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INVENTORY No. 108



Washington, D. C.

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Issued May, 1933

PLANT MATERIAL INTRODUCED BY THE DIVISION OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, JULY 1 TO SEPTEMBER 30, 1931 (Nos. 93749-94282)

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INTRODUCTORY STATEMENT

The present inventory, recording the materials arriving between July 1 and September 30, 1931, inclusive (Nos. 93749–94282), differs from former inventories in that most of its records concern gifts and exchanges from private individuals and institutions rather than the results of exploration conducted independently by the division, which is most conspicuously represented by the collection of soybeans (Nos. 94153–94173) collected by Dorsett and Morse,

Among the many gifts are the large collections of seeds from the last Forrest expedition, generously presented by Maj. Lionel de Rothschild (Nos. 93871-93970, 93991-94063, 94100-94150) from his share in the returns of that exploration.

Interest in tropical fruits, particularly lychees, is reflected in Nos. 93971-93977, 94070-94073, and 94247-94257, which include many lychee forms collected by G. Weidman Groff at the Lingnan University, Canton, China.

Plants from Australia are well recognized with collections from C. A. Gardner, Government Botanist, Perth, Western Australia (Nos. 93780-93793), an important collection of Casuarina species, particularly needed for a Florida specialist; and from Ida W. Richardson (Nos. 93828-93845), comprising many ornamental shrubs and trees.

Famous botanic gardens are represented by seeds from Buitenzorg, Java (Nos. 94095-94098), Peradeniya, Ceylon (Nos. 94089-94094), and the Lloyd Botanic Garden, Darjeeling, India (Nos. 94075-94086), all of which contribute particular plants to complete, or to add to, various permanent collections.

The botanical determinations of these introductions have been made and

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.

Division of Foreign Plant Introduction, Washington, D. C., August 16, 1932.

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INVENTORY 1

93749. ZEA MAYS L. Poaceae. Corn.

om Mexico. Seeds presented by Emil Makrinius, Concordia, Oaxaca. Received July 1, 1931.

Indian name, Chise. Corn grown in the mountains at 10,000 feet altitude; it matures in 11 months.

93750. Ulmus pumila L. Ulmaceae. Chinese elm.

rom Manchuria. Seeds purchased from the Manshu Nosan Shokai (Inc.), whole-sale seed growers and dealers, Dairen. Received July 1, 1931.

near Mukden, Manchuria, at 250 feet altitude. Introduced for the use of experimenters in the north-central Plaing area

93751 to 93755. AVENA Spp. Poaceae. Oats.

From Uruguay, South America. Seeds pre-sented by Dr. Alberto Boerger, Director del Instituto Fitotécnico y Semillere Nacional, La Estanzuela, Department Co-lonia. Received July 1, 1931.

Out varieties introduced for the use of department specialists.

93751. AVENA BYZANTINA Koch.

No. 1095-A. 1332.

93752 to 93755. AVENA SATIVA L.

93752. No. 64-Q.

93753. No. 64-R.

93754. No. 64-S, 613321.

93755. No. 64-T.

93756 to 93762.

com Quibdo, Colombia. Seeds collected by W. A. Archer. Received July 2, 1931.

93756 to 93762—Continued.

93756. CARICA PAPAYA L. Papayaceae. Papaya.

Collected in May, 1931. A variety about 8 inches long and semiseedless. This type is frequently found in the region around Quibdo.

98757. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. Cushaw.

Sapallo. Collected April 20, 1931, at Quibdo. A short-necked, light-green squash 9 inches long and over 5 inches in diameter with irregular cream markings on the globular body. The flesh, which has the color and odor of the Rocky Ford cantaloupe, is used in making dulces. The seeds are roasted and eaten.

93758. GUILIELMA GASIPAES (H. B. K.) Bailey (G. spectosa Mart.). Phoeni-caceae.

An Amazonian palm, becoming ultimately about 60 feet high, closely allied to the pejibaye (Guttielma utilis). Like the pejibaye, it furnishes food for a great number of people in regions where it is indigenous; it appears to be of promise for cultivating as a food plant throughout the Tropics in congenial situations.

For previous introduction see 93359.

98759. PHYTELEPHAS MACROCARPA Ruiz and Pav. Phoenicaceae.

Ivory-nut palm.

A tall tropical American palm with a thick, rough trunk and foliage resembling that of the coconut palm. The bony fruits are used for making buttons,

For previous introduction see 74503.

93760. HEDYCHIUM CORONARIUM Koen. Zinziberaceae. Common gingerlily.

No. 1847. Heliotropo. Collected in a park at Quibdo, April 10, 1931. A tu-

by W. A. Archer. Received July 2, 1931. | park at Quibdo, April 10, 1931. A tu
'It should be understood that the names of varieties of fruits, vegetables, cereals, and
other plants used in this inventory are those under which the material was received when
introduced by the Division 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 identification, 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 division,
herbarium specimens of leaves and flowers should be sent in so that definite identification
can be made. can be made.

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93756 to 93762—Continued.

berous-rooted perennial, 1 to 2 feet high, found growing in clumps. The white flowers have the odor of jasmine.

FRAGRANS (Salisb.) Ames. Orchidaceae.

Bejucillo. Collected May 2117. 20, 1931, above Quibdo on the Rio Atrato.

93762. ACANTHORHIZA Sp. Phoenicaceae.

No. 2199. Noli. A small palm which grows from 10 to 20 feet high.

93763. LITCHI PHILIPPINENSIS Radlk. Sapindaceae.

From the Philippine Islands. Seeds pre-sented by the Bureau of Science, Depart-ment of Agriculture and Natural Re-sources, Manila. Received July 7, 1931.

A Philippine relative of the lychee (Lit-chi chinensis). The tree is about 50 feet high, with dark-green, pinnate leaves similar to those of the lychee and roundish oblong to those of the lychee and roundish oblong fruits about 1 inch long borne in loose terminal clusters. The tough, leatherlike shell of the fruit, which is covered with short spiny projections, incloses a scant edible pulp in which is embedded a relatively large seed. This seed is roasted and eaten. The tree may have value as a stock for the lychee.

For previous introduction see 80871.

93764. Euphorbia sp. Euphorbiaceae.

From Madagascar. Seeds presented by R. Decary, Ambovombe. Received July 2, 1931.

Said to be a rubber plant.

93765. Cassia absus L. Caesalpinia-

From Africa. Seeds presented by Comm. L. Baldrati, University di Pisa, Asmara, Eritrea. Received July 2, 1931.

An erect annual tropical legume, about 2 feet high, with small red-yellow flowers. It is native to India and Egypt.

For previous introduction see 75976.

93766 and 93767. TRITICUM AESTIVUM L. (T. vulgare Vill.). Poaceae.

Common wheat.

From Rumania. Seeds presented by the Samanta, Society for Seed and Plant Selections, Senad (Banat). Received Received July 3, 1931.

93766. Samanta 117.

93767. Samanta 1252.

93768. LOPHIRA ALATA Banks. Dipterocarpaceae.

om Africa. Seeds presented by H. C. Tebbitt, Director of Forests, Ibaden, Ni-geria. Received April 7, 1931. From

large tree, native to tropical Africa, A large tree, native to tropical Africa, with obovate, crispate-undulate, coriaceous leaves 30 inches long and terminal, pyramidal panicles of creamy white flowers 1 to 2 inches across. The fruit is subtended by the calyx, one lobe of which is enlarged to 4 inches long and becomes crimson when the fruit is ripe.

For previous introduction see 93547.

