept. 3.

***T. virginiana rosea.**

Pl., 1898. Hardy. Ht. 3 ft. Fl. rosy purple; May 26 to Aug. 18.

T. virginiana rubra.

Pl., 1898. Hardy. Ht. 2½ ft. Fl. purplish red and lilac.

TRAUTVETTERIA, FISCH. & MEY.

FALSE BUGBANE.

*(Ranunculaceæ.)***T. palmata, FISCH. & MEY.** North-western America and Japan.

Pl., 1895. Hardy. Ht. 2 ft. Fl. white; June 29 to July 28.

TRICYRTIS, WALL. TOAD LILY.*(Liliaceæ.)***T. hirta fol. var.**

Pl., 1898. Half hardy. Ht. 1½ ft. Foliage variegated.

T. japonica Miq. = *T. hirta.***T. hirta, HOOK.** Japan.*Syn. T. japonica, Miq.*
Pl., 1898. Tender.**TRIFOLIUM, L.** TREFOIL, CLOVER.*(Leguminosæ.)***T. alpestre, L.** South Europe, &c.

Pl., 1905. Hardy. Ht. 12 to 15 in. Fl. rosy purple; June 19 to Aug. 4.

T. Simpson's Perennial, FLETCHER.

Prince Edward Island.

Pl., 1899. Hardy. Ht. 12 to 18 in. Fl. purplish red; June 23 to Aug. 20.

TRILLIUM, L. THREE-LEAVED NIGHT-SHADE.*(Liliaceæ.)****T. erectum, L.** Birth Root. North America.

Pl., 1895. Hardy. Ht. 9 in. Fl. brownish purple; May.

***T. erectum declinatum.**

Pl., 1895. Hardy. Ht. 16 in. Fl. white; May 16 to June 9.

*****T. grandiflorum, SALISB.** Wake Robin. North America.

Pl., 1895. Hardy. Ht. 12 to 18 in. Fl. white; May to June.

T. sessile californicum.

Pl., 1898. Tender.

T. stylosum, NUTT. Southern United States.

Pl., 1898. Tender.

TRITOMA, KER-GAWL = *KNIPHOFIA.***TRITONIA, KER-GAWL.***(Iridaceæ.)*****T. Pottsii, BENTH. & HOOK. F.** South Africa.

Pl., 1901. Hardy. Ht. 3 to 3½ ft. Fl. orange and red; July 31 to Sept. 7.

TROLLIUS, L. GLOBE FLOWER.

(Ranunculaceæ.)

The globe flowers while, perhaps, no more desirable than other plants to which no especial attention is drawn in this bulletin, are referred to here because they are not as well known in Canadian gardens as they should be. Spring flowers are most appreciated in the gardens, and among plants which bloom in the spring the globe flowers are among the most desirable. They are closely related to the buttercup, and if one can imagine a buttercup several times as large as the common species with incurved petals and, in some cases, semi-double, a good idea of the globe flowers will be obtained. They delight in rich moist soil, and this should be given them to obtain the best results, although they do well in the average border soil.

**T. asiaticus, L. Siberia, &c.

Syn. T. Smoutei, Hort.

Pl., 1895. Hardy. Ht. 2 ft. Fl. orange; May 16 to June 3.

**T. asiaticus Excelsior.

Pl., 1905. Hardy. Ht. 1½ to 2 ft. Fl. rich orange; May 23 to June 9.

**T. asiaticus flore croceo.

Pl., 1895. Hardy. Fl. deep orange; mid to late May.

***T. asiaticus plenus.

Pl., 1895. Hardy. Ht. 1½ to 2 ft. Fl. deep yellow; May 21 to June 3.

***T. asiaticus plenus.

Syn. T. japonicus plenus.

Pl., 1901. Hardy. Ht. 2½ ft. Fl. rich deep orange, semi-double; May 16 to June 9.

**T. europæus, L. Mountain Globe Flower. Europe, &c.

Pl., 1895. Hardy. Ht. 2 to 2½ ft. Fl. lemon yellow; May 19 to June 16.

T. europæus albidus.

Pl., 1898. Tender.

***T. europæus giganteus.

Syn. T. giganteus.

