



UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 98



Washington, D. C.

Issued May, 1930

PLANT MATERIAL INTRODUCED BY THE OFFICE OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, JANUARY 1 TO MARCH 31, 1929 (NOS. 78509 TO 80018)

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INTRODUCTORY STATEMENT

The plant material included in this inventory (Nos. 78509 to 80018) for the period January 1 to March 31, 1929, reflects very largely testing experiments undertaken by the office with ornamental plants in several important genera. In nearly all cases the material recorded was secured by the purchase of seed, and, as is always true of such undertakings, some seed has given no germination, with the result that the experiments are not as advanced as might appear. This is particularly true of the sedums, the primulas, and the gentians, which form conspicuous parts of the inventory.

The gardener will also notice the various other ornamentals, including the houseleeks, cyclamen, and ericas for more northern gardens; aloes, agaves, and mesembryanthemums for the South and Southwest, with the possible addition of the very interesting kalanchoes and the gingerlilies. The latter represent a collection purchased from India to see if other species might not be found for general use in the Southern and Gulf States.

A preliminary and not altogether successful importation of plants of various daphnes that should be included among our ornamental shrubs shows that repeated efforts should be made to establish these charming plants.

Several collections of acacias, banksias, grevilleas, and Ficus species should prove of interest in frost-free regions, particularly on the Pacific coast.

This inventory includes also large collections of oaks, castanopsis, and chestnuts obtained by R. Kent Beattie; a collection of oat varieties, presented by the director of the Sveriges Utsädesförening, Svalöf, Sweden; and a collection of seeds presented by Maj. Lionel de Rothschild from material collected by Capt. F. Kingdon Ward in Assam.

Especially because this inventory lists so many seeds, it should be repeated that this is merely a record of material received and does not represent a catalogue of available plants.

The botanical determinations of these introductions have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

OFFICE OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., February 20, 1930.

INVENTORY¹

78509. ERYTHROXYLON COCA LAM.
Erythroxylaceae. Cocaine-tree.

From Soledad, Cienfuegos, Cuba. Seeds presented by R. M. Grey, superintendent, biological laboratory and botanical garden, institute for tropical biology and medicine, Harvard University. Received June 10, 1927. Numbered in January, 1929.

A tropical shrub, native to Peru, 5 to 6 feet high, with rusty brown slender branches bearing clusters of obovate leaves at their tips. The yellowish flowers are borne in clusters of three to five in the axils of small scales which line the branchlets. It is grown commercially on a large scale throughout the warmer parts of South America, also in Java and Ceylon, for the sake of cocaine, which is extracted from the dried leaves.

For previous introduction see No. 67943.

78510. CYRTANTHUS FLAMMEUS HORT.
Amaryllidaceae.

From Philadelphia, Pa. Bulbs presented by James Lambert, superintendent of the botanical laboratories of the University of Pennsylvania. Received March 8, 1929.

A South African bulbous perennial which is a rapid grower. It has linear to lanceolate leaves and umbels of red flowers.

78511. DIOSPYROS SINENSIS HEMSL.
Diospyraceae. Persimmon.

From Nanking, China. Plants obtained through W. T. Swingle, Bureau of Plant Industry. Received March 6, 1929.

A small semievergreen Chinese tree with a short thick trunk, wide-spreading branches and spiny branchlets, thick oblong-lanceolate leaves 2 to 3 inches long, and globose or ovoid golden edible fruits nearly an inch in diameter.

78512 and 78513. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. Peach.

From Nikita, Yalta, Crimea, Russia. Trees presented by I. N. Riaboff, Government Botanical Garden. Received February 11, 1929.

78512. Pahnun.

78513. Yemoh.

78514 and 78515.

From Japan. Seeds obtained by R. K. Beattie, Bureau of Plant Industry. Received February 21, 1929.

Collected by Shimoyaku Eirinsho, at Nakama Kaikon, Shimoyaku Mura, Kumage Gun, Kagoshima Ken, in January, 1929.

78514. CASTANOPSIS CUSPIDATA (Thunb.) Schottky. Fagaceae.

Japanese chinquapin.

No. 850. *Shihi*. In Japan this tree is commonly cultivated from Tokyo southward. It grows from 30 to 75 feet high, with massive wide-spreading branches. The leaves are variable in size and shape and vary in color on the under side from brownish to nearly white. The small, sweet acorns are baked, boiled, or roasted, and regularly sold in the Japanese markets. This tree is hardy only in the southernmost United States.

For previous introduction see No. 75864.

78515. QUERCUS sp. Fagaceae. **Oak.**

No. 849. *Ubamegashi*.

78516. GOSSYPIUM STOCKSII Masters.
Malvaceae. **Cotton.**

From Nagpur, Central Provinces, India. Seeds presented by W. Youngman, economic botanist to the Government. Received March 1, 1929.

¹ It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Office of Foreign Plant Introduction and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications therefore must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this office, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

78516—Continued.

A tropical Indian shrubby cotton with small yellow flowers. It came originally from the Sind Desert, and is of the 13-haploid-chromosome group and therefore will not cross with American types. The seed is difficult to germinate. It is sown in Nagpur about June, and before sowing the coat is carefully split with a knife or the seed is rubbed upon a piece of fine sandpaper, which allows access of water and helps germination.

For previous introduction see No. 77215.

78517. DIERVILLA sp. Hydrangeaceae.

From Morden, Manitoba, Canada. Cuttings presented by W. R. Leslie, superintendent of the experimental station for southern Manitoba. Received March 7, 1929.

A hardy ornamental shrub originally from Fort William, Ontario, Canada.

78518 to 78523.

From Rome, Italy. Scions presented by Signor Pirovano, through the American consulate, Rome. Received February 1, 1929.

78518. PRUNUS CERASELLA Hort. Plum.

A very early hard plum.

78519 to 78522. PRUNUS DOMESTICA × AMYGDALUS PERSICA. Amygdalaceae.

Plum-peach hybrids.

78519. A strong-growing hybrid with sterile pink flowers.

78520. An extra strong hybrid with pink flowers.

78521. A normal hybrid.

78522. A fertile hybrid with heartlike fruit that bursts.

78523. PRUNUS SALICINA × DASYCARPA. Amygdalaceae. Hybrid plum.

78524. SARACA INDICA L. Caesalpinaceae. Common saraca.

From Buitenzorg, Java. Seeds presented by Dr. W. M. Docters van Leeuwen, Director, Java Botanic Gardens. Received February 4, 1929.

No. 200. A medium-sized Indian tree with pinnately compound leaves of 6 to 12 oblong leathery leaflets 6 to 9 inches long and orange-red fragrant flowers in compact panicles.

For previous introduction see No. 73260.

78525. RIBES RECLINATUM L. Grossulariaceae. Gooseberry.

From Alnarp, Akarp, Sweden. Plants presented by Carl G. Dahl. Received January 19, 1929.

Scania. A gooseberry resistant to gooseberry mildew. It might be classified as an improved type of Houghton, but the growth is better and the leaves remain on the bush for a longer time, as it is never attacked by *Gloeosporium ribis*. The fruit is larger and was placed on the market in 1927.

78526. ACTINIDIA sp. Dilleniaceae.

From Deli Valley, Mishmi Hills, Assam, India. Seeds collected by Capt. F. Kingdon Ward and presented by Maj. Lionel de Rothschild, London, England. Received January 19, 1929.

78526—Continued.

No. 8690. September 26, 1928. A big ornamental vine of the middle forest, growing at an altitude of 10,000 feet. Native to Assam.

78527. DIOSPYROS SINENSIS Hemsl. Diospyraceae. Persimmon.

From Algeria, Africa. Seeds presented by Dr. L. Trabut, Government botanist, Algiers. Received March 8, 1929.

A large-fruited variety grown at the Station Botanique, Algiers, in 1928.

78528 and 78529.

From the New Hebrides. Seeds presented by Dr. E. D. Merrill, dean, college of agriculture, University of California. Received February 18, 1929.

78528. ARECA sp. Phoenicaceae. Palm.

No. 547. A tall pinnate-leaved palm similar to *Areca catchu*, the betel palm.

78529. SEAFORTHIA sp. Phoenicaceae. Palm.

No. 639. A pinnate-leaved palm.

78530. CASTANOPSIS CONCINNA (Champ.) A. DC. Fagaceae. Evergreen chinquapin.

From Hong Kong, China. Seeds presented by H. Green, Superintendent, Botanical and Forestry Department. Received February 20, 1929.

A Chinese tree with oblong-lanceolate entire leathery leaves about 3 inches long, and densely spiny burs containing a solitary depressed-globular nut.

78531. GYNURA VIDALIANA Elmer. Asteraceae.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received February 20, 1929.

An interesting Philippine herb with orange-colored flowers popular with bees.

78532 and 78533.

From Richmond, Victoria, Australia. Seeds presented by F. H. Baker. Received February 20, 1929.

78532. CALLISTEMON CITRINUS (Curtis) Skeels (*C. lanceolatus* DC.). Myrtaceae. Lemon bottlebrush.

An evergreen shrub up to 12 feet high, with lanceolate leaves 1 to 3 inches long, reddish when young, and spikes, 2 to 4 inches long, of small flowers with long bright-red stamens. Native to southeastern Australia.

For previous introduction see No. 77385.

78533. HAKEA ACICULARIS (Vent.) Knight (*H. sericea* Schrad.). Proteaceae

A tall evergreen Australian shrub or small tree with awl-shaped leaves 1 to 3 inches long and axillary clusters of small white flowers.

For previous introduction see No. 77386.

78534. TAMARINDUS INDICA L. Caesalpinaceae. Tamarind.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received February 21, 1929.

78534—Continued.

A variety of tamarind with pods which have flesh of very agreeable taste, tartness, and sweetness, making them very good for eating out of hand.

For previous introduction see No. 50186.

78535. FRAGARIA HAYATAI Makino.
Rosaceae. Strawberry.

From Mount Arisan, Taiwan. Plants collected by R. K. Beattie, Bureau of Plant Industry. Received February 21, 1929.

No. 851. March 26, 1928. A stoloniferous perennial with long-petioled radicle leaves of three rhombic-ovate leaflets serrate with the terminal tooth smaller than the others. The flowers have a light-green calyx and obovate-emarginate or cuspidate white petals, and the delicious globose red fruits are one-fourth of an inch in diameter. Native to Japan.

For previous introduction see No. 76499.

78536. PHASEOLUS AUREUS Roxb. Fabaceae. Mung bean.

From St. Croix, Virgin Islands. Seeds presented by Maybin S. Baker, Agronomist, Agricultural Experiment Station. Received February 28, 1929.

A San Domingo bean which made a larger growth at the experiment station than any other tested there. The seed was originally sent from Porto Rico under the name "San Domingo cowpea."

78537. CITHAREXYLUM BERLANDIERI Robinson. Verbenaceae.

From Brownsville, Tex. Seeds presented by Peter H. Heinz. Received March 9, 1929.

An ornamental shrub or small tree, up to 30 feet high, with pendent branches, oblong or rhombic leaves about 4 inches long, and short axillary racemes of small black fruits. It is native to northeastern Mexico.

78538. ELAEIS GUINEENSIS Jacq. Phoenicaceae. African oil palm.

From Buitenzorg, Java. Seeds presented by Dr. L. Koch, chief of section for breeding annual crops of the General Experiment Station for Agriculture. Received March 9, 1929.

Dura Aijpe.

For previous introduction see No. 73956.

78539. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

From Charleston, S. C. Seeds presented by Dr. L. C. Critchfield. Received March 11, 1929.

An Italian tomato with most wonderful keeping properties; said to keep over a month after ripening on the vine and to be delicious to eat like an apple or orange.

78540 to 78542. RHODODENDRON spp. Ericaceae.

From Japan. Seeds presented by Prof. Bungo Miyazawa, Miyazaki College of Agriculture at Miyazaki-Shi, Japan. Received March 15, 1929.

78540. RHODODENDRON OLDHAMII Maxim.

A much-branched, partly deciduous red-hairy shrub 3 to 18 feet high, with

78540—Continued.

thinly leathery oblong-lanceolate dark-green leaves and red flowers 2 inches wide in terminal umbels. Native to Taiwan.

78541. RHODODENDRON PULCHRUM Sweet (*R. phoeniceum smithii* Wilson).

A handsome shrub with spreading hairy branches, elliptic leaves densely hairy beneath, and two to three terminal rosy purple flowers 2 inches or more across. A hybrid between *R. ledifolium* and *R. indicum*.

78542. RHODODENDRON RIPENSE Makino.

A densely branched evergreen shrub, 3 feet or more high, with whorled branches, narrow lanceolate leathery green leaves, and pale-lilac flowers about 2 inches across, solitary or in twos or threes. Native to Tosa and Iyo, Japan.

78543 to 78547. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. Peach.

From Portici, Italy. Scions presented by Prof. Gaetano Briganti, R. Istituto Superiore Agrario. Received March 22, 1929.

78543. Terzarola tonda.

78544. Terzarola col pizzo.

78545. Galltona di Napoli o Terzarola Cavallara.

78546. Terzarola riccia.

78547. San Martino.

78548. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. Japanese chestnut.

From Japan. Scions obtained by R. K. Beattie, Bureau of Plant Industry. Received March 13, 1929.

No. 834. From the Okitsu Agricultural Experiment Station. January, 1929. *Shidare* (weeping chestnut) variety *pendula*.

78549. PSORALEA GUEINZII Harvey. Fabaceae.

From Kirstenbosch, Union of South Africa. Seeds presented by R. H. Compton, director of the botanic garden of the University of Stellenbosch, Kirstenbosch. Received March 15, 1929.

A South African perennial 1 to 2 feet high, with a woody base, herbaceous branches, sessile leaves each consisting of a single lanceolate folded leaflet an inch long, and small axillary flowers. Of possible use as a forage crop or for green manure.

78550 to 78558.

From Orleans, France. Plants purchased from Léon Chénault & Son. Received January 2, 1929.

78550. CARAGANA GERARDIANA Royle. Fabaceae.

A compact, much-branched shrub about 3 feet high, native to northwestern India, with densely tomentose twigs, compound leaves having 8 to 12 obovate silky leaflets, and ending in a spine 2 inches long. The solitary pale-yellow flowers are an inch long.

78551. CARYOPTERIS TANGUTICA Maxim. Verbenaceae.

78550 to 78558—Continued.

A shrub native to northwestern China, with opposite ovate leaves and axillary cymes of violet-blue flowers. It is closely related to the common bluebeard (*C. incana*).

For previous introduction see No. 77662.

78552. COTONEASTER PRAECOX Hort. Malaceae.

A new prostrate dwarf species, with dark-green leaves, said to exceed in beauty all hitherto-known prostrate cotoneasters.

78553. COTONEASTER PYRENAICA Hort. Malaceae.

This species is said to be a dwarf evergreen shrub native to the Himalayas.

78554. SPIRAEA HENRYI Hemsl. Rosaceae. *Henry spirea*.

Variety *magnifica*. A spreading deciduous shrub about 7 feet high, with oblong-obovate wedge-shaped leaves usually coarsely dentate toward the apex and up to 2½ inches long, and with small white flowers in loose corymbs. Native to central and western China. This is of the same group as the well-known Anthony Waterer spirea.

78555. SYRINGA JULIANAE C. Schneid. Oleaceae.

A handsome spreading shrub, 6 to 8 feet high, with elliptic-ovate leaves 2 to 3 inches long and numerous panicles of fragrant clear violet flowers which are borne very early in the season. Closely related to *S. velutina*.

78556. SYRINGA KOMAROWI SARGENTIANA C. Schneid. Oleaceae. *Lilac*.

A shrubby lilac up to 15 feet high, native to China, with ovate-lanceolate leaves, 4 to 6 inches long, pubescent beneath, and compact nodding panicles of salmon-rose flowers. It is generally similar to *S. reflexa*.

78557. VIBURNUM BUDDLEIFORUM C. H. Wright. Caprifoliaceae.

A hairy shrub, native to central China, closely related to *V. veitchii*. It is about 6 feet high, with oblong-lanceolate leaves 3 to 6 inches long, dense clusters, about 3 inches across, of small white flowers, and ovoid black fruits.

For previous introduction see No. 58812.

78558. VIBURNUM HARRYANUM Rehder. Caprifoliaceae.

An evergreen shrub up to 10 feet high, native to western China, with nearly orbicular leaves an inch long, small cymes of white flowers, and ovoid black fruits. The evergreen *V. davidi* is a related species.

For previous introduction see No. 66320.

78559 and 78560. LILIUM spp. Liliaceae. *Lily*.

From Japan. Bulbs obtained by R. K. Beattie, Bureau of Plant Industry. Received January 7, 1929.

78559. LILIUM sp.

No. 800. Collected in Kiraichi Mura, Kita Tsugaru Gun, Aomori Ken, by Morisaburo Sasaki.

78559 and 78560—Continued.

78560. LILIUM sp.

No. 801. December 10, 1928. A lily with light and deep-pink flowers, collected in Nakui, Nakui Mura, San Nohe Gun, Aomori Ken, by Morisaburo Sasaki.

78561 to 78565. GOSSYPIUM spp. Malvaceae. *Cotton*.

From Peru. Seeds obtained from Graham, Rowe & Co., through T. H. Kearney, Bureau of Plant Industry. Received January 3, 1929.

78561. GOSSYPIUM sp.

No. 1.

78562. GOSSYPIUM sp.

No. 2.

78563. GOSSYPIUM sp.

No. 3. The southern or *Ica* variety of the Peruvian tree cotton. Seeds picked from a tree growing in the hacienda San Jose de Ica, which came originally from Nosca, a valley farther inland and to the south.

78564. GOSSYPIUM sp.

No. 4. *Red Peruvian*.

78565. GOSSYPIUM sp.

No. 5. *Stained Peruvian*.

78566. PASPALUM NOTATUM Fluegge. Poaceae. *Bahia grass*.

From Jaguay Grande, Cuba. Seeds purchased from Eugenia Gomez. Received January 7, 1929.

A perennial tropical American grass which has shown promise as a pasture grass in the southern United States. It has very stout rootstocks, makes a firm sod, and does well on sandy as well as on loam soils. The flowering culms and ascending stems attain a height of about 1 foot.

For previous introduction see No. 76433.

78567 to 78569.

From Japan. Seeds obtained by R. K. Beattie, Bureau of Plant Industry. Received January 7, 1929.

78567. PICEA GLEHNI (Schmidt) Masters. Pinaceae. *Sakhalin spruce*.

No. 806. Collected by the Ogi Paper Co., of Tomakomai, Hokushu. A handsome Japanese evergreen tree up to 150 feet high, native to northern Japan. The cones are a lustrous brown or violet, and the seeds are said to retain their vitality for seven years.

For previous introduction see No. 78180.

78568. RHODODENDRON sp. Ericaceae. *Azalea*.

No. 795. A white-flowered azalea collected in the front garden of the Red Cross hospital, Aoyama, Tokyo, by Yasuo Kurihara. There was one bloom when the seed pods were picked on November 30, 1928. Mr. Kurihara believes this to be a wild species rather than a cultivated variety.

78569. RHODODENDRON sp. Ericaceae. *Azalea*.

No. 802. An azalea collected in Kiraichi Mura, Kita Tsugaru Gun, Aomori Ken, by Morisaburo Sasaki, November 2, 1928.

78570 to 78573. TRIFOLIUM PRATENSE
L. Fabaceae. **Red clover.**

From Helsingfors, Finland. Seeds presented by Dr. K. Linkola, director of the botanical institute and gardens of the University of Helsingfors. Received January 5, 1929.

Wild varieties.

78570. No. 1. **78572.** No. 3.

78571. No. 2. **78573.** No. 4.

78574. ARTOCARPUS CHAMPEDEN
(Lour.) Spreng. (*A. polyphema*
Pers.). Moraceae.

From Singapore, Straits Settlements. Seeds presented by R. E. Holttum, Curator, Botanic Garden. Received January 10, 1929.

A handsome East Indian shade tree bearing small elongated fruits which are rather smooth skinned. The arillus has a peculiar sweet flavor.

For previous introduction see No. 68018.

78575 to 78577. FICUS spp. Moraceae.
Fig.

From the island of Guam. Seeds presented by C. W. Edwards, Director, Agricultural Experiment Station. Received January 9, 1929.

78575. FICUS MARIANNENSIS Merr.

A tropical plant, native to Guam, which starts as an epiphyte and eventually becomes a tall tree. The alternate, oblong-elliptic, entire leaves are up to about 5 inches long, and the axillary fruits are about two-fifths of an inch in diameter.

For previous introduction see No. 74591.

78576. FICUS PHILIPPINENSIS Miquel.

A climbing woody epiphytic strangling fig, native to the Philippine Islands, which sends down aerial roots and eventually kills the host plant. It has triangular branches, oval-oblong, leathery, long-pointed leaves, and axillary fruits.

For previous introduction see No. 74592.

78577. FICUS sp.

78578 and 78579. QUERCUS CERRIS L.
Fagaceae. **European Turkey oak.**

From near Cambridge, England. Plants presented by R. C. B. Gardner. Received January 11, 1929.

78578. An ornamental tree, native to southeastern Europe, up to 100 feet high and 6 feet in diameter, with a broad spreading top, handsome dark-green pinnately lobed leaves which turn brown in the autumn, and slender acorns, 1 to 2 inches long, about half inclosed in a cup with recurved awl-shaped scales.

78579. Variety laciniata. Leaves deeply pinnatifid with acute, usually dentate, lobes.

78580 to 78583.

From Paget East, Bermuda. Seeds presented by J. C. Nauen, horticulturist of

78580 to 78583—Continued.

the agricultural station of the Department of Agriculture. Received January 10, 1929.

78580. CATALPA LONGISSIMA (Jacq.) Sims.
Bignoniaceae.

A West Indian timber tree with thin oblong-lanceolate leaves 3 to 6 inches long and terminal panicles of crisped campanulate white flowers.

78581. LEPTOSPERMUM SCOPARIUM Forst.
Myrtaceae. **Manuka.**

An evergreen shrub, one of the most abundant in New Zealand, of compact bushy habit, sometimes 30 feet high. The hard, leathery, sharp-pointed leaves are very aromatic, and for this reason they have sometimes been used for making tea. The flowers, borne in great profusion, are white or pink and about three-fourths of an inch across.

For previous introduction see No. 73090.

78582. YUCCA ALOIFOLIA L. Liliaceae.

A West Indian plant with a thick stem 6 to 8 feet high, bearing a crown of daggerlike leaves, spreading above, deflexed below, and a large panicle of waxy white flowers often tinged with purple.

78583. ZEPHYRANTHES ATAMASCO (L.)
Herb. Amaryllidaceae. **Atamasco lily.**

A bulbous perennial with bright-green linear leaves a foot long, and a scape, 6 to 12 inches high, bearing a flower 3 inches long, which is usually white, but may have a purplish tinge or be light purple. The flowers usually appear in the spring, but may also appear again in the fall.

78584 to 78588. AVENA SATIVA L. Poaceae.
Oats.

From Svalöf, Sweden. Seeds presented by the director, Sveriges Utsädesförening, Svalöf. Received January 14, 1929.

78584. Golden Rain No. 1.

For previous introduction see No. 77881.

78585. Golden Rain No. 2.

For previous introduction see No. 77883.

78586. Echo.

For previous introduction see No. 77880.

78587. Star.

For previous introduction see No. 77882.

78588. Viktory.

For previous introduction see No. 77879.

78589 to 78593. PYRUS spp. Malaceae.
Pear.

From Fruitland Park, Fla. Scions presented by Louis P. Bosanquet. Received January 17, 1929.

Varieties said to be blight resistant.

78589. PYRUS sp.

Carnes.

78589 to 78593—Continued.

78590. PYRUS sp.

Cincinnati.

78591. PYRUS sp.

Hood.

78592. PYRUS sp.

Pineapple.

78593. PYRUS sp.

*Shaw.*78594. ALLIUM RETICULATUM Fraser.
Liliaceae.

From Vancouver, British Columbia, Canada. Bulbets presented by Prof. John Davidson, department of botany, University of British Columbia. Received January 17, 1929.

A perennial, native to northwestern America, with a fibrous-reticulated bulb, narrow channeled leaves, and scapes, 4 to 8 inches high bearing umbels of white or pinkish flowers.

78595 and 78596. PASSIFLORA spp.
Passifloraceae.

From Brazil. Seeds presented by Prof. P. H. Rolfs, Escola Superior de Agricultura e Veterinaria de Minas Geraes. Received January 17, 1929.

78595. PASSIFLORA MACROCARPA Masters.

Collected at Rio Casca, Minas Geraes. An ornamental Brazilian vine producing strongly perfumed fruits which ripen from yellow to orange and have flesh about an inch thick.

78596. PASSIFLORA sp.

Collected on the school grounds. An ornamental Brazilian vine producing fruits about the size of a very large lemon.

78597 to 78600. FICUS spp. Moraceae.
Fig.

From Brisbane, Queensland, Australia. Seeds presented by C. T. White, Government botanist, Department of Agriculture and Stock. Received January 17, 1929.

78597. FICUS GRACILIPES F. M. Bailey.

A small semideciduous Australian tree with a drooping habit, coriaceous deep-green elliptical leaves 3 to 5 inches long, and globular deep-purple fruits an inch in diameter that are suitable for preserving.

78598. FICUS HENNEANA Miquel.

An Australian shrub or small tree with coriaceous oblong leaves 3 to 5 inches long and small globular white-mottled fruits less than an inch in diameter.

78599. FICUS PLATYPODA PETIOLARIS Benth.

A small tree, native to Queensland, with thick coriaceous ovate-cordate leaves 4 to 6 inches long and small fruits less than a fourth of an inch long.

78600. FICUS WATKINSIANA F. M. Bailey.

A large glabrous tree, native to Queensland, with light-colored bark, coriaceous lanceolate leaves about 6 inches long, and oblong greenish fruits more than an inch long on thick-angled pedicels.

78601. MIMOSA sp. Mimosaceae.

From Trinidad, British West Indies. Seeds presented by H. Caracciolo. Received January 11, 1929.

Sensitive tree from Trinidad.

78602. CINCHONA LEDGERIANA Moens.
Rubiaceae.

From Munsong, Kalimpong, Bengal, India. Seeds purchased from H. Thomas, manager of the Government cinchona plantation. Received January 18, 1929.

A tree, native to the Andes, yielding a bark remarkably rich in quinine which crystallizes readily as quinine sulphate. The percentage of the other alkaloids present is relatively small. The bark of this species matures in the fifth or sixth year and does not increase its quinine content after that. This tree is suitable for cultivation only on hillsides in frost-free regions.

For previous introduction see No. 60292.

78603. CITRUS SINENSIS (L.) Osbeck.
Rutaceae. Orange.

From Viçosa, Minas Geraes, Brazil. Plants presented by Prof. P. H. Rolfs, Escola Superior de Agricultura e Veterinaria do Estado de Minas Geraes, through Dr. W. A. Orton, Director and General Manager, Tropical Plant Research Foundation, Washington, D. C. Received January 7, 1929.

Laranja hanceta docc.

78604. COLVILLEA RACEMOSA Boj. Caesalpiaceae.

From Trinidad, British West Indies. Seeds presented by W. G. Freeman, Director, Department of Agriculture. Received January 9, 1929.

This handsome tropical tree, believed to be native to east Africa, should be tested in southern Florida along with the poinciana, to which it is related. It is said to reach 40 or 50 feet in height. The pinnate leaves are 3 feet long, and the brilliant scarlet, curiously shaped flowers are borne in drooping racemes more than a foot long. The tree was named for Sir Charles Colville, Governor of Mauritius; it was discovered in 1824 on the west coast of Madagascar, where it flowers in April or May. In all probability it will stand no more frost than the poinciana. Like most other leguminous trees, it is readily propagated from seeds.

For previous introduction see No. 66504.

78605 to 78608.

From Manchuria, China. Seeds presented by V. K. Boerich, through V. Golubzoff, Harbin, Manchuria. Received January 17, 1929.

78605. LILIUM DAURICUM Ker. Liliaceae.
Candlestick lily.

Collected at Gullusutai, between the valleys of the Rivers Gan and Derbul.

For previous introduction see No. 75772.

78606. LILIUM sp. Liliaceae. Lily.

Collected in the Hukunbuir district in the valleys of the Gan and Derbul Rivers. The bulbs are eaten raw or boiled; Russian peasants of Transbaikalia mix these bulbs with millet and cook the whole into a gruel.

78605 to 78608—Continued.

78607. *PAEONIA ALBIFLORA* Pall. Ranunculaceae. Chinese peony.

An ornamental herbaceous perennial 2 to 3 feet high with white flowers. Native to China.

For previous introduction see No. 73195.

78608. *TRIFOLIUM LUPINASTER* L. Fabaceae. Clover.

A Siberian clover with five leaflets like a lupine leaf.

78609. *SARACA CAULIFLORA* Baker. Caesalpiniaceae.

From Bangalore, India. Seeds presented by the Superintendent of the Government Botanic Gardens. Received January 31, 1929.

A shrubby Indian tree with abruptly pinnate leaves of 10 to 12 thick rigid oblong to oblanceolate leaflets 6 inches to a foot long, and corymbs, 4 to 6 inches broad, of scarlet flowers.

78610 to 78615.

From Japan. Seeds obtained by R. K. Beattie, Bureau of Plant Industry. Received January 23, 1929.

78610. *CASTANOPSIS* sp. Fagaceae. Evergreen chinquapin.

No. 807. From the Tanushimaru Nursery Association, Ukiha Gun, Fukuoka Ken, originally collected at Miminoyama. The Japanese local name is Ichishibi.

78611. *CASTANOPSIS* sp. Fagaceae. Evergreen chinquapin.

No. 808. From the Rengechi Forest Experiment Station, Taichu Province, Taiwan.

78612 to 78615. *QUERCUS* spp. Fagaceae. Oak.

78612. *QUERCUS CASTANOPSISIFOLIA* Hayata.

No. 812. From the Rengechi Forest Experiment Station, Taichu Province, Taiwan. A subtropical oak, related to *Quercus lepidocarpa*, native to Taiwan. The rather thin oblong-lanceolate leaves, dull green above, paler beneath, are about 10 inches long, and the acorns are globose depressed.

78613. *QUERCUS KONISHII* Hayata.

No. 809. From the Rengechi Forest Experiment Station, Taichu Province, Taiwan. An oak from the mountainous regions of Taiwan, with elliptic-oblong acuminate leaves 3 inches long and small hemispherical acorns half an inch across. It is said to be a distinct species with no closely related forms.

78614. *QUERCUS MIYAGII* Koidz.

Nos. 811 and 813. From the Okinawa Eirinsho, Luchu Islands, and originally collected at Yasunami, Kokuzu Mura, Kokuzu Gun, Okinawa Ken. A large erect tree, 40 feet high, with dense foliage. The leathery ovate-lanceolate leaves are 4 to 5 inches long, and the globose-ovoid acorns are about an inch in diameter. It is native to the Luchu Islands.

78615. *QUERCUS TOMENTOSICUPULA* Hayata.

No. 810. From the Rengechi Forest Experiment Station, Taichu Province,

78610 to 78615—Continued.

Taiwan. An oak, native to Taiwan, with stiff leathery oblong-lanceolate leaves 4 inches long, somewhat serrate, and broadly campanulate cups 1½ inches across. It is related to *Quercus edithae*, but has much smaller acorns.

78616. *BORASSUS FLABELLIFER* L. Phoenicaceae. Palmyra palm.

From Jaffna, Ceylon. Seeds presented by W. P. A. Cooke, Division Agricultural Officer, Department of Agriculture. Received January 24, 1929.

The famous Palmyra palm of India and Ceylon which in the northern part of this island takes the place of the coconut palm. Though a slower grower, it is a very handsome palm when old. Inasmuch as it grows in the dry coastal regions of Ceylon, is apparently able to withstand any amount of lime, and is said to have been used successfully as a binder for sand dunes, it should prove of real value in the calcareous soils of southern Florida. In the number of uses to which it is put here it rivals the coconut. A delicate sugar is made from the sap which flows in abundance from its inflorescence when cut. The seeds are germinated and the young subterranean hypocotyl is used as a vegetable. The leaves are used in many different ways. The fruit, half the size of a coconut, is very attractive in appearance and when ripe exhales a delicate fragrance. The hull is eaten by the Tamils of Ceylon.

For previous introduction see No. 74590.

78617 to 78663.

From Japan. Seeds obtained by R. K. Beattie, Bureau of Plant Industry. Received January 2, 1929.

78617 to 78649. *CASTANEA CRENATA* Sieb. and Zucc. Fagaceae. Japanese chestnut.

Unless otherwise stated, these are selections from wild trees.

78617. No. 737. Collected in the Oshika Mago National Forest.

78618. No. 738. Collected in the Juni Sho Saruma Tozawa National Forest, Akita Gun, Akita Ken.

78619. No. 739. Presented by Morisaburo Sasaki, from Taizen, Akaishi Mura, Niski Tsugaru Gun, Aomori Ken.

78620. No. 740. Collected in Takizawa, Takizawa Mura, Iwate Gun, Iwate Ken.

78621. No. 741. Collected in the Etsunagi Public Forest, Kokuni Mura, Shimo Hei Gun, Iwate Ken.

78622. No. 742. Collected in the Yamaura Kwonita National Forest, Iwato Mura, Nishi Usuki Gun, Miyazaka Ken.

78623. No. 744. Obtained from Shon Shinyung, at Kal Huyngri, north of Giseifu, east of Keijo, Chosen. The nuts are large and of the orchard rather than the forest type.