93769. HYMENOCALLIS AMANCAES (Ruiz and Pav.) Nichols. Amaryllidaceae.

om Peru. Bulbs presented by Ralph H. Gray, Estación Experimental Agrícola, Lima. Received October 28, 1929. Num-bered in July, 1931.

A tender bulbous plant about 2 feet high with large bright-yellow flowers. Native to Peru and Chile.

For previous introduction see 67993.

93770. URCEOLINA MINIATA (Herb.) Benth. and Hook. Amaryllidaceae.

From Huancayo, Peru. Bulbs presented by Paul G. Ledig, Huancayo Magnetic observatory, Department of Research in Terrestrial Magnetism of the Carnegie Institution of Washington, D. C. Re-ceived July 1, 1931.

A bulbous perennial native to the Andes of Peru and Bolivia. The solid scape, 1 foot high, bears two to six urn-shaped scarlet flowers 2 inches long, after which appear the narrowly ovate leaves 1 foot

93771. Bambusa macroculmis A. Riviere. Poaceae.

From Algeria, Africa. Plants presented by Dr. R. Maire, Jardin d'Essais, Algiers. Received July 11, 1931.

A very distinct and valuable clump bam-boo introduced from Cochinchina by the Jardin des Plantes, in Paris and sent to Algiers for trial; there is now a splendid avenue in the Jardin d'Essais, of Algiers.

For previous introduction see 79548.

93772 to 93774.

From La Sierra, near Medellin, Colombia. Seeds presented by W. A. Archer. Received July 13, 1931.

93772. BEGONIA Sp. Begoniaceae.

No. 1516. Collected in February, 1931.

93773. SOLANUM sp. Solanaceae.

No. 1293. A vine 6 feet long, which is either flat on the ground or climbing on trees. The yellow flowers are purplish beneath, and the small green fruits, 1 inch in diameter, grow in clusters of 20 to 30.

93774. BOMAREA Sp. Amaryllidaceae.

1210. Cortopico. Collected Jan-No. 1210. uary 29, 1931.

93775 to 93779.

From Chiengmai, Siam. Seeds presented by Mrs. William Harris. Received July 13, 1931.

93775 to 93777. Cassia spp. Caesalpiniaceae.

cene.
93775. Cassia fistula L.
Golden-shower.

An ornamental tree which blossoms in Siam in May. The long pendulous racemes of large bright-yellow flowers appear after the leaves.

93776. CASSIA JAVANICA L.

A tree which blooms in the hottest part of the year. The gorgeous pink or rose-colored flowers, over 2 inches across, are borne in large clusters and appear before the leaves.

For previous introduction see 67542.

93775 to 93779—Continued.

93777. CASSIA NODOSA Buch.-Ham.

A moderate-sized, deciduous tree, with long drooping branches and glossy leaves; during May it bears a profusion of beautiful bright-pink, roseand scented flowers borne in dense clusters on long stalks. The leaves and flowers appear at the same time.

For previous introduction see 87505.

98778. DELONIX REGIA (Boj.) Raf. (Poinciana regia Hook.). Caesalpiniaceae. Royal poinciana.

Flower of the forest, peacock flower. A rapid-growing tree, native to Madagascar, which reaches a height of 20 to 40 feet with a wide-spreading crown. The leaves are 1 to 2 feet long with 10 to 20 pairs of pinnae, each pinna with numerous oval leaflets. The bright-scarlet flowers, 3 to 4 inches across, with the upper petal striped with yellow and more cuneate, the lower petals very prominently clawed, are in racemes, and are followed by pods which vary in length from 6 inches to 2 feet. This is one of the most striking and gorgeous of the tropical trees. tropical trees.

93779. LILIUM sp. Liliaceae.

Nepaul lily. Collected under a pine tree on a mountain ridge at 5,000 feet altitude.

93780 to 93793. Casuarina spp. Casuarinaceae

From Australia. Seeds presented by C. A. Gardner, Government Botanist, Perth, Western Australia. Received July 13,

93780. CASUARINA ACUTIVALVIS F. Muell.

An erect branched shrub with the internodes marked by 12 lines of low linear-subulate teeth and with rather large globular cones. The dark-brown leaves, 1 line long, are easily dislodged. Native to Victoria, Australia.

93781. CASUARINA BAXTERIANA Miquel.

A densely branched shrub with verticillate branches distinctly 7-angled to 8-angled, and with pale-green internodes up to one-fourth of an inch long.

98782. CASUARINA CAMPESTRIS Diels.

A dioecious shrub, 3 to 6 feet high, with numerous erect branches; native to Western Australia. The internodes are glaucous or shining green and striate.

98783. CASUARINA CORNICULATA Muell.

An erect branched shrub which has internodes lined with 8 or 10 rows of deltoid-lanceolate teeth and small globose cones 1 inch long. Native to Australia.

93784. CASUARINA DECUSSATA Benth.

A small tree closely resembling Casua-rina tortulosa, with slender elongated branches arranged in fours, but the an-gles are very acute and two of them are more prominent than the others.

For previous introduction see 92478.

93785. CASUARINA DRUMMONDIANA Miquel.

A bushy shrub up to 3 feet high, with rigid, divaricate branchlets in whorls of five. It is native to Western Australia.

93780 to 93793.—Continued.

93786. CASUARINA FIBROSA Gardner.

A small, erect, densely branched shrub with nearly terete, finely striate branch-lets in whorls of four to six. The cone scales are covered with coarse hairlike fibers. It is native to Western Austra-

98787. CASUARINA FRASERIANA Miquel.

A tall erect shrub or small tree closely related to Casuarina distyla, with rigid branches and with the leaves represented by very small scales in whorls.

For previous introduction see 92479.

93788. CASUARINA GLAUCA Sieber.

An Australian tree 60 to 70 feet high, An Australian tree 60 to 70 feet high, usually straight and of rapid growth. The timber is red, beautifully marked; hard and tough, and is used there for cabinetwork, staves, and fuel. In periods of drought the foliage is used for feeding stock. When the trees are cut down, the young growth shoots up quickly from the stump. This variety grows in the coastal districts, marshy country, and frequently in land submerged with tidal water. It makes a very handsome shade tree. shade tree.

For previous introduction see 75551.

93789. CASUARINA HELMSII Ewart and Gordon.

A Western Australian tree, 5 feet high, with slender terete branchlets 4 to 5 inches long. The nearly smooth cones are 1 inch long and about half an inch in diameter.

93790. CASUARINA HUEGELIANA Miquel.

A shrub or small tree, native to West-ern Australia, with round branchlets ar-ranged in whorls of 8 to 12.

For previous introduction see 92480.

98791. CASUARINA HUMILIS Otto and Dietr.

An erect shrub 2 to 6 feet high, with the branchlets usually in whorls of four and the angles of the internodes promi-nent but obtuse. It is native to Western Australia

98792. CASUARINA LEPIDOPHLOIA F. Muell.

A small or moderately large tree with very slender, linear, faintly angled branchlets. The cones are depressed-globose and about 1 inch in diameter. This species has hitherto been confused with C. glauca.

For previous introduction see 92483.

93793. CASUARINA THUYOIDES Miquel.

A straggling shrub 3 to 5 feet high, with numerous spreading slender branchlets about 1 inch long arranged in whorls of four or five. The ribs on the nearly round internodes are scarcely noticeable. It is native to Western Australia.

93794. Euphorbia sp. Euphorbiaceae.

From Algeria, Africa. Seeds presented by Dr. Henri Humbert, Faculté des Sciences, Laboratoire de Botanique, Algiers. Re-ceived July 13, 1931.