Pl., 1895. Hardy. Ht. 1½ to 2 ft. Fl. lemon yellow; May 16 to June 10.

***T. europæus Orange Globe.

Pl., 1900. Hardy. Ht. 2 to 2½ ft. Fl. orange yellow; May 19 to June 13.

T. europæus Loddigesii = T. asiaticus Loddigesii.

**T. Gibsoni, Hort.

Pl., 1906. Hardy. Ht. 1 ft. Fl. orange; mid to late May.

T. giganteus, Hort. = T. europæus giganteus.

***T. hybridus Thos. S. Ware.

Pl., 1900. Hardy. Ht. 2 ft. Fl. rich orange; May 16 to May 31.

*T. jap. Excelsior = T. asiaticus Excelsior.**T. japonicus plenus, Hort. = T. asiaticus plenus.*

**T. Ledebourii, REICHB. Siberia.

Pl., 1895. Hardy. Ht. 2 ft. Fl. pale yellow; May 23 to June 10.

T. Prince of Orange.

Pl., 1907.

T. T. Smith.

Pl., 1907.

T. Smoutei, Hort. = T. asiaticus.

TULIPA, L. TULIP.

(Liliaceæ.)

*T. acuminata, VAHL. Garden origin.

Pl., 1897. Hardy. Ht. 2 ft. Fl. light yellow with red lines and splashes; early May.

TULIPA—Con.

*T. armena, Boiss.

Pl., 1901. Hardy. Fl. deep crimson scarlet with black blotch at base; late May.

TULIPA—Con.

- **T. australis**, LINK. South-western Eur.
Syn. T. celsiana, DC.
Pl., 1897. Hardy. Ht. 1 ft. 8 in.
Fl. golden yellow flushed with
bronze outside, sweet scented;
May 19 to June 6.
- T. Batalinii**, REGEL. Asia Minor.
Pl., 1901. Hardy. Ht. 5 in. Fl.
pale yellow; May 16 to June 3.
- *T. billietiana**, JORD. Europe.
Pl., 1907. Hardy. Ht. 1 ft. 3 in.
Fl. golden yellow, edged with red
near base; May 19 to June 3.
- T. carinata rubra**.
Pl., 1897. Hardy. Ht. 2 ft. Fl.
carmine; May 26 to June 3.
- T. carinata violacea**.
Pl., 1897. Hardy. Ht. 2 ft. Fl.
green and red; late May to early
June.
- T. celsiana*, DC. = *T. australis*.
- **T. Didieri**, JORD. South Europe.
Pl., 1897. Hardy. Ht. 12 to 18 in.
Fl. bright crimson, purplish
blotch at base; late May.
- ***T. Didieri mauriana**.
Syn. T. mauriana.
Pl., 1901. Hardy. Ht. 1 ft. 10 in.
Fl. bright orange scarlet, yellow
at base; late May to early June.
- ***T. elegans**, BAKER. Garden origin.
Pl., 1901. Hardy. Ht. 12 to 18 in.
Fl. bright scarlet red with yellow
eye; May 13 to June 3.
- *T. fragrans**, MUNBY. Algiers.
Pl., 1901. Hardy. Ht. 6 to 12 in.
Fl. yellow, greenish outside,
sweet scented; May 16 to May
30.
- ***T. fulgens**, HORT. Garden origin.
Pl., 1901. Hardy. Ht. 2½ ft. Fl.
scarlet with yellow eye; May 16
to June 6.
- ***T. Greigi**, REGEL. Turkestan.
Pl., 1906. Hardy. Ht. 6 in. Fl.
bright flame red with black
blotches margined with yellow;
leaves with brown blotches; mid
to late May.

TULIPA—Con.