78624. No. 745. Obtained from the Shunrin Co., Giseifu, east of Keijo, Chosen.

78625. No. 746. Obtained at Dukehung, east of Giseifu, near Keijo, Chosen.

78617 to 78663—Continued.

78626. No. 748. Collected at Oguriyama, Chitose Mura, Naka Tsugaru Gun, Aomori Ken.
78627. No. 749. Collected in the Hisashi Hoden Osawayama National Forest, Hisashi Oguni Mura, Mogami Gun, Yamagata Ken.
78628. No. 750. Collected at Ota Public Genya (prairie), Hachimau Mura, Kusu Gun, Oita Ken. It is called locally Sasa guri, and Mr. Ikebe, Director of the Bureau of Utilization of Forest Products, states that it probably never grows very large, and usually grows on prairies where fire often sweeps through the scattered stands.
78629. No. 751. Collected in the Oshika Mago National Forest.
78630. No. 752. Collected in the Tamba Ashio University Forest.
78631. No. 753. Collected in the Yakunai National Forest, Akinomiya Mura, Okatsu Gun, Akita Ken.
78632. No. 754. From the forest of reforestation project 19 Rin Pan.
78633. No. 755. Collected at Noboribetsu Horobetsu Gun, Hokushu, by Bunsaburo Ishida, Botanic Garden, Hokushu University, Sapporo.
78634. No. 756. Collected at Makoma Nai, near Sapporo, Hokushu.
78635. No. 757. Collected at Atsubitsu, Hokushu.
78636. No. 758. Presented by Shintaro Kondo, Kamiteine, Teine Mura, Sapporo Gun, Hokushu.
78637. No. 760. Collected at Nakiu Dake, Kaminakui, Nakui Mura, Sannohe Gun, Aomori Ken.
78638. No. 761. Collected in the Ushioku Yama Provincial Forest, Okunodamura Ushioku, Higashi Yaminashi Gun, Yamanashi Ken.
78639. No. 763. Collected at the Poroto Forest Reserve, Shiraioi Mura, Shiraioi Gun, Iburi, Hokushu.
78640. No. 764. Presented by the Hamamachi Eirinsho, Kuma Moto Ken.
78641. No. 766½. Collected in the Kyoto University Forest, Wakayama Ken.
78642. No. 766½ B. Collected in the Kyoto University Forest, Wakayama Ken.
78643. No. 767½. Collected at Shikifu, near Shiraioi station, Shiraioi Mura, Shiraioi Gun, Iburi Province, Hokushu.
78644. No. 768. From the largest chestnut trees in Chosen at the Koryo Forest Experiment Station, east of Keijo.
78645. No. 768½. Collected northeast of Shiraioi, Shiraioi Mura, Shiraioi Gun, Iburi Province, Hokushu.
78646. No. 769. Collected at Chidoko, northeast of Shiraioi, Shiraioi Mura, Shiraioi Gun, Iburi Province, Hokushu.
78647. No. 770. Collected in the Ushioku Yama Provincial Forest, Okunodamura Ushioku, Higashi Yaminashi Gun, Yaminashi Ken.

78617 to 78663—Continued.

78648. No. 771. Collected in Ukiha Gun, Fukuoka Ken.
78649. No. 772. Collected at Ukiha Gun, Fukuoka Ken.
- 78650 to 78653. *CASTANEA MOLLISSIMA* Blume. Fagaceae. **Hairy chestnut.**
78650. No. 762. From Hamjong, Chosen. Trees of orchard type and of various ages, up to 15 inches in diameter and not more than 25 feet high, but held back by crude pruning.
78651. No. 765. *Song chung*. A cultivated variety obtained in the market at Heijo, Chosen, and said to have come from An Taik Ri, north-east of Heijo, October 20, 1928.
78652. No. 766. *Duk chung*. A cultivated variety obtained in the market at Heijo, Chosen, October 20, 1928.
78653. No. 767. *Sarinjo*. A cultivated variety obtained in the market at Heijo, Chosen, October 20, 1928, and said to have come from Sun-chung, north of Heijo.
78654. *CASTANOPSIS CUSPIDATA* (Thunb.) Schottky. Fagaceae. **Japanese chinquapin.**
- No. 804. *Shihi*. Obtained at Yoshida, Tajima Mura, Munnehaba Gun, Fukuoka Ken, from Gensero Ono, of the Fukuoka Eirinsho, November, 1928.
- For previous introduction and description see No. 78514.
78655. *LITHOCARPUS EDULIS* (Makino) Rehder. Fagaceae.
- No. 803. *Matebashihii*. Obtained at Shinokura Machi, Kasuya Gun, Fukuoka Ken, from Gensero Ono, of the Fukuoka Eirinsho, November, 1928. An evergreen tree, native to Japan, with ovate-oblong short-pointed entire leaves 3 to 7 inches long and oblong-ovoid acorns an inch long in very shallow cups.
78656. *LITHOCARPUS* sp.
- No. 805. *Komeji*. Obtained at Tanushi Maru, Ukiha Gun, Fukuoka Ken, from the Ukiha Gun Nursery Association, November, 1928.
- 78657 to 78663. *QUERCUS* spp. Fagaceae. **Oak.**
78657. *QUERCUS ACUTA* Thunb. **Japanese evergreen oak.**
- No. 797. December, 1928. *Aka gashi*. From the Tokyo University Chiba Ken Forest. A small evergreen tree, native to Japan, with oblong undulate-margined leaves 3 to 6 inches long and pubescent acorn cups with the scales arranged in concentric rings.
- For previous introduction see No. 78165.
78658. *QUERCUS ACUTISSIMA* Caruthers. **Bristletooth oak.**
- No. 747. October, 1928. Obtained at Duk Chung, east of Keijo, Chosen. A handsome hardy tree up to 50 feet high, with half-evergreen obovate to oblong sharp-pointed leaves, 5 to 7 inches long, having serrate bristle-pointed margins. The cup, which covers about two-thirds of the acorn, has long-spreading recurved scales. Native to northeastern Asia.
- For previous introduction see No. 76752.

78617 to 78663—Continued.

78659. QUERCUS DENTATA Thunb.
Daimyo oak.

No. 759. *Kashiwa*. Collected at Shimo Teine, Teine Mura, Sapporo Gun, Hokushu. A large tree, native to Chosen and northern and western China, 75 to 80 feet tall. The ovate-sinuate lobed leaves, dark green above and grayish tomentose beneath, are 10 to 12 inches long and 9 inches wide, and the ovoid acorns, an inch wide, are about half covered by the cup which has lanceolate spreading scales.

For previous introduction see No. 76753.

78660. QUERCUS GLAUCA Thunb.
Blue Japanese oak.

No. 799. *Ara gashi*. December, 1928. From the Tokyo University Chiba Ken Forest. A handsome evergreen tree, native to Japan, 45 feet high, with ovate-dentate leaves 3 to 5 inches long, lustrous above and glaucous beneath. The ellipsoid acorns, nearly an inch long with saucer-shaped cups, have five to seven concentric silky pubescent rings.

For previous introduction see No. 76754.

78661. QUERCUS MONGOLICA GROSSESERATA (Blume) Rehd. and Wils.

No. 743. *Nara, mizunara*. Collected in the Yamaura Kwonita National Forest, Iwato Mura, Nishi Usuki Gun, Miyazaki Ken. This oak is said to be the most important forest tree of Japan, attaining a height of 100 feet and a girth of 12 feet. The wood is durable and for a hardwood easily worked, approximating for furniture the best European and American oaks.

For previous introduction see No. 76478.

78662. QUERCUS MYRSINAEFOLIA Blume.

No. 798. *Shira gashi*. December, 1928. From the Tokyo University Chiba Ken Forest. A handsome evergreen oak, native to Japan, 30 to 40 feet high, with lanceolate-serrate leaves, 3 to 5 inches long, smooth and shining above and covered with a whitish bloom underneath. The ovoid acorns, nearly an inch long and one-third covered by the smooth cup, are borne in short spikes.

For previous introduction see No. 78166.

78663. QUERCUS STENOPHYLLA (Blume) Makino.

No. 796. *Urajiro gashi*. December, 1928. From the Tokyo University Chiba Ken Forest. An oak, native to Japan, with narrowly lanceolate long-pointed leaves 2 to 6 inches long.

For previous introduction see No. 78321.

78664 to 78671. ACACIA spp. Mimosaceae.

From Dundas, New South Wales, Australia. Seeds presented by Herbert J. Rumsey, through John McLaren, Superintendent of the Golden Gate Park, San Francisco, Calif. Received January 15, 1929.

78664. ACACIA ASPARAGOIDES A. Cunn.

78664 to 78671—Continued.

A glabrous rigid Australian shrub with nearly terete branches, thick rigid spreading linear sharp-pointed phyllodes nearly an inch long, and solitary globular heads of small flowers.

78665. ACACIA BAKERI Maiden.

A large forest tree of New South Wales, up to 160 feet high, with sessile, broadly lanceolate phyllodes about 4 inches long and pale-yellow flowers in loose panicles.

78666. ACACIA DECURRENS PAUCIGLANDULOSA F. Muell.

A form of the green wattle with fewer glands on the petioles and with softer pubescence than the usual form.

For previous introduction see No. 75585.

78667. ACACIA ELONGATA Sieber.

A tall handsome shrub with drooping angular branchlets, linear falcate 3-nerved phyllodes 4 to 6 inches long, and globose heads of yellow flowers. Native to Australia.

For previous introduction see No. 48042.

78668. ACACIA HETEROCLITA Meissn.

A small erect shrub 3 to 4 feet high, native to Western Australia, with the young shoots minutely pubescent, linear to lanceolate sharp-pointed phyllodes 2 to 3 inches long, and globular heads of small flowers.

78669. ACACIA PUBESCENS R. Br.
Hairy wattle.

The branches and leaf stems of this Australian shrub are covered with spreading hairs. The compound leaves are made up of 3 to 10 pairs of branches each bearing 6 to 20 pairs of small linear leaflets. The small flower heads are in slender racemes gathered into large panicles at the ends of the branches.

78670. ACACIA SUAVEOLENS (J. E. Smith) Willd.

An Australian shrub up to 6 feet high, with linear to lanceolate phyllodes and small heads of yellow flowers in axillary racemes.

For previous introduction see No. 75609.

78671. ACACIA TRINERVATA Sieber.

A tall shrub, native to New South Wales, with angular branches, thick rigid spreading linear phyllodes an inch long, and solitary heads of numerous small flowers.

78672. PSIDIUM GUAJAVA L. Myrtaceae.
Guava.

From Papeete, Tahiti, Society Islands. Seeds obtained from Marcel Frogier, through Gerrit P. Wilder, Honolulu, Hawaii. Received January 23, 1929.

A variety which is considered the finest of the cultivated guavas. The fruits vary in size from 2 to 3½ inches in diameter, with pale yellowish white skin dotted with fine red spots and solid white flesh with small seeds.

For previous introduction see No. 76015.

78673 and 78674.

From Boloven Plateau, Laos, French Indo-China. Fruits presented by G. Ricau, Botanic Garden. Received January 25, 1929.

78673. MALUS sp. Malaceae. **Apple.**

An apple tree about 25 feet high, growing in red soil in forests at an altitude of about 1,300 feet.

78674. PYRUS sp. Malaceae. **Pear.**

A semiaquatic pear which is said to grow in shallow water part of the year, at an altitude between 2,500 and 4,000 feet.

78675. VITIS sp. Vitaceae. **Grape.**

From Tsinan, Shantung, China. Cuttings presented by Dr. Philip S. Evans, Jr., Shantung Christian University. Received January 29, 1929.

A grape which fruits through the late summer and autumn. The first bunches ripen in August when only about half the bunches are half grown and there are many blossoms as well. It resembles the Niagara, although it often has an elongated shape. This grape, which is not unusual in quality, has a rather thick skin and a slight spicy flavor.

78676 to 78685.

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received January 19, 1929.

78676. CALLITRIS QUADRIVALVIS Vent. Pinaceae. **Arar-tree.**

An evergreen shrub or small tree somewhat like Cupressus in habit, native to the mountains in northern Africa, with hard durable fragrant wood, spreading jointed branches, very small flattened leaves, and 4-sided cones.

78677. DANAE RACEMOSA (L.) Moench. (*Ruscus racemosus* L.). Convallariaceae. **Alexandrian laurel.**

A much-branched evergreen Persian shrub 3 to 4 feet high, with alternate lanceolate leaflike cladodes 4 inches long, terminal racemes of small white flowers, and globose red berries.

78678. DAPHNE GNIDIUM L. Thymelaeaceae.

An evergreen shrub 2 feet high, native to southern Europe, with linear-lanceolate glabrous leaves and terminal clusters of yellowish-white fragrant flowers.

78679 to 78682. ERICA sp. Ericaceae. **Heath.**

78679. ERICA ARBOREA L.

An evergreen shrub or small tree up to 20 feet high, native to the Mediterranean region, with small glabrous leaves and large pyramidal panicles of fragrant nearly white flowers.

78680. ERICA CINEREA L. **Twisted heath.**

An evergreen European shrub 1 to 2 feet high, with very small lustrous linear leaves and umbels or terminal racemes of bell-shaped rosy purple flowers.

78681. ERICA SCOPARIA L. **Besom heath.**

An evergreen southern European shrub 10 feet high, with upright

78676 to 78685—Continued.

branches, small lustrous dark-green linear leaves in whorls of three or four, and long cylindrical spikes of greenish-white flowers.

78682. ERICA sp.

A mixture of various species of Erica from southern Africa, which are shrubs with small leaves and racemes of white, rosy, or yellow flowers.

78683. MERATIA PRAECOX GRANDIFLORA (Lindl.) Rehd. and Wils. Calycanthaceae. **Wintersweet.**

A variety with much larger and brighter colored flowers than the usual form, which is a Chinese shrub up to 10 feet high with ovate leaves 6 to 10 inches long and producing yellow flowers an inch across striped with purplish brown and opening in mild seasons throughout the winter.

78684. RUSCUS ACULEATUS L. Convallariaceae. **Butchersbroom.**

A rigid evergreen European shrub 2 to 4 feet high, with grooved branching stems and dark-green ovate leaflike cladodes over an inch long bearing one or two small white flowers in the middle of the upper surface, which are followed by globose or ovoid bright-red berries nearly half an inch in diameter.

78685. SKIMMIA JAPONICA Thunb. (*S. oblata* T. Moore). Rutaceae. **Japanese skimmia.**

A dense evergreen Japanese shrub 3 to 5 feet high, with yellowish-green leaves 6 inches long crowded at the ends of the branchlets, panicles of small yellowish-white flowers, and bright-red berries a quarter of an inch through.

78686 to 78696.

From Vancouver, British Columbia, Canada. Seeds presented by Prof. John Davidson, department of botany, University of British Columbia. Received January 17, 1929.

78686. ALLIUM WATSONI Howell. Liliaceae. **Onion.**

A low bulbous plant, native to northwestern North America, with a slender narrowly margined scape 3 inches high, linear leaves 6 inches long, and a dense umbel of rose-colored flowers.

78687 to 78689. ERYTHRONIUM spp. Liliaceae.

78687. ERYTHRONIUM GRANDIFLORUM Pursh. **Glaciertilly.**

A herbaceous perennial, native to northwestern North America, with an erect bulb, two broadly lanceolate plain green leaves 6 inches long, and a scape 1 to 2 feet high bearing three to five bright-yellow flowers with recurved segments and purple anthers.

78688. ERYTHRONIUM GRANDIFLORUM ALBIFLORUM Hook. **Troutlily.**

A herbaceous perennial, native to northwestern North America, with the two leaves mottled in white and brown; the recurved segments of the flower are creamy white.

78689. ERYTHRONIUM GRANDIFLORUM PARVIFLORUM S. Wats.

A herbaceous perennial, native to northwestern North America, with

78686 to 78696—Continued.

broadly lanceolate plain leaves and bright-yellow flowers with white anthers.

78690. *LILIUM PARVIFLORUM* (Hook.) Holzinger. Liliaceae. **Fanther lily.**

This lily, native to northwestern North America, closely resembles the leopard lily, *L. pardalinum*, but the flowers, of the same bright yellow with purplish spots, are smaller and are usually solitary or only two or three together.

78691 to 78695. *PENTSTEMON* spp. Scrophulariaceae. **Beardtongue.**

78691. *PENTSTEMON CONFERTUS* Douglas.

A herbaceous perennial, 2 feet high, native to Oregon and northern California, with nearly entire lanceolate to linear leaves and a narrow interrupted spike of cream-white to sulphur-yellow flowers.

78692. *PENTSTEMON CONFERTUS CAERULEO-PURPUREUS* A. Gray.

A variety of the preceding with flowers blue-purple to violet.

78693. *PENTSTEMON DIFFUSUS* Douglas.

A herbaceous perennial, native to northwestern North America, with diffuse stems 2 feet high, lanceolate to cordate-ovate deeply serrate leaves, and a leafy cluster of light-purple 2-lipped flowers.

78694. *PENTSTEMON MENZIESII* Hook.

A herbaceous perennial with a woody base, native to Washington and British Columbia. The stems are less than a foot high, the thick leaves are obovate, and the violet-blue to purple flowers, an inch long, are borne in a spreading raceme.

78695. *PENTSTEMON OVATUS* Douglas.

A herbaceous perennial, native to northwestern North America, with a slender but erect stem 4 feet high, ovate thin serrate bright-green leaves, and lax clusters of 2-lipped blue flowers changing to purple.

78696. *SISYRINCHIUM CALIFORNICUM* Ait. Iridaceae.

A herbaceous perennial with linear leaves a foot long, a leafless broadly winged stem, 1½ feet high, with a cluster of three to six brown-lined yellow flowers half an inch long. Native to California.

78697 to 78743.

From Deli Valley, Mishmi Hills, Assam, India. Seeds collected by Capt. F. Kingdon Ward and presented by Maj. Lionel de Rothschild, London, England. Received January 19, 1929.

78697. *ABELIA* sp. Caprifoliaceae.

No. 8180. May 8, 1928. *Golden Abelia.* A small shrub with long, drooping racemes of bright-yellow flowers. Only one plant was found in the dense thickets on sheltered cliffs at an altitude of 6,000 feet.

78698. *ACONITUM* sp. Ranunculaceae. **Aconite.**

No. 8724. October 1, 1928. An ornamental herbaceous perennial, 2 to 4 feet high, growing on alpine meadow slopes at an altitude of 12,000 feet.

78697 to 78743—Continued.

78699. *ANDROSACE* sp. Primulaceae.

No. 8565. August 23, 1928. A small herbaceous perennial resembling *Androsace henryi*, 6 inches high, bearing large many-flowered heads. It grows in dense undergrowth on the banks of gullies in the middle of the rain forest, above an altitude of 10,000 feet.

78700. *ARISAEMA* sp. Araceae.

No. 8085. April 12, 1928. A large herbaceous perennial closely related to the Indian turnip, with papery, colorless spathes which are striped with purple. It grows in the temperate rain forest at an altitude of 7,000 feet.

78701. *BUDDLEIA* sp. Loganiaceae.

No. 8559. August 23, 1928. A floppy undershrub, 2 to 3 feet high, growing on steep, well-shaded slopes, among bamboos or in gullies among subalpine flowers, at an altitude of 11,000 feet. The leaves are very large, and the fragrant flowers are cream white with orange centers.

78702. *CALTHA* sp. Ranunculaceae.

No. 8616. August 28, 1928. A herbaceous perennial about a foot high, with an abundance of magenta flowers. It grows in alpine gullies and on alpine meadow slopes at an altitude between 11,000 and 12,000 feet.

78703. *BRYOCARPUM HIMALAICUM* Hook. f. and Thoms. Primulaceae.

No. 8236. May 23, 1928. A herbaceous perennial about 2 feet high, with solitary nodding yellow flowers which appear before the large leaves. It grows under bamboos or in an Abies forest, on steep slopes, at altitudes between 10,000 and 11,000 feet.

For previous introduction see No. 41417.

78704. *DICENTRA* sp. Papaveraceae.

No. 8649. September 17, 1928. An annual climbing vine with sea-green leaves and bunches of yellow flowers, borne in the autumn, which are followed by red, pear-shaped fruits. It grows in the forest at an altitude between 8,000 and 9,000 feet.

78705. *GAULTHERIA* sp. Ericaceae.

No. 8725. October 26, 1928. A shrub 3 to 6 feet high, with crowded spikes of white flowers and an abundance of black berries which have a white bloom. It grows on open, grass-clad slopes along the edge of the forest at altitudes between 6,000 and 7,000 feet.

78706. *HEDYCHUM* sp. Zinziberaceae.

No. 8483. July 24, 1928. A strong-growing herbaceous perennial, 2 feet high, with purplish leaves and white flowers from a creeping rhizome. It grows at an altitude of 6,000 feet.

78707. *HYPERICUM* sp. Hypericaceae.

No. 8444. July 12, 1928. An ornamental shrub, with an abundance of small bright-yellow flowers, growing in open stony pastures near cultivated land at an altitude of 5,000 feet.

78708. *LYSIMACHIA* sp. (*Nummularia* sp.). Primulaceae.

No. 8574. August 23, 1928. A semi-erect herbaceous perennial nearly a foot high, bearing an abundance of yellow

78697 to 78743—Continued.

flowers up the leafy stems. It is a good rock-garden plant, with a prolonged flowering period, and is found on rocks and banks in deep gullies, keeping as much as possible in the open, but not intolerant of shade.

78709. NOMOCHARIS sp. Liliaceae.

No. 8370. June 26, 1928. A lily-like perennial about a foot high, bearing, during June, solitary nodding dull-red flowers. It is found on alpine meadow slopes, in tenacious loam, and also under bamboos, at an altitude of 12,000 feet.

78710 to 78713. PRIMULA spp. Primulaceae. Primrose.**78710. PRIMULA PRENANTHA** Balf. and Smith.

No. 8262. May 21, 1928. A herbaceous perennial, with small light-yellow flowers, growing on subalpine grass slopes where bamboos give shelter, at an altitude of 11,000 feet.

78711. PRIMULA sp.

No. 8282. June 4, 1928. A bright yellow-flowered herbaceous perennial, about a foot high, with leaves covered with cream-colored meal. It is found from the upper Abies forest to the alpine region, between 12,000 and 13,000 feet altitude, where it grows in black loam among bowlders or scrub rhododendrons.

78712. PRIMULA sp.

No. 8295. June 5, 1928. A herbaceous perennial with leaves often turning scarlet in the autumn and large compact heads of faintly fragrant, bright purplish-rose flowers which have a yellow or crimson eye. It is a rather massive perennial bearing an abundance of foliage from which rise as many as half a dozen scapes. It grows in steep rocky gullies in the Tsuga and Rhododendron forest, at an altitude of 10,000 feet, and requires deep shade and an abundance of water.

78713. PRIMULA sp.

No. 8406. July 2, 1928. A herbaceous perennial, 6 inches high, which is a hairy and not very mealy alpine species scattered widely over the turf slopes at an altitude of 12,000 feet. It bears small heads of fragrant violet flowers.

78714 to 78737. RHODODENDRON spp. Ericaceae.**78714. RHODODENDRON** sp.

No. 8045. April 11, 1928. A small smooth-barked forest tree with very large leaves and pink-flushed buds which become large white fragrant flowers. It grows at altitudes between 6,000 and 7,000 feet.

78715. RHODODENDRON sp.

No. 8052. April 11, 1928. A species found at an altitude between 7,000 and 8,000 feet, bearing white fragrant flowers, banded with rose-purple on the reverse side, during March and April. It is like *Rhododendron bullatum*.

78716. RHODODENDRON sp.

No. 8069. April 11, 1928. A large tree of the rain forest, growing at an altitude between 8,000 and 9,000 feet, with leaves which are silvery beneath.

78697 to 78743—Continued.

78717. RHODODENDRON sp.

No. 8101. April 20, 1928. A small evergreen bushy shrub with masses of butter-yellow flowers. It grows in thickets, but enjoys full exposure. The flowers are paler than those of *Rhododendron aureum*, but it is a much better-looking shrub.

78718. RHODODENDRON sp.

No. 8113. April 22, 1928. A small rather lanky or scraggy shrub growing on rock outcrops and cliffs, or epiphytically, and in shady places it is more compact. The flowers, in trusses of four to six, are fairly large and brilliant crocus yellow. This shrub is found at an altitude between 7,000 and 8,000 feet.

78719. RHODODENDRON sp.

No. 8130. April 24, 1928. A fine gnarled tree with huge leaves characterized by a bright-yellow midrib and immense trusses of cream flowers. It is found at an altitude between 8,000 and 9,000 feet.

78720. RHODODENDRON sp.

No. 8163. May 5, 1928. A spreading gnarled medium-sized tree with leaves which are cinnamon-colored felt beneath and silver white above when young and big trusses of cream flowers. It is found at an altitude of 9,000 feet.

78721. RHODODENDRON sp.

No. 8165. May 5, 1928. A small shrub abundant on open rock ridges and in thickets, with bright-purple flowers in loose trusses of six to nine. It recalls *Rhododendron tephropeplum*, but has more and larger flowers in the truss. It grows at an altitude between 8,000 and 9,000 feet.

78722. RHODODENDRON sp.

No. 8203. May 19, 1928. A small gnarled smooth-barked tree growing at an altitude between 9,000 and 10,000 feet. The small purple flowers with dark spots are in large trusses.

78723. RHODODENDRON sp.

No. 8206. May 19, 1928. A small shrub, usually high up on Tsuga or Abies trees, and sometimes found on rocks, at altitudes between 9,000 and 10,000 feet. The large flowers are solitary or more usually in two's, and rarely in three's. They are white, flushed rose-purple on the reverse, and very fragrant. It is one of the most beautiful species and is probably fairly hardy. The highest specimens do not flower until June.

78724. RHODODENDRON sp.

No. 8208. May 19, 1928. A small or large bush bearing during June and July flame-colored, narrow tubular flowers in large aggregate bunches of axillary trusses.

78725. RHODODENDRON sp.

No. 8225. May 22, 1928. An epiphyte growing in the Abies forest at an altitude between 10,000 and 12,000 feet. The leaves are bright silver beneath, and the bright-yellow flowers are in pairs.

78697 to 78743—Continued.

78726. RHODODENDRON sp.

No. 8250. May 30, 1928. A bushy shrub with handsome young foliage and persistent leaf bud scales which are cherry red. The leaves are large, and the bright brick-red flowers are in large compact trusses. It is scattered in thickets at an altitude of 11,000 feet.

78727. RHODODENDRON sp.

No. 8251. May 30, 1928. A fair-sized tree with leaves woolly white beneath and large trusses of rose-purple flowers. It grows in the Abies forest and in thickets at an altitude of 11,000 feet.

78728. RHODODENDRON sp.

No. 8256. June 4, 1928. A species with glaucous leaves and pale-yellow flowers with a crimson flush at the base. It grows in dense thickets in the alpine region at an altitude between 12,000 and 13,000 feet.

78729. RHODODENDRON sp.

No. 8257. June 10, 1928. A small, aromatic bushy shrub growing in thickets on the edge of the alpine region, at altitudes between 11,000 and 12,000 feet. The leaves are whitened beneath, and the dull plum-purple flowers are in loose umbels.

78730. RHODODENDRON sp.

No. 8258. May 30, 1928. A bush with an ascending trunk and loose umbels of bright crimson-scarlet flowers which have coal-black glands at the base. It grows in the Abies forest, along the ridge, at an altitude of 12,000 feet.

78731. RHODODENDRON sp.

No. 8259. May 30, 1928. A small bush with yellowish flowers which appear before the leaves. It is found on alpine meadow slopes at an altitude of 12,000 feet.

78732. RHODODENDRON sp.

No. 8288. June 4, 1928. A shrub, 3 to 5 feet high, forming much of the scrub on the northern slopes in this alpine region at altitudes between 12,000 and 13,000 feet. The small leaves are dark green above and rust red beneath, and the cream-colored flowers, sometimes flushed with pink, are heavily speckled rose purple.

78733. RHODODENDRON sp.

No. 8300. June 6, 1928. A small tree growing in the Tsuga and Rhododendron forest at an altitude of 10,000 feet. The leaves have a very thin closely woven rust-red felt, and the fairly large trusses of flowers are probably purple.

78734. RHODODENDRON sp.

No. 8326. June 14, 1928. A small epiphytic undershrub with tiny sickly yellow flowers. The previous year's leaves probably turn bright scarlet in the autumn, as also do the fruits. It grows in the rain forest at altitudes between 10,000 and 11,000 feet.

78735. RHODODENDRON sp.

No. 8522. August 15, 1928. A lanky shrub 6 to 8 feet high in the shade, but it is more common in the open, on gneiss rocks, where it is a

78697 to 78743—Continued.

compact shrublet 1 to 2 feet high. It grows at altitudes between 7,000 and 8,000 feet.

78736. RHODODENDRON sp.

No. 8545. August 20, 1928. A rather late-flowering species growing on exposed ridges facing south, where it is a small shrub. It is found at an altitude of 8,000 feet.

78737. RHODODENDRON sp.

No. 8546. August 20, 1928. A small slim shrub, sometimes 10 to 12 feet high, growing in thickets and among scrub on the southern slope, at an altitude of 9,000 feet.

78738. ROSA sp. Rosaceae. **Rose.**

No. 8626. September 2, 1928. A small shrub with smooth scarlet fruits, scattered in the Abies and Rhododendron forest at an altitude of 11,000 feet.

78739. ROSA sp. Rosaceae. **Rose.**

No. 8681. October 1, 1928. A dwarf very spiny undershrub growing on alpine slopes at an altitude of 12,000 feet. The smooth, red, flask-shaped fruits are smaller than those of No. 8626 (No. 78738).

78740. SCHEFFLERA sp. (*Heptapleurum* sp.). Araliaceae.

No. 8652. September 19, 1928. A moderate-sized palmlike tree, 20 feet high, usually much branched at the top, with large shining green, digitate leaves, long spikes of fragrant cream-colored flowers, and black fruits. It grows in the lower rain forest at an altitude of 7,000 feet.

78741. SCHIZANDRA sp. Magnoliaceae.

No. 8665. September 22, 1928. A large woody climber with scarlet fruits on pedicels 6 inches long. It grows in the forest at an altitude of 10,000 feet.

78742. VIOLA sp. Violaceae. **Violet.**

No. 8563. August 23, 1928. A species, with unusual foliage growing on earth banks in the middle forest, where there is no sun, at altitudes between 9,000 and 10,000 feet.

78743. (Undetermined.)

No. 8096. April 17, 1928. A small tree with masses of intensely fragrant yellowish flowers. It is scattered in the lower rain forest at altitudes between 4,000 and 5,000 feet.

78744. CASTANEA MOLLISSIMA Blume. Fagaceae. **Hairy chestnut.**

From Fa Hua Ssu Temple, near Peiping, Hopel, China. Seeds obtained through Peter Liu, Peiping. Received January 29, 1929.

Tiger paw chestnut.

For previous introduction see No. 76087.

78745. HIBISCUS SABDARIEFFA L. Malvaceae. **Roselle.**

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received January 30, 1929.

Rizal. A distinctive and attractive variety, with waxy pink calyxes, which originated at Novaliches, Rizal, and is apparently a spontaneous hybrid between the Victor, a red, and Archer, a white variety.

78746. *EULALIA FULVA* (R. Br.) Kuntze
(*Pollinia fulva* Benth.). Poaceae.
Sugar grass.

From Sydney, New South Wales, Australia.
Seeds presented by G. D. Ross, Under-
secretary, Department of Agriculture. Re-
ceived January 28, 1929.

A fine-stemmed leafy grass, 3 feet high,
native to Australia. It is said to be drought
resistant and of good seeding habit. Be-
cause of its flavor it is called "sugar grass"
in parts of Australia, and cattle are very
fond of it.

For previous introduction see No. 41754.

78474 and 78748. *GOSSYPIUM* spp. Mal-
vaceae. Cotton.

From Bangkok, Siam. Seeds presented by
Dr. A. Kerr, director of the botanical sec-
tion of the Ministry of Commerce and
Communications. Received January 30,
1929.

78747. *GOSSYPIUM* sp.

A perennial cotton cultivated about
Bangkok. It is not grown as a regular
crop, and the floss is used only for
making string.

78748. *GOSSYPIUM* sp.

A perennial cotton grown from seeds
collected on Kaw Samui, one of the is-
lands in the Gulf of Siam.

78749 to 78816.

From Tiflis, Caucasus, Russia. Seeds pre-
sented by the director, Botanic Garden.
Received February 4, 1929.

78749 to 78752. *AEGILOPS* spp. Poaceae.
Grass.

78749. *AEGILOPS CYLINDRICA* Host.

78750. *AEGILOPS CYLINDRICA* Host.

78751. *AEGILOPS TAUSCHII* Coss.

78752. *AEGILOPS TRIUNCIALIS* L.

A thickly branched annual grass with
ascending stems and flat rough leaves.
It is native to dry places in the Medi-
terranean region.

78753 to 78755. *AGROPYRON* spp. Poaceae.
Grass.

78753. *AGROPYRON DAGNAE* Hort.

No place of publication for this name
has been found.

The seeds closely resemble those of
Agropyron cristatum.

78754. *AGROPYRON ORIENTALE* (L.)
Roem. and Schult.

An annual, much-branched grass,
prostrate-ascending in habit, native to
sandy places in Asia Minor and Turke-
stan.