For previous introduction and description see 93764.

93795 to 93808.

From China. Seeds presented by Hugh W. Hubbard, Paotingfu. Received July 14,

A collection of commercial varieties, introduced for the use of department special-

93795 to 93800. CUCUMIS MELO L. Cucurbitaceae. Melon.

93801. CUCURBITA MAXIMA Duchesne. C11curbitaceae. Squash.

93802 and 93803. CUCURBITA PEPO L. curbitaceae. Pumpkin.

93804 to 93808. LAGENARIA LEUCANTHA (Duchesne) Rusby (L. vulgaris Seringe). Cucurbitaceae.

Calabash gourd.

93809 to 93823.

From China. Seeds presented by Frank Dickinson, West China Union University, Chengtu. Received July 14, 1931.

collection of commercial varieties, introduced for the use of department special-

93809. BENINCASA (Thunb.) HISPIDA Cogn. Cucurbitaceae. Waxgourd.

Dung squash. A variety which weighs up to 30 pounds.

93810. CUCUMIS SATIVUS L. Cucurbitaceae. Cucumber.

A small early variety.

93811. CUCUMIS SATIVUS L. Cucurbita-Cucumber. ceae.

A vigorous growing, large cucumber.

93812 and 93813. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. Cushaw.

CYLINDRICA (L.) Rocal Mill.). Cucurbitaceae. 814. LUFFA CILINATION Cucurbitaceae.
(L. aegyptiaca Mill.). Cucurbitaceae.
Suakwa towelgourd.

93815. PHASEOLUS ANGULAR W. F. Wight. Fabaceae. ANGULARIS

. Adzuki bean.

93816 to 93821. Phaseolus vulgaris L. Common bean.

93822. SPINACIA OLERACEA L. diaceae. Spinach.

93823. VIGNA SESQUIPEDALIS wirth. Fabaceae. As (L.) Asparagus-bean,

93824. ROYSTONEA REGIA (H. B. K.) O. F. Cook (Oreodoxa regia H. B. K.). Phoenicaceae.

Cuban royal palm.

From Habana, Cuba. Seeds presented through the Plant Quarantine Control Administration. Received July 15, 1931.

A Cuban palm, up to 80 feet high and 2 feet in diameter, with pinnately divided leaves 10 feet long.

For previous introduction see 76790.

93825. PISTACIA Sp. Anacardiaceae.

rom Greece. Seeds presented by G. T. Choremis, of the island of Chios, through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received July From Greece. 16, 1931.

Turpentine tree.

For previous introduction see 91608.

93826. AMYGDALUS PERSICA L. (Prunus persica Stokes). Amygdalaceae.

Peach.

From the Union of South Africa. Plants purchased from H. E. V. Pickstone & Bro. (Ltd.), Simondium, Cape of Good Hope. Received July 17, 1931.

Inkoos

93827. SPONDIAS TUBEROSA Arruda. Anacardiaceae. Imbu.

From Bahia, Brazil. Seeds presented by Reo Bennett, Empresas Electricas Bra-zilieras, Rio de Janeiro. Received July 17, 1931.

A native Brazilian tree which branches 4 or 6 feet from the ground and forms a broad dense flat-topped crown. When the large limbs are cut and placed in the ground as fence posts they take root and grow. The fruits are oval, over an inch long, and light green in color. The skin is rather tough and incloses the translucent pulcy pulp in which is embedded the single large seed. The pulp has an agreeable flavor, rather suggestive of a sweet orange. The fruit is used fresh, as well as being made into jams and jellies.

For previous introduction see 37861.

93828 to 93845.

From Perth, Western Australia. Seeds presented by Ida W. Richardson. Received July 18, 1931.

93828. ACTINOSTROBUS ACUMINATUS Parl. Pinaceae.

A small erect densely branched shrub, usually about 1 foot high, with short, thick, rigid leaves in whoris of three, and small cones half an inch in diameter, contracted at the tip into a distinct neck. It is native to Western Australia.

93829. ALYOGYNE HAKEARFOLIA dano) Alefeld. Malvaceae.

An erect evergreen shrub, native to Australia, with narrow lobed or deeply serrate leaves and large purple-lilac flowers. It is closely related to Gossypium.

For previous introduction see 86707.

93830. BAECKEA PENTANDRA F. Muell. Myrtaceae.

An erect heathlike shrub with slender branches 1 to 2 feet long and linear obtuse leaves less than one-fourth of an inch long. The very small white or pink flowers are in clusters of one to three in the axils of the leaves. It is native to the axils of the leaves. Western Australia.

93831. BRUNONIA AUSTRALIS J. F. Smith. Goodeniaceae.

A silky haired tufted perennial, native to Australia, with a rosette of linear-ob-ovate entire leaves 2 to 4 inches long and scapes 6 to 12 inches high, bearing globu-lar blue flower heads less than 1 inch in diameter.

For previous introduction see 77276.

832. CALLISTEMON CITRINUS (Curtis) Skeels (C. lanceolatus DC.). Myrtaceae. Lemon bottlebrush. 93832. CALLISTEMON

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

93828 to 93845—Continued.

bright-red stamens. Native to southeastern Australia.

For previous introduction see 78532.

93833. CALLITRIS ROEI (Endl.) Benth. and Hook. Pinaceae.

shrub or small tree 12 to high, with stout flexuous branchlets. leaves are reduced to scales the midribs of which form the angles on the stem be-tween the nodes. It is native to Western Australia.

93834. CALOTHAMNUS QUADRIFIDUS Ait. Myrtaceae.

An erect evergreen bush 7 feet high, native to Western Australia, with crowded linear leaves about 1 inch long, somewhat like those of Hakea, and dense spikes of flowers which are conspicuous because of the long, rich crimson stamens.

For previous introduction see 79935. 98835. Conospermum bracteosum Meissn. Protescese

An undershrub with usually simple stems 1 to 2 feet high and petioled basal leaves with nearly orbicular blades 1 inch long. The stem leaves are bractlike, closely rong. The stem leaves are bractific, closely appressed, and only half an inch long. The fiexuose spikes, 2 to 3 inches long, are in the axils of the upper leaves and bear small white or violet flowers densely covered with silky white hairs. It is native to Western Australia.

98886. DAMPIERA WELLSIANA F. Muell. Goodeniaceae.

A tufted perennial, native to Western Australia, with thick glabrous radical leaves and erect woolly tomentose stems bearing bracted globular heads of small blue flowers.

For previous introduction see 77280.

93837. EUCALYPTUS ERYTHROCORYS Muell. Myrtaceae.

Usually a shrub 8 to 10 feet high, but sometimes a tree up to 30 feet. The broadly linear rigid leaves are 6 inches long. The large flowers in axiliary clusters have bright-red fleshy caps over the buds, and the long stamens are yellow. The ribbed hemispherical fruits are 1 to 2 inches long. It is native to Western Australia

93838. EUCALYPTUS MACROCARPA Hook. Myrtaceae.

A stout Australian shrub or small tree up to 15 feet high, with thick rigid cordate glaucous leaves 6 inches long and large solitary brilliant orange to crimson

For previous introduction see 77283.

93839 to 93841. MELALEUCA spp. Myrta-

93839. MELALEUCA ELLIPTICA Labill.

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

For previous introduction see 90713. 93840. MELALEUCA HYPERICIFOLIA Dotted melaleuca.

A tall glabrous shrub with opposite lanceolate to oblong leaves 1 to 2 inches

Smith.

93828 to 93845—Continued.

long, dotted beneath, and rich-red flowers in spikes 2 inches long and about as thick. Native to Australia.