- *T. Hageri**, HELDR. Smyrna.
Pl., 1901. Hardy. Ht. 16 in. Fl.
deep orange black, with yellow
margin at base; May 17 to
June 6.
- ***T. kaufmanniana**, REGEL. Turkestan.
Pl., 1901. Hardy. Ht. 6 to 9 in.
Fl. orange red with white marg-
in, yellow and white inside;
April 23 to May 10.
- T. Korolkowi**, REGEL.
Pl., 1901. Half hardy.
- T. Lownei**, BAKER. Syria.
Pl., 1901. Half hardy.
- T. Leichtlinii**, REGEL. Kashmir.
Pl., 1901. Half hardy.
- ***P. macrospeila**, BAKER. Garden origin.
Pl., 1897. Hardy. Ht. 1½ ft. Fl.
bright crimson, black and yellow
at base; late May to early June.
- ***T. maculata**, HORT. Garden origin.
Pl., 1897. Hardy. Ht. 2 ft. Fl.
rich scarlet, black, edged with
yellow at base; May 21 to June 9.
- T. mauriana* = *T. Didieri mauriana*.
- **T. Oculus-solis**, ST-AMAN. South of
France, Italy and Switzerland.
Pl., 1901. Hardy. Ht. 12 to 18 in.
Fl. bright crimson, black base
with yellow margin; mid to late
May.
- *T. orphanidea**, BOISS. Greece.
Pl., 1897. Hardy. Ht. 18 in. Fl.
yellow inside, bronzy red outside;
mid to late May.
- **T. præcox**, TENORE. South Europe, &c.
Pl., 1901. Hardy. Ht. 1 ft. 9 in.
Fl. bright crimson with black
blotch at base; mid to late May.
- *T. pulchella**, FENZEL. Cilicia.
Pl., 1897. Hardy. Ht. 5 in. Fl.
bright mauve red with yellow
base; early May.
- ***T. retroflexa**, HORT. Garden origin.
Pl., 1901. Hardy. Ht. 1½ ft. Fl.
bright yellow; mid to late May.

TULIPA—Con.

T. saxatilis, SIEB. Crete.

Pl., 1901. Hardy. Ht. 1 ft. Fl. mauve purple, yellow towards base; late May to early June.

****T. sylvestris**, L. Wild Tulip. Europe, &c.

Pl., 1897. Hardy. Ht. 1 ft. Fl. yellow, sweet scented; mid to late May.

T. viridiflora, HORT. Garden origin.

Pl., 1897. Hardy. Ht. 1 ft. Fl. green and pale greenish yellow; May 28 to June 17.

****T. vitellina**, HORT. Garden origin.

Pl., 1901. Hardy. Ht. 1 to 1½ ft. Fl. white tinged with straw colour; mid to late May.

TUNICA, HALL.

(*Caryophyllaceæ.*)

T. olympica, BOISS. Asia Minor.

Pl., 1904. Tender.

TYPHA, L. CAT-TAIL, REED MACE.

(*Typhaceæ.*)

***T. angustifolia**, L. Small Bullrush. Europe, &c.

Pl., 1897. Hardy. Ht. 4 to 4½ ft. Fl. brown; June.

UVULARIA, L. BELLWORT.

(*Liliaceæ.*)

***U. grandiflora**, SM. North America.

Pl., 1896. Hardy. Ht. 1½ ft. Fl. pale yellow; May 8 to May 28.

***U. sessilifolia**, L. North America.

Pl., 1895. Hardy. Ht. 9 in. Fl. pale yellow; May 18 to May 28.

VALERIANA, TOURN. VALERIAN.

(*Valerianaceæ.*)

***V. officinalis**, L. Cat's Valerian. Eur.

Pl., 1895. Hardy. Ht. 3½ ft. Fl. white tinged with pink; June 16 to July 16.

VERATRUM, L. FALSE HELLEBORE.

(*Liliaceæ.*)

***V. nigrum**, L. Europe, &c.

Pl., 1894. Hardy. Ht. 3 to 5 ft. Fl. dark brown; June 30 to Sept. 6.

VERATRUM—Con.

V. viride, AIR. Indian Poke.

North America.

Pl., 1895. Hardy. Ht. 3½ to 4 ft. Fl. yellowish green; June 22 to Aug. 4.

VERBASCUM, TOURN. MULLEIN.

(*Schropulariaceæ.*)

****V. Chaixii**, VILL. South-western Eur.

Pl., 1903. Hardy. Ht. 7 ft. Fl. yellow; June 17 to Aug. 30.