For previous introduction see No.
64091.

78755. *AGROPYRON REPENS GLAUDESCENS*
Peterm.

Said to be a glaucescent form of the
well-known quack grass. The seeds are
more like those of *Agropyron cristatum*.

78756. *AMYGDALUS GEORGICA* Desf.
(*Prunus nana georgica* DC.). Amyg-
dalaceae.

78749 to 78816—Continued.

A hardy bush, native to southern Rus-
sia, which closely resembles *Amygdalus*
nana, differing in its darker-colored flow-
ers and smaller leaves.

For previous introduction see No.
67905.

78757. *AMYGDALUS FENZLIANA* × COMMU-
NIS. Amygdalaceae.

A cross between the almond (*Amygda-
lus communis*) and a closely related
species from the Caucasus. The latter
is a low, sometimes spiny tree, with nar-
row, grayish green leaves, small whitish
flowers, and fruits with scarcely any
flesh.

78758. *ANDROPOGON INTERMEDIUS CAUCAS-
ICUS* (Trin.) Hack. Poaceae. Grass.

78759. *ANDROPOGON ISCHAEMUM* L. Poa-
ceae. Grass.

78760. *ARTHRAOXON HISPIDUS CRYPTA-
THERUS* (Hack.) Honda. Poaceae. Grass.

78761 to 78770. *ASTRAGALUS* spp. Faba-
ceae.

78761. *ASTRAGALUS AMMOPHILUS* Kar.
and Kir.

A leguminous annual with branched
prostrate stems, small pinnate leaves,
and minute flowers in small heads. It
is native to the mountains of Persia
and Turkestan.

78762. *ASTRAGALUS BRACHYCARPUS* Bieb.

A leguminous perennial, a foot or
more high, with purple flowers, nearly
an inch long, in lax ovoid racemes.
It is native to the Caucasus Mountains.

78763. *ASTRAGALUS FALCATUS* Lam.

An upright perennial, nearly 2 feet
high, with yellowish flowers in an elon-
gated cluster. It is native to south-
ern Russia and Asia Minor.

For previous introduction see No.
66517.

78764. *ASTRAGALUS GLYCYPHYLLOS* L.

A prostrate, spreading herbaceous
perennial, native to Asia Minor.

78765. *ASTRAGALUS HAMOSUS* L.

An annual gray-green hairy plant,
with prostrate or ascending stems 8
inches to a foot long. It is native to
sunny places in the Mediterranean
countries.

For previous introduction see No.
66540.

78766. *ASTRAGALUS KADSHORENSIS*
Bunge.

A leguminous perennial, native to
the Caucasus, with short ascending
stems 2 to 3 inches high, pinnate
leaves, and rather large light bluish-
violet flowers.

78767. *ASTRAGALUS MOLLIS* Bieb.

A nearly stemless perennial with
hairy pinnate leaves and yellow flowers
in cylindrical racemes. It is native to
the arid deserts of Armenia and Cau-
casus.

78749 to 78816—Continued.

- 78768. ASTRAGALUS MONSPESSULANUS L.**
A leguminous perennial with a woody rootstock, a very short stem, and a rosette composed of bright-green compound leaves intermingled with the remains of the previous year's leaves. The small flowers are purplish violet. Native to southern Europe.
- 78769. ASTRAGALUS PSEUDONOBRYCHIS Hort.**
A legume of possible value as a green manure.
- 78770. ASTRAGALUS SANGUINOLENTUS Bieb.**
A perennial leguminous plant with small pinnate leaves and small white flowers, with red keels, in headlike racemes. It is native to the Caucasus Mountains.
- 78771. BRACHYPODIUM SYLVATICUM (Huds.) Beauv. Poaceae. Grass.**
A grass native to the woods and thickets throughout Europe and eastward through northern Asia to the Provinces of Sinkiang and Hupeh, China.
For previous introduction see No. 53134.
- 78772. BROMUS ALBIDUS Bieb. Poaceae. Grass.**
- 78773. BROMUS RUBENS L. Poaceae. Grass.**
- 78774 to 78776. CORONILLA spp. Fabaceae.**
- 78774. CORONILLA CAPPAODOCICA Willd.**
A yellow-flowered leguminous perennial with ascending stems and pinnate leaves. Native to rocky places in Asia Minor.
- 78775. CORONILLA SCORPIOIDES (L.) Koch.**
An erect yellow-flowered herbaceous perennial, about 8 inches high, native to the Mediterranean countries.
For previous introduction see No. 69850.
- 78776. CORONILLA VARIA L. Crownvetch.**
A prostrate or ascending leguminous perennial, about 4 feet high, with a thick rootstock, compound leaves, and pinkish flowers in dense umbels. It is native to central Europe.
For previous introduction see No. 53607.
- 78777. CYNODON DACTYLON (L.) Pers. Poaceae. Bermuda grass.**
- 78778. ECHINARIA CAPITATA (L.) Desf. Poaceae. Grass.**
- 78779. ERIANTHUS RAVENNAE (L.) Beauv. Poaceae. Grass.**
- 78780. FESTUCA OVINA SULCATA Hack. Poaceae. Grass.**
- 78781 to 78786. HORDEUM spp. Poaceae.**
- 78781. HORDEUM BULBOSUM L. Grass.**
- 78782. HORDEUM DISTICHON PALMELLA Harlan. Two-rowed barley.**
- 78783. HORDEUM MURINUM L. (H. leporinum Link). Grass.**

78749 to 78816—Continued.

- 78784. HORDEUM MURINUM L. (H. leporinum Link). Grass.**
Forma nigraeans.
- 78785. HORDEUM VULGARE NIGRUM (Willd.) Beauv. Six-rowed barley.**
- 78786. HORDEUM VULGARE PALLIDUM Seringe. Six-rowed barley.**
- 78787. KOBLERIA GRACILIS Pers. Poaceae. Grass.**
- 78788. TULIPA SCHMIDTII Fomin. Liliaceae. Tulip.**
A wild tulip, native to the Caucasus, with a bulb about 2 inches in diameter, oblong-lanceolate obtuse leaves, and red flowers 3 inches long.
- 78789. LATHYRUS ROSEUS Stev. Fabaceae.**
An erect much-branched perennial, 2 or 3 feet high, with ovate leaflets and rose-colored flowers. Native to Asia Minor.
- 78790. MEDICAGO SATIVA GLUTINOSA (Bieb.) Urban. Fabaceae.**
- 78791. MEDICAGO SATIVA L. Fabaceae. Alfalfa.**
- 78792. MELICA MICRANTHA Boiss. and Hohen. Poaceae. Grass.**
- 78793. MELICA PICTA Koch. Poaceae. Grass.**
- 78794 to 78796. MELILOTUS spp. Fabaceae.**
- 78794. MELILOTUS ALBA Desr. White sweetclover.**
- 78795. MELILOTUS NEAPOLITANA Ten. Sweetclover.**
An annual, mostly upright plant, up to 15 inches high, branched from the base, with obovate to roundish hairy leaflets and small bright-yellow flowers. It is native to the Mediterranean countries.
For previous introduction see No. 43595.
- 78796. MELILOTUS OFFICINALIS (L.) Lam. Sweetclover.**
- 78797. ORYZOPSIS HOLCIFORMIS (Bieb.) Hack. Poaceae. Grass.**
A perennial grass with a thick, short rhizome and stems 3 feet or more high. The panicles are a foot or more long. It is native to southern and southeastern Europe.
For previous introduction see No. 64095.
- 78798. ORYZOPSIS PARADOXA VIRESCENS (Trin.) Richter. Poaceae. Grass.**
A perennial, densely caespitose grass with rough stems up to 4 feet high and spreading panicles about 8 inches high. It is native to southern Europe and Asia Minor.
For previous introduction see No. 64096.
- 78799. PHEUM PHELOIDES (L.) Karst. (P. boeckmeri Wibel). Poaceae. Timothy.**
A perennial, gray-green, loosely caespitose grass with short, creeping rhizomes

78749 to 78816—Continued.

and stems 1 to 2 feet high. It is native to dry stony places throughout central Europe.

For previous introduction see No. 63992.

78800. PHLEUM PANICULATUM Huds. Poaceae. **Grass.**

An erect or ascending annual grass, 4 to 16 inches high, native to the Mediterranean countries.

For previous introduction see No. 74171.

78801. PISUM ELATIUS Bieb. Fabaceae. **Pea.**

A hardy annual, about 5 feet high, with leaves composed of one to three pairs of narrow leaflets and with purple flowers. It is native to the woods and thickets in the alpine regions of Europe.

For previous introduction see No. 67925.

78802 to 78805. POA spp. Poaceae. **Grass.**

78802. POA ANNUA L.

78803. POA BULBOSA VIVIPARA Koel.

78804. POA LONGIFOLIA PLANIFOLIA Somm. and Lev.

78805. POA NEMORALIS L.

Variety *latifolia*.

78806. PRUNUS CERASIFERA DIVARICATA (Ledeb.) C. Schneid. Amygdalaceae.

The wild form of the myrobalan plum. It is a small spreading tree with more slender branches than the type, smaller flowers, and yellowish fruits about an inch long. Native to Asia Minor.

For previous introduction see No. 43865.

78807. PTEROCARYA FRAXINIFOLIA (Lam.) Spach (*P. caucasica* Meyer). Juglandaceae.

A handsome spreading tree, 60 feet or less high, with attractive dark-green pinnate leaves about a foot long. It is native to the Caucasus and will probably not be hardy north of Massachusetts.

For previous introduction see No. 74596.

78808. TRIFOLIUM CAMPESTRE Schreb. Fabaceae. **Clover.**

A biennial or annual clover up to 20 inches high, prostrate or ascending, with bright-yellow flowers. It is native to central Europe.

78809 to 78814. TRITICUM spp. Poaceae.

78809. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). **Common wheat.**

78810 and 78811. TRITICUM DURUM Desf. **Durum wheat.**

78810. Variety *apulicum*.

78811. Variety *hordeiforme*.

78812 and 78813. TRITICUM PERSICUM Aitch. and Hemsl. **Persian wheat.**

78812. Variety *fuliginosum*.

78813. Variety *rubiginosum*.

78814. TRITICUM TURGIDUM L. **Poulard wheat.**

78815 and 78816. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). **Common wheat.**

78815. Variety *cinereum*.

78816. Variety *erythrospermum*.

78817. VITIS DAVIDII (Carr.) Foex. Vitaceae. **Brier grape.**

From Yokohama, Japan. Cuttings purchased from the Yokohama Nursery Co. Received February 13, 1929.

Koshu. A variety growing in Koshu, Yamanashi Ken, a region which is very hilly and surrounded by high mountains. The highest temperature in the summer is about 90° F. This is a very late grape and is said to be the best in Japan in both flavor and appearance. The bunches weigh up to 2¼ pounds.

For previous introduction see No. 55098.

78818. CAVANILLESIA PLATANIFOLIA H. B. K. Bombacaceae.

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Plant Introduction Garden. Received May 7, 1928. Numbered in March, 1929.

A Colombian tree up to 100 feet high, with a large thick trunk, smooth pale bark, large shallowly 5-lobed to 7-lobed leaves, and red flowers an inch long. The coarse soft pithlike wood is white or yellowish and is used for making canoes and rafts.

78819 to 78826. AVENA spp. Poaceae. **Oats.**

From Sydney, New South Wales, Australia. Seeds presented by W. Wenholz, director of plant breeding, Department of Agriculture, Sydney. Received February 12, 1929.

Varieties of oats which have shown resistance to crown rust under field conditions in New South Wales.

78819 and 78820. AVENA BYZANTINA Koch.

78819. Algerian (G'28 A-18).

78820. Algerian (G'28 8a18).

78821. AVENA STRIGOSA Schreb.

Variety *glabrescens*. (G'28 29a [I.28/7639].)

78822. AVENA sp.

Buddah (G'28 17a₁₇).

78823. AVENA sp.

Buddah (single plant No. 991).

78824. AVENA sp.

Mulga (selection 4107 [G'28 21a₁₀]).

78825. AVENA sp.

(*Sunrise* × *Victory*) 9 G'28.

78826. AVENA SATIVA L.

From Ruakura (G'28 15a₁₇).

78827. PHASEOLUS LUNATUS L. Fabaceae. **Lima bean.**

From China. Seeds presented by Dr. W. H. Dobson, Forman Memorial Hospital, Ycounkong, Kwangtung, China. Received February 12, 1929.

A variety grown locally.

78828 and 78829. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Baghdad, Irak. Seeds presented by J. F. Webster, Inspector General of Agriculture. Received February 13, 1929.

78828. Punjab B 8.

78829. Nymgan 3.

78830. GOSSYPIUM sp. Malvaceae.

Cotton.

From the Dominican Republic. Seeds presented by Dr. R. Ciferri, Director de la Estación Nacional Agronómica y Colegio de Agricultura. Received February 13, 1929.

Granbolla or *granbola* cotton labeled: "Dominican cotton collection No. 1." This was grown in the dry zone of Monte Cristi, and appraised there as a good indigenous variety. The chief characteristics are a very early maturity of the boll and the small size of the plants.

78831. CASTANEA MOLLISSIMA Blume. Fagaceae. Hairy chestnut.

From Keijo, Chosen. Plants grown from seeds presented by the Director of the Forestry Experiment Station, March 9, 1926. Numbered in January, 1929.

In the endeavor to relieve the situation caused by the rapid disappearance of our native chestnut, due to the ravages of the blight fungus, the Chinese hairy chestnut is being introduced into this country in considerable quantity. The size and quality of the nuts compare rather favorably with our native chestnut, although neither the size of the tree nor the tannin content measure up to those of our native species.

For previous introduction see No. 75754.

78832. ARRACACIA XANTHORRHIZA Bancroft (Arracacha esculenta DC.). Apiaceae. Arracacha.

From Kingston, Jamaica. Tubers presented by M. S. Goodman, superintendent of the Hope gardens of the Department of Science and Agriculture. Received February 21, 1929.

The arracacha is an herbaceous perennial about 3 feet high, with carrotlike foliage and small umbels of purple flowers. It is native to northern South America. The large fleshy roots are used as food in South America and Central America, being boiled like parsnips or sliced and fried.

For previous introduction see No. 78262.

78833 to 78851. VITIS VINIFERA L. Vitaceae. European grape.

From Sawbridgeworth, Herts, England. Cuttings purchased from Thomas Rivers & Son. Received February 28, 1929.

78833. Alwick seedling.

78834. Appley Towers. A late black variety of good flavor and keeping qualities.

78835. Diamond Jubilee.

78836. Directeur Tisserand.

78837. Dr. Hogg.

78838. Duke of Buccleuch.

78839. Early Auvergne Frontignan.

78840. Lady Downe's seedling. A large, oval, black variety with sweet, firm flesh richly flavored with a fine aroma. It is said to be one of the best late grapes.

78841. Lady Hastings.

78842. Lady Hutt. A late, round white variety of excellent quality.

78833 to 78851—Continued.

78843. Madresfield Court. A very large black variety with a muscat flavor when quite ripe.

78844. Melton Constable.

78845. Mill Hill Hamburgh.

78846. Mrs. Pearson.

78847. Muscat Champion.

78848. Muscat Hamburg.

78849. Prince of Wales.

78850. Reine Olga. A round, reddish variety.

78851. White Frontignan. A medium-sized, round variety with a high muscat flavor. It is said to be a most abundant bearer.

78852. CANNA EDULIS Ker. Cannaceae. Edible canna.

From Honolulu, Hawaii. Rootstocks presented by J. M. Westgate, Director, Hawaii Agricultural Experiment Station. Received February 26, 1929.

A close relative of the ornamental cannas, cultivated for its edible tubers.

For previous introduction see No. 75858.

78853 and 78854. LILIUM spp. Liliaceae.

From Bengal, India. Seeds purchased from R. B. & D. S. Pradhan, the Chandra Nursery. Received March 2, 1929.

78853. LILIUM GIGANTEUM Wall. Giant lily.

A lily, native to the Himalayas, with bulbs which grow close to the surface in rich black mold, at altitudes between 7,500 and 9,000 feet, where it is covered with snow from November to April. The smooth hollow stems, 6 to 9 feet high, are sometimes used for musical pipes. The handsome cordate leaves, shining dark green above and paler beneath, are 10 to 12 inches long on petioles of equal length; both become smaller near the apex. In the large white fragrant flowers, often 12 to a raceme, the perianth tube is slightly greenish, and the inner surfaces of the segments are tinged with deep purple.

For previous introduction see No. 77585.

78854. LILIUM WALLICHIANUM Schult. f. Lily.

A lily 4 to 6 feet high, with linear leaves 6 to 9 inches long, and usually solitary creamy waxy white fragrant flowers, 9 inches long, which are golden yellow at the base inside and green outside.

78855. LEYCESTERIA FORMOSA Wall. Caprifoliaceae.

From Gresham, Oreg. Plants presented by the W. L. Crissey Alpine Gardens. Received March 5, 1929.

A handsome ornamental bush, closely allied to the honeysuckles, which is native to the cooler sections of the Himalayas. It is from 6 to 8 feet high, with broadly cordate leaves 5 to 7 inches long, terminal spikes of purplish flowers in the axils of the purplish bracts, and subglobose red-purple berries.

For previous introduction see No. 65261.

78856 to 78870.

From Stevenage, Herts, England. Seeds purchased from Clarence Elliott (Ltd.), Six Hills Nursery. Received February 25, 1929.

78856. AGAPANTHUS AFRICANUS (L.) Hoffmannsegg (*Abumon africanum* Britton). Liliaceae. African lily.

Variety *Mooreanus*. A robust tuberous-rooted plant reputed to be winter-hardy, 1½ feet high, with short straplike leaves and dark-blue flowers in fair-sized umbels.

78857 to 78862. GENTIANA spp. Gentiana-ceae. Gentian.

78857. GENTIANA GENTIANELLA A. T. Johnson. Stemless gentian.

A stemless European alpine plant which forms a dense carpet of compact tufts of glossy green leaves from which rise large tubular flowers of an amazingly deep blue.

78858. GENTIANA ASCLEPIADEA L. Milkweed gentian.

A comparatively robust subalpine species forming clumps of vigorous stems up to 3 feet high with opposite ovate leaves. In late summer it produces from the upper axils almost sessile trumpet-shaped flowers of sapphire blue which weigh down the arching stalks. There is some variation in color from seed, which germinates freely and produces flowering plants in about three years. The plant is said to be indifferent as to whether the soil is alkaline or not.

78859. GENTIANA BAVARICA L.

A difficult species requiring conditions similar to those of moist alpine meadows for success. It forms compact tufts of stout stems about 3 inches high with yellow-green boxlike leaves and flowers somewhat like those of *Gentiana verna*, with five large lobes, but of a velvety dark-blue color and produced much later in the summer. It is said to be indifferent to limestone or granite soils provided it has the proper moist turfy soil.

78860. GENTIANA LAGODECHIANA Hort.

A dwarf form of *Gentiana septemfida*, with deeper blue flowers and prostrate habit.

78861. GENTIANA SEPTEMFIDA Pall.

An Asiatic gentian which somewhat resembles *Gentiana asclepiadea*, requiring similar conditions. It makes spreading clumps up to 12 inches high with opposite ovate leaves and heads of wide-mouthed trumpet-shaped blue flowers in late summer. It varies considerably in habit and flower color, but all forms do well in peaty loam with ample but not stagnant water supply.

78862. GENTIANA VERNA L.

This is the gentian of the Alps, difficult in cultivation unless provided with peaty soil filled with sharp sand, a liberal supply of coarse broken stone, perfect underdrainage, and a constant supply of moisture in summer. It is a social plant and should be grown with other plants to simulate an alpine turf, where it will produce vigorous clumps of low shoots, gray-green foliage, and, in early summer, myriads of starchy flowers of indescribable blue.

78856 to 78870—Continued.

78863. IRIS SINTENISII Janka. Iridaceae.

A beardless iris of the same general type as *Iris graminea* with tufted evergreen leaves about 12 inches high and flower stalks little higher than the leaves. Flowers blue purple as in *I. graminea* with red purple on the style branches and hafts. Native to southeastern Europe and Asia Minor.

78864. LILIUM RUBELLUM Baker. Liliaceae. Rubellum lily.

A miniature trumpet lily from Japan with slender green stems spotted with purple, rarely exceeding 2 feet in height, narrow leaves, and one to eight smallish trumpets of rosy white, flushed darker without. It is more delicate than Kramer's lily (*Lilium japonicum*), and, like it, should be grown in a low shrubby undergrowth, where its head can rise to full sun.

78865 to 78868. PRIMULA spp. Primulaceae. Primrose.

78865. PRIMULA sp.

Primrose blue. A blue-flowered horticultural strain of the common garden primrose.

78866. PRIMULA HELEDOXA Balf.

A large Chinese primrose, with flower stalks like those of *Primula japonica*, about 3 feet high, with seven or eight tiers of soft-yellow flowers resembling in color and size those of *Jasminum primulinum*. It requires a moist but well-drained site.

78867. PRIMULA POLYANTHA Mill. Polyanthus primrose.

A European primrose, about a foot high, with more or less upright yellow flowers in erect umbels which stand above the long leaves.

78868. PRIMULA SIKKIMENSIS Hook.

This primrose, with flower stalks 1 or 2 feet high and with the habit of *Primula secundiflora*, grows in moist meadows and along stream beds in the Himalayas at an altitude of 13,000 feet. The lanceolate drooping leaves are dull green on both sides, and the rich-yellow flowers, which appear in June, are large and bell-shaped. It should be treated as a short-lived perennial.

78869. SISYRINCHIUM BOREALE (Bickn.) J. K. Henry. Iridaceae.

A semiaquatic plant up to a foot in height, with narrow leaves and yellow flowers on erect pedicels. Native to southwestern Canada and northwestern United States.

78870. SISYRINCHIUM FILIFOLIUM Gaud. Iridaceae.

A herbaceous perennial, 6 inches to a foot in height, native to the Falkland Islands. In cool peaty soil, with good drainage, it spreads into grassy tufts of narrow rushlike leaves, and produces from six to nine stalks with white bell-shaped flowers of exquisite delicacy.

78871 to 78914.

From Newry, Ireland. Seeds purchased from T. Smith, Daisy Hill Nursery. Received February 23, 1929.

78871 to 78874. ALSTROEMERIA spp. Amaryllidaceae.

78871 to 78914—Continued.

78871. ALSTROEMERIA AURANTIACA D. Don. **Yellow alstroemeria.**

A Chilean plant 2 to 4 feet high, with about 50 thin leaves 3 to 4 inches long and bright-yellow flowers, spotted brown within, in a compound umbel.

78872. ALSTROEMERIA CHILENSIS Lem. **Chilean alstroemeria.**

A stout tuberous-rooted plant 2 to 4 feet high, with scattered obovate or spatulate leaves and large rosy red or whitish flowers in pairs. Native to Chile.

78873 and 78874. ALSTROEMERIA AURANTIACA D. Don. **Yellow alstroemeria.**

For previous introduction and description see No. 78871.

78873. Variety flava.

78874. Variety major.

78875. RHODODENDRON LUTEUM Sweet (*Azalea pontica* L.). **Ericaceae. Pontic azalea.**

A deciduous shrub 8 to 12 feet high, native to the Caucasus region, with hairy oblong leaves and a profusion of funnel-form fragrant yellow flowers 2 inches across.

78876. BERBERIS BUXIFOLIA Lam. **Berberidaceae. Magellan barberry.**

An erect bushy, partially evergreen barberry, 6 to 8 feet high, with hard leathery oblong-obovate leaves up to an inch long, small solitary amber-yellow flowers, and globular dark-purple fruits. Native to southern Chile.

For previous introduction see No. 58099.

78877. BERBERIS EMPETRIFOLIA Pers. **Berberidaceae. Crow barberry.**

A low densely branched barberry, 1 or 2 feet high, with linear, bright-green leaves, and bluish-black fruits. Native to southern South America.

For previous introduction see No. 73532.

78878. BRUCKENHALIA SPICULIFOLIA Reichenb. **Ericaceae. Spikeheath.**

A low evergreen shrub which forms large tufts of slender shoots with small needle-shaped leaves and short terminal racemes of nodding rosy pink flowers. Requires gritty acid soil. Native to southeastern Europe and Asia Minor.

78879. BULBINELLA HOOKERI (Colenso) Cheeseman (*Chrysoactron hookeri* Colenso). **Liliaceae.**

A New Zealand herbaceous perennial related to the asphodels, varying in size from 2 to 4 inches up to 3 feet. The numerous glaucous-green leaves are linear, and the loose racemes of bright-yellow flowers are on slender scapes up to 10 inches high.

For previous introduction see No. 77547.

78880. CYANANTHUS LOBATUS Wall. **Cant. ranunculaceae.**

A herbaceous perennial with more or less prostrate shoots up to 2 feet high with ovate-oblong lobed leaves an inch long and single blue flowers somewhat

78871 to 78914—Continued.

like a periwinkle, sometimes an inch across, appearing in late summer. Native to the Himalayas.

For previous introduction see No. 41615.

78881 to 78892. CYTISUS SCOPARIUS ANDREANUS Dipp. **Fabaceae. Paradise broom.**

The paradise brooms are upright shrubs with slender green branches, small obovate leaflets, and flowers an inch across, of various shades of yellow and red.

78881. Dragon fly. Flowers crimson and old gold.

78882. Fairy. Flowers cream and pink.

78883. Firefly. Flowers scarlet and yellow.

78884. Fulgens. Flowers very dark crimson.

78885. A late flowering form.

78886. Mayfly. Flowers copper and yellow.

78887. Moonlight. Flowers pale cream colored.

78888. Newry gold.

78889. Newry Seedling. Flowers cream and rose colored.

78890. Red Admiral.

78891. Rosy Moonlight. Flowers cream colored, tinged with rose.

78892. Præcox. Flowers cream colored, appearing early.

78893 to 78899. ERICA spp. **Ericaceae.**

78893. ERICA ARBOREA L. **Tree heath.**

A bushy shrub or small tree, at times 20 feet high, with linear, whorled leaves and very fragrant whitish flowers borne in great profusion in early spring. Native to the Mediterranean countries.

78894. ERICA CILIARIS L. **Fringed heath.**

A straggling shrub, up to a foot high, with long prostrate stems from which the flowering branches spring erect in dense masses. The oval whorled leaves are green above and whitish beneath. The rosy flowers are in whorls of three on erect terminal racemes 2 to 5 inches long appearing in late summer. Native to southwestern Europe.

78895 to 78897. ERICA CINEREA L. **Twisted heath.**

For previous introduction and description see No. 78680.

78895. Rose Queen. A variety with 6-inch sprays of clear rose-colored flowers.

78896. Variety purpurca. A variety with purple flowers.

78897. Variety rosca. A variety with rose-colored flowers.

78898. ERICA STRICTA Donn. **Corsican heath.**

A woody perennial about 2 feet high, with rigid branches, whorled leaves, and rosy purple flowers. Native to Corsica.

78871 to 78914—Continued.

78999. ERICA VAGANS L.

Cornish heath.

A low European shrub a foot or more high, with its leaves in whorls of four or five, and pale purplish red flowers.

78900 and 78901. CALLUNA VULGARIS (L.) Salisb.

Heather.

78900. A low evergreen European shrub 1 to 2 feet high, with small ovate leaves and dense racemes 6 to 10 inches long of rosy pink flowers.

78901. Variety *alba*. A white-flowered form.

78902. GENISTA MONOSPERMA (L.) Lam. Fabaceae.

Bridal-veil broom.

An ornamental leguminous shrub, native to Spain, about 10 feet high with slender grayish branches and small, very narrow leaves. The fragrant white flowers are in short lateral racemes.

78903 to 78906. GERANIUM spp. Geraniaceae.

Cranesbill.

78903. GERANIUM ANDRESSI J. Gay.

A European perennial 1½ feet high which has a brown hairy stem, opposite palmate leaves, and light-rose flowers with the petals fringed at the base.

78904. GERANIUM LOWII Hort.

A plant 2 feet high. The bright rose flowers have violet centers.

78905. GERANIUM SANGUINEUM L.

Variety *album*. A white-flowered form.

78906. GERANIUM SESSILIFLORUM Cav.

A low herbaceous perennial which forms compact tufts of dark-green leaves, among which nestle scores of grayish white flowers. Native to Australia and Chile.

78907 to 78909. MENZIESIA POLIFOLIA Juss. Ericaceae.

A low evergreen shrub about 2 feet high, with shining dark-green elliptical leaves half an inch long and flowers in racemes. Native to western Europe.

78907. A purple-flowered variety.

78908. Variety *alba*. A white-flowered variety.78909. Variety *atropurpurea*. A variety with deep-purple flowers.

78910 and 78911. MORINA LONGIFOLIA Wall. Dipsacaceae.

78910. A hairy thistlelike perennial 3 to 4 feet high, with narrow leaves 6 inches long and showy crimson flowers crowded in dense whorls near the top of the stem. Native to the Himalayas at altitudes of 9,000 to 14,000 feet.

78911. Variety *gigantea*. A variety with bright-red stems 5 feet high.

78912. PRIMULA CAPITATA Hook. Primulaceae.

Primrose.

Variety *mooreanus*. A form of the species with fine round heads of deep-violet flowers, calyxes and stems dusted with white farina, and rosettes of spreading green leaves.

78913. PRIMULA CHIONANTHA Balf. and Forr.

Primrose.

78871 to 78914—Continued.

A stout herbaceous plant 1 to 2 feet high, with blunt narrowly oval leaves, sulphur-mealy beneath, and clusters of white flowers borne in a many-flowered umbel at the apex of a stout scape. It appears to thrive best in rich moist soil.

78914. ROSCOEA PURPUREA J. E. Smith. Zinziberaceae.

A thick-rooted perennial gingerlike Himalayan plant about a foot high with sessile lanceolate leaves and purple, rarely pale lilac or white flowers in a sessile spike.

78915 to 78974.

From Edinburgh, Scotland. Seeds presented by William Wright Smith, Regius Keeper, Royal Botanic Garden. Received February 27, 1929.

78915 to 78919. BERBERIS spp. Berberidaceae.

Barberry.

78915. BERBERIS ANGULOSA Wall.

An ornamental shrub from the mountainous sections of northern India, which becomes about 4 feet high, with dark glossy green leaves, large solitary globose orange-yellow flowers half an inch wide, and elliptical, scarlet berries nearly an inch long. The autumnal coloring of the foliage is said to be very striking, and the fruits, less acid than most barberries, are edible.

For previous introduction see No. 65223.

78916. BERBERIS BREVIPANICULATA C. Schneid.

Shortcluster barberry.

A shrub from western China with tawny glabrous young branches later becoming furrowed and ash-colored, and graceful golden spines. The oblong entire clustered leaves are one-third of an inch long, shining above, distinctly glaucous, and with a bloom. The small graceful flowers are in panicles which are sometimes an inch long.

For previous introduction see No. 52336.

78917. BERBERIS BUXIFOLIA Lam.

Magellan barberry.

For previous introduction and description see No. 78876.

78918. BERBERIS UMBELLATA Wall.

Barberry.

A hardy subevergreen Himalayan shrub about 3 feet high, with narrow leaves slightly glaucous beneath, and umbellate racemes of yellow flowers.

For previous introduction see No. 65755.

78919. BERBERIS WALLICHIANA DC.

Variety *compacta*. An evergreen shrubby barberry from the Himalayas. It is probably too tender for the North.

78920. CARMICHAELIA FLAGELLIFORMIS Colenso. Fabaceae.

A new Zealand shrub about 4 feet high, with stiff slender flat green branches which take the place of leaves and short dense axillary fascicles of purplish flowers borne in great profusion.

For previous introduction see No. 76562.

78915 to 78974—Continued.

78921 to 78925. ENKIANTHUS spp. Ericaceae.

78921 to 78923. ENKIANTHUS CAMPANULATUS (Miquel) Nicholson.

Redvein enkianthus.

78921. Variety *palibinii*. A Japanese shrub with the branches often verticillate, oblanceolate green leaves, paler beneath, and bell-shaped drooping red flowers in short terminal racemes.

78922. Variety *pallidiflorus*. A shrub with its branches usually verticillate, narrow green leaves, paler beneath, up to 1½ inches long, and sessile terminal racemes of nearly white flowers. Native to Japan.

78923. Variety *recurvus*. A Japanese shrub with the branches usually verticillate, lanceolate papery leaves up to 2 inches long, and pink flowers nearly half an inch across, in terminal clusters.

78924. ENKIANTHUS CHINENSIS Franch. (*E. sinohimalaicus* Craib).

A Chinese shrub with elongated branches, lanceolate leaves up to 2 inches long, and salmon-red flowers in shortened racemes.

78925. ENKIANTHUS CAMPANULATUS (Miquel) Nicholson.

Redvein enkianthus.

Variety *tectus*. A shrub native to Japan, with usually whorled branches, leaves of variable shape up to an inch long, and sessile racemes of pink flowers.

78926. FUCHSIA CORYMBIFLORA Ruiz and Pav. Onagraceae.

A handsome Peruvian fuchsia with large serrate, taper-pointed leaves and deep-red flowers. The plant becomes tall, but requires support in order to attain full height. It is adapted for training on pillars or pergolas in the warmest parts of the United States.

For previous introduction see No. 65174.

78927. FUCHSIA CORYMBIFLORA Ruiz and Pav. Onagraceae.

Variety *alba*. A white-flowered form from Peru.

78928 to 78940. GENTIANA spp. Gentiana-ceae. Gentian.