For previous introduction see 90860.

98841. MELALEUCA LATERITIA Otto and Dietr.

A graceful shrub, 6 to 12 feet high, with slender branches, alternate linear leaves about 1 inch long, and cylindrical spikes, 3 inches long, of scarletvermillon flowers. It is native to vermilion Ílowers. Western Australia.

For previous introduction see 67081.

93842 to 93844. VERTICORDIA spp. Myrta-

93842. VERTICORDIA DRUMMONDII Schauer.

shrub much resembling heather (Calluna vulgaris), with spreading branches and thick concave oblong branches leaves less than a quarter of an inch long. The flowers, borne in dense panicles, have top-shaped calyxes with the lobes divided into awl-shaped plumes, and the small petals are fringed at the tip. It is native to Western Australia.

93843. VERTICORDIA FONTANESII DC.

An erect bushy shrub, 3 to 4 feet high, with linear half-round or 3-cornered leaves about one-fourth inch long densely crowded on the shoots. The white or pink flowers on slender pedicels are borne in leafy panicles and are densely covered with soft hairs. It is native to Western Austrelia

93844. VERTICORDIA ROEI Endl.

An erect shrub with broadly ovate leaves about one-fourth inch long and terminal leafy corymbs of small flowers which have calyx lobes, petals, and staminodes all fringed with long tawny cilia. It is a native to Western Australia.

93845. XYLOMELUM OCCIDENTALE R. Proteaceae.

A large shrub or small tree up to 25 feet high, with branchlets and inflorescence densely brown tomentose. The ovate to oblong leaves, 3 to 5 inches long, have undulate prickly margins, and the small flowers, in dense spikes 3 to 5 inches long, are followed by woody fruits 2 to 3 inches long and 1 inch in diameter. It is native to Western Australia.

93846. Amygdalus persica L. (Prunus persica Stokes). Amygdalaceae.

From the Union of South Africa. Seeds purchased from H. E. V. Pickstone & Bros. (Ltd.), Simondium, Cape of Good Hope. Received July 18, 1931.

Pucelle de Malines.

93847. PRUNUS SARGENTII Rehder. Sargent cherry. Amygdalaceae.

rom Jamaica Plain, Mass. Seeds pre-sented by J. G. Jack, Arnold Arboretum. Received July 20, 1931.

To be grown and tested as stock for cultivated varieties of oriental cherries.

93848 and 93849.

From New Zealand. Plants presented by George A. Green, Consulting Horticultur-ist, New Zealand Horticultural Trades Association. Received July 22, 1931.

93848. CITRUS LIMONIA Osbeck.

Short-thorned Lisbon lemon, Benjamin's type. Doncaster Lisbon on sweet stock.

93849. CITRUS GRANDIS (L.) Osbeck (C. decumana Murr.). Rutaceae. Grapefruit.

Poorman (Morrison's type) grapefruit on sweet stock.

93850. Prunus sp. Amygdalaceae. Plum.

From Morocco, Africa. Seeds presented by C. Bey Rozet, Station Expérimentale de Marrakech. Received July 22, 1931.

Belsiana. A precocious and most vigorous variety which has the immense merit of thriving in the coastal region. The fruit is ripe the latter part of May and ships well. The tree is easily propagated by cuttings.

93851 to 93865.

From Tunisia, Africa. Cuttings and seeds presented by Robert W. Hodgson, Tunis. Received July 23, 1931.

93651 to 93858. CITRUS spp. Rutaceae.

93851. CITRUS SINENSIS (L.) Orange.

The Beldi double, or native double, orange from Menzel bou Zelfa.

93852. CITRUS AUBANTIUM L. Seville orange.

Bouquetier de Nice. From Nabeul. A variety of the bigarade orange which is grown for the flowers for the manufacture of oil of neroli and oil of petit grain.

93853. CITRUS SINENSIS (L.) Osbeck. Orange.

Meltaise sanguine. From Menzel bou Zelfa.

93854. CITRUS NOBILIS DELICIOSA
(Then) Swingle. Mandarin orange. ordinaire. Mandarine common

mandarin, from La Soukra. 98855. CITRUS SINENSIS (L.) Osbeck. Orange.

From Menzel bou Zelfa. Neski. native sweet orange which lacks acid.

93856 to 93858. CITRUS MEDICA I Citron.

356. Citron doux or limetta (sweet lemon). From Menzel bou 93856. Citron Zelfa.

93857. From Ras Djebel. The citron of Porto Farina, a large long citron of high repute in Tunisia.

93858. From Hammamet. The citron of Sicily, a very large fine citron.

33859 to 93865. OLEA EUROPAEA L. Olea-Olive. ceae.

98859. Barouni deSahel. From Soukra.

Nos. 93860 to 93864 are from the Forest of Djebel Amar, near Tunis, on the road to Bizerte. 93851 to 93865—Continued.

93860. Barouni de Sahel.

93861. Bidh-el-Haman,

93862. Marsaline.

93863. Meski.

93864. Zarazi

93865, From Feriana. Seeds from an sob. From Ferlana. Seeus from an enormous old tree said to date back from the time of the Roman occupation. It is certainly the largest and finest olive tree in this region. Feriana is in the mountainous interior where the olive fly does not occur.

93866. MANGIFERA INDICA L. Anacardiaceae. Mango.

From the Canal Zone. Budsticks presented by J. E. Higgins, Director, Canal Zone Experiment Gardens, Summit. Received July 25, 1931,

Fairchild.

93867 to 93869. SACCHARUM OFFICI-NARUM L. Poaceae. Sugarcane.

From Ile de la Réunion. Cuttings presented by the Station Agronomique, Saint-Denis. Received July 27, 1931.

93867. Naz.

93868. Uba marot.

93869. Uba seedling No. 4.

93870. Garcinia mangostana L. Clusiaceae. Mangosteen.

From Puerto Rico. Seeds presented by T. B. McClelland, Director, Agricultural Experiment Station, Mayaguez. Re-B. McClelland, Dire Experiment Station, ceived July 29, 1931.

93871 to 93970.

rom China. Seeds collected by the For-rest Expedition, 1930–32, to southwestern China and presented by Maj. Lionel de Rothschild, London, England. Received July 31, 1931. From China.

93871. ACANTHOPANAX EVODIAEFOLIUM Franch. Araliaceae.

No. 29037. An unarmed shrub 10 feet high with trifoliolate leaves crowded at the ends of the branchlets. The small lanceolate acuminate leaflets are 3 or 4 inches long. Native to Yunnan, China.

93872. ACANTHOPANAX GIRALDII Harms. Araliaceae.

No. 29034. A densely prickly shrub up to 10 feet high with compound leaves made up of three to five sessile obovate doubly serrate leaflets 1 to 3 inches long. The inconspicuous greenish flowers are in solitary umbels and are followed by small black berrylike fruits. It is native to central and northern China to central and northern China.

93873. ACER LAXIFLORUM Pax. restii Diels). Aceraceae. Maple.

No. 28395. A tree up to 50 feet high with cordate-oblong leaves 4 inches long, having two to four short lobes near the base and serrate margins. The yellowish flowers are borne in slender pendulous racemes and are followed by winged fruits spreading at right angles. It is native to western China.

For previous introduction see 93077.

93874. ACONITUM sp. Ranunculaceae.

Monkshood.

No. 28406.

93875. Albizzia sp. Mimosaceae.

Vo. 28545.

93876. Anemone Demissa Hook. f. and Thoms. Ranunculaceae.

No. 28399.

93877. AQUILEGIA VULGARIS L. Ranuncuiaceae. European columbine.

No. 28402.