V. Chaixii album.

Pl., 1908.

V. cupreum, Sims.=*V. phœniceum cupreum*.

*****V. densiflorum**, BERTOL. Mountains of Italy.

Pl., 1907. Ht. 6 ft. Fl. yellow, brownish purple at base; July 5 to Sept. 7.

V. ferrugineum, Mill.=*V. rubiginosum ferrugineum*.

V. Libani.

Pl., 1907.

V. longifolium, TENORE. Europe.

Syn. V. pannosum, Vis.

Pl., 1897. Tender.

V. Lychinitis, L. Europe, &c.

Pl., 1907.

***V. nigrum**, L. Dark Mullein. Europe, &c.

Pl., 1901. Hardy. Ht. 6 to 7 ft. Fl. yellow; June 18 to Sept. 9.

V. pannosum, Vis.=*V. longifolium*.

****V. phœniceum cupreum.**

Syn. V. cupreum, Sims.

Pl., 1907. Ht. 3 ft. Fl. yellow tinged with lilac; June 8 to Aug. 6.

V. phœniceum album.

Pl., 1907.

V. rubiginosum ferrugineum.

Syn. V. ferrugineum, Mill.

Pl., 1907.

VERBENA, L. VERVAIN.

(*Verbenaceæ.*)

V. stricta, VENT. North America.

Pl., 1905. Hardy. Ht. 5 ft. Fl. bluish violet; Aug. 2 to Sept. 14.

VERBESINA, L. CROWN BEARD.

(Compositæ.)

V. helianthoides, MICHX. North America.*Syn. Actinomeris helianthoides, Nutt.*
Pl., 1907.**VERNONIA, SCHREB. IRON WEED.**

(Compositæ.)

V. arkansana, DC. North America.

Pl., 1895. Hardy. Ht. 6 ft. Fl. purple; Aug. 26 to Oct. 8.

V. Baldwini, TORR. North America.

Pl., 1907.

V. noveboracensis, WILLD. United States.

Pl., 1895. Hardy. Ht. 4½ to 5½ ft. Fl. purple; Aug. 10 to Sept. 25.

VERONICA, L. SPEEDWELL.

(Scrophulariaceæ.)

V. amethystina, Willd. = *V. spuria*.**V. austriaca, L.** Europe, &c.*Syn. V. Jacquini, Baumg.*
Pl., 1907.*V. australis, Schrad.* = *V. spicata*.**V. ceratocarpa, C. A. MEY.** Region of the Caspian Sea.

Pl., 1905. Tender.

V. elegans carnea = *V. spuria elegans carnea*.****V. spuria elegans carnea.***Syn. V. elegans carnea.*

Pl., 1895. Hardy. Ht. 2 to 2½ ft. Fl. lilac pink; June 26 to Aug. 22.

V. fruticulosa, L. Europe.

Pl., 1895. Hardy. Ht. 4 to 6 in. Fl. rosy purple; June 16 to Aug. 4.

V. grandis, FISCH. Europe.

Pl., 1907.

V. Hendersoni alba.

Pl., 1908.

*****V. incana, L.** Hoary Speedwell. South and East Europe.

Pl., 1898. Hardy. Ht. 2½ ft. Fl. deep violet; June 15 to Sept. 30.

V. Jacquini, Baumg. = *V. austriaca*.**V. longifolia, L.** Europe, &c.*Syn. V. oxyphylla, Stev.*
Pl., 1907.**VERONICA—Con.***V. longifolia subsessilis* = *V. subsessilis*.**V. maritima alba.**

Pl., 1905. Tender.

V. officinalis, L. Common Speedwell.

Europe, &c.

Pl., 1895. Hardy.

V. orchidea, CRANTZ. South-eastern

Europe, Caucasus.

Pl., 1907.

V. oxyphylla, Stev. = *V. longifolia*.**V. repens, DC.** Creeping Speedwell.

Corsica, &c.

Pl., 1898. Tender.

V. rupestris, HORT.

Pl., 1905. Tender.

V. spuria, L. Europe.*Syns. V. amethystina, Willd.; V. speciosa, Hort.*

Pl., 1908.