78928. GENTIANA ASCLEPIADEA L. Milkweed gentian.

For previous introduction and description see No. 78858.

78929. GENTIANA ASCLEPIADEA L. Milkweed gentian.

Variety *alba*. A white-flowered form.

78930. GENTIANA CRASSICAULIS Duthie.

A glabrous perennial a foot or more high, native to western China, with elliptic leaves and greenish-white flowers, 20 to 30 in a head.

78931. GENTIANA CRUCIATA L. Cross gentian.

One of the less difficult alpine species, making foot-high clumps with handsome dark-green foliage and pro-

78915 to 78974—Continued.

ducing crowded heads of small, 4-lobed blue flowers in late summer and early autumn. Native to Europe and northern Asia.

78932. GENTIANA LUTEA L.

A coarse perennial species too large for the rock garden with 3 to 4 foot stems bearing handsome rugose foliage, crowned in late summer in the upper whorls of leaves with crowded clusters of slender-lobed golden-yellow flowers.

78933. GENTIANA PHLOGIFOLIA Schott and Kotschy.

A rather easy creeping alpine species, native to central Europe, about 10 inches high, with clustered dark-blue flowers, produced in early summer.

78934. GENTIANA PURPUREA L.

A European alpine, with somewhat lax stems up to 3 feet high, narrow leaves, and dull purplish-blue flowers, flushed and spotted yellowish brown within, appearing in late summer.

78935. GENTIANA SAPONARIA L.

A hardy herbaceous perennial not exceeding 2 feet in height, with an ascending stem, narrow-pointed opposite leaves and light-blue flowers. Native to eastern North America.

78936 to 78938. GENTIANA SEPTEMFIDA Pall.

78936. For previous introduction and description see No. 78861.

78937. Variety *cordifolia*. A variety with heart-shaped leaves. From Turkish Armenia.

78938. Variety *procumbens*. A variety with stems which tend to lie flat on the ground. It is smaller, more delicate than the type and has a tendency to give fewer, usually solitary flowers.

78939. GENTIANA TIBETICA King. Himalayan gentian.

An erect plant 1½ feet high, with oblong-ovate leaves 5 to 7 inches long and small dull yellowish-white axillary flowers an inch long. Native to Tibet; introduced only for comparative study.

78940. GENTIANA TUBULOSA Gilg.

An annual gentian from Argentina, with upright stems 6 inches high, narrowly oblong membranous leaves half an inch long, and lilac-blue flowers, usually solitary, about an inch long.

78941. HEMEROCALLIS Plicata Hort. Liliaceae. Daylily.

78942. PHILADELPHUS INCANUS SARGENTI-ANUS Koehne. Hydrangeaceae. Gray mockorange.

A variety which has yellowish or brownish branches and leaves with the lower surfaces pilose.

78943. PHILADELPHUS SERICANTHUS REHD-ERIANUS Koehne. Hydrangeaceae. Silk mockorange.

A variety with broadly ovate leaves up to 4½ inches long and 2 inches wide.

78944. ROSA FOETIDA Herrmann (R. lutea Mill.). Rosaceae. Austrian briar rose.

78915 to 78974—Continued.

A hardy shrub, up to 10 feet high, with slender stems and bright yellow flowers. Native to western Asia.

For previous introduction see No. 72879.

78945. ROSA FOETIDA BICOLOR (Jacq.) Willm. Rosaceae.
Austrian copper brier rose.

Differs from the type in having coppery red flowers.

78946 to 78964. SEDUM spp. Crassulaceae. **Stonecrop.**

78946. SEDUM AIZOON L.
Aizoon stonecrop.

A glabrous fleshy perennial, native to Siberia, with several simple stems 1 to 2 feet high, alternate oblong-lanceolate distant leaves, and numerous yellow flowers in loose cymes.

78947. SEDUM ALBUM L.
White stonecrop.

A succulent perennial caespitose alpine, 4 to 6 inches high, native to the Mediterranean countries. The white flowers are in much-branched corymbose cymes.

78948. SEDUM ALBUM L.
White stonecrop.

Variety *brevifolium*. A form with shorter leaves.

78949. SEDUM ALTISSIMUM Poir.

A hardy common species from the Mediterranean region. The plants vary in height from 6 inches to 2 feet, but all forms are characterized by their decumbent stems, ascending branches crowded with sharply tipped more or less glaucous leaves, and very tall flowering branches which bear smaller leaves and dense terminal umbellate cymes of greenish-white flowers.

78950. SEDUM ANOPETALUM DC.

A hardy species native from central and southern Europe eastward, which, like the preceding, varies greatly and occurs under many names. It is related to *S. reflexum*, but seems to differ most in the more slender terete leaves and the erect carriage of the developing inflorescence. The flowers are usually greenish white, more rarely yellow.

78951. SEDUM ASIATICUM (Don) Spreng.

A Himalayan succulent up to a foot high, with opposite linear, irregularly toothed leaves and yellow flowers in compact globose cymes.

For previous introduction see No. 39075.

78952. SEDUM CRASSIPES Wall.

A low succulent Himalayan alpine with slender stems 2 to 6 inches high, linear somewhat dentate leaves one-half inch long, and straw-colored flowers in a dense cyme.

78953. SEDUM DASYPHYLLUM L.
Leafy stonecrop.

A low hardy tufted perennial, native to the Mediterranean countries, with slender stems, and crowded glaucous

78915 to 78974—Continued.

beadlike leaves which are easily broken from the stem. The flowers are white tinted pink, but are not so showy as the leaves. The plant is said to prefer a dry site.

78954. SEDUM ELLACOMBIANUM Praeger.

A Japanese succulent perennial of caespitose habit, with annual stems up to 6 inches high, obovate or spatulate leaves, and yellow flowers in a compact cymose inflorescence.

78955. SEDUM EWERSII Ledeb.
Ewers stonecrop.

A hardy succulent perennial with caespitose ascending stems, opposite glaucous elliptic or cordate leaves, and purple flowers in rather dense terminal corymbs. Native to central Asia.

78956. SEDUM KAMTSCHATICUM Fisch. and Mey.
Orange stonecrop.

A glabrous perennial succulent with greenish or pinkish branches 10 inches long, deep-green coarsely toothed leaves, and numerous yellow flowers in terminal cymes. Native to eastern Asia.

78957. SEDUM MAXIMUM Suter.
Great stonecrop.

A stout bushy perennial up to 2 feet high, with opposite sessile leaves and whitish flowers in terminal and lateral cymes on long peducles, forming a loose panicle. Native to Europe and northwest Asia.

78958. SEDUM PILOSUM Bieb.

A fleshy perennial of round-compact habit, with small hairy leaves and rose-pink flowers in a panicle. Native to the Caucasus.

78959. SEDUM POPULIFOLIUM Pall.
Poplar stonecrop.

A shrubby glabrous succulent up to 10 inches high, with ovate-acute coarsely toothed leaves 1½ inches long and terminal cymes of pinkish flowers. Native to Siberia.

78960. SEDUM RUPESTRE L.

A succulent perennial 6 to 12 inches high, from western Europe, with glaucous stems and foliage which redden with age. The numerous yellow flowers are in umbellate cymes.

78961. SEDUM SEMENOVII Masters.

An Asiatic succulent with annual stems about a foot high, from a perennial rhizome. The sessile leaves, in six rows, are an inch long, and the whitish flowers are in compact globose terminal cymes.

78962. SEDUM SPURIUM Bieb.

Variety *splendens*. A succulent perennial, native to Asia Minor, with a rosette of cuneate-obovate pubescent leaves and a corymb of flesh-colored flowers, purple veined beneath.

78963. SEDUM TELEPHIUM L.
Liveforever.

An erect fleshy perennial a foot or more high with scattered oblong-ovate leaves and numerous pink, red-spotted flowers in dense terminal and lateral cymes. Native from central Europe to Siberia.

78915 to 78974—Continued.

78964. *SEDUM TELEPHIUM BORDERI* Masters.

A variety with reddish stems and flat-topped corymbs of pink flowers.

78965 to 78973. *SEMPERVIUM* spp. Crasulaceae.
Houseleek.

78965. *SEMPERVIUM ARENARIUM* Koch.
Sand houseleek.

A succulent European alpine which forms globular rosettes of 60 to 80 bright-green oblanceolate leaves. The pale-yellow flowers are in dense heads.

78966. *SEMPERVIUM BARBATUM* C. Smith.

A shrubby succulent with stout stems and flat rosettes of oblong spatulate leaves. The yellow flowers are in rather open panicles. Native to the Canary Islands.

78967. *SEMPERVIUM GLAUCUM* Tenore.
Fuzzy houseleek.

A succulent alpine, native to central Europe, which forms rosettes 2 to 3 inches in diameter, with oblanceolate glaucous leaves and about a dozen pale or bright-red flowers in a short compact panicle on a densely hairy stem about a foot high.

78968. *SEMPERVIUM SANGUINEUM* Jeanb.

A low compact reddish hairy succulent alpine with oval-acuminate leaves and small pink flowers in few-flowered clusters on slender stems 5 to 8 inches long. Native to the Pyrenees.

78969. *SEMPERVIUM SCHNITTSPAHNII* Lagr.

A succulent alpine, native to Switzerland, with a rosette of narrowly ovate smooth leaves and pink flowers on an upright stem.

78970 to 78972. *SEMPERVIUM TECTORUM* L.
Roof houseleek.

A European herbaceous perennial with rosettes of obovate sharp-pointed thick pale-green leaves having distinct red tips, and densely pilose flowering stems a foot high, bearing branched panicles of pale-red flowers.

78970. Variety *glaucum*.

78971. Variety *pulchrum*.

78972. Variety *robustum*.

78973. *SEMPERVIUM VERLOTI* Lamotte.

An alpine succulent with small rosettes of dark-green obovate leaves about an inch long, and 8 to 12 small rose-colored flowers on each peduncle of a branched panicle. Native to western Europe.

78974. *VIBURNUM DASYANTHUM* Rehder.
Caprifoliaceae.

A hardy ornamental shrub 7 feet high from the mountains of western Hupeh, China, where it grows at altitudes of 4,000 to 9,000 feet. The narrow toothed leaves are dark metallic green above, paler beneath, and prominently veined. The flowers are in lax panicles, and the small red berries make the shrub a striking object of beauty in the fruiting season.

78975 to 79052.

From Kew, Surrey, England. Seeds and bulblets presented by Dr. A. W. Hill. Director, Royal Botanic Gardens. Received March 1, 1929.

78975 to 79001. *ALLIUM* spp. Liliaceae.
Onion.

78975. *ALLIUM BEESIANUM* W. W. Smith.

An ornamental western Chinese onion, 9 to 18 inches high, with pendulous blue flowers.

For previous introduction see No. 76204.

78976. *ALLIUM BIDWILLIAE* S. Wats.

A pink-flowered onion about a foot high, native to the Sierra Madre Mountains, Calif.

For previous introduction see No. 66424.

78977. *ALLIUM CARINATUM* L.

Bulblets of a species with narrowly linear leaves and lilac-purple flowers, produced in a comparatively large head. It is found throughout southern Europe, especially in the Alps.

For previous introduction see No. 73522.

78978. *ALLIUM CAERULEUM* Pall.

A wild Russian onion, 2 feet or more high, with linear leaves and attractive light-blue flowers in erect rounded umbels.

78979. *ALLIUM CYANEUM* Regel.

A rather dwarf plant, less than a foot high, with small heads of pendulous bright-blue flowers. Native to northern China.

For previous introduction see No. 73523.

78980. *ALLIUM FISTULOSUM* L.
Welsh onion.

Bulbs of a hardy onion, about 2 feet high, with green and yellow flowers.

For previous introduction see No. 63155.

78981. *ALLIUM GIGANTEUM* Regel.

One of the tallest members of the genus, becoming 4 feet high. It is native to the Himalayas. The bulbs are large, and the fleshy leaves are about 18 inches in length lying close to the ground. The bright-lilac flowers are in heads 4 inches in diameter.

For previous introduction see No. 58871.

78982. *ALLIUM HYMENORRHIZUM* Ledeb.

A perennial moisture-loving Russian species with linear leaves and purplish-violet flowers.

For previous introduction see No. 73598.

78983. *ALLIUM KARATAVIENSE* Regel.

An onion, native to Turkestan, with dense umbels of dull-pink flowers and

78975 to 79052—Continued.

very ornamental broad leaves of a striking blue-green color.

For previous introduction see No. 76335.

78984. *ALLIUM MACRANTHUM* Baker.

A handsome herbaceous perennial from the eastern Himalayas. The flat leaves are over a foot long, and the mauve-purple flowers are produced in clusters of 50 or more on scapes 2 feet high.

For previous introduction see No. 66429.

78985. *ALLIUM NEAPOLITANUM* Cirillo.

A southern European species, about 1½ feet high, with flat leaves and very ornamental white flowers, hardy in the South and requiring light perfectly drained soil.

For previous introduction see No. 58877.

78986. *ALLIUM ODORUM* L.

A European onion, cultivated in Japan for its leaves, which are produced abundantly in the spring and eaten as greens.

For previous introduction see No. 76336.

78987. *ALLIUM OSTROWSKIANUM* Regel.

A particularly striking species from Turkestan with deep rose-colored flowers produced freely in many-flowered umbels on scapes 12 inches high.

For previous introduction see No. 76208.

78988. *ALLIUM OVIFLORUM* Regel.

A low bulbous alpine about 2 inches high, with linear leaves up to 20 inches long and violet-purple flowers in a lax umbel. Native to the Himalayas.

78989. *ALLIUM PARADOXUM* (Bieb.) Don.

Bulbets of a perennial onion, a foot high, with white flowers. Native to Siberia.

For previous introduction see No. 66431.

78990. *ALLIUM PENDULINUM* Tenore.

An Italian alpine, with linear keeled leaves, and long-peduncled nodding whitish flowers.

78991. *ALLIUM SCHOENOPRASUM* L.
Chives.

The sand leek or rocambole of Europe and Asia Minor, which resembles garlic but has smaller bulbs of milder flavor produced at the tip of the stem as well as at its base. Its flowers are dull lavender pink, and the plant is useful in the perennial border.

For previous introduction see No. 68057.

78992. *ALLIUM SCORZONERAEFOLIUM* DC.

Bulbets of a species of unknown origin, cultivated in European gardens. It has very narrow concave leaves and

78975 to 79052—Continued.

small yellow flowers in a few-flowered umbel.

For previous introduction see No. 58882.

78993. *ALLIUM SENESCENS* L.

A wild European onion, 1 to 2 feet high, with narrow, erect, often-twisted leaves and numerous, rather small, pink or lilac flowers in dense heads.

78994. *ALLIUM STELLATUM* Fraser.

A bulbous plant with 3-angled narrowly linear leaves and terminal umbels of deep-pink flowers on erect scapes. Native to the central United States.

78995. *ALLIUM SUBANGULATUM* Regel.

A caespitose bulbous plant with semiterete linear leaves and rosy purple flowers borne in a dense rounded umbel at the summit of an erect or ascending scape. Native to central China.

78996. *ALLIUM SUBHIRSUTUM* L.

A bulbous perennial native to the Mediterranean region with hairy margined narrow leaves a foot high and white flowers.

For previous introduction see No. 76337.

78997. *ALLIUM TANGUTICUM* Regel.

A hardy bulbous plant, up to 16 inches high, with numerous linear leaves and dense hemispherical umbels of purplish flowers. Native to western China.

78998. *ALLIUM URSINUM* L.

A wild European onion which grows in large masses in the open woods. When in flower it is very effective, clothing the ground with its broad green leaves, above which the numerous umbels of white flowers are borne on scapes a foot high.

For previous introduction see No. 58690.

78999. *ALLIUM VINEALE* L.

Bulbets of a pink-flowered wild onion, about a foot high, native to England.

79000. *ALLIUM YUNNANENSE* Diels.

A caespitose onion, native to southwestern China, with linear leaves about 6 inches long and pink or purplish flowers on scapes 4 to 16 inches long.

For previous introduction see No. 69906.

79001. *ALLIUM ZEBBANENSE* Boiss. and Noe.

A bulbous plant, 2 feet high, with linear-lanceolate leaves and three to five white flowers in an umbel. Native to Syria.

79002 to 79006. *BERBERIS* spp. Berberidaceae. **Barberry.**79002. *BERBERIS JULIANAE* C. Schneid. **Wintergreen barberry.**

A shrubby evergreen barberry, up to 7 feet high, native to western China. It has thick, 3-cleft spines about 1½ inches long, narrowly oval leathery leaves, and small yellow flowers, followed by blue-black fruits.

78975 to 79052—Continued.

For previous introduction see No. 65599.

79003. BERBERIS LECOMTEI C. Schneid.

A shrub up to 7 feet high, with slender yellowish-brown spines, one-half inch long, thin lanceolate leaves, and small yellow flowers. Native to southwestern China.

79004. BERBERIS LYCIUM Royle.

A half-evergreen shrub, 10 feet high, with narrow bright-green leaves and pale-yellow flowers followed by ovoid violet berries. It is native to northern India.

For previous introduction see No. 76215.

79005. BERBERIS ORTHOBOTRYS Bienert.

A semievergreen barberry with very large crimson berries.

For previous introduction see No. 66688.

79006. BERBERIS POLYANTHA Hemsl.

A practically evergreen shrub 6 to 10 feet high, somewhat like *B. aggregata*, with slender simple or 3-pronged thorns, obovate leaves mostly rounded at the apex, and yellow flowers which are produced during June and July in large drooping panicles. The red berries are quickly destroyed by frost. Native to China.

For previous introduction see No. 58140.

79007 to 79011. BRASSICA spp. Brassicaceae. Mustard.

79007. BRASSICA BALEARICA Pers.

A wild perennial mustard, native to the Balearic Islands, about 2 feet high, with a woody base.

79008. BRASSICA CAMPESTRIS L.

Rutabaga.

79009. BRASSICA ERUCASTRUM L.

A wild perennial mustard with yellow flowers, native to the mountains of southern Europe.

79010. BRASSICA LAEVIGATA Lag.

An annual mustard up to 8 inches high, with pinnatifid leaves in a basal rosette and small white flowers.

79011. BRASSICA NIGRA (L.) Koch. Black mustard.

For previous introduction see No. 45001.

79012. CYTISUS SPACHIANUS (Webb) Kuntze.

A Canary Island shrub, 6 to 8 feet high, with elongated racemes of fragrant bright-yellow flowers.

For previous introduction see No. 76246.

79013. DIANTHUS REQUIENII Godr. Pink.

A hardy herbaceous perennial up to 10 inches high, rather stiff linear leaves, and a solitary bright-red flower. Native to the Pyrenees.

79014 to 79016. DIMORPHOTHECA spp. Asteraceae.

78975 to 79052—Continued.

79014. DIMORPHOTHECA AURANTIACA DC. Winter cape-marigold.

A South African perennial, somewhat shrubby at times, with thickish oblong or spatulate leaves and large heads of orange-yellow flowers.

79015. DIMORPHOTHECA HYBRIDA (L.) DC. Cape-marigold.

A South African composite of variable size and habit. The hairy obovate leaves are 1 to 3 inches long, and the flowers, about 2 inches across, are white above and purple beneath.

79016. DIMORPHOTHECA PLUVIALIS (L.) Moench. Cape-marigold.

An erect or diffuse, simple or branched annual from the Cape of Good Hope. The oblong or obovate leaves are hairy, and the flowers, white above and purple beneath, are in terminal heads.

79017 to 79020. ERICA spp. Ericaceae. Heath.

79017. ERICA AUSTRALIS L.

An evergreen shrub 2 to 3 feet high, native to Portugal, with small rose-purple flowers.

79018. ERICA SCOPARIA L. Besom heath.

An evergreen southern Europe shrub, 10 feet high, with upright branches, small lustrous dark-green linear leaves in whorls of three or four, and long cylindrical spikes of greenish-white flowers.

For previous introduction see No. 78681.

79019. ERICA STRICTA Donn. Corsican heath.

For previous introduction and description see No. 78898.

79020. ERICA TETRALIX L. Crossleaf heath.

A low shrub with its leaves in whorls of four and umbellate clusters of rosy flowers. Native to western Europe.

79021 to 79028. GENTIANA spp. Gentianaceae. Gentian.

79021. GENTIANA ASCLEPIADEA L. Milkweed gentian.

For previous introduction and description see No. 78858.

79022. GENTIANA ASCLEPIADEA L. Milkweed gentian.

Variety *alba*. A white-flowered form.

79023. GENTIANA CRUCIATA L. Cross gentian.

For previous introduction and description see No. 78931.

79024. GENTIANA FETISOWII Regel and Winkler.

A hardy herbaceous perennial, native to Turkestan, about 6 inches high, with small deep-blue flowers.

79025. GENTIANA FREYNIANA Borum.

A vigorous species rather close to *Gentiana septemfida*, requiring similar

78975 to 79052—Continued.

conditions and making a good garden plant with fine bright-blue, bell-shaped flowers in late summer.

79026. GENTIANA FRIGIDA Haenke.

An alpine perennial, native to central Europe, scarcely 3 inches high, with opposite, lanceolate, somewhat fleshy leaves about 1 inch long and terminal white flowers marked with blue.

79027. GENTIANA GROMBEZEWSKII Hort.

A place of publication or description for this name has not been found.

79028. GENTIANA TIBETICA King.
Himalayan gentian.

For previous introduction and description see No. 78939.

79029. IRIS CHRYSOGRAPHES Dykes, Iridaceae. **Goldvein iris.**

One of the handsomest of the Siberian irises; the velvety dark-purple flowers are brightened by golden reticulations at the throat, running into a signal patch in the blade.

For previous introduction see No. 73545.

79030. IRIS MILESII Baker, Iridaceae.

A semievergreen Himalayan iris related to *Iris tectorum* with seven or eight leaves 2 to 3 feet long on the tall flower stem; the latter is branched and bears about four heads of small rosy lilac flowers, more or less spotted with darker magenta.

For previous introduction see No. 67265.

79031. KALMIA CUNEATA Michx. Ericaceae. **Kalmia.**

An erect deciduous shrub with slender straggling stems up to 3 feet long and oblong-oval leaves. The creamy white flowers, with a red band within, are in small lateral umbels. Native to the southeastern United States.

79032. KALMIA POLIFOLIA Wang, (*K. glauca* Ait.), Ericaceae. **Bog kalmia.**

A hardy evergreen shrub, native to Newfoundland, with opposite, narrow-oblong leathery leaves and a terminal corymb of purple flowers.

79033. MUSCARI ARMENIACUM Leichtl. Liliaceae. **Grape-hyacinth.**

A handsome hardy bulbous plant, native to Armenia, with many linear leaves overtopping the racemes of deep-violet flowers. One of the last of the grape-hyacinths to flower.

For previous introduction see No. 66586.

79034. MUSCARI SZOVITSIANUM Baker. Liliaceae. **Grape-hyacinth.**

A bulbous perennial, native to Persia, with leaves 6 inches long and several scapes 5 inches high, bearing clusters of slightly fragrant bright-blue flowers.

79035 to 79038. PAEONIA spp. Ranunculaceae. **Peony.****79035. PAEONIA ANOMALA** L.

A strong-growing, wild Siberian peony 1 to 2 feet high, found on well-drained

78975 to 79052—Continued.

hillsides. Flowers large and of a pale-rose color; foliage somewhat coarse.

For previous introduction see No. 66593.

79036. PAEONIA ARIETINA Anders.

A European herbaceous peony about 3 feet high, with 5-lobed or 6-lobed leaves and a large solitary dark-red flower.

For previous introduction see No. 67044.

79037. PAEONIA DELAVAYI Franch.

A very attractive vigorous shrub 4 feet high, growing on steep slopes among limestone boulders and in alpine meadows at altitudes of 10,000 to 13,000 feet. The deep-crimson flowers are 3 inches in diameter. Native to southwestern China.

For previous introduction see No. 55994.

79038. PAEONIA LUTEA Delavay. **Golden peony.**

A shrubby Chinese peony with a short woody stem 1 or 2 feet high and deep-green leathery 3 parted leaves, white beneath, and about a foot in length. The golden-yellow single or slightly double flowers are 2½ inches across.

For previous introduction see No. 67048.

79039. PETERIA RAMENTACEA (Sieber) Presl. (*Cytisus weldeni* Vis.). Fabaceae.

An upright leguminous shrub, 6 feet or less in height, with trifoliolate leaves and dense upright racemes of fragrant yellow flowers. Native to southern Europe.

For previous introduction see No. 66599.

79040. SORBUS FOLGNERI (C. Schneid.) Rehd. (*Pyrus folgneri* Leveille). Malaceae. **Mountain-ash.**

A handsome Chinese tree with gracefully spreading branches and oval leaves, dark-green above and white-hairy beneath. The ovoid red berries are about one-half inch long.

For previous introduction see No. 61990.

79041 to 79043. RHODODENDRON spp. Ericaceae.**79041. RHODODENDRON DECORUM** Franch.

A western Chinese shrub with glabrous leaves, glaucous beneath, and broadly bell-shaped white or pink flowers 2 inches across.

For previous introduction see No. 53729.

79042. RHODODENDRON SMIRNOWI Trautv. **Smirnow rhododendron.**

A shrub or small tree, reputed to be hardy, about 20 feet high with dark-green leaves, grayish hairy beneath, and compact heads of rosy red flowers, each about 3 inches across. Native to the Caucasus.

For previous introduction see No. 63773.

79043. RHODODENDRON TSCHONOSKII Maxim.

78975 to 79052—Continued.

A Japanese forest shrub with flaky bark, elliptic leaves one-third inch long, and heads of two to four small white flowers.

79044 to 79046. *SEDUM* spp. *Crassulaceae*.
Stonecrop.

79044. *SEDUM ELLACOMBIANUM* Praeger.

For previous introduction and description see No. 78954.

79045. *SEDUM EWERSII* Ledeb.
Ewers stonecrop.

For previous introduction and description see No. 78955.

79046. *SEDUM MIDDENDORFFIANUM* Maxim.
Middendorff stonecrop.

A hardy succulent caespitose perennial up to 16 inches high, with narrow leaves up to 3 inches long, and small yellow flowers in dense cymes. Native to eastern Siberia.

79047. *SEMPERVIIVUM ASSIMILE* Schott.
Houseleek.

A Rumanian succulent with rosettes of 60 to 80 oblanceolate leaves and pale-rose flower, about three-fourths inch across in cymes on stems about 6 inches high.

79048. *SEMPERVIIVUM TRISTE* Baker.
Houseleek.

A small fleshy plant which forms rosettes 2 to 3 inches in diameter, composed of oblanceolate leaves, red brown above and drab green beneath. The stem leaves are red brown throughout. The bright-red flowers, an inch across, are in a panicle 6 inches long. Country of origin unknown.

79049. *STRANVAESIA DAVIDIANA* SALICIFOLIA (Hutchinson) Rehd. *Malaceae*.

A rosaceous shrub, closely related to *Stranvaesia undulata*, from which it differs in its narrower, willowlike leaves and its fruits, which are red, not orange like those of *S. undulata*. The small white flowers are in terminal clusters. It comes from western China and is hardy in southeastern England.

For previous introduction see No. 62392.

79050 to 79052. *SYRINGA* spp. *Oleaceae*.
Lilac.

79050. *SYRINGA PINETORUM* W. W. Smith.

A hardy spreading ornamental shrub, 10 feet high, from western China. Somewhat like *Syringa microphylla*, with rosy lavender flowers.

79051. *SYRINGA SWEGINZOWII* Koehne and Ling.
Chengtu lilac.

An attractive hardy lilac, about 10 feet high, from western China. The dark-green, oval leaves are 2 to 4 inches long, and the fragrant, rosy lilac flowers are borne in June in terminal panicles up to 10 inches in length.

For previous introduction see No. 63584.

79052. *SYRINGA VILLOSA* Vahl.
Late lilac.

A bushy lilac about 8 feet high, with stout, upright branches, broadly oval,

78975 to 79052—Continued.

bright-green leaves, and pinkish-lilac flowers in panicles 3 to 7 inches long. Native to China and the Himalayas.

For previous introduction see No. 76044.

79053 to 79111.

From Ipswich, England. Seeds purchased from Thompson & Morgan. Received February 28, 1929.

79053 to 79055. *CYCLAMEN* spp. *Primulaceae*.

79053. *CYCLAMEN EUROPAEUM* L.
European cyclamen.

A low, more or less evergreen European perennial with a tuberous root, rounded or kidney-shaped leaves white marbled above and purplish beneath, and fragrant bright-red flowers on scapes 4 or 5 inches high in autumn.

79054. *CYCLAMEN MACROPHYLLUM* Sieber.

A low tuberous-rooted perennial, native to southern Europe, with large cordate, crenate leaves usually mottled with white, and in autumn white flowers on scapes 6 inches high.

79055. *CYCLAMEN NEAPOLITANUM* Tenore.
Neapolitan cyclamen.

A low perennial, 3 inches high, arising from a large black tuber. The deep-pink or rarely white flowers are borne in autumn. Native to Italy.

For previous introduction see No. 73535.

79056 to 79058. *DAPHNE* spp. *Thymelaeaceae*.

79056. *DAPHNE ALPINA* L.
Alpine daphne.

An erect European alpine shrub 2 feet high, with narrow deciduous leaves and fragrant white or pinkish flowers in terminal clusters.

79057. *DAPHNE LAUREOLA* L.

A shrub, up to 4 feet high, with shining dark-green leaves about 3 inches long and yellowish-green flowers in nearly sessile racemes. Native to southern Europe and western Asia.

79058. *DAPHNE STRIATA* Tratt.

A dwarf evergreen alpine shrub with small, wedge-shaped narrow leaves and pink flowers in many-flowered terminal heads. Native to Switzerland.

79059. *DIGITALIS ISABELLINA* Hort.
Scrophulariaceae.
Foxglove.

A new hybrid of *Digitalis purpurea*, with pinkish-yellow flowers, of the hue of *Lilium testaceum*.

79060 to 79062. *ERICA* spp. *Ericaceae*.
Heath.

79060. *ERICA CINEREA COCCINEA* Bean.

A very striking variety with red, almost scarlet, flowers, but less vigorous than the type.

79061. *ERICA STRICTA* Donn.
Corsican heath.

For previous introduction and description see No. 78898.

79062. *ERICA VAGANS* L. *Cornish heath*.

79053 to 79111—Continued.

For previous introduction and description see No. 78899.

79063. GENTIANA spp. **Gentiana-ceae.** **Gentian.**

79063. GENTIANA **GENTIANELLA** A. T. Johnson. **Stemless gentian.**

For previous introduction and description see No. 78857.

79064. GENTIANA ALPINA Vill.

An almost stemless alpine plant, native to central Europe, with small glistening gray-green leaves curving inward and imbricated, forming rosettes, and dark-blue flowers resembling in general style those of *G. gentianella*.

79065. GENTIANA ANGULOSA Bieb.

A tufted alpine, native to the Caucasus, with narrowly oval leaves and solitary bowl-shaped blue flowers, of the type of *G. verna*, but much larger.

79066. GENTIANA ASCLEPIADEA L. **Milkweed gentian.**

For previous introduction and description see No. 78853.

79067. GENTIANA BAVARICA L.

For previous introduction and description see No. 78859.

79068. GENTIANA BRACHYPHYLLA Vill.

A high alpine perennial, native to central Europe, forming spreading tufts with small round leaves and brilliant-blue flowers of the general type of *G. verna*, appearing in late summer.

79069. GENTIANA CALYCOSA Griseb.

A perennial about a foot high, with ovate leaves three-fourths of an inch long, and dark-blue, usually solitary, flowers. Native to northwestern North America.

79070. GENTIANA CLUSH Perr. and Song.

A low stemless perennial, possibly a form of *G. vulgaris*, with rosettes of leathery leaves and dark-blue flowers. Native to the Alps.

79071. GENTIANA CRUCIATA L. **Cross gentian.**

For previous introduction and description see No. 78931.

79072. GENTIANA DAHURICA Fisch.

A rather unattractive Siberian gentian about a foot high, with an ascending stem, linear-lanceolate leaves about 3 inches long, and sessile terminal dark-blue flowers 1½ inches long. Introduced for comparative study only.

79073. GENTIANA DETONSA Rottb.

A biennial gentian native to the cold regions of northwestern Asia, related to *G. crinita*, with a very short stem and oblong leaves arranged more or less in a basal rosette. The flowers, borne singly, are deep blue, with the corolla lobes wavy at the tips.

For previous introduction see No. 55274.

79074. GENTIANA FARRERI Balf. f.

A perennial, native to the mountains of western China, with thick roots and numerous freely rooting stolons which

79053 to 79111—Continued.

form wide-spreading masses. The thick opposite leaves are about half an inch long, and the solitary terminal flowers, which are so freely produced as to cover the plant, are blue with a white throat.

79075. GENTIANA FREYNIANA Borum.

For previous introduction and description see No. 79025.

79076. GENTIANA KESSELRINGI Regel.

A plant about 8 inches high, with whitish flowers dotted purple on the outside, useful for comparative study only. Native to Turkestan.

79077. GENTIANA KOCHIANA Perr. and Song.

An alpine gentian belonging to the *Acaulis* group, from central Europe with large flat thin light-green leaves and dark-blue flowers with five blackish-green spots on the throat. Some forms have been reported from the limestone regions.