93878. ARALIA CHINENSIS L. Araliaceae. Chinese aralia.

No. 29026. A tall shrub up to 25 feet high, native to China, with prickly stems, bipinnate leaves made up of ovate closely serrate leaflets 2 to 4 inches long, and panieles of small flowers followed by small black fruits.

93879. CALLICARPA GIRALDIANA Hesse. Verbenaceae. Beautyberry.

No. 28996. A deciduous Chinese shrub 10 feet high with membranous light-green leaves, cymes of pink flowers, and dense clusters of round berrylike violet fruits which hang on after the leaves have fallen

For previous introduction see 76183.

93880. CHALCAS KOENIGII (L.) Kurz. (Murraya koenigii Spreng.). Rutaceae.

No. 28998. A small tropical tree found chiefly in the dry region of the Jaffna Peninsula, northern Ceylon. The seeds are in season generally during April. It prefers light rich soil, and with cultivation will thrive at an altitude of 2,000 feet. The dried leaves are used in curries, soups, etc.

For previous introduction see 73098.

93881. COTONEASTER ACUMINATA Lindl. Malaceae.

No. 28397. A Himalayan shrub 12 to 15 feet high with ovate leaves, pinkish flowers, and bright-red fruits.

For previous introduction see 76729.

93882. COTONEASTER sp. Malaceae.

93883. CRATAEGUS ORESBIA W. W. Smith. Malaceae. Hawthorn.

No. 28412. A shrub 12 to 20 feet high with branchlets, leaves, and flower clusters densely white pilose. The ovate leaves are 1 to 2 inches long and the small white flowers are borne in corymbs 2 to 3 inches across. The small white pilose fruits are a quarter of an inch long.

93884. Dalbergia sp. Fabaceae. No. 28999.

93885 and 93886. DELPHINIUM DELAVAYI Franch. Ranunculaceae. Larkspur.

A perennial herb 2 to 3 feet high, with incised 5-lobed leaves and dense racemes of blue flowers. It is native to Yunnan.

93885. No. 28582. 93886. No. 28587.

9387. DELPHINIUM sp. Ranunculaceae. Larkspur.

No. 28380.

93871 to 93970—Continued.

93888. DIDISSANDRA GRANDIS Craib. Gesneriaceae.

No. 28519. A perennial herb about 10 inches high with a rhizome half an inch thick. The flat leathery lanceolate leaves, 2 to 4 inches long, are in a rosette. The purple-blue and white flowers, about half an inch long, are in small clusters on stalks 6 inches high. Native to rocky places on the Chungtien Plateau, southwestern China.

93889. EMBELIA sp. Myrsinaceae.

No. 28995.

93890, ERIOPHYTON WALLICHIANUM. Benth. Menthaceae.

No. 28520. A dwarf herbaceous perenlate in the inches high, with the stems, leaves, the inflorescence densely covered with soft white, wool a quarter of an inch long. The round toothed leaves, 1 to 2 inches across, are very closely set on the stem, and the large 2-lipped yellow flowers, 1 to 2 inches long, are borne in axillary whorls. It is native to the alpine slopes of the central Himalayas in India.

93891 to 93894. EUONYMUS spp. Celastraceae.

93891. EUONYMUS GRANDIFLORUS Wall.

No. 28371. A small tree 10 or 12 feet high, native to India, with leathery oblong-ovate sharply serrate leaves 3 to 4 inches long and white flowers, 1 inch across, on slender pedicels as long as the leaves. The fruits are yellow, and the seeds are inclosed with red arils,

93892. EUONYMUS LANCEIFOLIUS LOES.

No. 29007. A tall shrub or small tree up to 30 feet high, native to central and western China. The lance-late leathery leaves, 3 to 6 inches long, have crenately serrate margins, and the pale-yellow fruits inclose the orange arils which open and expose the crimson seeds.

93893. EUONYMUS ORESBIUS W. W. Smith.

No. 28681. A shrub 3 to 6 feet high with spreading branches; lanceolate leathery leaves 1 inch long, and axillary cymes of pyramidal fruits.

93894. EUONYMUS Sp.

No. 29030.

93895. EXCOECARIA ACERIFOLIA F. Didr. Euphorbiaceae.

No. 28991. A small evergreen tree native to the central and western Himalayas in India. The alternate oblanceolate leaves with crenulate margins are 3 to 6 inches long and the small flowers are borne in slender terminal and axillary spikes 1 to 2 inches long.

93896. GAULTHERIA FRAGRANTISSIMA Wall. Ericaceae.

No. 29050. A very fragrant evergreen shrub or small tree, found in the mountains of India from Nepal eastward to Bhutan. In summer it is loaded with white or pinkish flowers which are followed by beautiful racemes of blue-purple fruits.

For previous introduction see 65254.

93897. GENTIANA STYLOPHORA C. B. Clarke. Gentianaceae.

No. 28809. A stout herbaceous perennial, native to the slopes of the Himalayas between 11,000 and 14,000 feet altitude in Sikkim, India. The simple stems are 3 to 6 feet high, the lower leaves are elliptic and 12 inches long, and the upper leaves are sessile and about 5 inches long. The widely funnel-shaped solitary flowers are borne on axillary peduncles up to 8 inches long.

93898, ILEX CORALLINA Franch. nch. Aqui-Coral holly. foliaceae.

No. 28997. A graceful bushy smooth shrub up to 10 feet in height which has not the rigid appearance of other hollies. The ovate-lanceolate leaves are thin, tough, fully fringed, and from 4 to 6 inches long, brilliant green on top and pale green underneath. The numerous fruits are small and coral red.

For previous introduction see 34836.

93899. ILEX YUNNANENSIS Franch. Aquifoliaceae. Holly.

No. 29020. A shrub up to 15 feet high, native to western China. The branchlets are densely villous, the ovate crenate-serrate leaves are 2 to 3 inches long, and the solitary globose berries are bright red and are borne on slender pedicels.

93900. Indigofera sp. Fabaceae.

No. 29010.

98901. MERREMIA SIBIRICA (Pers.) Hall. f. Convolvulaceae. Morning-glory.

No. 28952.

93902. IRIS CHRYSOGRAPHES Dykes. Iridaceae. Goldvein iris.

No. 28446. One of the handsomest of the beardless 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 92495.

98903. IRIS WILSONI Wright. Iridaceae. Wilson iris. Iridaceae.

No. 28420. An iris from western China, about 2 feet high. The flowers are yellow with some purple venation in the falls.

For previous introduction see 92496.

93904. JASMINUM HUMILE L. Oleaceae. Italian jasmine.

No. 29005. A shrub, usually evergreen, with upright and spreading branches, angled branchlets, and compound leaves made up of three to seven ovate, entire leaflets about 1 inch long. The bright yellow flowers, nearly 1 inch long, are borne in several-flowered open cymes. It is native to southern Asia. is native to southern Asia.

98905. LIGUSTRUM LUCIDUM Ait. Olea-Glossy privet.

No. 29006. An evergreen shrub or tree up to 30 feet high, native to China and Japan. The ovate-lanceolate coriaceous leaves are 3 to 5 inches long, and the small white flowers, in terminal panicles, are followed by blue-black fruits.

93906. LOBELIA Wall. PYRAMIDALIS Campanulaceae.

No. 28932. Variety seguini. A widely branched herbaceous plant 2 to 7 feet

93871 to 93970—Continued.

high, found between 3,000 and 9,000 feet altitude in the Himalayan Mountains. The linear leaves are glabrous, and the purple-rose or whitish flowers are pro-duced in many-flowered racemes.