*****V. spicata, L.** Europe, &c.*Syn. V. australis, Schrad.*

Pl., 1894. Hardy. Ht. 3 ft. 3 in. Fl. deep bluish violet; July 7 to Oct. 20.

*****V. subsessilis, HORT.** Kew. Japan.*Syn. V. longifolia subsessilis.*

Pl., 1905. Hardy. Ht. 2 to 3 ft. Fl. blue; Aug. 4 to Sept. 12.

****V. virginica, L.** Great Virginian

Speedwell. North America.

Pl., 1895. Hardy. Ht. 5½ ft. Fl. white; July 21 to Aug. 29.

***V. Teucrium, L.** Hungarian Speedwell. Europe, &c.

Pl., 1905. Hardy. Ht. 2 ft. Fl. blue; June 22 to July 12.

VICIA, TOURN. VETCH, TARE.

(Leguminosæ.)

V. aurantia, Boiss. Asia Minor.*Syn. Orobus aurantius, Stev.*
Pl., 1908.***V. oroboides, WULF.** South Europe.*Syn. Orobus lathyroides.*

Pl., 1902. Hardy. Ht. 2½ to 3 ft. Fl. violet blue; June 7 to July 2.

***V. Orobus, DC.** Bitter Vetch. Europe.

Pl., 1905. Hardy. Ht. 1 ft. 4 in. Fl. white; June 20 to July 8.

VICIA—Con.

V. sylvatica, L. Wood Vetch. Europe.
Pl., 1905. Hardy. Ht. 2½ ft. Fl.
blue and white; June 16 to
July 6.

VINCA, L. PERIWINKLE.

(*Apocynaceæ.*)

***V. herbacea flore pleno.**

Pl., 1897. Hardy. Ht. 1 ft. 3 in.
Fl. purplish mauve with paler
shades, double; May 10 to June 9.

***V. major maculata aurea.**

Pl., 1895. Half hardy. Fl. pale
violet; Foliage variegated with
yellow; June.

V. major variegata.

Pl., 1895. Half hardy. Foliage
variegated with creamy white.

V. major viridis.

Pl., 1895. Half hardy.

****V. minor**, L. Common Periwinkle.
Europe, &c.

Pl., 1908. Hardy. Trailing. Fl.
lavender blue; early May.

***V. minor alba.**

Pl., 1895. Hardy. Fl. white; May
and Oct.

***V. minor argenteo marginata.**

Pl., 1899. Hardy. Does not bloom.
Foliage variegated with silvery
colour.

***V. minor azurea plena.**

Pl., 1898. Hardy. Fl. lavender
blue, double; May 13 to June 6.

***V. minor flore pleno.**

Pl., 1898. Hardy. Fl. blue, double;
May 13 to June 3.

***V. minor flore pleno purpureo.**

Pl., 1898. Hardy. Fl. purplish
mauve, double; May.

***V. minor variegata.**

Pl., 1895. Hardy. Fol. variegated
with creamy white.

****V. minor viridis.**

Pl., 1895. Hardy. Fl. lavender
blue; May and Oct.

VINCETOXICUM, RUPP.

(*Asclepiadaceæ.*)

V. nigrum, MENCH. Europe, &c.

Pl., 1905. Hardy. Ht. 7½ ft. Fl.
brown; June 22 to Aug. 10.

VIOLA, TOURN. VIOLET.

(*Violaceæ.*)

****V. cornuta alba.**

Pl., 1898. Hardy. Ht. 6 in. Fl.
white; May 31 to July 12.

****V. cucullata**, ARR. North America.

Pl., 1895. Hardy. Ht. 6 to 12 in.
Fl. purplish blue; May 11 to
June 1.

****V. cucullata striata.**

Syn. T. obliqua striata.

Pl., 1899. Hardy. Ht. 6 in. Fl.
violet striped and splashed with
white; May 10 to June 3.

V. odorata alba.

Pl., 1900. Tender.

****V. odorata Brune de Bourg la Reine.**

Pl., 1899. Half hardy. Ht. 6 in.
Fl. deep purple; May and Oct.

****V. odorata Californian.**

Pl., 1899. Half hardy. Fl. purple;
May.