79078. GENTIANA KURROO Royle.

A Himalayan gentian forming dense tufts from which rise lax stems up to 7 inches high with narrowly lanceolate leaves and bell-shaped blue flowers spotted with white inside. It is said to appreciate a sunny location, with ample moisture and perfect drainage, especially in spring and autumn.

79079. GENTIANA LAGODECHIANA Hort.

For previous introduction and description see No. 78860.

79080. GENTIANA MACROPHYLLA Pall.

A herbaceous perennial, native to northern Europe and Asia, with an erect or ascending stem, narrow spreading leaves, and clustered heads of dark-blue flowers. For comparative study only.

79081. GENTIANA NIVALIS L.

A slender annual about 3 inches high, native to Scotland, with small obovate leaves and solitary blue flowers appearing in late summer.

79082. GENTIANA PARRYI Engelm.

An alpine gentian up to 9 inches high, with large dark-purple flowers contrasting attractively with the broad pale-green leaves. It is said to need conditions similar to those required by *G. septemfida*.

79083. GENTIANA PHLOGIFOLIA Schott and Kotschy.

For previous introduction and description see No. 78933.

79084. GENTIANA PNEUMONANTHE L.

An erect perennial with many slender stems, dark narrow leaves, and dark-blue flowers in a cymelike raceme. Native to the mountain marshes in central Europe.

79085. GENTIANA PROLATA Balf. f.

A stoloniferous perennial with erect branches about 2 inches long, small succulent leaves, and a terminal blue flower about 2 inches long. Native to Sikkim.

79053 to 79111—Continued.

79086. *GENTIANA PRZEWALSKII* Maxim.

A lax-growing, free-flowering gentian from western China, rather like *G. kurroo*, with linear leaves about 6 inches long and flowers with nearly white tubes and cobalt-blue petals.

79087. *GENTIANA PUNCTATA* L.

A rather tall herbaceous perennial, native to central Europe, with yellow flowers spotted with brown, resembling but inferior to *G. lutea*.

79088. *GENTIANA PURDOMI* Hort.

A showy Asiatic gentian allied to but better than *G. przewalskii*, with rosettes of narrow glossy leaves, from which radiate prostrate stems, each carrying about a dozen bright-blue flowers.

79089. *GENTIANA PURPUREA* L.

For previous introduction and description see No. 78934.

79090. *GENTIANA SCABRA* Burge.

A hardy herbaceous perennial requiring conditions similar to those needed by *G. septemfida*. It has an erect stem a foot or less high, oval-oblong dark-green leaves, and terminal flowers an inch long. Native to Turkestan.

79091. *GENTIANA SEPTEMFIDA* Pall.

For previous introduction and description see No. 78861.

79092. *GENTIANA SETIGERA* A. Gray.

A rather stout perennial, with a thick root, 7 to 10 pairs of leaves, and blue flowers 1½ inches long. Native to California.

79093. *GENTIANA STRAMINEA* Maxim.

A prostrate perennial, native to western China, with attractive blue flowers.

79094. *GENTIANA VERNA* L.

For previous introduction and description see No. 78862.

79095. *GENTIANA WALUJEWI* Regel and Schmalh.

A dwarf gentian, native to Sinkiang, China, with white blue-spotted flowers.

79096. *IRIS CHRYSOPHYLLA* Howell. *Iris*.

An iris with low slender leafy stems 2 to 8 inches high, from slender root-stalks, linear leaves, and one to three yellow to white flowers 2 to 3 inches long. Native to southern Oregon in pine woods.

79097 to 79111. *PRIMULA* spp. *Primulaceae*. *Primrose*.

79097. *PRIMULA APOCLITA* Balf. and Forr.

A Tibetan primrose of the *Muscarioides* section, with a rosette of papery, oblong-spatulate leaves, and purplish-blue flowers borne on a scape 6 inches high.

79098. *PRIMULA BERMANICA* Balf. and Ward.

A stout moisture-loving primrose from western China, with oblanceolate leaves up to a foot long and reddish-

79053 to 79111—Continued.

purple flowers borne on a scape 2 feet high. It is a member of the *Candelabra* section.

79099. *PRIMULA CHIONANTHA* Balf. and Forr.

For previous introduction and description see No. 78913.

79100. *PRIMULA CHRYSOPA* Balf. and Forr.

A tufted perennial marsh-loving primrose from southwestern China, where it grows in moist stony alpine meadows. It has oblong, bright-green, somewhat fleshy, long-stemmed leaves and very attractive fragrant flowers borne in 2-flowered to 4-flowered umbels on the summit of the slender scape. The calyx is green or purplish and the oblique corolla pale lilac with a golden eye. The entire plant is more or less covered with a white mealy powder. This is a member of the *Farinosae* section.

For previous introduction see No. 56019.

79101. *PRIMULA CONSPERSA* Balf. and Purd.

A primrose from western China with linear-ovate leaves 4 to 6 inches long, and rose-pink flowers in whorls of about 12, on scapes a foot high. It is one of the *Farinosae* section.

79102. *PRIMULA CYANANTHA* Balf. and Forr.

A western Chinese primrose about a foot high, with papery oval-oblong leaves about 3 inches long in a rosette and intensely dark-blue fragrant flowers in a many-flowered terminal cluster. One of the *Muscarioides* section.

79103. *PRIMULA FLORINDAE* K. Ward.

A Tibetan primrose about 3 feet high, one of the *Sikkimensis* section, with cowslip-yellow fragrant flowers in an immense cluster of 60 to 80 flowers. The very large leaves resemble those of *Caltha palustris*, and the plant grows in running streams.

79104. *PRIMULA GLYCOSMA* Pettitt.

A strong-growing primrose of the *Candelabra* section, native to boggy situations in western China. The deep-purple flowers have golden centers.

79105. *PRIMULA HELODOXA* Balf.

For previous introduction and description see No. 78866.

79106. *PRIMULA LICHANGENSIS* Forrest.

A handsome primrose of the *Cortusoides* section, from southwestern China, where it reaches a height of 6 to 14 inches, growing on ledges and boulders in dry shady places. The fragrant flowers vary from rose to almost crimson, with greenish-yellow eyes. The foliage is very variable.

79107. *PRIMULA LITTONIANA* Forrest.

A very handsome plant, 2 to 3 feet tall, growing in swampy meadows in southwestern China at altitudes between 10,000 and 11,000 feet. It is one of the *Muscarioides* section. The

79053 to 79111—Continued.

pendent deep indigo-blue flowers are borne in long densely packed spikes, and the rich crimson calyxes are very striking.

For previous introduction see No. 59428.

79108. PRIMULA LITTONIANA Forrest.

Variety *grandiflora*. A giant form with spikes 8 inches long.

79109. PRIMULA NUTANS Delav.

A Chinese primrose 9 to 20 inches high, of the Muscarioides section, with obovate or oblanceolate hairy leaves, and clear-blue fragrant flowers in a terminal cluster.

79110. PRIMULA SIKKIMENSIS Hook.

For previous introduction and description see No. 78868.

79111. PRIMULA SMITHIANA Craib.

A perennial alpine primrose of the Candelabra section, with tall stems and whorls of soft-yellow flowers; very similar to *P. bulleyana*. Native to the Himalayas.

79112 to 79147.

From San Francisco, Calif. Seeds presented by John McLaren, Superintendent, Golden Gate Park. Received January 15, 1929.

79112. ACTINOTUS LEUCOCEPHALUS Benth. Apiaceae.

This Western Australian flannel flower is an erect much-branched herbaceous perennial about 2 feet high, entirely clothed in soft silky hairs. The leaves are divided into three linear segments which are again three lobed, and the flowers are numerous in densely packed umbels.

79113 to 79120. BANKSIA spp. Proteaceae.

79113. BANKSIA ATTENUATA R. Br.

An evergreen tree up to 40 feet high, native to Western Australia, with serrate linear leaves 6 inches long, densely white tomentose underneath, and cylindrical spikes of small flowers united into a thick woody cone from which the silky fruits eventually protrude.

79114. BANKSIA BAXTERI R. Br.

A tall evergreen shrub 8 to 10 feet high, with the leaves 3 to 4 inches long, divided into ovate-triangular segments, and nearly globular flower spikes, 2 to 3 inches in diameter, covered with long fine hairs. Native to Western Australia.

79115. BANKSIA COCCINEA R. Br.

An erect evergreen shrub 15 feet high, native to Western Australia, with broadly ovate leaves 3 inches long and brilliant red flowers an inch long, in globose heads 2 inches in diameter.

For previous introduction see No. 76636.

79116. BANKSIA LEMANNIANA Meisn.

An evergreen shrub with tomentose branches, flat regularly toothed, obovate-oblong leaves 3 inches long, loosely tomentose underneath, and globular to oblong dense flower heads 4 inches long.

79112 to 79147—Continued.

79117. BANKSIA OCCIDENTALIS R. Br.

An erect evergreen shrub up to 8 feet high, native to Western Australia, with glabrous branches, linear leaves 2 to 4 inches long, three toothed at the end and white underneath, and red flowers in ovoid to cylindrical clusters 3 to 6 inches long.

79118. BANKSIA PRIONOTES Lindl.

A Western Australian evergreen tree up to 30 feet high, with thick tomentose branches. The leaves, 8 to 12 inches long, are divided into regular sharp-pointed lobes, and the thick golden flower spikes are 5 inches long.

79119. BANKSIA SPECIOSA R. Br.

A tall evergreen shrub, native to Western Australia, with leaves a foot long, divided into numerous rounded triangular lobes and white tomentose beneath, and thick oblong yellow flower spikes 5 inches long.

79120. BANKSIA VERMICILLATA R. Br.

A small Western Australian tree with tomentose branchlets, nearly entire oblong or broadly linear leaves in whorls of four to six, and yellow flowers in cylindrical spikes 8 inches long.

79121. CASSIA PLEUROCARPA F. Muell. Caesalpiniaceae.

A tall erect Australian shrub with four or five rather distinct pairs of thick oblong leaflets and loose racemes of yellow flowers.

For previous introduction see No. 64479.

79122. CHAMAELAUCIUM CILIATUM Desf. Myrtaceae.

An erect bushy heathlike shrub 2 feet high, native to Western Australia, with very small linear terete leaves and very small shell-pink flowers clustered in the axils of the leaves at the ends of the branches.

79123. COMESPERMA SPINOSUM F. Muell. Polygalaceae.

A rigid much-branched spiny evergreen shrub, native to Western Australia, with the leaves reduced to small scales and the small flowers scattered along the branches.

79124. CONOSTYLIS DRUMMONDII Benth. Amaryllidaceae.

A woolly densely tufted herbaceous perennial, native to Western Australia, with rigid linear-terete leaves 6 to 9 inches long and several scapes bearing heads of small yellow flowers.

79125. DAVIESIA CORDATA J. E. Smith. Fabaceae.

An erect evergreen shrub 2 to 3 feet high, with elongated angled branches, ovate coriaceous leaves 3 to 4 inches long, having deeply cordate clasping bases, and axillary umbels of yellow and purple peashaped flowers. Native to Western Australia.

79126. GREVILLEA ERIOSTACHYA Lindl. Proteaceae.

A stout erect evergreen shrub 3 to 6 feet high, native to Western Australia, with narrowly linear leaves 8 inches long, usually pinnately divided into three to five segments, and small orange flowers in densely tomentose 1-sided racemes 6 inches long.

79112 to 79147—Continued.

79127 to 79129. *GASTROLOBIUM* spp.
Fabaceae.

These are all reported to be poisonous to livestock.

79127. *GASTROLOBIUM CALYCINUM* Benth.

An erect glabrous evergreen shrub 2 feet high, native to Western Australia, with rigid coriaceous sharp-pointed oblong to lanceolate leaves 2 inches long, and axillary and terminal racemes of rather large yellow and purple pea-shaped flowers.

79128. *GASTROLOBIUM EPACRIDIOIDES* Meisn.

A tall evergreen shrub with wand-like loosely villous branches, coriaceous spreading ovate leaves one-half inch long, and loose axillary clusters of yellow and purple pea-shaped flowers. Native to Western Australia.

79129. *GASTROLOBIUM VILLOSUM* Benth.

A softly tomentose decumbent evergreen shrub, 2 to 4 feet high, native to Western Australia, with opposite ovate leathery leaves 2 inches long and terminal racemes, 4 inches long, of orange and purple pea-shaped flowers.

79130. *GREVILLEA POLYBOTRYA* Meisn.
Proteaceae.

An erect evergreen shrub, native to North Australia and Western Australia, with entire oblong leaves sprinkled with shining silvery hairs when young, but pale and glabrous when mature. The large dense leafless panicles are made up of tomentose cylindrical spikes of small flowers.

79131. *HEMIGENIA CANESCENS* (Bartl.) Benth. Menthaceae.

A Western Australian evergreen shrub, 2 feet high, clothed with long loose, silky white pubescence, with thick soft spreading or recurved obovate leaves half an inch long, and small axillary 2-lipped pink or purple flowers.

79132. *HEMIGENIA INCANA* (Lindl.) Benth. Menthaceae.

An evergreen undershrub 2 to 3 feet high, native to Western Australia, covered with short appressed silky hairs, with oblong leaves 2 inches long and racemes of pink or purple flowers.

79133. *JACKSONIA DECUMBENS* Pritz. Fabaceae.

A low evergreen shrub with long decumbent branches, erect broadly linear cladodes, and rather large hairy yellow flowers borne singly or in small clusters at the tips of the branches.

79134. *KUNZEA MICRANTHA* Schauer. Myrtaceae.

A small erect evergreen shrub, native to Western Australia, with flat rigid linear leaves one-fourth inch long and dense terminal globular heads of small flowers.

79135. *KUNZEA SERICEA* (Labill.) Turcz. Myrtaceae.

A tall evergreen shrub, native to Western Australia, with rigid tortuous branches, silvery white very stiff leaves

79112 to 79147—Continued.

less than an inch long, and yellowish flowers, either solitary or in terminal clusters.

For previous introduction see No. 64488.

79136. *LESCHENAUTIA BILOBA* Lindl. Goodeniaceae.

An evergreen shrub 2 to 3 feet high, native to Western Australia, with slender scattered leaves one-half inch long. The flowers are either in small clusters in the upper axils or borne in large leafy terminal clusters. The corolla, about an inch long, has spreading dark-blue wings marked with parallel transverse veins, and the sepals are narrow like the leaves.

For previous introduction see No. 58674.

79137. *MELALEUCA ELLIPTICA* Labill. Myrtaceae.

A tall evergreen shrub, native to Western Australia, with elliptical evergreen leaves one-half inch long, and cylindrical spikes of large showy red flowers.

79138. *MELALEUCA* sp. Myrtaceae.

An evergreen Australian shrub with red flowers.

79139. *OLEARIA PAUCIDENTATA* F. Muell. Asteraceae.

An evergreen undershrub 3 feet high, native to Western Australia, with oblanceolate leaves 1 inch long and small asterlike flower heads in terminal panicles.

79140. *OXVLOBIUM CAPITATUM* Benth. Fabaceae.

An evergreen undershrub 3 feet high, native to Western Australia, with rigid branches, oblong to linear leaves 2 inches long, and axillary clusters or compact terminal racemes of small yellow pea-shaped flowers.

79141. *PATERSONIA XANTHINA* F. Muell. Iridaceae.

A herbaceous perennial, native to Western Australia, with a short stem, a rosette of linear leaves 2 feet long, and a spike of yellow irislike flowers with outer segments 1 inch long and very small inner segments.

79142. *PIMELEA PREISSII* Meisn. Thymelaeaceae.

An erect slender shrub 2 feet high, native to Western Australia, with opposite linear-lanceolate leaves one-half inch long and globular silky villous heads of small flowers.

79143. *SCAEVOLA PLATYPHYLLA* Lindl. Goodeniaceae.

An erect perennial, native to Western Australia, woody at the base with rigid herbaceous branches, ovate-sessile clasping leaves 2 inches long, and large silky winged white flowers in terminal leafy spikes.

79144. *SCAEVOLA STRIATA* R. Br. Goodeniaceae.

A diffuse hispid herbaceous perennial, 1 to 2 feet high, native to Western Australia, with coarsely toothed obovate

79112 to 79147—Continued.

leaves and axillary flowers 1 inch long having broad wings elegantly marked with transverse veins.

79145. SCHEFFLERA ACTINOPHYLLA (Endl.) Harms (*Brassia actinophylla* Endl.). Araliaceae.

A handsome umbrella-shaped evergreen tree up to 40 feet high, native to Queensland, with compound leaves made up of 6 to 16 leathery oblong leaflets 1 foot long, and racemes several feet long of small heads of angled dry fruits.

79146. SOLANUM ELLIPTICUM R. Br. Solanaceae.

A densely stellate pubescent under-shrub, native to Australia, either low and spreading or tall and erect, with ovate sinuate-margined leaves 3 inches long and lateral racemes of violet flowers.

79147. STENOCARPUS CUNNINGHAMII R. Br. Proteaceae.

A tall bushy evergreen shrub or small tree, native to North Australia, with oblong-lanceolate leaves 2 to 4 inches long and axillary umbels of 10 to 30 small red or yellow slightly irregular flowers less than one-half inch long.

79148 and 79149. ZELKOVA spp. Ulmaceae.

Varieties growing near the United States Department of Agriculture, Washington, D. C. Scions collected by Paul Russell, Bureau of Plant Industry. Received March 6, 1929.

79148. ZELKOVA SERRATA (Thunb.) Makino (*Z. acuminata* Planch.).
Sawleaf zelkova.

A handsome Japanese tree up to 90 feet high, with a short trunk dividing into many upright spreading branches and forming a broad round-topped head. The sharply serrate leaves are ovate and are usually 2 to 3 inches long, or on young shoots up to 8 inches long.

For previous introduction see No. 35301.

79149. ZELKOVA CARPINIFOLIA (Pall.) Dipp. (*Z. ulmoides* C. Schmid.).

A tree up to 75 feet high, native to the Caucasus region, with crenately serrate dark-green obovate leaves 2 to 6 inches long, resembling those of the hornbeam.

79150 to 79184.

From Paris, France. Seeds presented by Prof. D. Bois, Paris Museum of Natural History. Received March 9, 1929.

79150. ALOE ANDRINGITRENSIS Perrier. Liliaceae.

A stemless aloe, native to central Madagascar, with a rosette of 12 to 18 sub-falcate leaves about 17 inches long. The leaves have horny margins and are armed with very small marginal spines. The dark orange-red flowers are in dense racemes about 4 inches long.

For previous introduction see No. 77885.

79151. BERBERIS ANGULOSA Wall. Berberidaceae.
Barberry.

For previous introduction and description see No. 78915.

79150 to 79184—Continued.

79152. BERBERIS MORRISONENSIS Hayata. Berberidaceae.
Barberry.

A barberry closely resembling *Berberis dictyophylla*. It is an erect, densely branched shrub with 3-parted, spined, and fascicled leathery oval leaves. Unlike *B. dictyophylla*, the berries are in fascicles and are more nearly round.

For previous introduction see No. 66687.

79153. COTYLEDON UMBILICUS L. Crassulaceae.
Navelwort.

A perennial, fleshy plant, native to western Europe, which grows about a foot high and has succulent, orbicular leaves and pendulous racemes of yellowish-green flowers.

For previous introduction see No. 65005.

79154. DIMORPHOTHECA PLUVIALIS (L.) Moench. Asteraceae. Cape-marigold.

For previous introduction and description see No. 79016.

79155 to 79158. ERICA spp. Ericaceae.

79155. ERICA CILIARIS L.
Fringed heath.

For previous introduction and description see No. 78894.

79156. ERICA CINEREA L.
Twisted heath.

For previous introduction and description see No. 78680.

79157. ERICA TETRALIX L.
Crossleaf heath.

For previous introduction and description see No. 79020.

79158. ERICA VAGANS L. Cornish heath.

For previous introduction and description see No. 79062.

79159 to 79163. GENTIANA spp. Gentianaceae.
Gentian.

79159. GENTIANA ANGUSTIFOLIA Michx.

A slender ascending mostly un-branched plant, 4 to 16 inches high, with rigid linear or oblanceolate leaves and azure-blue flowers from 1½ to 2½ inches long. Native to the southern United States.

79160. GENTIANA ASCLEPIADEA L.
Milkweed gentian.

For previous introduction and description see No. 78858.

79161. GENTIANA CAPESTRIS L.

A low slender annual, native to Europe, with an erect stem 2 to 6 inches high, sessile narrow-oval leaves, and clusters of dark purplish-blue flowers.

79162. GENTIANA CRUCIATA L.
Cross gentian.

For previous introduction and description see No. 78931.

79163. GENTIANA PNEUMONANTHE L.

For previous introduction and description see No. 79084.

79164 to 79173. KALANCHOE spp. Crassulaceae.
Kalanchoe.

79150 to 79184—Continued.

79164. *KALANCHOE ALICIAE* Hammet.

A stout, erect, hairy succulent with opposite roundish or oval crenate leaves and rather large flowers in branched cymes. Native to central Madagascar.

For previous introduction see No. 78433.

79165. *KALANCHOE AROMATICA* Perrier.

A succulent perennial, native to Madagascar, characterized by being covered throughout with viscous red glands and by having a strong aromatic odor. The leaves are triangular-lanceolate, and the small flowers, greenish yellow with red lines, are in terminal cymes.

79166. *KALANCHOE CRENATA* Haw.

A succulent perennial, native to tropical Africa, 2 to 6 feet high, with a thick fibrous root, oblong or roundish oval crenate leaves about 2 inches long, and bright-yellow flowers one-half inch long, in terminal and axillary cymes.

79167. *KALANCHOE CRENATA* × *FELTHAMENSIS*.

Kalanchoe felthamensis is said to be a hybrid of *K. flammica* and *K. kirkitii*.

79168. *KALANCHOE DAIGREMONTIANA* Ham. and Perr.

A brownish-green succulent perennial, native to Madagascar, becoming about 2 feet high. The leaves are petiolate, sometimes peltate, green within, barred with brown, deeply crenate with plants from the angles. The small pink flowers are in lax terminal panicles.

For previous introduction see No. 78426.

79169. *KALANCHOE GASTONIS-BONNIERI* Ham. and Perr.

During the nonblooming periods this succulent, native to Madagascar, is a low plant with a very short stem and a rosette of light-green crenate leaves. When about to flower the stem elongates to a height of nearly 2 feet, bearing at its summit a lax corymb of light-pink flowers.

For previous introduction see No. 78428.

79170. *KALANCHOE GLOBULIFERA* COCCINEA Perrier.

A stout-branched succulent perennial up to a foot high, with elongated, thick, irregularly toothed obovate-spatulate leaves over 2 inches long, and numerous red flowers in large terminal corymblike cymes. Native to Madagascar.

79171. *KALANCHOE HILDEBRANDTII* Baill.

A woody succulent, native to Madagascar, with dense cymes of small yellow flowers.

79172. *KALANCHOE SYNSEPALA* Baker.

An erect succulent perennial, native to central Madagascar, with the lower leaves opposite, sessile, oblong-spatulate, and green with a red margin. The small reddish flowers are in dense terminal cymes.

79150 to 79184—Continued.

For previous introduction see No. 78431.

79173. *KALANCHOE ORGYALIS* Baker.

An erect succulent perennial with stems 6 to 7 feet long, oblong-spatulate leaves 3 to 5 inches long, and yellow flowers one-third inch long in dense terminal cymes. Native to central Madagascar.

79174. *KITAIBELIA VITIFOLIA* Willd. Malvaceae.

A tall hardy herbaceous perennial, up to 8 feet high, with maplelike leaves and showy white or rose-colored axillary flowers. Native to Czechoslovakia.

79175. *NOTHOSCORDUM FRAGRANS* (Vent.) Kunth. Liliaceae.

A bulbous plant, native to tropical America, closely related to the onion. The bulb is round and yellowish white, and the linear, obtuse leaves are 8 to 12 inches long. The fragrant flowers, white flushed with pink, have purplish stamens and anthers and are borne on a scape 20 inches high.

For previous introduction see No. 66096.

79176. *ORNITHOGALUM LONGEBRACTEATUM* Jacq. Liliaceae. **Star-of-Bethlehem.**

A bulbous plant, native to South Africa, with five or six fleshy, very narrow leaves 1 to 2 feet long and a dense raceme of whitish flowers on a scape about 2 feet long.

For previous introduction see No. 66964.

79177. *ORNITHOGALUM PYRENAICUM* L. Liliaceae. **Star-of-Bethlehem.**

A bulbous plant, about 2 feet high, with greenish flowers, native to Europe.

For previous introduction see No. 69930.

79178. *PASSIFLORA CAERULEA* L. Passifloraceae. **Bluecrown passionflower.**

A slender strong-growing vine, native to Brazil, with leaves divided into five to seven lanceolate segments and fragrant greenish white flowers 4 inches across. The rays of the crown are blue at the tip, white in the middle, and purple at the base, while the styles are light purple.

For previous introduction see No. 30902.

79179. *PINUS BUNGEANA* Zucc. Pinaceae. **Lacebark pine.**

A tree sometimes 100 feet high, native to China, with the bark exfoliating in large scales, leaving light-colored areas and on old trees becoming chalky white.

For previous introduction see No. 62470.

79180. *RUSCUS ACULEATUS* L. Convallariaceae. **Butchersbroom.**

A rigid evergreen shrub, native to Europe, 2 to 4 feet high, with branching grooved stems and sessile ovate cladodes replacing the leaves. The small white flowers are borne in the axil of a bract in the middle of each cladode and are followed by ovoid red berries one-half inch in diameter.

79150 to 79184—Continued.

For previous introduction see No. 68148.

79181. *SEDUM DASYPHYLLUM* L. Crassulaceae. **Leafy stonecrop.**

For previous introduction and description see No. 78953.

79182 to 79184. *SEMPERVIVUM* spp. Crassulaceae.

79182. *SEMPERVIVUM ARACHNOIDEUM* L. **Spiderweb houseleek.**

A fleshy perennial, native to southern Europe, with a barren rosette about three-fourths inch in diameter, composed of about 50 oblong wedge-shaped, pale-green leaves. The bright-red flowers are in a small dense panicle on a stem 3 to 4 inches high.

79183. *SEMPERVIVUM ARVERNENSE* Lecocq and Lamotte. **Houseleek.**

A succulent perennial, native to France, which forms barren rosettes about 2 inches in diameter and is copiously stoloniferous. The short thick leaves are pale green, and the pale-pink flowers are borne in a panicle 5 inches long and broad, on a stem about 5 inches high.

79184. *SEMPERVIVUM HAWORTHII* Salm-Dyck. **Houseleek.**

A succulent evergreen perennial with a woody stem and yellow flowers. Native to the Canary Islands.

79185 to 79341.

From Chêne-Bourg, Geneva, Switzerland. Seeds purchased from Henry Correvon, Floraire Nurseries. Received March 5, 1929.

79185. *BERBERIS FARRERI* Hort. Berberidaceae. **Barberry.**

79186 to 79198. *CYCLAMEN* spp. Primulaceae.

79186. *CYCLAMEN AFRICANUM* Boiss. and Reut.

A summer-blooming tuberous perennial with coarsely toothed kidney-shaped or heart-shaped leaves dull and pale green marbled above, and nearly white, purple-tinged flowers an inch long. It is native to Algeria.

79187. *CYCLAMEN ATKINSHI* T. Moore.

A hybrid between *Cyclamen coum* and *C. ibericum*. The leaves are reniform and dark green, spotted white, and the pale-rose or white flowers are usually lined or spotted red.

79188. *CYCLAMEN BALEARICUM* Willk.

A tuberous-rooted perennial with long-stemmed oval, heart-shaped leaves, dark green and white mottled above. The flowers, white and rose colored, are about three-fourths inch long. It is native to the Balearic Islands.

79189. *CYCLAMEN CILICICUM* Boiss. and Heldr.

A herbaceous perennial native to Sicily. It closely resembles *C. euro-paeum*, but the larger pale-rose flowers are stained purple at the mouth.

79190 and 79191. *CYCLAMEN COUM* Mill.

A spring-blooming tuberous-rooted plant, native from southeastern Europe

79185 to 79341—Continued.

to Persia, about 6 inches high, with rounded-reniform uniformly green leaves and small scentless purple flowers.

79190. **79191.**

79192. *CYCLAMEN EUROPAEUM* L. **European cyclamen.**

For previous introduction and description see No. 79053.

79193. *CYCLAMEN GRAECUM* Link.

An autumn-flowering perennial with obcordate irregularly dentate leaves and white or light-rose flowers with a deep-purple base. Native to southeastern Europe.

79194 and 79195. *CYCLAMEN HEDERAEFOLIUM* Ait.

79194. A herbaceous perennial with a large black tuber, hastate or kidney-shaped leaves with wavy edges, and pink or rarely white flowers. It is native to southwestern Europe.

79195. Variety *album*. A white-flowered form.

79196. *CYCLAMEN IBERICUM* Stev.

A dwarf herbaceous perennial, native to the Caucasus region, with oval-rounded leaves zoned with white above and purple flowers with darker colored throats.

79197. *CYCLAMEN JOVIS* Hildebrand.

A low herbaceous perennial with a large black tuber, native to Asia Minor. The leaves vary in shape from hastate to rounded-reniform, and the slender flowers are pink or rarely white.

79198. *CYCLAMEN REPANDUM* Sibth. and Smith.

A spring-flowering tuberous-rooted plant with cordate undulate-lobed leaves and showy purple flowers. Native to the Mediterranean countries.

79199 to 79213. *DAPHNE* spp. Thymelaeaceae.

79199. *DAPHNE ACUTILOBA* Rehdér.

A shrub, native to western China, about 5 feet high, with leathery lanceolate leaves 1 to 3 inches long and fragrant white flowers one-half inch long in few-flowered heads.

79200. *DAPHNE ALPINA* L. **Alpine daphne.**

For previous introduction and description see No. 79056.

79201. *DAPHNE MEZEREUM* L. **February daphne.**

Variety *autumnalis*. A form with large purple flowers, often blooming in the fall.

79202. *DAPHNE OLEOIDES* Schreb. (*Daphne buxifolia* Vahl).

Olive daphne.

An evergreen shrub, native to southeastern Europe, up to 3 feet high, with pubescent branches, hairy obovate-lanceolate leaves, and white or pale-lilac flowers in few-flowered heads.

79203. *DAPHNE CAUCASICA* Pall. **Caucasian daphne.**

79185 to 79341—Continued.

A hardy deciduous shrub, up to 4 feet high, with lanceolate leaves and fragrant white flowers in terminal heads of 3 to 20 flowers. Native to the Caucasus region.

For previous introduction see No. 38420.

79204. DAPHNE CNEORUM L.
Rose daphne.

A low trailing evergreen shrub, native to Europe, with crowded oblanceolate dark-green leaves and rather dense heads of small fragrant pink flowers.

79205. DAPHNE GNIDIUM L.

For previous introduction and description see No. 78678.

79206. DAPHNE HAEMATOCARPA Hort.

An ornamental shrub with blood-red fruits.

79207. DAPHNE LAUREOLA L.

For previous introduction and description see No. 79057.

79208 and 79209. DAPHNE MEZEREUM L.
February daphne.

79208. An erect deciduous shrub, about 4 feet high, with alternate oblong leaves, fragrant, lilac-purple flowers, usually in threes, appearing long before the leaves, and ovoid-roundish scarlet fruits. It is native to southeastern Europe and the Caucasus region.

79209. Variety *album*. A white-flowered form.

79210. DAPHNE LAUREOLA PHILIPPI
(Gren. and Godr.) Meisn.

A dwarf variety, native to the Pyrenees, with the stems more fully covered with smaller leaves and with smaller, fragrant flowers, often violet, outside.

79211. DAPHNE PONTICA L.

An evergreen shrub, native to southeastern Europe and western Asia, about 5 feet high, with obovate-cuneate shining-green leaves 2 to 3 inches long and fragrant greenish-yellow flowers in small clusters.

79212. DAPHNE PETRAEA Leyb. (D. rupestris Facch.).

A dwarf evergreen shrub with small linear-lanceolate obtuse leaves and fragrant light-pink flowers in small terminal heads. It is native to central Europe.

79213. DAPHNE STRIATA Tratt.

For previous introduction and description see No. 79058.

79214 to 79219. EPHEDRA spp. Gnetaceae.
Jointfir.

79214. EPHEDRA ALTISSIMA Desf.
Climbing jointfir.

A handsome woody climber, native to North Africa, 10 to 20 feet high, with minute green leaves, and especially striking when covered with its ovoid scarlet berries.

For previous introduction see No. 74181.

79185 to 79341—Continued.

79215. EPHEDRA AMERICANA ANDINA
(Poepp.) Stapf.

A low alpine shrub with short subulate leaves and fruiting aments about an inch long. It is native to the Andes of Chile.

79216. EPHEDRA FRAGILIS Desf.

A low bushy evergreen plant, native to the Mediterranean countries, with minute leaves borne on slender pale-green branches.

For previous introduction see No. 69035.

79217. EPHEDRA FOLIATA Boiss. and Kotschy.

A low shrub, native to Persia, with gray-green cylindrical branches and inconspicuous subulate leaves less than an inch long.

79218. EPHEDRA HELVETICA Meyer.

An alpine evergreen bush, native to Switzerland, with pale-green branches and minute leaves. This is said to yield the alkaloid known as ephedrine, a powerful heart stimulant and astringent.

For previous introduction see No. 69036.

79219. EPHEDRA MAJOR PROCERA (Fisch. and Mey.) Aschers. and Graebn.

A shrub, native to the Caucasus, 4 to 5 feet high, with smooth stiff gray-green branches, minute leaves, and nearly sessile yellowish aments.