For previous introduction see 48271.

93907. LOBELIA SESSILIFOLIA Lamb. Campanulaceae.

No. 28966. A perennial herb about 1 foot high, with broadly ovate serrate leaves and violet-blue flowers. It is native to northeastern Asia and Japan.

93908 to 93911, LONICERA spp. Caprifoliaceae. Honeysuckle. foliaceae.

93908. LONICERA ADENOPHORA Franch.

No. 28398. A shrub 6 to 10 feet high with ovate ciliate leaves 2 to 3 inches long and purple flowers. It is native to Yunnan Province, China.

93909. LONICERA HENRYI Hemsl.

Henry honeysuckle.

No. 29019. A vine, native to western China, with long dark-green evergreen leaves and axillary clusters of odorless flowers which are rose colored when they first open, but soon become orange red

For previous introduction see 48310.

93910. LONICERA ORESBIA W. W. Smith.

No. 29033. A small shrub, native to Yunnan, resembling L. serpyllifolia with obovate leaves one-half inch long and tubular flowers one-half inch long covered with white wool.

98911. LONICERA SYRINGANTHA MINOR Maxim.

No. 28589. A dwarf honeysuckle which differs from the type in having smaller leaves and flowers.

93912. LYSIMACHIA BARYSTACHYS Bunge. Primulaceae. Loosestrife. Primulaceae.

No. 28466. A perennial herb, native to China, with simple stems, scattered alternate linear-oblong leaves, and dense terminal spikes, at first nodding, of white flowers.

93913, Malus Theifera Rehder. Malaceae. Tea crab.

No. 28368. A spreading tree up to about 25 feet high, with smooth dark-gray bark. The fragrant white or pinkish flowers, about 2 inches across, are in clusters of three to seven, and the fruits, about half an inch in diameter, are greenish yellow with red cheeks. A floriferous and handsome crab apple, native to China and the Himalayas. and the Himalayas.

For previous introduction see 77854.

93914. MECONOPSIS Sp. Papaveraceae. No. 28388.

915. MECONOPSIS INTEGRIFOLIA (Maxim.) Franch. Papaveraceae. Yellow Chinese-poppy. 93915. MECONOPSIS

No. 28394. A perennial herb, 1 to 2 feet high, bearing rich golden-yellow flowers. It is found in alpine meadows at 13,000 feet altitude in southwestern Szechwan.

For previous introduction see 80369.

93916. MELIOSMA PUNGENS (Wall.) Walp. Sabiaceae.

No. 28992. A small tree, native to the subtropical Himalayas in India, with the branchlets and inflorescence covered with rusty down. The coriaceous leaves, 5 to 9 inches long, are oblanceolate with coarsely serrate margins, and the inconspicuous small flowers are in large spreading panicles.

93917. PARNASSIA DELAVAYI Franch. Saxifragaceae.

No. 28537. A perennial herb, with stems about 8 inches high and a thick rhizome. The basal leaves are long stemmed deeply cordate round or reniform and nearly 2 inches across, while the stem leaves are round and clasping. The white flowers are about half an inch long. It is native to Yunnan, China.

93918. PEDICULARIS INTEGRIFOLIA Hook. f. Scrophulariaceae.

No. 28611. An alpine perennial, native to Sikkim, India, with a stout rootstock and ascending stems 4 to 6 inches high. The leaves are crowded, narrowly linear, pubescent, and about 2 inches long. The dark-purple flowers are in oblong capitate spikes.

For previous introduction see 80200.

93919. PEDICULARIS RHODOTRICHA Maxim. Scrophulariaceae.

No. 28525. A slender perennial herb from western China, with linear-oblong pinnatifid leaves 1 inch or more long and rose-pink flowers, nearly 1 inch across, in short few-flowered racemes.

93920. PHLOMIS ROTATA Benth. Menthaceae.

No. 28592. A stemless plant with a rosette of thick coriaceous orbicular crenate leaves 3 to 6 inches across, densely tomentose beneath, suddenly contracted into tomentose petioles half an inch broad. The small flowers are in whorls on short peduncles, forming dense heads, 1 to 2 inches in diameter, in the center of the rosette of leaves, and are covered with white hairs. It is native to the alpine slopes of the Himalayas in India.

93921 and 93922. PIPTANTHUS CONCOLOR YUNNANENSIS Stapf. Fabaceae.

A shrub 3 to 12 feet high, with olivegreen glabrous branchiets and dull darkgreen trifoliolate leaves of lanceolate leaflets 2 to 3 inches long, native to northwestern Yunnan, China. The golden-yellow pea-shaped flowers, 1 inch long, are in terminal clusters and form a pleasing contrast to the dark leaves.

93921. No. 28392. 93922. No. 29018. 93923. PLEUROSPERMUM sp. Apiaceae.

No. 28541.

93924. POTENTILLA ERIOCARPA Wall. FROSACEAE.

No. 28625. A perennial herb with a stout rootstock from which arise branches 4 to 10 inches long, densely clothed with imbricating woolly stipular sheaths. From the tips of these branches grow the slender suberect flowering stems bearing thin 3-lobed and incised leaves about 1 inch long and solitary yellow flowers 1 to 2 inches across. It is native to northern India.

93871 to 93970—Continued.

93925 to 93933. PRIMULA spp. Primulaceae. Primrose.

93925. PRIMULA BEESIANA Forrest.

No. 28429. A remarkable free-flowering and hardy Chinese primula found growing close to the snow line in the mountainous parts of Yunnan. Under favorable circumstances the scape rises to a height of over 3 feet and produces, in the early summer, its whorls of showy flowers, a glowing velvety purple color with conspicuous eyes.

For previous introduction see 48352.

93926. PRIMULA FLORIDA Balf. and Forr.

No. 28389. A perennial herb, native to Yunnan, with ovate leaves, covered with white meal, spreading flat on the ground. The scape bears an umbel of short-stalked, purple-blue flowers with mealy calyxes.

93927. PRIMULA LITTONIANA ROBUSTA Forrest.

No. 28450. A robust form with spikes up to 15 inches long of pale purplish blue flowers. It is native to the Muli region of western China.

93928. PRIMULA POISSONI Franch.

No. 28414. Said to be a variety of *P. poissoni*, which is a tall stout glabrous herbaceous perennial, native to Yunnan, China. The broad leathery ovate-oblong leaves, 9 inches long, have crisped and twisted dentate margins folded upwards on each side. The flower scape, 3 to 5 feet high, bears superposed umbels of 3 to 12 rosy flowers 1 inch across with a golden ring at the mouth.

93929. PRIMULA POLYNEURA Franch.

No. 28400. Said to be a form of *P. polyneura*, which is a perennial herb with suborbicular crenate-lobed leaves 1 to 3 inches long and scapes 4 to 16 inches tall bearing one to three umbels of purple flowers about half an inch across. It is native to central China.

93930. PRIMULA SIKKIMENSIS Hook.

No. 28422. Received as P. pseudosikkimensis, which is now considered to be a form of P. sikkimensis with larger and brighter canary-yellow flowers. It is native to Yunnan, China.

93931. PRIMULA SECUNDIFLORA Franch.

No. 28413. A perennial herb with ovate-oblong finely serrulate papery leaves 2 to 4 inches long, golden farinose beneath when young. The stout scape, 8 to 12 inches high, bears a 1-sided, 6-flowered to 10-flowered umbel of bright violet flowers nearly an inch across. It is native to southwestern China.

For previous introduction see 59429.