****V. odorata Luxonne.**

Pl., 1898. Half hardy. Fl. bluish
purple; May.

V. odorata Marie Louise.

Pl., 1897. Tender.

V. odorata Perle Rose.

Pl., 1908.

V. odorata sulphurea.

Pl., 1908.

V. odorata Swanley White.

Pl., 1897. Tender.

***V. pinnata**, L. Europe; Northern Asia.

Pl., 1894. Hardy. Ht. 6 in. Fl.
violet; May.

YUCCA.

Y. angustifolia, Pursh. = *Y. glauca*,
Nutt.

*****Y. filamentosa**, L. Adam's Needle.
Southern United States.

Pl., 1895. Hardy. Ht. 3½ to 4 ft.
Fl. creamy white with greenish
tinge; July 13 to Aug. 10.

Y. filamentosa flaccida.

Pl., 1895. Half hardy.

****Y. filamentosa glaucescens**.

Pl., 1899. Hardy. Ht. 3 ft. Fl.
creamy white with greenish
tinge; July 10 to Aug. 2.

YUCCA—Con.

Y. glauca, NUTT.*Syn. Y. angustifolia*, Pursh.

Pl., 1897. Half hardy. Does not bloom.

YUCCA—Con.

*****Y. gloriosa recurvifolia**.

Pl., 1895. Hardy. Ht. 2½ to 4 ft.

Fl. creamy white tinged with red outside; July 4 to July 30.

Y. recurvifolia, Salisb.=*Y. gloriosa recurvifolia*.

LIST OF TWENTY-FIVE BEST HARDY HERBACEOUS PERENNIALS.

Anemone japonica (varieties).
Aquilegia cœrulea and hybrids.
Aquilegia chrysantha.
Campanula persicifolia and varieties.
Chrysanthemum maximum and varieties.
Clematis recta.
Coreopsis grandiflora.
Delphinium cashmirianum, or *D. grandiflorum*.
Delphinium hybridum and varieties.
Dianthus plumarius Mrs. Sinkins.
Dicentra spectabilis.
Epimedium rubrum.
Hemerocallis aurantiaca major.

Hemerocallis flava.
Iris German, in great variety.
Iris lævigata (Kœmpferi), in great var.
Lilium superbum.
Lilium tenuifolium, or *L. testaceum*.
Pœonia albiflora and *officinalis*, in great variety.
Papaver nudicaule.
Phlox paniculata (*decussata*), in great variety.
Platycodon grandiflorum.
Rudbeckia laciniata fl. pl. Golden Glow.
Spirœa Aruncus.
Trollius europæus Orange Globe.

LIST OF FIFTY BEST HARDY HERBACEOUS PERENNIALS.

Achillea Ptarmica fl. pl. The Pearl.
Adonis vernalis.
Althœa rosea (Hollyhock).
Anemone japonica (varieties).
Anemone patens nutalliana.
Anemone sylvestris.
Aquilegia cœrulea and hybrids.
Aquilegia chrysantha.
Aquilegia oxysepala.
Aster Amellus bessarabicus.
Campanula latifolia macrantha.
Campanula persicifolia and varieties.
Chrysanthemum maximum elegans.
Clematis recta.
Coreopsis grandiflora.
Delphinium cashmirianum, or *D. grandiflorum*.
Delphinium hybridum and varieties.
Dianthus plumarius Mrs. Sinkins.
Dicentra spectabilis.
Doronicum plantagineum excelsum.
Epimedium rubrum.
Gaillardia aristata.
Gypsophila paniculata.
Helianthus multiflorus Meteor, or Soleil d'Or.
Helianthus rigidus Miss Mellish.

Hemerocallis aurantiaca major.
Hemerocallis flava.
Heuchera brizoides gracillima.
Heuchera sanguinea splendens.
Iberis sempervirens garrexiana.
Iris aurea.
Iris German, in great variety.
Iris lævigata (Kœmpferi), in great var.
Lilium auratum.
Lilium speciosum and varieties.
Lilium superbum.
Lilium tenuifolium, or *L. testaceum*.
Myosotis alpestris.
Pœonia albiflora and *officinalis*, in great variety.
Papaver nudicaule.
Papaver orientale Novelty.
Phlox divaricata.
Phlox paniculata (*decussata*), in great variety.
Platycodon grandiflorum.
Rudbeckia laciniata fl. pl. Golden Glow.
Salvia azurea grandiflora.
Spirœa Aruncus.
Spirœa Filipendula fl. pl.
Trillium grandiflorum.
Trollius europæus Orange Globe.