79220 to 79286. GENTIANA spp. Gentiana-ceae.
Gentian.

79220. GENTIANA GENTIANELLA A. T. Johnson.
Stemless gentian.

For previous introduction and description see No. 78857.

79221. GENTIANA ALPINA Vill.

For previous introduction and description see No. 79064.

79222. GENTIANA ANGULOSA Bieb.

For previous introduction and description see No. 79065.

79223. GENTIANA ANGUSTIFOLIA Michx.

For previous introduction and description see No. 79159.

79224. GENTIANA ASCLEPIADEA L.
Milkweed gentian.

For previous introduction and description see No. 79160.

79225. GENTIANA BARBATA Froel.

An erect branched annual, native to Siberia, where it grows in damp situations. It is 3 to 18 inches high, with linear or lanceolate leaves and blue flowers.

79226 and 79227. GENTIANA BAVARICA L.

79226. For previous introduction and description see No. 79067.

79227. Variety *subacaulis*.

79228. GENTIANA BIGELOVII A. Gray.

A purple-flowered gentian, native to the southwestern United States, which

79185 to 79341—Continued.

forms large clumps with 40 to 50 stems over a foot high, bearing 10 to 20 flowers.

79229. GENTIANA BRACHYPHYLLA Vill.

For previous introduction and description see No. 79068.

79230. GENTIANA BURSERI Lapeyr.

A low alpine perennial, native to the Pyrenees, with an unbranched stem, less than a foot high, oval-elliptic leaves, and yellowish flowers with the corollas mostly six cut.

79231. GENTIANA CALYCOSA Griseb.

For previous introduction and description see No. 79069.

79232. GENTIANA CLUSII Perr. and Song.

For previous introduction and description see No. 79070.

79233. GENTIANA CRUCIATA L.
Cross gentian.

For previous introduction and description see No. 79162.

79234. GENTIANA DAHURICA Fisch.

For previous introduction and description see No. 79072.

79235. GENTIANA DECUMBENS L. f.

A stout erect perennial, up to 10 inches high, with oblong or elliptic leaves, mostly radical, and blue flowers. Native to the Himalayas.

79236. GENTIANA DEPRESSA D. Don.

A low, nearly stemless alpine perennial, native to the Himalayas, with broadly elliptic leaves about three-fourths of an inch long and small solitary blue flowers.

79237. GENTIANA DETONSA Rottb.

For previous introduction and description see No. 79073.

79238. GENTIANA DINARICA Beck.

An alpine gentian, native to the Austrian Alps, with broad thick erect leaves and dark-blue flowers.

79239. GENTIANA ELEGANS A. Nels.

An annual alpine gentian, about 8 to 12 inches high, with numerous simple stems, each terminated by a single deep-blue flower 2 inches long. Each stem bears three to six pairs of ovate or oblong leaves. Native to the western United States.

79240. GENTIANA EXCISA Presl.

A stemless alpine gentian, native to the Austrian Alps, about 3 inches high, with elliptic-oblong leaves and rather large blue flowers.

79241. GENTIANA FARRERI Bal. f.

For previous introduction and description see No. 79074.

79242. GENTIANA FAVRAII Rittner.

An alpine gentian, closely allied to *G. cerna*, but distinguished by its very short stem, small roundish leaves in a rosette, and by the roundish shape of its petals. Native to the French Alps.

79243. GENTIANA FETISOWII Regel and Winkler.

Variety *alba*. A white-flowered form.

79185 to 79341—Continued.

For previous introduction and description see No. 79024.

79244. GENTIANA FREYNIANA Borum.

For previous introduction and description see No. 79075.

79245 and 79246. GENTIANA FRIGIDA Haenke.

79245. For previous introduction and description see No. 79026.

79246. Variety *alba*.

79247. GENTIANA FROELICHII Jan.

A short-stemmed, nearly tufted alpine gentian with solitary blue flowers. Native to the German Alps, where it is rare.

79248. GENTIANA GENTIANELLA A. T. Johnson.
Stemless gentian.

For previous introduction and description see No. 78857.

79249. GENTIANA GROMBEZEWSKII Hort.

For previous introduction and description see No. 79027.

79250. GENTIANA HOLOPETALA (A. Gray) Holm.

A slender erect alpine plant, 2 to 16 inches high, with very narrow leaves and sky-blue flowers 1 inch or more long. Native to the Sierra Nevada Mountains of California.

79251. GENTIANA HOOKERI Griseb.

An alpine gentian, about 4 inches high, with oblong-spatulate leaves one-half inch long and flowers three-fourths of an inch long. It is native to South America.

79252. GENTIANA IMBRICATA Froel.

A low alpine perennial, native to limestone regions in the Swiss Alps, about 3 inches high, with acute leaves and blue flowers with crenate petals.

79253. GENTIANA KESSELRINGI Regel.

For previous introduction and description see No. 79076.

79254. GENTIANA KOCHIANA Perr. and Song.

For previous introduction and description see No. 79077.

79255. GENTIANA LAGODECHIANA Hort.

For previous introduction and description see No. 79079.

79256. GENTIANA MOORCROFTIANA Wall.

A stiff upright annual, native to the Himalayas, 8 to 16 inches high, with pale-blue flowers about 1½ inches across in nearly terminal clustered cymes.

79257. GENTIANA NEWBERRYI A. Gray.

A dwarf alpine gentian, native to the Sierra Nevada Mountains of California, with obovate or spatulate leaves and pale-blue flowers, white within, about an inch long.

79258. GENTIANA OLIVIERI Griseb.

A herbaceous perennial, native to mountain pastures in the Himalayas, about 9 inches high, with dark-blue flowers in umbellike cymes.

79185 to 79341—Continued.

79259. *GENTIANA PANNONICA* Scop.

A tall, stout perennial, native to Europe, with broadly elliptical to narrowly ovate leaves and flowers which are purple above.

79260. *GENTIANA PARRYI* Edgelm.

For previous introduction and description see No. 79082.

79261. *GENTIANA PHLOGIFOLIA* Schott and Kotschy.

For previous introduction and description see No. 79083.

79262. *GENTIANA PNEUMONANTHE* L.

For previous introduction and description see No. 79163.

79263. *GENTIANA PRZEWALSKII* Maxim.

For previous introduction and description see No. 79086.

79264. *GENTIANA PTEROCALYX* Franch.

An annual alpine gentian, native to Yunnan, China. 1 foot or more high, with ovate-cordate leaves and intense blue flowers more than 2 inches long.

79265. *GENTIANA PUMILA* Jacq.

A very small alpine gentian, almost mosslike, with small clustered leaves and solitary, terminal deep-blue flowers. It is native to the Tyrolean Alps.

79266. *GENTIANA PUNCTATA* L.

For previous introduction and description see No. 79087.

79267. *GENTIANA PURDOMI* Hort.

For previous introduction and description see No. 79088.

79268 and 79269. *GENTIANA PURPUREA* L.

79268. For previous introduction and description see No. 79089.

79269. Variety *nana*.

79270. *GENTIANA PYRENAICA* L.

A tufted alpine perennial, native to Europe and Asia Minor, often forming mats, with leaves having a cartilaginous margin and solitary dark-blue flowers about 1 inch long.

79271. *GENTIANA ROSTANI* Reut.

A low herbaceous alpine perennial, native to central Europe, about 3 inches high, with bowl-shaped, blue flowers.

79272. *GENTIANA SCEPTRUM* Griseb.

An erect leafy perennial, native to northwestern North America, 2 to 4 feet high, with oblong-lanceolate leaves and bell-shaped, dark-blue flowers 1 inch long.

79273. *GENTIANA SCHISTOCALYX* Koch.

An upright perennial, native to Asia Minor, 2 feet or more high, with oval-lanceolate, long-pointed leaves 3 inches in length and flowers 1½ inches long.

79274 to 79278. *GENTIANA SEPTEMFIDA* Pall.

79274. For previous introduction and description see No. 79091.

79185 to 79341—Continued.

79275. Variety *angustifolia*.

79276. Variety *cordifolia*. A variety native to Armenia, with heart-shaped leaves.

79277. Variety *latifolia*.

79278. Variety *splendida*.

79279. *GENTIANA STRAMINEA* Maxim.

For previous introduction and description see No. 79093.

79280. *GENTIANA SIKKIMENSIS* C. B. Clarke.

A perennial alpine, native to the mountains of Sikkim, with decumbent stems, elliptic or rounded leaves, and terminal heads of blue flowers.

79281. *GENTIANA TIBETICA* King.

Himalayan gentian.

For previous introduction and description see No. 79028.

79282 to 79285. *GENTIANA VERNA* L.

79282. For previous introduction and description see No. 78862.

79283. Variety *alba*.

79284. Variety *azurca*.

79285. Variety *grandiflora*.

79286. *GENTIANA WALUJEWI* Regel and Schmalh.

For previous introduction and description see No. 79095.

79287 to 79291. *PEDICULARIS* spp. Scrophulariaceae. Woodbetony.

79287. *PEDICULARIS FOLIOSA* L.

An alpine perennial, native to central Europe, with simple stems 1 to 3 feet high, with pinnatifid leaves, and a dense spike of cream-colored flowers.

79288. *PEDICULARIS PALUSTRIS* L.

European woodbetony.

A marsh-loving herbaceous perennial, native to Europe, about 2 feet high, with thick roots, pinnately parted leaves, and rather large purplish flowers in spikelike racemes.

79289. *PEDICULARIS RACEMOSA* Dougl.

A herbaceous alpine perennial, native to western North America, a foot or more high, with narrow undivided leaves and spikes of long-beaked white flowers.

79290. *PEDICULARIS TUBEROSA* L.

A perennial alpine, native to Switzerland, about a foot high, with a tuberous root and yellow flowers.

79291. *PEDICULARIS VERTICILLATA* L.

A moisture-loving alpine perennial, native to Europe, up to a foot high, with purplish flowers arranged in whorls.

79292 to 79341. *SEDUM* spp. Crassulaceae. Stonecrop.

79292. *SEDUM AIZOON* L.

Aizoon stonecrop.

Variety *mandshuricum*. A glabrous perennial, 1 to 2 feet high, with erect unbranched stems, alternate oblong-lanceolate leaves, coarsely toothed, and numerous yellow flowers in loose cymes.

79185 to 79341—Continued.

79293. SEDUM AMPLEXICAULE DC.

An evergreen alpine succulent perennial, native to the Mediterranean region, with ascending branches up to 4 inches long and numerous golden-yellow flowers in 2-forked cymes.

79294. SEDUM ANACAMPSEROS L.
Shy stoncrop.

An evergreen glaucous perennial succulent, native to central Europe, with cordate auricled red-margined leaves and numerous small pale-violet flowers in dense globose cymes borne on erect reddish stems 6 to 8 inches high.

79295. SEDUM ANGLICUM Huds.

A low evergreen fleshy perennial, native to western Europe, about 3 inches high, with trailing barren shoots forming dense masses. The small white or rosy flowers are in small cymes.

79296. SEDUM ANOMALUM Britton.

A decumbent or ascending low succulent with spatulate obtuse leaves about four-fifths inch long, and bright yellow flowers in cymes 1 inch across. It is native to California.

79297. SEDUM ANOPETALUM DC.

For previous introduction and description see No. 78950.

79298. SEDUM ATHOUUM DC.

An erect perennial succulent, native to the mountains of Greece, about 4 inches high, with pale rose-colored flowers.

79299. SEDUM ATROPURPUREUM Turcz.

A hardy succulent perennial, native to eastern Siberia, with obovate spatulate leaves. The short racemes of small flowers are dark purple throughout, excepting the anthers which are yellow.

79300. SEDUM BOLONIENSE Loisel.

A glabrous succulent perennial, native to Europe, 2 to 3 inches high, with linear-cylindrical leaves crowded into six or seven rows, and yellow flowers, one-half inch across, in a branched umbellate cyme.

79301. SEDUM TELEPHIUM BORDERI Masters.
Liveforever.

For previous introduction and description see No. 78963.

79302. SEDUM BREVIFOLIUM DC.
Shortleaf stoncrop.

A fleshy perennial, native to France, about 4 inches high, of caespitose habit, with crowded ovoid, pinkish, densely mealy pubescent leaves, and whitish flowers in a 2-forked or 3-forked cyme.

79303. SEDUM CARPATICUM Reuss.

A white-flowered succulent perennial, native to the Carpathian Mountains, about 10 inches high.

79304. SEDUM CORSICUM Duby.

A low fleshy perennial, native to Corsica, about 3 inches high, with crowded, very small gray-green leaves densely pubescent, and small white flowers in lax cymes.

79185 to 79341—Continued.

79305. SEDUM DASYPHYLLUM L.
Leafy stoncrop.

For previous introduction and description see No. 79181.

79306. SEDUM DOUGLASI Hook.

An annual succulent, native to northwestern North America, with an erect stem about 8 inches high, linear subulate leaves, and small yellow flowers in a branched cyme.

79307. SEDUM EUPHORBIODES Schlecht.

A hardy succulent perennial, native to northern Siberia, nearly 1 foot high, with crowded linear-oblong leaves and small flowers in short terminal racemes.

79308. SEDUM FABARIA Koch.

An alpine succulent, native to Europe, with upright stems 8 to 16 inches high, flat grass-green leaves, and lilac-purple flowers in a dense terminal corymb.

79309. SEDUM GATTEFOSSEI Batt.

A low delicate annual succulent, native to Morocco, about 2 inches high, with graceful stems, alternate spatulate or oblong leaves, and small yellow flowers in terminal cymes.

79310. SEDUM GLAUCUM Lam.

A succulent perennial, native to Europe and North Africa, 2 to 4 inches high, with tufted slender stems, crowded, oblong, or roundish leaves, and small white or pinkish flowers in few-flowered cymes.

79311. SEDUM GRACILE Haensel.

A low stemless alpine succulent, native to Spain, with a tuft of terete obtuse leaves and cymes of small white flowers.

79312. SEDUM HIRSUTUM All.

A low hairy alpine succulent, native to central Europe, with reddish stems, alternate sessile leaves, and small white flowers which have purple lines.

79313. SEDUM JACCARDI Hort.

An ornamental succulent.

79314. SEDUM LAGGERI Hort.

An ornamental succulent.

79315. SEDUM LEBLANCEI Hamet.

An ornamental annual succulent, native to southwestern China, with erect graceful stems about 5 inches high, obovate-linear leaves, and dense corymbs of small flowers.

79316. SEDUM MAGELLEENSE Tenore.

An alpine perennial, native to Asia Minor, of caespitose habit, with crowded flat obovate fleshy leaves and pinkish-white flowers in paniclelike racemes.

79317. SEDUM MAXIMUM Suter.
Great stoncrop.

For previous introduction and description see No. 78957.

79318. SEDUM MIDDENDORFFIANUM Maxim.
Middendorff stoncrop.

For previous introduction and description see No. 79046.

79185 to 79341—Continued.

79319. *SEDUM MURALE* Hort.

A succulent said to have dark leaves and white flowers with a pink center.

79320. *SEDUM NEVII* A. Gray.

A caespitose succulent perennial, native to the southeastern United States, with erect flower stems 2 to 5 inches high, obovate-spatulate leaves in rosettes, and numerous white flowers, nearly one-half inch across, in forked cymes.

79321. *SEDUM NICAEENSE* All.

A glabrous succulent perennial, native to the Mediterranean region, with a thick woody rootstock, ascending stems 6 to 8 inches long, oval-lanceolate leaves, and greenish-yellow flowers, one-half inch across, in terminal cymes.

79322. *SEDUM NUTTALLIANUM* Rafin.

An annual simple or branched succulent, native to the southern United States, 2 to 4 inches high, with scattered flat or somewhat terete oblong leaves, and cymes of small yellow flowers.

79323. *SEDUM OBTUSIFOLIUM* Meyer.

A perennial alpine, native to the Caucasus, with erect stems, rounded-oval leaves, and small white flowers in elongated leafy cymes.

79324. *SEDUM OCHROLEUCUM* Vill.

A succulent alpine, native to France, with oblong-acute crowded leaves and small white flowers.

79325. *SEDUM PALMERI* S. Wats.

An erect perennial, about 6 inches high, with succulent flattened leaves 1 inch or more long and deep-orange flowers in a branched panicle. It is native to Mexico.

79326. *SEDUM PILOSUM* Bieb.

For previous introduction and description see No. 78958.

79327. *SEDUM PSEUDOSPECTABILE* Praeger.

A fleshy perennial, native to northeastern China, about 20 inches high, with ovate or obovate sessile leaves about 1½ inches long, and rose-colored flowers, not quite one-half inch long, in compact terminal clusters.

79328. *SEDUM PURPURASCENS* Koch.

An erect succulent perennial, native to central Europe, 12 to 18 inches high, with scattered oblong-ovate leaves 2 to 3 inches long and numerous pink or white flowers in dense cymes.

79329. *SEDUM ROSEUM* (L.) Scop. (*S. rhodiola* DC.) Roseroot stonecrop.

A perennial succulent, native to Europe, with a thick fleshy rootstock that exhales the odor of rose water. The stems are 4 to 8 inches high, with scattered glaucous spatulate leaves an inch long, and flat-topped cymes of greenish or reddish-purple flowers.

79330. *SEDUM RUBENS* L.

A low succulent, native to the Mediterranean countries, about 3 inches high, with small pinkish or white flowers.

79185 to 79341—Continued.

79331. *SEDUM SELSKIANUM* Regel and Maack.

A spreading hairy fleshy perennial, native to northeastern Asia, 1 foot or more high, with lanceolate-sessile leaves and numerous yellow flowers in a much-branched terminal leafy hollow-topped cyme.

79332. *SEDUM SEMPERVIVUM* Ledeb.

A pubescent biennial succulent, native to Asia Minor, 2 to 8 inches high, with 40 to 50 obovate leaves in a basal rosette and scarlet flowers in a dense-panicked cyme.

79333. *SEDUM SPATHULIFOLIUM* Hook.

A succulent glaucous perennial, native to northwestern North America, finally reddish, with the leaves of the barren shoot forming terminal rosettes 1½ inches in diameter. The numerous yellow flowers, one-half inch across, are borne in terminal forking cymes.

79334. *SEDUM STAHLII* Solms. Stahl stonecrop.

A trailing much-branched succulent perennial, native to Mexico, with green or pinkish stems 4 to 6 inches high, opposite nearly terete leaves, and yellow flowers in terminal cymes.

79335. *SEDUM STELLATUM* L.

A low succulent annual, native to Europe, about 3 inches high, with a rosette of flat roundish leaves and lax cymes of reddish or purplish flowers.

79336. *SEDUM STENOPETALUM* Pursh.

A tufted fleshy perennial, native to western North America, 3 to 6 inches high. The crowded sessile leaves are linear or lanceolate, and the bright-yellow flowers are in much-branched scorpoid cymes.

79337. *SEDUM STRIBRNYI* Velen.

A succulent perennial, native to Bulgaria, laxly caespitose, with ascending stems 4 to 6 inches long, oblong-terete leaves, and small yellow flowers in compound cymes.

79338. *SEDUM EWERSII* Ledeb. Violet stonecrop.

Variety *Turkestanicum*. A form said to be 4 inches high, with deep-violet flowers, and and to be hardy in Massachusetts.

79339. *SEDUM VILLOSUM* L.

A low fleshy annual, native to the mountains of central Europe, 3 to 4 inches high, with simple erect stems hairy above and alternate linear leaves. The dull rose or white flowers are in a small loose terminal cyme.

79340. *SEDUM WOODWARDI* N. E. Brown.

A perennial succulent, perhaps native to China, with simple green stems 1 foot high, alternate lax obliquely obovate flat leaves, and yellow flowers, about one-half inch across, in loose cymes.

79341. *SEDUM YUNNANENSE* Franch.

A succulent plant, native to southwestern China, 1 to 2 feet high, with a thick rhizome, a whitish stem, opposite sessile rounded-oval leaves, and small yellow flowers in cymes.

79342 to 79349. *AVENA* spp. Poaceae.
Oats.

From Sydney, New South Wales, Australia. Seeds presented by H. Wenholz, director of plant breeding in the New South Wales Department of Agriculture. Received March 12, 1929.

New hybrids which are not entirely resistant to crown rust, but have a large measure of resistance under conditions which favor this disease in Australia.

79342. *AVENA* sp.

Bombo. A cross between Abruzzi and Victory, maturing late in the season.

79343. *AVENA* sp.

Boppy. A midseason variety which is a cross between two strains of White Ligowo and Algerian.

79344. *AVENA* sp.

Buddah. A selection from Sunrise, maturing very early in the season.

79345. *AVENA* sp.

Gidgee. A very early variety of similar breeding to Boppy [No. 79343].

79346. *AVENA* sp.

Kendall. A selection from Ruakura, maturing early in the season.

79347. *AVENA* sp.

Kurri. A selection from Ruakura, maturing early in the season.

79348. *AVENA* sp.

Laggan. A selection from Kelsall's, maturing very early.

79349. *AVENA* sp.

Lampton.

79350 to 79359. *SOLANUM MELONGENA* L. Solanaceae. Eggplant.

From Nishigahara, Japan. Seeds presented by Dr. H. Ando, Director, Imperial Agricultural Experiment Station. Received March 12, 1929.

79350. *Kintyaku*.

79351. *Okute-yamanasu*.

79352. *Otosi*.

79353. *Saitama-sinnasu*.

79354. *Siro-nasu*.

79355. *Tama-sinnasu*.

79356. *Tiba-wase*.

79357. *Turuboso-sennari*.

79358. *Wase-marunasu*.

79359. *Wase-sennari*.

79360 to 79365. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

From Portici, Italy. Scions presented by Prof. Gaetano Briganti, R. Istituto Superiore Agrario. Received March 19, 1929.

79360. *Abbate*.

79361. *Cerasiello*.

79362. *Cipolla* or *Zepolle*.

79363. *Del Prete*.

79364. *Meraviglia lunga*.

79365. *Meraviglia tonda*.

79366 to 79377.

From Nagpur, Central Provinces, India. Seeds presented by D. N. Mahta, second economic botanist. Received February 25, 1929.

79366 to 79373. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. Watermelon.

79366. A late variety.

79367. An early variety.

79368. A late variety.

79369. *Calcutta*.

79370. Received without notes.

79371. A variety with purple flesh.

79372. A variety with red flesh.

79373. A variety with white flesh.

79374 to 79377. *CUCUMIS MELO* L. Cucurbitaceae. Melon.

79374. Mixed melon seeds.

79375. *Jalgaon*.

79376. *Piria*.

79377. *Kharkhara*.

79378 to 79419. *ORYZA SATIVA* L. Poaceae. Rice.

From China. Seeds collected by F. A. McClure, Lingnan University, Canton. Received March 11, 1929.

Nos. 79378 to 79381 were collected in November, 1928, and are white, starchy, beardless varieties of the second crop.

79378. No. 1055. *Yau chim*. From Ngfungts'uen, Honam Island.

79379. No. 1056. *Chuk chim*. From the Agricultural College of the Lingnan University, Canton.

79380. No. 1057. *Paak hok yau chim*. From the Agricultural College of the Lingnan University, Canton.

79381. No. 1058. *Kam fung (chim)*. From Sunfungwong village, Honam Island.

Nos. 79382 to 79402 were collected during November, 1928.

79382. No. 1059. *Oo tuk noh*. From Hato, Honam Island. A white, glutinous, beardless variety of the second crop. It takes its name "black tip glutinous" from the dark markings on the glumes.

79383. No. 1060. *Tin tau taai noh*. Near Lingnan University, Canton, China.

79384 and 79385. From Ngfungts'uen, Honam Island. Two strains of white starchy rice obtained in the same field.

79384. No. 1061. *Paak hok yau chim*. A beardless variety.

79385. No. 1062. *Paak hok yau chim*. A bearded variety.

79386. No. 1063. *Taai kwat yau chim*. Near Lingnan University. A white, starchy, beardless variety of the second crop.

79387. No. 1064. *Paak hok tsai*. From Hato, Honam Island. A white, starchy, beardless variety of the second crop.

78378 to 79419—Continued.

79388. No. 1065. *Tsai (chai) mei tawi noh* (compact headed large glutinous). From Hato, Honam Island. A white, glutinous, beardless variety of the second crop.

Nos. 79389 to 79391 are white, starchy, beardless varieties of the second crop.

79389. No. 1066. *Fa hok kam fung*. From Shat'au, Honam Island.

79390. No. 1067. *Noh chaap chim*. From Ngfungts'uen, Honam Island.

79391. No. 1068. *Paak hok ham jung*. From Shat'au, Honam Island.

79392. No. 1069. *Paak hok noh*. From Honglok, Honam Island. A white, glutinous, beardless variety of the second crop.

79393. No. 1070. *Noh chaap*. From Shuipo, Honam Island. A white, starchy beardless variety of the second crop.

79394. No. 1071. *Kam fung tsai*. From Shat'au, Honam Island. A white starchy, semibearded variety of the second crop.

79395. No. 1072. *She chim*. From Ngfung, Honam Island. A white starchy, beardless variety of the second crop.

79396. No. 1073. *Uen chu noh*. From Paanchikaau, Honam Island. A white glutinous, beardless variety of the second crop.

79397. No. 1074. *Yau chim noh*. From Paanchikaau, Honam Island. A white, glutinous, semibearded variety of the second crop.

79398. No. 1075. *T'uan t'au noh*. From Lekkau, Honam Island. A white, glutinous, beardless variety of the second crop.

79399. No. 1076. *Ma mei noh*. From Lekkau, Honam Island. A white, glutinous, beardless variety of the second crop.

79400. No. 1077. *Heung mai* (fragrant rice). From Shuipo, Honam Island. A white, starchy, beardless variety of the second crop.

79401. No. 1078. *Paak hok noh chaap*. From Lekkau, Honam Island. A white, semibearded starchy variety of the second crop.

79402. No. 1080. *Yuk shau k'au* (Hydrangea). From Lekkau, Honam Island. A white, beardless, starchy variety of the second crop.

79403. No. 1081. *Suet chim*. From Yungui, Kwangsi Province, December 9, 1929. A red-grained, bearded, starchy variety of the second crop.

Nos. 79404 to 79408 were collected during October, 1928.

79404. No. 1082. *Paak hok yau chim*. From Poknaneung, Tsangsheng district, Kwangtung Province. A white-grained, beardless, starchy rice of the second crop.

79405. No. 1083. *Chek mai sz miu*. From Cheungkongmei, Tsangsheng district, Kwangtung Province. A red-grained, beardless, starchy variety of the second crop.

79406. No. 1084. *Wong hok yau chim*. From Sheungto, Tsangsheng district,

78378 to 79419—Continued.

Kwangtung Province. A white-grained, beardless, starchy variety of the second crop.

79407. No. 1085. *Wong chim*. From Pokha, Tsangsheng district, Kwangtung Province. A white-grained, starchy, beardless variety of the second crop.

79408. No. 1086. *Yau chim noh*. From Pokha, Tsangsheng district, Kwangtung Province. A white-grained, beardless, glutinous variety of the second crop.

Nos. 79409 to 79419 were collected during November, 1928.

79409. No. 1087. *Paak noh tsai*. From Pokha, Tsangsheng district, Kwangtung Province. A white-grained, glutinous beardless variety of the second crop.

79410. No. 1088. *Chaan shui chim*. From Pokha, Tsangsheng district, Kwangtung Province. A white-grained, beardless, starchy variety of the second crop.

79411. No. 1089. *Wong hok sz miu*. From Chohk'ai, Tsangsheng district, Kwangtung Province. A white-grained, beardless, starchy variety of the second crop.

79412. No. 1090. *Paak hok chek*. From Pokha, Tsangsheng district, Kwangtung Province. A red-grained, semibearded, starchy variety of the second crop.

79413. No. 1091. *Wong hok noh*. From Pokha, Tsangsheng district, Kwangtung Province. A white-grained, beardless, glutinous variety of the second crop.

79414. No. 1092. *Lung moon chek*. From Pokha, Tsangsheng district, Kwangtung Province. A red (pink)-grained, beardless, starchy variety of the second crop.

79415. No. 1093. *Lo chim*. From Pokha, Tsangsheng district, Kwangtung Province. A red-grained, beardless, starchy variety of the second crop.

79416. No. 1094. *Kai chue noh*. From Cheungkongmei, Tsangsheng district, Kwangtung Province. A white-grained, beardless, glutinous variety of the second crop.

79417. No. 1095. *So tsai chek*. From Pokha, Tsangsheng district, Kwangtung Province. A red-grained, bearded, starchy variety of the second crop.

79418. No. 1096. *Shui nga chim*. From Chohk'ai, Tsangsheng district, Kwangtung Province. A white-grained, beardless, starchy variety of the second crop.

79419. No. 1097. *Taai noh tsai*. From T'ongt'auha, Tungkoon district, Kwangtung Province. A white-grained, beardless, glutinous variety of the second crop.

79420 to 79453.

From Japan. Scions obtained by R. K. Beattie, Bureau of Plant Industry. Received March 13, 1929.

79420 to 79449. *CASTANEA CRENATA* Sieb. and Zucc. Fagaceae. Japanese chestnut.

79420 to 79453—Continued.

Scions collected in January, 1929, of cultivated varieties unless otherwise stated.

79420. No. 814. *Ganne*. Nuts from Sakaue Mura, Kuka Gun, Yamaguchi Ken, presented by Shigeo Hayashi.

79421 to 79429. From Tateno Farm, Nogi Mura, Shimotsuga Gun, Tochigi Ken.

79421. No. 815. *Butsake*.

79422. No. 816. *Hassaku*.

79423. No. 817. *Ichiemon*.

79424. No. 818. *Inukoroshi*.

79425. No. 819. *Mino*.

79426. No. 820. *Motokichi* No. 1.

79427. No. 821. *Odai*.

79428. No. 822. *Osaya*.

79429. No. 823. *Wase tamba*.

79430 to 79439. From the Okitsu Agricultural Experiment Station.

79430. No. 824. *Bon I*.

79431. No. 825. *Buzen*.

79432. No. 826. *Dai hachi*.

79433. No. 827. *Dengoro*.

79434. No. 828. *Kambei*.

79435. No. 829. *Obi wase*.

79436. No. 830. *Ogawa ichigo*.

79437. No. 831. *Ogawa teteuchi*.

79438. No. 832. *Tsunehisa*.

79439. No. 833. *Yakko*.

79440 to 79447. From the Ayabe Machi Agricultural Experiment Station at Kyoto.

79440. No. 839. *Sakahara*.

79441. No. 840. *Goku wase*.

79442. No. 841. *Kamadani okute*.

79443. No. 842. *Suginobo*.

79444. No. 843. *Nishi gaki*.

79445. No. 844. *Obata*.

79446. No. 845. *Futakura*.

79447. No. 846. *Otomune*.

79448 and 79449. From Sakaue Mura, Kuka Gun, Yamaguchi Ken; presented by Shigeo Hayashi.

79448. No. 847. *Ganne*.

79449. No. 848. *Yokobai*.

79450 to 79453. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki.**

From the Okitsu Agricultural Experiment Station.

79450. No. 835. *Sushi*. Originally from Keisho Hokudo, Chosen.

79451. No. 836. *Panshi*. Originally from Keizan.

79452. No. 837. *Shakokushi*. Originally from Shakoku.

79453. No. 838. *Kojomshi*. Originally from Hoki.

79454 to 79461.

From Viçosa, Minas Geraes, Brazil. Presented by Prof. P. H. Rolfs, Escola Superior de Agricultura e Veterinaria de Minas Geraes. Received March 16, 1928.

79454 to 79459. CITRUS spp. Rutaceae.

79454. CITRUS sp.

Cacau. Scions of an apparent sport from the Selecta. Tree upright stocky grower, very vigorous and prolific. Fruits orange when ripe, ripening about the same time as Pineapple; skin rather thick and corrugated; seeds 15 to 30; eating quality excellent. Some of the buds show reversion to Selecta type.

79455. CITRUS sp.

Civó, or willow twiggod. Scions of a highly ornamental as well as useful variety of orange which has the peculiar habit of the limbs growing pendent, like a weeping willow. It must be budded high on the stock for the best effect because, if budded near the ground, it forms a low creeping bush. The fruits are disposed laterally on the branches, making, when ripe, a wreath of oranges of a deep orange-red. They are of superior flavor and ripen about midseason, which is about the time Pineapple ripens, and they remain in prime condition for a much longer time than the commercial orange. The skin is thin and smoother, and the seeds very few, running from 2 or 3 to 20.

79456. CITRUS sp.

Lancetta. Said by Doctor Caire to have originated from a bud sport found among Pera. (Oblong form Valencia type.) Fruits small, very sweet and delicious, ripening very late in the year.

79457. CITRUS sp.

Lima Paulista. Type of tree and habit of growth similar to Tanger. Fruits flattened, very sweet when ripe, thin skinned, and contain few seeds.

79458. CITRUS sp.

Limão Inherme. Habit of growth of tree similar to Lima Paulista and Tanger. Fruits more oblong than Lima Paulista, about the size and shape of some of the larger Mexican limes, and ripen continuously throughout the year. The flavor is quite distinct from that of the Mexican lime.

79459. CITRUS sp.

Tanger. A very peculiar and desirable type of orange, said to have been named after the city of Tangier. It apparently does not belong to the *Citrus sinensis* species. The leaves are small and the petioles very small, giving the tree a very peculiar appearance. The fruits, produced in clusters, are about the size and color of tangerines and are sweet and delicious, containing 20 or more seeds.