93932. PRIMULA YARGONGENSIS Petitmengin.

No. 28403. A primrose from eastern Tibet with ovate-oblong obtuse leaves 1 to 2 inches long and one to three deep rose-lilac flowers on a thick scape 4 inches high.

93933. PRIMULA VINCIFLORA Franch.

No. 28391. A perennial herb, native to China, with a short rhizome

and thin papery oblong leaves covered with reddish glands, and all erect, or nearly so, forming a narrow erect crown. The short scapes, 6 to 9 inches high, bear solitary purple-violet vincalike flowers 1 to 2 inches across.

Amygdalaceae. Buch.-Ham.

No. 28586. A small tree, native to India, with slender branches and membranous crenate.serrate leaves varying from oblong-lanceolate and 2 to 3 inches long to linear-lanceolate and much longer. The small white flowers are in slendar transmitted to the state of the der racemes, and the globose fruits are less than a quarter of an inch in diameter

93935. RHEUM DELAVAYI Franch. gonaceae.

No. 28509. A perennial herb from southwestern China with stems 6 inches to nearly a foot high, thick cordate-ovate leaves about 2 inches long, and small purple flowers.

93936 to 93939. RIBES spp. Grossulariaceae.

93936 to 93938. RIBES GLACIALE Wall.

A shrub 10 to 15 feet high, with reddish young shoots, rounded leaves, and small flowers which are maroon or purplish on the inside. The small currantlike fruits mature in July in the higher altitudes of the Himalayas where the species is native.

For previous introduction see 58637.

93936. No. 28421.

93937. No. 28618. A form with black fruits.

93938. No. 28619.

93939. RIBES SD.

No. 28580.

93940. RUBUS LUTESCENS Franch. Rosaceae.

No. 28510. A small shrub from 1 to 2 feet high, native to alpine slopes from 10,000 to 15,000 feet altitude in Yunnan, China. The leaves are small, the flowers a pale canary-yellow and the large deep orange-yellow berries are sweet and very delicious. delicious.

For previous introduction see 56369.

93941. RUBUS STANS Focke. Rosaceae.

No. 28511. An erect shrub 3 to 4 feet high, native to China. The densely pilose, ternate leaves have round serrate leaflets 1 inch long, and the axillary rose-red flowers are nearly 1 inch across.

93942. RUMEX YUNGNINGENSIS Polygonaceae.

No. 28637. A name for which a place of publication and a description have not been found.

93943 to 93945. SAUSSUREA spp. Astera-

93943. SAUSSUREA LEUCOMA Diels.

No. 28943. A thistlelike herbaceous perennial, native to Yunnan, China, 4 to 9 inches high, with the leaves divided into pinnate segments. The entire plant, except the blue-purple flower heads, is densely covered with cottony white tomentum.

93871 to 93970—Continued.

93944. SAUSSUREA POOPHYLLA Diels.

No. 28527. A cespitose plant with silky hairy stems, 5 or 6 inches high, and narrow linear leaves ranging from to minute leaves above. The thistle-like flower heads are white or yellowish. Native to Tibet.

93945. SAUSSUREA Sp.

No. 28531.

93946. SCHEFFLERA DUMICOLA W. W. Smith. Araliaceae.

No. 29004. A shrub 12 to 20 feet high, native to Yunnan, China, with compound leaves made up of five to nine oblong-lanceolate entire leaflets 8 to 12 inches long, glaucous beneath. The small inches long, glaucous beneath. The small flowers are in panicles 2 feet long, and the fruits are purplish black.

93947. SENECIO sp. Asteraceae.

No. 28419.

93948. Senecio sp. Asteraceae.

No. 28677.

93949 to 93959, Sorbus spp. Malaceae.
Mountain-ash.

93949. SORBUS CUSPIDATA (Spach) Hedl.

No. 29044. A tree, native to northern India, with elliptic to obovate doubly-serrate simple leaves, 3 to 8 inches long, densely white tomentose beneath. The small white flowers are borne in terminal corymbs 3 to 5 inches across and are followed by reddish fruits nearly 1 inch in diameter.

93950. SORBUS EPIDENDRON Hand. Mazz.

No. 29021. A clambering shrub, native to western China, with more or less rosulate obovate papery leaves about 4 inches long, deep green above and paler beneath. The flowers are in hemispherical corymbs about 2 inches across.

93951. SORBUS HARROWIANA (Balf. and Smith) Rehder.

No. 29015. A tree up to 40 feet high, native to China, with compound leaves made up of three to nine oblong serrulate coriaceous leafiets 8 inches long. The small white flowers, in compound terminal corymbs 6 to 8 inches across, are followed by ovoid fruits a quarter of an inch in diameter. eter.

93952 to 93955. SORBUS KOEHNEANA C. Schneid.

A shrub up to 10 feet high, native to central China. The compound leaves are made up of 17 to 25 oblong-lanceolate sharply serrate leaflets 1 to 2 inches long, and the white flowers with brown anthers are in corymbs 2 to 4 inches across and are followed by small white berrylike fruits.

93952. No. 28369. 93954. No. 28620.

93953, No. 28390, 93955, No. 28621.

93956. SORBUS REHDERIANA Koehne.

No. 28656. A shrub or bushy tree 10 to 25 feet high, with ashy black branches and pinnate leaves 3 to 5 inches

long. The terminal corymbs of white flowers, about 2 inches across, are succeeded by round flesh-pink berries. Native to southwestern China.

93957. SORBUS Sp.

No. 28593.

93958. SORBUS Sp.

No. 29047.

93959. SORBUS Sp.

No. 29049.

98960. STRANVAESIA DAVIDIANA Decaisne. Malaceae.

No. 29025. An evergreen shrub up to 25 feet high, native to western China. The oblong to oblanceolate entire leaves are 2 to 4 inches long, with the midrib and petiole often colored red. The small white flowers are in loose corymbs 2 to 3 inches across, and the round scarlet fruits are a quarter of an inch in diameter.

For previous introduction see 62738.

93961. STROBILANTHES FORRESTII Diels. Acanthaceae.

No. 28435. A subshrubby perennial 1 to 2 feet high, with all parts except the corolla covered with glandular hairs. The ovate crenate leaves are 1 to 2 inches long, and the bright-blue flowers, 1 inch across, are borne in leafy spikes. It is native to China.

93962, STROBILANTHES VERSICOLOR Diels. Acanthaceae.

No. 28584. A perennial herb 1 to 4 feet high, with ovate serrate leaves 2 inches long and axillary pure white to deep-blue flowers nearly 2 inches long. It is native to China.

93963. SYMPLOCOS PANICULATA Miquel. Symplocaceae. Asiatic sweetleaf.

No. 29032. A shrub or small tree up to 35 feet high, native to China and Japan. The obovate sharply serrulate leaves are 1 to 3 inches long, the fragrant white flowers are in panicles 2 to 4 inches long, and the bright-blue ellipsoid fruits are nearly half an inch long.

93964. TERMINALIA FRANCHETII Gagn. Combretaceae.

No. 28547. A tree or large shrub with tortuous branches, cordate-ovate obtuse leaves over 2 inches long, and greenish-yellow flowers in small erect spikes. Native to Yunnan, China.

93965. TILIA PAUCICOSTATA Maxim. Tiliaceae. Linden.

No. 29008. A tree with coarsely toothed ovate leaflets 2 to 4 inches long, bluish green beneath, and yellowish flowers in clusters of 7 to 15, followed by globose to pyriform slightly ribbed fruits. It is native to northern and central China.