LIST OF ONE HUNDRED BEST HARDY HERBACEOUS PERENNIALS.

- Achillea Ptarmica* fl. pl. *The Pearl*.
Aconitum Fischeri (autumnale).
Aconitum Napellus bicolor.
Adonis vernalis.
Æthionema grandiflorum.
Althæa rosea (Hollyhock).
Anemone japonica (varieties).
Anemone patens nuttalliana.
Anemone sylvestris.
Aquilegia cœrulea and hybrids.
Aquilegia chrysantha.
Aquilegia glandulosa.
Aquilegia oxysepala.
Aquilegia Stuarti.
Aquilegia flabellata nana alba.
Aster alpinus superbus.
Aster Amellus amelloides.
Aster Amellus bessarabicus.
Aster Novæ-Angliæ Mrs. J. F. Rayner.
Campanula carpatica and varieties.
Campanula lactiflora.
Campanula latifolia macrantha.
Campanula persicifolia and varieties.
Campanula pyramidalis.
Chrysanthemum maximum (varieties).
Cimicifuga americana.
Clematis recta.
Convallaria majalis.
Coreopsis grandiflora.
Delphinium Belladonna.
Delphinium cashmirianum.
Delphinium grandiflorum.
Delphinium hybridum and varieties.
Dianthus plumarius Mrs. Sinkins.
Dicentra spectabilis.
Dictamnus albus.
Doronicum plantagineum excelsum.
Echinacea purpurea.
Epimedium rubrum.
Erigeron speciosus superbus.
Funkia subcordata.
Gaillardia aristata.
Gypsophila paniculata.
Helenium autumnale pumilum magnificum.
Helenium autumnale striatum.
Helenium Hoopesii.
Helianthus multiflorus Meteor, or *Soleil d'Or*.
Helianthus multiflorus Mrs. Moon.
Helianthus rigidus Miss Mellish.
Hemerocallis aurantiaca major.
Hemerocallis flava.
Hemerocallis Thunbergii.
Heuchera brizoides gracillima.
Heuchera sanguinea splendens.
Hibiscus Moscheutos and varieties.
Iberis sempervirens garrexiana.
Iberis sempervirens superba Snowflake.
Incarvillea Delavayi.
Iris aurea.
Iris German, in great variety.
Iris lævigata (Kœmpferi), in great var.
Lilium auratum.
Lilium croceum, or *L. dauricum* (davuricum).
Lilium longiflorum.
Lilium speciosum and varieties.
Lilium superbum.
Lilium testaceum.
Lilium tenuifolium.
Lilium tigrinum.
Lupinus polyphyllus.
Mertensia pulmonarioides (M. Virginica).
Monarda didyma.
Myosotis alpestris.
Oenothera fruticosa Youngii.
Pœonia albiflora and *officinalis*, in great variety.
Pœonia tenuifolia flore pleno.
Papaver nudicaule.
Papaver orientale and varieties.
Phlox amœna.
Phlox divaricata.
Phlox glaberrima suffruticosa Snowdon.
Phlox paniculata (decussata), in great variety.
Platycodon grandiflorum.
Platycodon grandiflorum album.
Polemonium humile.
Primula elatior Harry Mitchell.
Rudbeckia laciniata fl. pl. Golden Glow.
Rudbeckia maxima.
Rudbeckia speciosa (Newmanni).
Salvia azurea grandiflora.
Spiræa Aruncus.
Spiræa Aruncus Kneiff.
Spiræa Filipendula flore pleno.
Spiræa palmata.
Statice latifolia.
Trillium grandiflorum.
Trollius asiaticus plenus.
Trollius europæus Orange Globe.
Veronica subsessilis.
Yucca filamentosa.

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