79460 and 79461. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

79460. Seeds.

79461. *Sabiana*. Seeds.

79462 to 79502.

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received March 19, 1929.

79462 to 79469. AGAVE spp. Amaryllidaceae. Agave.

79462. AGAVE ALBICANS Jacobi.

A trunkless, caespitose agave, native to Mexico, with spreading, glaucous, thin oblanceolate leaves about a foot long, with close-set minute brown marginal prickles and a terminal needle-like small spine. The reddish green flowers, in pairs, are a little over 1 inch long and are on a spike 3 feet high.

79463. AGAVE ELLEMEETIANA Koch.

A nearly trunkless plant with spreading lanceolate unarméd leaves about 2 feet long, and paired greenish white flowers, about 1 inch long, in a spike-like inflorescence 5 to 10 feet high. Native to Mexico.

79464. AGAVE FRANZOSINI Baker.

An agave with roughish, white, recurved ascending lanceolate leaves up to 8 feet long, armed with dark-gray marginal prickles and a large terminal spine. The tall green flower stem, 30 to 40 feet high, bears flowers over 3 inches long. It is probably native to Mexico.

79465. AGAVE LOPHANTHA Schiede. Crested agave.

An agave, native to eastern Mexico, with spreading, glossy green lanceolate leaves a foot or more long, with small hooked marginal prickles and terminating in a brown grooved spine. The flowers, 1½ inches long, are borne on a spike 9 to 15 feet high.

79466. AGAVE POLYACANTHA Haw.

A caespitose plant, native to southern Mexico, with lanceolate, upcurving leaves sometimes 3 feet long, terminating in a stout spine and margined with close-set brown prickles. The flowers, 2 inches long, are in a spikelike inflorescence 4 to 5 feet high.

79467. AGAVE SALMIANA Otto.

An agave with gray-green very thick leaves about 3 feet long, with an elongated gray terminal spine and triangular marginal teeth. The scape is covered with long, somewhat spreading bracts. Native to Mexico.

79468. AGAVE TEQUILANA Web.

A stemless century plant with straight, rather stiff leathery gray-green leaves about 3 feet long and 3 inches wide, terminating in a short stout spine. The flower stem is about 20 feet high, with about 30 floral branches. Native to southern Mexico.

79469. AGAVE VICTORIAE-REGINAE T. Moore.

An agave, native to northeastern Mexico, with 3-angled short, stiff, triangular dark-green leaves about 7 inches long, ending in a short black spine, and a slender compact flowering spike 10 to 12 feet high.

79470 to 79473. ALOE spp. Liliaceae.

79470. ALOE ARBORESCENS Mill.

An arborescent succulent with a simple trunk 10 to 15 feet high,

79462 to 79502—Continued.

clothed at the top with dull-green sinuately spreading, gradually narrowed leaves about 2 feet long, with prickly margins. The red flowers are in an elongated raceme. It is probably a native of the Cape of Good Hope.

79471. ALOE SAPONARIA (Ait.) Haw.

An aloe from the Cape of Good Hope which grows in caespitose clusters, with ascending, oblong-lanceolate acuminate leaves about 7 inches long, often reddish with pale blotches, and with large confluent brown marginal teeth. The red flowers are in a branched inflorescence 1 or 2 feet high.

79472. ALOE STRIATA Haw.

A low fleshy plant with a dense rosette of thick narrowly oblong leaves 1 or 2 feet long, obscurely spotted, and bright-red flowers about 1 inch long, in 20 or more heads borne on a stout, branched peduncle. Native to South Africa.

79473. ALOE STRIATA × ?.

Seeds of a hybrid aloe of which only one parent is known.

79474. DAPHNE GNIDIUM L. Thymelaeaceae.

For previous introduction see No. 79205.

79475. GASTERIA OBTUSIFOLIA (Salm-Dyck) Haw. Liliaceae.

A low fleshy South African plant with a leafy stem 2 inches high, densely crowded tongue-shaped leaves 4 to 6 inches long, and rosy flowers in a raceme over a foot long.

79476. GASTERIA VERRUCOSA Haw. Liliaceae.

A caespitose succulent, native to the Cape of Good Hope, with spreading, somewhat concavely 3-sided, dull-gray acute leaves about 4 inches long, roughened by white tubercles, and rosy flowers about an inch long in an inflorescence 2 feet high.

79477 to 79479. KALANCHOE spp. Crassulaceae.

79477. KALANCHOE CRENATA Haw.

For previous introduction and description see No. 79166.

79478. KALANCHOE GLAUCESCENS Britten.

A plant, native to tropical Africa, with a terete stem 2 feet or more high, narrowly oval irregularly crenate fleshy leaves 5 inches long, and red or dark-yellow flowers one-half inch long in a glaucous panicle.

79479. KALANCHOE SCHIMPERIANA A. Rich.

An Abyssinian succulent of caespitose habit, with obovate-spatulate crenate leaves and pale-yellow flowers, about 3 inches long, in a dense branching cyme.

79480 to 79492. MESEMBRYANTHEMUM spp. Aizoaceae. Figmarigold.

79480. MESEMBRYANTHEMUM ACINACIFORME L.

A fleshy plant with a jointed stem 2 to 3 feet high, opposite, scimitar-shaped leaves 2 to 3 inches long, with

79462 to 79502—Continued.

the keel dilated, and purple flowers, about 4 inches across, said to be the largest in the genus. The edible fruits about the size of a gooseberry, are eaten by the natives of South Africa.

79481. MESEMBRYANTHEMUM BLANDUM Haw.

An erect perennial succulent, 2 feet high, with numerous branches, compressed-triangular leaves 2 inches long or less, with minute dots and pale-rose or white flowers 2 inches across. It is native to the Cape of Good Hope.

79482. MESEMBRYANTHEMUM CORDIFOLIUM L. f. **Heartleaf figmarigold.**

A diffuse-stemmed perennial, native to South Africa, 1 to 2 feet high, with opposite cordate leaves somewhat papillose and solitary purple daisylike flowers.

For previous introduction see No. 77228.

79483. MESEMBRYANTHEMUM CULTRATUM Salm-Dyck.

A low stemless succulent, native to South Africa, with thick 2-ranked, tongue-shaped leaves curved like a pruning knife, with a blunt apex, and yellow flowers on a somewhat 3-angled peduncle an inch or more high.

79484. MESEMBRYANTHEMUM DEPRESSUM Haw.

A stemless prostrate succulent, native to South Africa, with narrow, tongue-shaped, recurved-depressed acute leaves and yellow flowers with the petals somewhat recurved.

79485. MESEMBRYANTHEMUM DIFFORME L.

An almost stemless fleshy plant, native to South Africa, with obliquely cross-shaped, narrow, tongue-shaped punctate leaves about 2 inches long and solitary large yellow flowers.

79486. MESEMBRYANTHEMUM EDULE L.

A low, fleshy plant with an angular prostrate stem, opposite triquetrous curved leaves 3 to 4 inches long, with the keel serrate, and large yellow or purple flowers. The small edible fruits are the "figs" of the Hottentots in South Africa, where this plant is native. In California this species is used as a ground cover.

79487. MESEMBRYANTHEMUM HETEROPETALUM Haw.

A low succulent with erect-spreading stem and branches and glaucous, subfalcate leaves. The pale-red or whitish flowers are solitary. It is native to South Africa.

79488. MESEMBRYANTHEMUM LINGUIFORME L.

A low fleshy plant, with deflexed, somewhat falcate, and unequally tongued-shaped leaves, flattish above, and yellow flowers. It is native to South Africa.

79489. MESEMBRYANTHEMUM SALMII Haw.

A nearly stemless succulent from the Cape of Good Hope, with decussate attenuate leaves, one of each pair acute and the other oblique and blunt. The yellow flowers are sessile.

79462 to 79502—Continued.

79490. MESEMBRYANTHEMUM SERRULATUM Haw.

A rather shrubby plant, erect when young, with 3-angled fleshy thick leaves and purplish asterlike flowers. It is native to the Cape of Good Hope.

79491. MESEMBRYANTHEMUM SPECTABILE Haw.

A prostrate succulent, native to South Africa, with ascending branches, thick 3-sided linear leaves 2 to 3 inches long, and daisylike purplish flowers 2 inches across.

For previous introduction see No. 77237.

79492. MESEMBRYANTHEMUM UNCATUM Salm-Dyck.

A low, nearly stemless plant with narrow tongue-shaped fleshy leaves 2½ inches long, hooked at the apex, and yellow flowers. It is native to South Africa.

79493 to 79502. STAPELIA spp. Asclepiadaceae.

Low fleshy cactuslike plants with coarsely 4-angled stems and large showy flat evil-smelling flowers.

79493. STAPELIA ATRATA Todaro.

The erect, 4-angled, fleshy stems of this plant are 2 to 6 inches high and are green and more or less mottled with purple. The one to five dark purple-brown flowers are 2 to 3 inches across, with acuminate-deltoid corolla lobes. It is native to South Africa.

79494. STAPELIA CILIOLULATA Todaro.

A robust plant with fleshy stems, up to 5 inches high, armed with short projecting lateral teeth. The flower, about 3 inches across, is bright yellow, with lighter spots, and the broadly triangular-oval lobes are marked with irregular brown spots. It is of garden origin.

79495. STAPELIA CLYPEATA Jacq.

An erect fleshy plant, with obtusely angled stems 2 to 6 inches high which are green, often mottled or tinted with purple. The flowers, single or as many as five at the bases of the young stems, are 2 or 3 inches across and are pale greenish yellow with dark purple-brown spots. It is native to South Africa.

79496. STAPELIA DISCOLOR Todaro.

A rather large carrion-flower with green, purple-tinged, sharply 4-angled stems 3 to 18 inches high, and one to three dark purple-brown flowers, about one-half inch across, marked with faint yellowish transverse lines. It is native to the Cape of Good Hope.

79497. STAPELIA DIVERGENS N. E. Brown.

A perennial succulent with 4-angled stems about 4 inches high and slightly wrinkled light-yellow flowers, 2 inches across, with thick ramified brown-crimson lines on the disk and lower two-thirds of the petals. It is a hybrid, of unknown parentage, raised in Europe.

79498. STAPELIA MUTABILIS Jacq.

A rather large carrion-flower, with green or purplish stems 3 to 18 inches

79462 to 79502—Continued.

high, acutely 4-angled and armed with stout conical teeth. The flower, about 1½ inches across, has sharply recurved petals, which are pale greenish yellow, with the upper third purple brown. It is native to South Africa.

79499. *STAPELIA MUTABILIS* Jacq.

Variety *picta*.

79500. *STAPELIA PLANIFLORA* Jacq.

A freely branching succulent with erect 4-angled stems 2 to 6 inches high, armed with acute spreading teeth. The pale greenish-yellow flower, about 3 inches across, is irregularly purple spotted and is often lined with purple-brown. It is native to the coastal regions of South Africa.

79501. *STAPELIA RUGOSA* Jacq.

A fleshy plant with erect stems, obtusely 4-angled and armed with conical teeth. The flower, about 2½ inches across, is greenish yellow with numerous scattered small purple spots and irregular transverse dark purple-brown lines. The outer corona lobes are acutely 3-toothed at the apex. It is native to South Africa.

79502. *STAPELIA TRIFIDA* Todaro.

A caespitose, fleshy plant, probably originally from South Africa, with 4-angled stems about 3 inches high. The purplish-violet flower is 3 inches across, with purple corolla tips and numerous transverse yellow lines.

79503 to 79505.

From Nancy, France. Seeds presented by Prof. Edmond Gain, director of the botanical garden of the Nancy University. Received March 18, 1929.

79503. *KITAIBELIA VITIFOLIA* Willd. Malvaceae.

For previous introduction and description see No. 79174.

79504. *OMPHALODES LINIFOLIA* (L.) Moench. Boraginaceae.

A summer-flowering annual plant a foot high, with wedge-shaped radical leaves, linear-lanceolate stem leaves, and lax racemes of white flowers. Native to dry stony hills of Spain and Portugal.

79505. *PETTERIA RAMENTACEA* (Sieber) Presl (*Cytisus weideni* Vis.). Fabaceae.

For previous introduction and description see No. 79039.

79506 to 79521.

From Winchester, England. Plants purchased from Hillier & Sons, West Hill Nurseries. Received December 20, 1928. Numbered in March, 1929.

79506 to 79508. *BERBERIS* spp. Berberidaceae. **Barberry.**

79506. *BERBERIS ATROCARPA* C. Schneid.

An ornamental shrub, native to western Szechwan, China, 3 to 5 feet high, with leathery evergreen leaves, shining green above and yellowish green beneath, and almost globose jet-black fruits.

For previous introduction see No. 76212.

79506 to 79521—Continued.

79507. *BERBERIS EMPETRIFOLIA* Pers. **Crow barberry.**

For previous introduction and description see No. 78877.

79508. *BERBERIS HOOKERI* Lem.

An evergreen barberry, native to the Himalayas, where it is a dense shrub 3 to 5 feet high, with usually 3-parted spines, dark-green, leathery, spiny margined leaves, and cylindrical black-purple berries often persisting on the shrub until spring.

For previous introduction see No. 65232.

79509 to 79521. *BUXUS* spp. Buxaceae.

79509. *BUXUS HARLANDII* Hance.

A compact evergreen shrub, native to China, about 3 feet high, with obovate-oblong leaves, gradually narrowed toward the base, less than an inch long and one-fourth of an inch broad.

For previous introduction see No. 76558.

79510 to 79520. *BUXUS SEMPERVIRENS* L. **Common box.**

79510. Variety *aurea maculata*.

79511. Variety *aurea pendula*.

79512. Variety *handsworthii*.

79513. Variety *latifolia macrophylla*.

79514. Variety *latifolia maculata*.

79515. Variety *myosotifolia*.

79516. Variety *myrtifolia*.

79517. Variety *prostrata*.

79518. Variety *pyramidalis*.

79519. Variety *rosmarinifolia*.

79520. Variety *salicifolia*.

79521. *BUXUS WALLICHIANA* Baill.

An evergreen shrub, native to the Himalayas, 10 feet high, with linear-lanceolate leaves 2 to 4 inches long.

79522. *AMYGDALUS COMMUNIS* L. (*Prunus amygdalus* Stokes). Amygdalaceae. **Almond.**

From Granada, Spain. Plants presented by Juan Leyva, through Austin C. Brady, American consul, Malaga. Received March 19, 1929.

Marcona.

79523 and 79524. *FICUS CARICA* L. **Common fig.**

From Balaguer, Lerida, Spain. Cuttings presented by Ramon Sala Roqueta. Received March 21, 1929.

79523. *Fraga*.

79524. *Layola blanca*.

79525. *ELAEODENDRON CAPENSE* Eckl. and Zeyh. Celastraceae.

False olive.

Plants grown from seeds presented by the Plant Quarantine and Control Administration. Received February 15, 1929.

79525—Continued.

An erect shrub, native to South Africa, with leathery ovate leaves 3 inches long and panicles of small white flowers followed by red drupes an inch long.

For previous introduction see No. 51144.

79526. WAHLENBERGIA BIVALVIS Merr. Campanulaceae.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received February 27, 1929.

An erect glabrous branched annual up to 16 inches high, with sessile leaves and blue, bell-shaped flowers a quarter of an inch long. Native to the Philippine Islands.

79527. VIGNA SINENSIS (Tornef) Savi. Fabaceae. Cowpea.

From Tirana, Albania. Seeds presented by A. T. Fultz, Director, Albanian Vocational School of the American Junior Red Cross and Ministry of Education. Received March 15, 1929.

Seeds white with a black eye; from the market at Kavaji.

79528. NICOTIANA TABACUM L. Solanaceae. Tobacco.

From New Guinea. Seeds presented by L. P. B. Armit, Port Moresby. Received March 25, 1929.

Mixed seeds from Autemba and Biagi, Kokoda district, northern division.

79529. ORCHIDANTHA MAXILLAROIDES (Ridley) Schum. Musaceae.

From Glasnevin, Ireland. Plants presented by J. W. Besant, Director, Botanic Gardens. Received March 16, 1929.

A gingerlike stemless Malayan plant with oblong leaves about 8 inches long and panicles 1 to 2 feet high of rather showy purple flowers, resembling those of *Maxillaria*.

79530. ORCHIDANTHA LONGIFLORA (Scort.) Ridley. Musaceae.

From Singapore, Straits Settlements. Plants presented by R. E. Holtum, Director, Singapore Botanic Gardens. Received March 23, 1929.

A large stemless tropical plant, related to the banana and native to the Malay Peninsula, which forms huge tufts of lanceolate leaves 3 feet long. The solitary axillary flowers, about 8 inches in length, have long purple bracts and yellowish petals.

79531. AMARANTHUS VIRIDIS L. Amaranthaceae. Amaranth.

From Antigua, British West Indies. Seeds presented by A. E. Collens, Government Chemist and Superintendent of Agriculture. Received March 22, 1929.

A plant cultivated in Antigua and used in the same manner as spinach.

79532. LYCOPELSON ESCULENTUM Mill. Solanaceae. Tomato.

From near Trujillo, Peru. Seeds presented by Ralph T. Gray, Estación Experimental Agrícola, Lima, Peru. Received March 28, 1929.

A wild Peruvian tomato collected by G. N. Wolcott, Estación Experimental Agrícola, Lima.

79533 to 79545.

From the West Indies. Seeds collected by Allison V. Armour. Received March 25, 1929.

79533. AMERIMNON LANCEOLARIUM (L. f.) Kuntze (*Dalbergia lanceolaria* L. f.). Fabaceae.

Dominican Botanic Gardens. A tree 60 to 80 feet high, native to India, with compound leaves made up of 11 to 15 elliptical rigidly subcoriaceous leaflets 2 inches long and terminal and axillary compound panicles of small purplish flowers followed by bright-brown flexible pods.

79534. BERRIA AMMONILLA Roxb. Tiliaceae.

Dominican Botanic Gardens. A large tree, native to southeastern Asia, with long-stemmed heart-shaped leaves and dense racemes of small white flowers. The hard durable dark-red wood is used for agricultural implements and is also exported under the name of trincomali wood.

For previous introduction see No. 63761.

79535. CAPSICUM ANNUUM L. Solanaceae. Common redpepper.

A very fine aromatic variety obtained in the market at Port au Prince, Haiti.

79536. CARICA PAPAYA L. Papayaceae. Papaya.

St. Lucia Botanic Gardens. An excellent local variety.

79537 to 79545. From the Dominican Botanic Gardens.

79537. CATALPA LONGISSIMA (Jacq.) Sims. Bignoniaceae.

For previous introduction and description see No. 78580.

79538. COLVILLEA RACEMOSA Boj. Caesalpiniaceae.

For previous introduction and description see No. 78604.

79539. EUTERPE EDULIS Mart. Phoenicaceae. Palm.

A palm, native to Brazil, 40 feet high, with a slender inclined trunk, pinnate leaves, and fruits the size of marbles. A nutritious beverage is made by the natives from the fibrous flesh surrounding the seeds.

For previous introduction see No. 66218.

79540. GARCINIA MORELLA (Gaertn.) Desr. Clusiaceae.

A small tree, 30 to 50 feet high, which is related to the mangosteen and may be of use as a stock. It is native to India.

For previous introduction see No. 58589.

79541. KLEINHovia HOSPITA L. Sterculiaceae.

A fine Dombeyalike shrub up to 50 feet high, with heart-shaped leaves 4 inches long and lax clusters of small rose-colored flowers followed by inflated papery pods an inch long. It is native to the East Indies.

For previous introduction see No. 54985.

79533 to 79545—Continued.

79542. ORMOSIA MONOSPERMA (Swartz) Urban (*O. dasycarpa* Jacks.). Fabaceae. **Necklace tree.**

A tree with compound leaves of five pairs of oblong leaflets, large rusty tomentose panicles of small blue flowers, and ovoid tomentose pods each containing a globose red seed with a black blotch. It is native to the West Indies.

For previous introduction see No. 66232.

79543. PONGAMIA PINNATA (L.) W. F. Wight (*P. glabra* Vent.). Fabaceae.

A tall, erect shade tree or sometimes a climbing shrub native to tropical Asia, with compound leaves composed of five to seven pairs of oblong leaflets and simple racemes of white flowers. The woody pods are about one-fourth inch thick and 1½ inches long. Because of its bright, handsome foliage this tree has been recommended as an ornamental for subtropical regions. It is said to withstand hurricanes.

For previous introduction see No. 74584.

79544. THRINAX MORRISII Wendl. Phoenicaceae. **Morris thatch palm.**

An attractive dwarf palm, native to the West Indies, up to 3 feet high, with palmate leaves which are glaucescent on the under side and have the segments free for more than half their length.

For previous introduction see No. 78508.

79545. TOUNATEA SIMPLEX (Vahl) Taub. (*Spartzia grandiflora* Willd.). Caesalpiniaceae.

An ornamental shrub with a single oblong coriaceous leaflet, or occasionally three leaflets, and corymbs of three to five flowers each having a single orbicular yellow petal an inch or more across.

79546. CINNAMOMUM MINDANAENSE Elmer. Lauraceae.

From Jolo, Sulu, Philippine Islands. Seeds presented by Gov. Carl M. Moore, through P. J. Wester, Ballston, Va. Received November 10, 1926. Numbered in March, 1929.

Kami. A small erect tropical tree, up to 30 feet high, with slender branches, smooth pale-green bark, and small pointed leathery leaves. The inconspicuous flowers are followed by numerous small shining steel-blue fruits. The bark is very similar to the cinnamon of commerce, and the tree has possibilities as a source of cinnamon.

79547. CUDRANIA TRICUSPIDATA Bureau. Moraceae.

From Crescent, Ga. Cuttings obtained from James Dyerger, through R. A. Young, Bureau of Plant Industry. Received March 5, 1928. Numbered in March, 1929.

A thorny shrub or small tree native to eastern Asia. The fruits, resembling clusters of red raspberries, are edible, and the plant has been recommended as a good

hedge plant for the Southern States. The extremely hard wood is used for tools, and the ovate, usually entire leaves are used in some sections to feed silkworms.

For previous introduction see No. 71304.

79548. DENDROCALAMUS MACROCULMIS Hort. Poaceae. **Bamboo.**

From Algiers, Algeria, Africa. Cult presented by Dr. L. Trabut, Government botanist. Received March 29, 1928. Numbered in March, 1929.

A very distinct and valuable giant clump bamboo introduced from Cochin China by the Jardin des Plantes in Paris and sent to Algiers for trial, where there is now a splendid avenue in the Jardin d'Essais, of Algiers.

For previous introduction see No. 62251.

79549. GARCINIA SP. Clusiaceae.

From Buitenzorg, Java. Seeds presented by Dr. L. Koch, Chief, Plant Breeding Station for Annual Crops. Received October 19, 1928. Numbered in March, 1929.

An East Indian evergreen tree related to the mangosteen (*Garcinia mangostana*).

79550. ARACHIS HYPOGAEA L. Fabaceae. **Peanut.**

From Caracas, Venezuela. Seeds presented by Dr. H. Pittier, Ministerio de Relaciones Exteriores, Museo Commercial. Received March 23, 1929.

A variety cultivated only in the State of Falcon, Venezuela. It is said to be exceptionally rich in oil.

79551 to 79554. TIGRIDIA PAVONIA (L. f.) Ker. Iridaceae.

Common tigerflower.

From Paris, France. Bulbs purchased from Vilmorin-Andrieux & Co. Received March 28, 1929.

79551. Variety alba. White flowers with red spots in the throat.

79552. Variety conchiflora. Bright-yellow flowers.

79553. Variety lilacea. Lilac flowers with a spotted center.

79554. Variety speciosa rubra. A somewhat dwarf form with deep-red flowers, the interior of the cup being the same color as the limb.

79555. PRATIA BEGONIFOLIA (Wall.) Lindl. Campanulaceae.

From Sumatra. Seeds collected by Prof. H. H. Bartlett, University of Michigan, Ann Arbor, Mich. Received July 20, 1927. Numbered in March, 1929.

No. 7525. Between Simakkoek and Simartoloe, on the trail from Asahan to Toba, north of the Asahan River, April 23, 1927. A creeping vine with small cordate denticulate leaves and purple fleshy fruits half an inch long.

79556 and 79557. QUERCUS CERRIS L. Fagaceae. **Turkey oak.**

From Northwood, Middlesex, England. Seeds presented by R. C. B. Gardner. Received November 2, 1928. Numbered in March, 1929.

79556 and 79557—Continued.

79556. *D. Variety laciniata.*

For previous introduction and description see No. 78679.

79557. *E.*

For previous introduction and description see No. 78678.

79558. SANDORICUM KOETJAPE (Burm. f.) Merr. (*S. indicum* Cav.). Meliaceae.

From Manila, Philippine Islands. Seeds presented by S. Youngberg, Director, Bureau of Agriculture. Received September 5, 1928. Numbered in March, 1929.

A Philippine tree which becomes 80 feet high in its native country, with trifoliate hairy leaves and greenish yellow or straw-colored flowers. The chief value resides in its yellowish fruits which are rounded or flattened, about 2 inches in diameter, with rather large seeds inclosed in translucent, acid, edible pulp of good flavor. When peeled, quartered, and cooked in sirup the fruit makes a delicious preserve. This tree is not suited for cultivation in the United States except perhaps in the warm parts of Florida.

For previous introduction see No. 58445.

79559. TILMIA CARYOTAEFOLIA (H. B. K.) O. F. Cook (*Martinezia caryotae-folia* H. B. K.). Phoenicaceae.

Palm.

From Summit, Canal Zone. Seeds presented by I. E. Higgins, Plant Introduction Garden. Received May 31, 1927. Numbered in March, 1929.

A graceful palm up to 30 feet high, native to tropical South America. The erect stem is slightly swollen at the base and is clearly ringed; these rings are armed with stiff black slender spines 2 or 3 inches long. The bright-green pinnate fronds are 4 to 5 feet long, spreading and drooping.

For previous introduction see No. 73822.

79560 to 79565.

From Buifenzorg, Java. Seeds presented by Dr. W. M. Docters van Leeuwen, Director, Java Botanic Gardens. Received August, 1926, and May, 1927. Numbered in March, 1929.

79560. ATTALEA SPECTABILIS Mart. Phoenicaceae. Palm.

An ornamental Brazilian palm which is stemless or with a very short caudex. The erect spreading pinnate leaves are 18 to 21 feet long; the lower segments are 3 to 4 feet and the upper 12 to 16 inches long.

For previous introduction see No. 43056.

79561 to 79563. BACCAUREA spp. Euphorbiaceae.

79561. BACCAUREA DULCIS Muell. Arg.

A tropical evergreen tree, 30 to 60 feet high, with smooth reddish-brown branches, alternate brownish oval-oblong leaves up to 7 inches long, reddish beneath, and round woody fruits about 1 inch in diameter in lax racemes. Native to the Malay Peninsula.

79562. BACCAUREA MOTLEYANA Muell. Arg.

79560 to 79565—Continued.

A large ornamental tropical Malayan evergreen tree with oval, entire, dark-green leaves 6 inches long and 4 inches wide and large clusters of small edible yellow berries of mildly acid flavor.

For previous introduction see No. 34495.

79563. BACCAUREA NANIHUA Merr.

A tropical Asiatic evergreen tree about 50 feet high, with brownish leathery oblong leaves up to 6 inches long.

79564. PITHECOLOBIUM LOBATUM Benth. Mimosaceae.

A small ornamental tropical tree with large curved red pods which contain bluish seeds.

For previous introduction see No. 35452.

79565. SAGUERUS LANGKAB Blume (*Arenga obtusifolia* Mart.). Phoenicaceae. Palm.

A Javanese palm, related to the sugar palm (*Arenga saccharifera*) of Malaya, with a spineless, thick-ringed trunk about 20 feet high and 9 to 13 pinnate leaves, about 15 feet long, which have spiny petioles.

For previous introduction see No. 67177.

79566. ARUNDINA CHINENSIS Blume. Orchidaceae.

From Singapore, Straits Settlements. Plant collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received July 19, 1926. Numbered in March, 1929.

No. 827. Singapore Botanic Gardens, May 31, 1926. A tropical terrestrial orchid with very beautiful flowers reminding one of a small cattleya. When grown in pots it becomes several feet high, and when not in flower it looks more like a bamboo than an orchid. It is grown on a large scale by nurserymen who sell the cut flowers in the markets of the Malay Archipelago.

79567. DRACAENA DRACO L. Liliaceae. Dragontree.

From Ajuda, near Lisbon, Portugal. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April 21, 1927. Numbered in March, 1929.

No. 1296. April 4, 1927. Seeds from a remarkable specimen probably 300 years old, now growing in the Botanic Garden at Ajuda, once the Royal Quinta Cima of Queen Mary I. This tree is not over 10 or 15 feet high, but has a spread of about 40 feet. It is a curious ornamental tropical tree which becomes 60 feet high, with numerous crowded sword-shaped glaucous-green leaves, greenish flowers, and orange berries.

79568 and 79569.

From Sibolangit, Sumatra. Plant and stolons collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the Allison V. Armour expedition. Received May, 1926. Numbered in March, 1929.

79568 and 79569—Continued.

79568. *GIGANTOCHLOA VERTICILLATA* (Willd.) Munro. Poaceae. **Bamboo.**

No. 732. *Boeloeih Regen, Boeloeih Belangke.* Sibolangit Botanic Garden, March 28, 1926. A bamboo plant with culms over 4 inches in diameter, which is not the best of the giant clump bamboos in the mountains of Sumatra, but is largely grown in the lowlands about the kampongs because of its useful timber.

79569. *GLOBBA* sp. Zinziberaceae.

No. 437. Sibolangit Botanic Garden, February 24, 1926. Stolons of a herbaceous gingerlike plant with attractive pink flowers, which should be useful as a border plant in southern Florida and Panama.

79570. *LIVISTONA OLIVAEFORMIS* Mart. Phoenicaceae **Palm.**

From Singapore. Straits Settlements. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received July 29, 1926. Numbered in March, 1929.

No. 848. Singapore Botanic Gardens, May 30, 1926. A small handsome fan-leaved palm with olive-shaped, green to purplish-green fruits. Native to Java.

79571. *MILLINGTONIA HORTENSIS* L. f. Bignoniaceae.

From Peradeniya, Ceylon. Plants collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received July 19, 1926. Numbered in March, 1929.

No. 893. *Indian cork tree.* Peradeniya Botanic Garden, June 9, 1926. A tropical avenue tree of erect habit, becoming 50 feet or more high. It has finely divided leaves and pure-white fragrant long tubular flowers which are borne twice a year, during November and June.

79572. *SCIRPUS SUPINUS* L. Cyperaceae. **Sedge.**

From Gold Coast, Africa. Plants collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April 29, 1927. Numbered in March, 1929.

No. 1267. *Diatamara.* A sedge native to tropical Africa, forming a solid field in a moist boggy spot, several acres in extent, north of Mamou, French Guinea, March 10, 1927. The natives say that in the dry season the cattle eat this to the exclusion of other grasses which are at that time dried up. Its succulent stems form a regular turf on which the cattle walk. It should be tried as fodder on swampy land.

79573 to 79903.

From Manchuria. Seeds presented by P. F. Constatinoff, Harbin, through E. D. Merrill, dean of the College of Agriculture of the University of California, Berkeley, Calif. Received in February, 1929.

79573 to 79576. *CHAETOCCHLOA ITALICA* (L.) Scribn. (*Setaria italica* Beauv.). Poaceae. **Millet.**

From the Harbin Experiment Station.

79573. N 6. **79574.** N 7.

79573 to 79903—Continued.

79575. N 11. **79576.** N 23.

79577. *HORDEUM VULGARE PALLIDUM* Seringe. Poaceae. **Six-rowed barley.**

79578. *PANICUM MILIACEUM* L. Poaceae **Proso.**

N 6. From the Harbin Experiment Station.

79579 and 79580. *PHASEOLUS ANGULARIS* (Willd.) W. F. Wight. Fabaceae. **Adzuki bean.**

79579. N 257/1243. From the Anta Experiment Station, Chinese Eastern Railway.

79580. From Fugdin, on the Sungari River.

79581 and 79582. *PHASEOLUS AUREUS* Roxb. Fabaceae. **Mung bean.**

79581. From Fugdin, on the Sungari River.

79582. N 297. From the Anta Experiment Station, Chinese Eastern Railway.

79583 to 79887. *SOJA MAX* (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

79583 to 79610. From the Anta Experiment Station, Chinese Eastern Railway.

79583. N 42/1146.

79584. N 123.

79585. N 235/149 A.

79586. N 236/149 G.

79587. N 251/1261.

79588. N 252/1263.

79589. N 265/287 A.

79590. N 254/1148.

79591. N 260/75.

79592. N 262/93.

79593. N 265/100.

79594. N 267/1229.

79595. N 268/1230.

79596. N 270/1234.

79597. N 272/1236.

79598. N 277/44.

79599. N 279/56.

79600. N 282/61.

79601. N 286/3.

79602. N 287/11.

79603. N 288/12.

79604. N 298/13.

79605. N 240/225.

79606. N 291/18.

79607. N 292/21.

79608. N 293/22.

79609. N 247/1250.

79610. N 228.

79611 to 79642. From the Echo Experiment Station.

79611.

79573 to 79903—Continued.

79612.
 79613.
 79614.
 79615.
 79616. N 7.
 79617. N 8.
 79618. N 9.
 79619. N 266 A.
 79620. N 272.
 79621. N 274.
 79622. N 275.
 79623. N 277.
 79624. N 287.
 79625. N 284.
 79626. N 228.
 79627. N 303.
 79628. N 304.
 79629. N 403.
 79630. N 410.
 79631. N 411.
 79632. N 416.
 79633. N 423.
 79634. N 433.
 79635. N 402.
 79636. N 409.
 79637. N 416.
 79638. N 423.
 79639. N 1128.
 79640. N 1153.
 79641. N 1198.
 79642. N 1231.
 79643. N 1250. Wan Sin Hei Shin Station, Echo.
 79644 to 79649. From the Echo Experiment Station.
 79644. N 1260.
 79645. N 1261.
 79646. N 1265.
 79647. N 1272.
 79648. N 1286.
 79649. N 1801.
 79650 to 79690. From the Manchurian Agricultural Co. experiment field.
 79650. N 9/2.
 79651. N 9/3.
 79652. N 9/4.
 79653. N 9/5.
 79654. N 9/9.
 79655. N 9/10.
 79656. N 9/14.
 79657. N 9/27.
 79658. N 10/1.
 79659. N 10/16.
 79660. N 10/17.

79573 to 79903—Continued.

79661. N 12/11.
 79662. N 12/28.
 79663. N 14/8.
 79664. N 14/13.
 79665. N 14/26.
 79666. N 14/27.
 79667. N 15/26.
 79668. N 16/10.
 79669. N 18/8.
 79670. N 19/12.
 79671. N 19/26.
 79672. N 21/11.
 79673. N 24/7.
 79674. N 31/7.
 79675. N 31/16.
 79676. N 42/8.
 79677. N 42/9.
 79678. N 42/22.
 79679. N 43/14.
 79680. N 70/2.
 79681. N 70/10.
 79682. N 73/3.
 79683. N 78/3.
 79684. N 78/8.
 79685. N 82/3.
 79686. N 85/5 A II.
 79687. N 85/9.
 79688. N 85/17.
 79689. N 86/18.
 79690. N 86/7.
 79691 to 79736. From the Harbin Experiment Station.
 79691.
 79692.
 79693.
 79694. N 3.
 79695. N 4.
 79696. N 20.
 79697. N 40.
 79698. N 66.
 79699. N 79.
 79700. N 83.
 79701. N 106.
 79702. N 111.
 79703. N 116.
 79704. N 120.
 79705. N 122.
 79706. N 124.
 79707. N 128.
 79708. N 130.
 79709. N 138.
 79710. N 140.
 79711. N 145.

79573 to 79903—Continued.

- 79712. N 158.
- 79713. N 170.
- 79714. N 177.
- 79715. N 179.
- 79716. N 181.
- 79717. N 182.
- 79718. N 183.
- 79719. N 187.
- 79720. N 190.
- 79721. N 193.
- 79722. N 195.
- 79723. N 199.
- 79724. N 210.
- 79725. N 221.
- 79726. N 228.
- 79727. N 230 A.
- 79728. N 425.
- 79729. N 1121.
- 79730. N 1185.
- 79731. N 1191.
- 79732. N 1125.
- 79733. N 1205.
- 79734. N 1228.
- 79735. N 1279.
- 79736. N 1 C.
- 79737 to 79772. From the Anta Experiment Station, Chinese Eastern Railway.
- 79737. N 2 A.
- 79738. N 2/6.
- 79739. N 5 A.
- 79740. N 7 A.
- 79741. N 12/10.
- 79742. N 17 A.
- 79743. N 20 B.
- 79744. N 24 C.
- 79745. N 37 A.
- 79746. N 37 B.
- 79747. N 37 C.
- 79748. N 39 B.
- 79749. N 84.
- 79750. N 99.
- 79751. N 100.
- 79752. N 101.
- 79753. N 102.
- 79754. N 128/16.
- 79755. N 201/2 C.
- 79756. N 202/2.
- 79757. N 254.
- 79758. N 211/17 A.
- 79759. N 225/71 D.
- 79760. N 223/70 G.
- 79761. N 226/20 D.

79573 to 79903—Continued.

- 79762. N 237/152 A.
- 79763. N 255/209.
- 79764. N 259/66.
- 79765. N 263.
- 79766. N 266.
- 79767. N 281/60.
- 79768. N 287.
- 79769. N 288.
- 79770. N 294.
- 79771. N 1215.
- 79772. N 1235.
- 79773 to 79788. From the Echo Experiment Station.
- 79773.
- 79774.
- 79775. N 226.
- 79776. N 256.
- 79777. N 257/6.
- 79778. N 258 C.
- 79779. N 259.
- 79780. N 260.
- 79781. N 262.
- 79782. N 263.
- 79783. N 227.
- 79784. N 1246.
- 79785. N 1253.
- 79786. N 1259.
- 79787. N 1268.
- 79788. N 1271.
- 79789 to 79810. From the Manchurian Agricultural Co. experiment field.
- 79789. N 1/12.
- 79790. N 12/11.
- 79791. N 17/15.
- 79792. N 22/5.
- 79793. N 43/14.
- 79794. N 46/5.
- 79795. N 48/1.
- 79796. N 50/10.
- 79797. N 50/13.
- 79798. N 52/15.
- 79799. N 53/22.
- 79800. N 55/3.
- 79801. N 61/22.
- 79802. N 63/13.
- 79803. N 63/16.
- 79804. N 77/1.
- 79805. N 78/8.
- 79806. N 82/3.
- 79807. N 83/3.
- 79808. N 84/5.
- 79809. N 85/3.
- 79810. N 210/11A.

79573 to 79903—Continued.

79811 to 79840. From the Harbin Experiment Station.

79811.
79812.
79813. N 55.
79814. N 61.
79815. N 65.
79816. N 70.
79817. N 71.
79818. N 77.
79819. N 125.
79820. N 126.
79821. N 132.
79822. N 136.
79823. N 145.
79824. N 147.
79825. N 154.
79826. N 155.
79827. N 163.
79828. N 167.
79829. N 169.
79830. N 173.
79831. N 174.
79832. N 184.
79833. N 189.
79834. N 191.
79835. N 201.
79836. N 203.
79837. N 251.
79838. N 259.
79839. N 260.
79840. N 299.

79841.

79842.

79843.

79844.

79845. Selection N 1 (N 9/3). From the Manchurian Agricultural Co. experiment field.

79846 to 79850. From the Anta Experiment Station, Chinese Eastern Railway.

79846.

79847.

79848.

79849.

79850.

79851. N 282. From the Echo Experiment Station.

79852. From Fugdin, on the Sungari River.

79853. From Fugdin, on the Sungari River.

79854 to 79857. From the Harbin Experiment Station.

79854. N 12.

79855. N 135.

79573 to 79903—Continued.

79856. N 143.

79857. N 149.

79858 to 79861. From the Mangow Experiment Station, Chinese Eastern Railway.

79858. 79860.

79859. 79861.

79862 to 79865. From the Sangache Experiment Station, Chinese Eastern Railway.

79862. 79864.

79863. 79865.

79866 to 79868. From the Shouchenpu Experiment Station, Chinese Eastern Railway.

79866. 79868.

79867.

79869 to 79873. From the Jaolaychou Experiment Station, Chinese Eastern Railway.

79869. 79872.

79870. 79873.

79871.

79874 to 79877. From the Taomin Experiment Station, Chinese Eastern Railway.

79874. 79876.

79875. 79877.

79878 to 79882. From the Tmampo Experiment Station, Chinese Eastern Railway.

79878. 79881.

79879. 79882.

79880.

79883. From the Taomin Experiment Station, Chinese Eastern Railway.

79884 to 79886. From the Uchimiche Experiment Station, Chinese Eastern Railway.

79884. 79886.

79885. 79887.

79888 to 79892. SORGHUM VULGARE Pers. Poaceae. Sorghum.

From the Harbin Experiment Station.

79888. N 4. 79891. N 14.

79889. N 5. 79892. N 17.

79890. N 11.

79893 to 79900. TRITICUM spp. Poaceae.

79893 to 79898. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.

79893. [No data.]

79894. From the Sanchache Experiment Station.

79895. N 65. From the Harbin Experiment Station, and originally from Mukden.

79896. N 43. From the Russian Experiment Station, Harbin.

79897. N 81. From the Harbin Experiment Station.

79898. N 21. From the Harbin Experiment Station.

79573 to 79903—Continued.

79899. *TRITICUM DICOCCUM* Schrank.
Emmer.

N 64. From the Harbin Experiment Station.

79900. *TRITICUM DURUM* Desf.
Durum wheat.

N 85. From the Harbin Experiment Station.

79901. *VICIA FABA* L. Fabaceae.
Broadbean.

79902. *VIGNA SINENSIS* (Torner) Savl.
Fabaceae. Cowpea.

79903. *ZEA MAYS* L. Poaceae. Corn.
N 42.

79904 to 79929.

From Tiflis, Georgia, Russia. Seeds presented by the director, Botanic Garden. Received February 14, 1929.

79904. *COLCHICUM SPECIOSUM* Stev. Melanthiaceae.

A low bulbous plant with four or five shining green leaves about a foot long and showy dark-rose flowers often 6 inches in diameter which appear after the leaves have died away. It is native to the Caucasus.

For previous introduction see No. 67016.

79905 and 79906. *EPHEDRA MAJOR PROCERA* (Fisch. and Mey.) Aschers. and Gracbn. Gnetaeae. Jointfir.

A leafless shrub, 4 to 5 feet high, native to the Caucasus, with stiff branches and nearly sessile flower clusters.

79905. Variety *chrysocarpa*. A golden-fruited variety.

79906. Variety *erythrocarpa*. A red-fruited variety.

79907. *HYACINTHUS PARADOXUS* (Boiss.) Fisch. and Mey. (*Bellevalia paradoxa* Boiss.). Liliaceae.

A wild hyacinth, native to Russia, with narrowly lanceolate leaves and spikes of intensely blue bell-shaped flowers.

79908 to 79919. *IRIS* spp. Iridaceae.

79908. *IRIS ACUTILOBA* Meyer.

A wild iris native to the Caucasus, with purple and fawn-colored flowers.

For previous introduction see No. 68158.

79909. *IRIS CAUCASICA* Hoffm.

A rather dwarf bulbous iris native from Asia Minor to Turkestan and ascending to 6,000 feet above sea level. It has about six bright-green, very narrow leaves 3 to 6 inches long, a short stem, and pale or bright-yellow flowers which appear in March or April.

For previous introduction see No. 67812.

79910. *IRIS IBERICA* Hoffm. Iberian iris.

A dwarf, nearly stemless iris, native to mountainous parts of Asia Minor, with narrow leaves 3 to 6 inches long and large flowers which have pale-brown outer segments blotched with

79904 to 79929—Continued.

purple brown, and pure white inner segments, although these colors are not constant.

For previous introduction see No. 68163.

79911. *IRIS LYCOTIS* Woron.

A species for which a description has not been found.

For previous introduction see No. 67916.

79912 to 79914. *IRIS PUMILA* L.

79912. Variety *luteis*. A form with light-yellow flowers.

79913. Variety *pallidis*.

79914. Variety *violaceis*. A form with violet flowers.

79915. *IRIS RETICULATA* Bieb. Netted iris.

A bulbous iris, native to Asia Minor, with short erect leaves about 1½ feet high, a very short stem, and fragrant bright-purple flowers which appear early in spring before the leaves develop.

For previous introduction see No. 68167.

79916. *IRIS* sp.

Received as *Iris sulphurea*, which is a synonym of *I. pumila*, but the seeds do not agree with that species.

79917. *IRIS TALISCHI* Forst.

An iris, native to Persia, of the section *Pogoniris*, with a large rhizome, thick wide obtuse sword-shaped leaves, and 12 to 30 yellow flowers.

79918. *IRIS TASCHEA* Hort.

A horticultural variety for which a place of publication has not been found.

For previous introduction see No. 68169.

79919. *IRIS WINOGRADOWI* Fourn.

An iris native to the Caucasus.

For previous introduction see No. 64301.

79920 to 79922. *JUNIPERUS* spp. Pinaceae. Juniper.

79920. *JUNIPERUS FOETIDISSIMA* Wild.

Variety *squarrosa*. A form with spreading or recurved branches. The usual type is an evergreen tree, native to southern Europe, up to 15 feet high, with upright branches. The young twigs, when rubbed, emit a disagreeable odor.

79921. *JUNIPERUS ISOPHYLLOS* Koch.

A shrubby oriental tree with light-brown bark and ovate leaves. It differs from *J. pseudosabina* in being smaller and having keeled leaves. Native to Asia Minor.

For previous introduction see No. 64302.

79922. *JUNIPERUS ONYCEDRUS* L. Prickly juniper.

An ornamental evergreen tree, native to Europe, about 15 feet high,

79904 to 79929—Continued.

with light-green foliage covered somewhat with a whitish bloom. It is reported to thrive in dry rocky places.

79923 to 79927. *PAEONIA* spp. Ranunculaceae. Peony.

79923. *PAEONIA ABCHASICA* Hort.

A horticultural variety for which a place of publication has not been found.

For previous introduction see No. 64303.

79924. *PAEONIA MLOKOSEWITSCHI* Lomakin.

A herbaceous perennial peony with dark bluish-green biternate leaves with red nerves and margins and yellow flowers, 4 to 5 inches in diameter, which have numerous stamens and purple stigmas. This peony, considered the handsomest of the yellow-flowered forms, is native to the central Caucasus.

For previous introduction see No. 64304.

79925. *PAEONIA TENUIFOLIA* L. Fringed peony.

A hardy herbaceous perennial a foot or more high, densely leafy, with ternate, much-divided leaves and an erect dark-crimson flower about 3 inches across. It is native to the Caucasus region.

79926. *PAEONIA TRITERNATA* Pall.

A herbaceous peony, native to Siberia, usually about 3 feet high, with triternate leaves and purple flowers.

For previous introduction see No. 67050.

79927. *PAEONIA WITTMANNIANA* Hartwiss.

A herbaceous perennial, native to the Caucasus, 2 to 3 feet high, with biternate leaves 4 to 8 inches long and flowers, about 4 inches across, which are solitary, pale yellow, greenish or nearly white.

For previous introduction see No. 64306.

79928. *SCILLA ROSENI* Koch. Liliaceae. Squill.

A bulbous plant, native to the Caucasus, with linear-oblong leaves and small white flowers.

79929. *ULMUS ELLIPTICA* Koch. Ulmaceae. Elm.

A tree, native to Armenia, with pubescent branchlets, elliptical leaves 3 to 6 inches long, and obovate fruits.

For previous introduction see No. 67926.

79930 to 79956.

From Blackwood, South Australia. Seeds presented by Edwin Ashby. Received February 16, 1929.

79930. *ALYOGYNE HAKEAEFOLIA* (Giordano) Alefeld (*Fugosia hakeaeifolia* Hook.). Malvaceae.

An erect evergreen shrub, native to Australia, with narrow lobed or deeply cut leaves and large purple-lilac flowers. It is closely related to *Gossypium*.

79930 to 79956—Continued.

For previous introduction see No. 65221.

79931. *BEAUFORTIA* sp. Myrtaceae.

Perongorups Mountains, Western Australia. An ornamental evergreen dwarf bush native to Australia.

79932. *CALLISTEMON BRACHYANDRUS* Lindl. Myrtaceae. Bottlebrush.

A pendulous form of this large bushy evergreen shrub. It is 12 to 15 feet high, native to northern Australia, with linear-subulate rigid leaves an inch or more long and loose spikes of flowers with showy deep-red stamens.

79933. *CALLITRIS DRUMMONDII* (Parl.) Benth. and Hook. Pinaceae.

Kangaroo Island, South Australia. A dwarf, compact, cypresslike tree with bright-green foliage. It is native to South Australia, where it thrives under semiarid conditions.

For previous introduction see No. 51283.

79934 to 79937. *CALOTHAMNUS* spp. Myrtaceae.

79934. *CALOTHAMNUS ASPER* Turcz.

A hairy evergreen shrub, native to Western Australia, with crowded, linear, flat leaves and short, dense clusters of flowers with crimson stamens.

For previous introduction see No. 67069.

79935. *CALOTHAMNUS QUADRIFIDUS* Ait.

An erect evergreen shrub 7 feet high, native to Western Australia, with crowded linear leaves about an inch long, somewhat like those of *Hakea*, and dense spikes of flowers which are conspicuous only because of the long, rich crimson stamens.

For previous introduction see No. 67071.

79936. *CALOTHAMNUS SANGUINEUS* Labill.

A tall evergreen shrub, 6 to 12 feet high, with subulate terete leaves about an inch long and flowers with blood-red stamens as long as the leaves. It is native to Western Australia.

79937. *CALOTHAMNUS* sp.

Murchison, Western Australia. A downy dwarf evergreen shrub native to Australia.

79938. *EREMAEA* sp. Myrtaceae.

Geraldton, Western Australia. An orange-flowered shrub up to 4 feet high, native to Australia.

79939 to 79948. *GREVILLEA* spp. Proteaceae.

79939. *GREVILLEA BIPINNATIFIDA* R. Br.

A prostrate or diffuse evergreen shrub 3 to 4 feet high, native to Western Australia. The broadly ovate leaves, 4 inches long and 3 inches wide, are twice divided into wedge-shaped segments. The silky pubescent red flowers are in loose racemes 4 inches long or gathered together into a large terminal panicle.

79940. *GREVILLEA BUXIFOLIA* (J. E. Smith) R. Br.

79930 to 79956—Continued.

An evergreen shrub about 6 feet high, which stands cutting back well and produces an abundance of small pink flowers. It is native to South Australia.

For previous introduction see No. 49364.

79941. GREVILLEA ERICIFOLIA R. Br.

A low evergreen shrub of spreading habit, about 2 feet high, with sessile linear or lanceolate leaves and short terminal racemes of red and yellowish flowers. It is native to southeastern Australia.

79942. GREVILLEA ILICIFOLIA R. Br.

A large spreading evergreen shrub, native to South Australia, with prickly hollylike leaves 1 to 2 inches long and small flowers in terminal racemes.

79943. GREVILLEA LAVANDULACEA Schlecht.

Variety *malleensis*. A variety native to South Australia where it grows from a foot to a foot and a half high on a sandy or clayey subsoil, but it seems to prefer broken rock soil (quartzite). It does very well on rockeries and should be treated as a rock plant. The leaves are pungent, and the crimson flowers, at each axil all along the branches, are borne from the beginning of the winter until late spring in Australia.

79944. GREVILLEA OLEOIDES Sieber.

From The Grampians, Victoria. An erect evergreen shrub, 4 to 5 feet high, closely allied to *G. punicea*, with lanceolate leaves 2 to 4 inches long and sessile racemes of bright-red flowers. It is native to southeastern Australia.

79945. GREVILLEA OLEOIDES DIMORPHA (F. Muell.) Benth.

A variety with more rigid foliage, lanceolate in some specimens and linear in others, and usually smaller flowers.

79946. GREVILLEA PRITZELII Diels.

An evergreen shrub, native to Australia, with brown-hairy branchlets, linear sickle-shaped leaves 3 to 5 inches long, and racemes, 2 to 3 inches long, of white flowers covered with dense white tomentum.

For previous introduction see No. 76640.

79947. GREVILLEA PUNICEA R. Br.

An erect evergreen shrub, 4 to 5 feet high, with small elliptic-oblong leaves and crimson flowers in short dense terminal racemes. It is native to New South Wales.

79948. GREVILLEA ROSMARINIFOLIA A. Cunn.

An erect evergreen shrub, native to New South Wales, about 5 feet high, with hairy branches, erect crowded linear-subulate leaves, and short dense racemes of red flowers.

79949. HAKEA sp. Proteaceae.

An ornamental evergreen shrub, native to Western Australia, with long spikes of scarlet flowers.

79930 to 79956—Continued.

79950. HIBISCUS SPLENDENS Fras. Malvaceae.

From north of Cairns, Queensland. A tall handsome shrub 12 to 20 feet high, native to southern Australia, densely hairy, with prickly branches, palmately lobed heart-shaped leaves, and large, showy rose-colored flowers 6 inches or more across.

79951. HOVEA ELLIPTICA (J. E. Smith) DC. Fabaceae.

A leguminous evergreen shrub up to 10 feet high, with slender branches, small narrowly oval leaves, and short axillary clusters of small blue flowers. It is native to Western Australia.

For previous introduction see No. 64487.

79952. HOVEA PUNGENS Benth. Fabaceae.

A rigidly erect evergreen shrub, 1 to 2 feet high, with linear-lanceolate coriaceous sharp-pointed leaves less than an inch long. The branches are covered from the bottom to the top with clusters of deep-blue flowers.

For previous introduction see No. 76641.

79953. KUNZEA PARVIFLORA Hort. Myrtaceae.

A dwarf evergreen shrub with very showy crimson flowers. Native to Australia.

79954. OXYLOBIUM LANCEOLATUM (Vent.) Druce (*O. callistachys* Benth.). Fabaceae.

A tall evergreen shrub, native to Australia, with whorls of lanceolate leaves 3 to 5 inches long and yellow flowers in dense terminal racemes 6 inches long.

For previous introduction see No. 76941.

79955. SWAINSONA GALEGIFOLIA (Andrews) R. Br. (*S. coronillifolia* Salisb.). Fabaceae.

A shrubby perennial, native to Australia, climbing to a height of several feet, with 1 to 21 small oblong leaflets and large deep-red, pink, or white flowers. *Swainsona coronillifolia* probably represents the horticultural variety *violacea*, which has rose-violet flowers. This species is said to be poisonous to stock.

For previous introduction see No. 77447.

79956. THRYPTOMENE sp. Myrtaceae.

From Geraldton, Western Australia. A dwarf evergreen bush or shrub with a mass of pink flowers which were borne at Blackwood between June and September.

79957. TRACHYPHYNIUM sp. Marantaceae.

From Cameroon, West Africa. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received March 25, 1927. Numbered in January, 1929.

No. 1174. Victoria Botanic Garden. A tall branching shrub, native to west tropical Africa, with leafy stems and small inconspicuous flowers.

79958 to 79970. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From San Juan, Porto Rico. Seeds presented by O. W. Barrett, Agricultural Director, Bureau of Agricultural Development. Received March 27, 1929.

79958. *Americano.*

79959. *Areiibenos 447.*

79960. *Chagaros.*

79961. *Cubanos 439.*

79962. *French 1624.*

79963. *Horacios.*

79964. *Larenos 446.*

79965. *Mits.*

79966. *Negritos.*

79967. *Pepineros 445.*

79968. *Pinto Moro.*

79969. *San Salvador 4258.*

79970. *Silvios.*

79971. PINUS SYLVESTRIS L. Pinaceae.

From Manchuria, China. Seeds presented by V. K. Roerich, through V. Golubzoff, Harbin, Manchuria. Received February 2, 1929.

Variety *mongolica*. A Mongolian form of the Scotch pine.

79972. ALSTONIA MACROPHYLLA Wall. Apocynaceae.

From Peradeniya, Ceylon. Seeds presented by T. H. Parsons, Curator, Royal Botanic Gardens. Received March 30, 1929.

A tall Malayan evergreen tree with milky juice, oblanceolate leaves a foot long, and terminal clusters of small white flowers.

For previous introduction see No. 58390.

79973. ORCHIDANTHA LONGIFLORA (Scott.) Ridley. Musaceae.

From Peradeniya, Ceylon. Plants presented by W. Small, Acting Director, Department of Agriculture. Received March 30, 1929.

For previous introduction and description see No. 79530.

79974. FICUS CARICA L. Moraceae. **Common fig.**

From Hereford, England. Plant and scions purchased from King's Acre Nurseries. Received March 30, 1929.

Brown Turkey fig.

79975. CRYPTOSTEGIA sp. Asclepiadaceae. **Lombiro rubber.**

From Madagascar. Seeds presented by Dr. J. O. Dyrnes, through John S. Richardson, jr., American vice consul, Tananarive, Madagascar, at the request of Charles F. Swingle, Bureau of Plant Industry. Received March 11, 1929.

These seeds were collected by Doctor Dyrnes at Manasoa (Benenitra), Tullear, Madagascar, from native vines that produce the Lombiro rubber.

79976 to 79979. AGAVE spp. Amaryllidaceae.

From Naples, Italy. Seeds purchased from M. Herb. Received March 30, 1929.

79976. AGAVE CAESPITOSA Tod.

A caespitose, nearly stemless century plant, 3 feet high, with fleshy light-green acuminate leaves which have brown prickly margins. The small greenish flowers are on a long tenuous almost-nodding scape about 10 feet high.

79977. AGAVE HORRIDA Jacobi.

A herbaceous perennial, native to central Mexico, with a rosette of oblanceolate glossy green flat spreading leaves having the large irregular prickles joined by a wide horny margin. The stalk of the inflorescence is moderately slender, and the yellowish or purplish-green flowers are 1 to 2 inches long.

79978. AGAVE MITRAEFORMIS Jacobi (*A. bonnettiana* Hort.).

A herbaceous perennial, native to southern Mexico, with a rosette of prickly margined recurved obovate leaves 2 to 3 feet long and a flower stalk, 15 to 20 feet high, bearing a loose panicle of large yellow flowers 2 to 3 inches across.

79979. AGAVE UNIVITTATA Haw.

A stemless Mexican century plant with narrow-lanceolate leaves, a foot or more long, elongated into a stout brown spine, with brown horny margins.

79980 to 79991.

From Winchester, England. Plants purchased from Hillier & Sons, West Hill Nurseries. Received March 30, 1929.

79980 to 79990. DAPHNE spp. Thymelaeaceae.**79980. DAPHNE ACUTILOBA** Rehder.

For previous introduction and description see No. 79199.

79981. DAPHNE CNEORUM L. **Rose daphne.**

For previous introduction and description see No. 79204.

79982. DAPHNE COLLINA NEAPOLITANA (Lodd.) Lindl.

An evergreen shrub, native to Italy, about 3 feet high, with smooth, narrow, oblong leaves about an inch long and loose heads of rosy purple flowers.

79983. DAPHNE GNIDIUM L.

For previous introduction and description see No. 79474.

79984. DAPHNE HOUTTEANA Planch.

A handsome evergreen shrub with deep-purple lanceolate half-leathery leaves and small cymes of violet-lilac flowers. It is possibly a hybrid between *Daphne mezereum* and *D. laureola*.

79985. DAPHNE LAUREOLA L.

For previous introduction and description see No. 79057.

79986. DAPHNE LAUREOLA PHILIPPI (Gren. and Godr.) Meisn.

For previous introduction and description see No. 79210.

79980 to 79991—Continued.

79987. *DAPHNE OLEOIDES* Shreb. (*D. buxifolia* Vahl). Olive daphne.

For previous introduction and description see No. 79202.

79988 and 79989. *DAPHNE PETRAEA* Leyb. (*D. rupestris* Fach.).

79988. For previous introduction and description see No. 79212.

79989. Variety *grandiflora*. A large-flowered form.

79990. *DAPHNE RETUSA* Hemsl.

An evergreen densely branched shrub, native to western China, up to 3 feet high, with cuncate-oblong usually emarginate leaves from 1 to 3 inches long and fragrant, rosy purple flowers, white inside, about an inch across, in terminal heads.

79991. *ERICA VAGANS* L. Ericaceae. Cornish heath.

For previous introduction and description see No. 79158.

79992 to 80018.

From Bengal, India. Bulbs and roots purchased from R. B. and D. S. Pradhan, the Chandra Nursery. Received in February, 1929.

79992. *AGAPANTHUS AFRICANUS* (L.) Hoffmannsegg (*A. umbellatus* L'Her.). Liliaceae. African lily.

Variety *Minor moorianus*. A slender-leaved dwarf variety.

79993. *CRINUM POWELLII* Baker. Amaryllidaceae. Powell crinum.

A bulbous plant with about 20 spreading strap-shaped leaves 3 to 4 feet long and about 8 rose-colored flowers in large showy heads terminating a scape a foot or more high. It is considered to be a hybrid between *Crinum longifolium* and *C. moorei*.

79994 to 80003. *HEDYCHIMUM* spp. Ziniberaceae. Gingerlily.

79994. *HEDYCHIMUM AURANTIACUM* Wall.

A leafy alpine perennial about 5 feet high, with lanceolate leaves a foot or more long and 2 to 3 inches wide. The delicate orange flowers, with orange-yellow patches, are in a spike 6 inches to a foot long. It is native to the mountains of Nepal.

79995. *HEDYCHIMUM CHANDRABIRIANUM* Hort.

A hybrid bearing fragrant white flowers with yellow patches very early in the season.

79996. *HEDYCHIMUM COCCINEUM* Buch-Ham.

Variety *angustifolium*. A gingerlike plant up to 5 feet high, with narrow leaves and dull brick-red flowers, shading to crimson, in a spike about 15 inches long.

79997 to 79999. *HEDYCHIMUM CORONARIUM* Koen. Common gingerlily.

79997. Variety *chrysoleucum*. A variety in which the highly scented flower has a white lip with a large yellow patch in the center.

79992 to 80018—Continued.

79998. Variety *flavescens*. Flowers very fragrant and yellow with a deeper yellow patch.

79999. Variety *maximum*. A variety with a taller stem and white flowers with faint orange patches.

80000. *HEDYCHIMUM ELATUM* R. Br.

A gingerlike plant 5 feet high, with narrow-oblong leaves a foot or more in length and white flowers marked with pink, about 2 inches long, in stout spikes nearly a foot high. It is native to the subtropical Himalayas.

80001. *HEDYCHIMUM GARDNERIANUM* Roscoe. India gingerlily.

A tall tender leafy perennial, native to India, with narrow sessile leaves and a terminal spike of light-yellow flowers which are succeeded by showy red fruits.

80002. *HEDYCHIMUM GHALI* Hort.

A hybrid with scented white flowers, marked with yellow, borne in a spike over a foot long.

80003. *HEDYCHIMUM GREENII* W. W. Smith.

A leafy subtropical perennial, native to Bhutan, India, about 5 feet tall, with narrow-oblong leaves up to a foot long and red flowers in dense spikes about 5 inches long.

80004. *HEDYCHIMUM PRADHANII* Hort.

A hybrid with spikes over a foot long, of mildly scented flowers which are white with a flesh-pink patch.

80005. *HEDYCHIMUM SAMSHERRI* Hort.

A hybrid with spikes about a foot long, of delicate orange flowers with a deeper patch.

80006. *HEDYCHIMUM SPICATUM ACUMINATUM* Wall.

A leafy perennial, native to the Himalayas, up to 4 feet high, with narrow-oblong leaves a foot or more long, with pale-yellow or white flowers in a rather lax spike about a foot long.

80007. *HEDYCHIMUM THYRSIFORME* J. E. Smith.

A tender leafy perennial, native to the Himalayas, usually about 5 feet high, with finely hairy leaves up to a foot long and 4 inches wide and mildly scented white flowers in a dense spike.

80008. *HEDYCHIMUM VILLOSUM* Wall.

A leafy alpine perennial, native to the Himalayas, with narrow-oblong leaves, a foot or less long, pubescent above, and cream-colored flowers, about 2 inches long, in spikes 6 inches to a foot high.

80009. *IRIS* sp. Iridaceae.

An alpine iris from the Himalayas.

80010 to 80013. *LILIUM* spp. Liliaceae. Lily.

80010. *LILIUM GIGANTEUM* Wall. Giant lily.

For previous introduction and description see No. 78853.

79992 to 80018—Continued.

80011. *LILIUM NEILGHERRENSE* Wight.

A tender lily from the Neilgherry Hills, India, which resembles in a general way the hardy *L. regale* of China. It differs in its more slender, less widely open trumpet-shaped flowers which are greenish white without and pure white within.

80012. *LILIUM SULPHUREUM* Baker.

A handsome trumpet lily, native to northern Burma at such elevations that it is as far north as Philadelphia, with erect stems 6 to 7 feet high, and somewhat broader leaves than those of *L. neilgherrense*. It resembles more closely the northern *L. sargentiae*, and, like it, bears bulbils in the axils of the leaves. The yellowish white flowers are stained with brown on the outside and deeper yellow in the throat.

80013. *LILIUM WALLICHIANUM* Schult. f.

For previous introduction and description see No. 78854.

80014. *NIOBE* sp. (*Funkia* sp.). Liliaceae. Plantainlily.

The plantainlilies are herbaceous perennials, mostly native to China and Japan, with large masses of root leaves and white or bluish flowers in loose spikes.

79992 to 80018—Continued.

80015 to 80018. *ZEPHYRANTHES* spp. Amaryllidaceae. Zephyrily.80015. *ZEPHYRANTHES CANDIDA* (Lindl.) Herb. Autumn zephyrily.

A subtropical bulbous plant with linear leaves a foot long, appearing with the flowers; these are white, often rose tinted on the outside, and about 2 inches long. It is native to Argentina.

80016. *ZEPHYRANTHES ROBUSTA* (Herb.) Baker.

A tender bulbous plant, native to Argentina, 6 to 9 inches high, with glaucous linear leaves which appear after the very large showy flowers. The latter are a delicate pink and about 2½ inches long.

80017. *ZEPHYRANTHES ROSEA* Lindl. Pink zephyrily.

An autumn-blooming tender bulbous plant, native to Cuba, with linear bright-green leaves and rose-colored flowers an inch long, on a slender peduncle 4 to 6 inches long.

80018. *ZEPHYRANTHES SULPHUREA* Hort.

A tender bulbous plant with bright-yellow flowers.

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