93966. TRIOSTEUM HIMALAYANUM Wall. Caprifoliaceae.

No. 29039. A coarse hairy herbaceous perennial native to Nepal, India. The ovate leaves are connate at the base, and the greenish flowers are followed by yellow fruits in terminal racemes.

93967. VERONICA CILIATA Fisch. Scrophulariaceae. Speedwell.

No. 28518. A hoary-pubescent annual 4 to 12 inches high, native to central

93871 to 93970—Continued.

Asia. The sessile ovate leaves are about 1 inch long, and the small flowers are sessile in terminal heads.

93968. VICIA CRACCA L. Fabaceae.
Cow vetch.

No. 28929.

93969. VITIS PENTAGONA Diels and Gilg. Vitaceae. Grape.

No. 29003. A woody vine, native to China, with the stems and leaves reddish gray tomentose. The long-petioled papery ovate leaves are usually five angled.

93970. (Undetermined.)

No. 28370. Said to be closely related to Briggsia forrestii. A stemless herbaceous perennial with pale rosy purple flowers having a tinge of yellow on the lip.

93971 to 93977.

From China. Plants presented by G. Weidman Groff, Lingman University, Canton. Received August 3, 1931.

93971. GARCINIA COCHINCHINENSIS (Lour.) Choisy. Clusiaceae.

No. 113. A tree with ovate-oblong leaves, small white flowers, and pear-shaped yellowish red fruits which are said to be edible. It is related to the mangosteen and is native to southeastern Asia.

For previous introduction see 89412.

93972 to 93976. LITCHI CHINENSIS Sonner (Nephelium litchi Cambess.). Sapindaceae. Lychee.

Nos. 93972 to 93974 are from the Lingnan University orchard.

93972. No. 352. Chong Un hung.

93973. No. 198. Pi tez siu.

93974. No. 192. Kwa luk, hanging green.

93975. No. 347. Past Po Hueng. A lychee recently secured from Yatkauuen, near Towah, Honan Island.

93976. No. 205. Shan chi. A variety excellent as stock.

93977. RUBUS PARVIFOLIUS L. Rosaceae. Raspberry.

No. 332. A hardy, tropical-loving raspberry with edible red fruits which are somewhat acid, not particularly juicy, but of good flavor.

For previous introduction see 80946.

93978 and 93979. PISUM SATIVUM L. Fabaceae. Pea.

From Hungary. Seeds purchased from Edmund Mauthner (Ltd.), Hungarian Seed Merchants' Association, Budapest. Received August 3, 1931.

93978. Autumn pea. Seeds dark colored.

93979. Sand pea. Seeds light colored.

93980 and 93981.

From Buitenzorg, Java. Seeds presented by the 'sLands Plantentuin (Botanische Tuin). Received August 3, 1931. 93980 and 93981-Continued.

Beccari. 93980. CYRTOSTACHYS LAKKA Phoenicaceae. Palm.

A stately and elegant palm, native to the East Indies, with a slender spineless stem crowned with a cluster of boldly arched leaves 3 to 4 feet in length. The fruits are elongate-ovoid and about half an inch long.

For previous introduction see 68115.

93981. PIGAFETTIA ELATA (Mart.) Wendl. Phoenicaceae. Palm.

tall ornamental palm with a stout trunk, spiny above, and spreading pinnate foliage resembling that of the coconut. Native to the East Indies.

For previous introduction see 67903.

93982 to 93990. TRITICUM AESTIVUM L. (T. vulgare Vill.). Poaceae.

Common wheat.

From Australia. Seeds presented by Dr. W. L. Waterhouse, University of Sydney, Sydney, New South Wales. Received August 3, 1931.

A collection of Australian wheats introduced for the use of department specialists.

93982. Rena

93987. Jonathan

93983. Bowen.

93988. Thew.

93984. Cedar.

93989. Wandilla.

93990. Warren. 93985. Firbank.

93986. Indian F.

93991 to 94063.

From China. Seeds collected by the For-rest Expedition, 1930–1932, to southwest-ern China and presented by Maj. Lionel de Rothschild, London, England. Received August 4, 1931.

98991. ACTINIDIA VENOSA Rehder. Dillenіясеяе.

No. 29075. A climbing shrubby plant up to 25 feet high with oval membranous leaves, short clusters of buff-yellow flowers, and small russet berries. It is native to Szechwan Province, China.

For previous introduction see 61803.

93992. BUDDLEIA MYRIANTHA Diels. Loganiaceae.

No. 29064. A shrub 6 to 10 feet high, native to Yunnan, China, with lanceolate serrulate leaves 5 to 7 inches long and panicles 10 inches long of fragrant deeppurple flowers covered with brown hairs. It is allied to *B. davidii*.

1993 and 93994. THEA PITARDII (C. Stuart) Rehder (Camellia speciosa Melchior). Theaceae.

A shrub 3 to 6 feet high, native to Yunnan, China, with coriaceous ovate to oblanceolate serrate leaves 2 to 4 inches long and rose-pink flowers 1 to 2 inches across.

93993. A dark-flowered form.

93994. Type.

93995. CELASTRUS sp. Celastraceae.

No. 29052. Said to be closely related to *C. loeseneri*, which is a climbing shrub with rather fleshy deciduous lanceolate leaves 5 inches long having crenate-serrate margins. The greenishwhite flowers, in axillary racemes, are

93991 to 94063—Continued.

followed by 3-valved yellow fruits a third of an inch in diameter.

93996. CORNUS MACROPHYLLA Wall. Cornaceae.

No. 29067. A small, strikingly handsome deciduous tree 30 to 40 feet high, chiefly noteworthy for its fine foliage. chiefly noteworthy for its fine foliage. The ovate or oblong leaves, often tapering to a taillike point, are 4 to 7 inches long and 2 to 3 inches wide, smooth bright green above and glaucous beneath. The numerous yellowish-white flowers are produced in somewhat rounded terminal cymes 4 to 6 inches across. Each flower is less than 1 inch in diameter and of too dull a white to be very effective. effective.

For previous introduction see 40808.

93997. COTONEASTER MOUPINENSIS Franch. Malaceae. Mupin cotoneaster. Malaceae.

No. 29090. A shrub, native to western China, 15 to 20 feet high with spreading branches, rhombic-ovate dulgreen rugose leaves 3 to 5 inches long, and many-flowered corymbs of pinkish flowers followed by ovoid, jet-black fruits a quarter of an inch in diameter.

93998. DECAISNEA FARGESII Franch. Lardizabalaceae.

No. 29063. A handsome shrub up to 15 feet high, with large pinnate leaves 3 feet long, greenish flowers in long pendulous racemes, and deep-blue fruits 3 to 4 inches long. Native to western China.

For previous introduction see 77828.

93999. DELPHINIUM sp. Ranunculaceae. Larkspur.

94000. DIPELTA YUNNANENSIS Caprifoliaceae.

No. 29091. A shrub 10 to 15 feet high, native to western China, with op-posite entire lanceolate leaves 3 to 6 inches long and leafy racemes of 2-lipped tubular-campanulate pinkish to purple flowers having shieldlike floral bracts.

94001. EUONYMUS GRANDIFLORUS Wall. Celastraceae.

No. 29096.

For previous introduction and description see 93891.

94002. EUPTELEA PLEIOSPERMA Hook. f. and Thoms. Trochodendraceae.

No. 29086. A tree 30 to 40 feet high, native to the Tibet region, with slender-stalked red flowers in axillary fascicles, appearing before the leaves. The ovate-crenate leaves 3 to 6 inches long are glaucescent beneath and have very long-acuminate tips.

CHINENSIS 94003. HELWINGIA Cornaceae.

No. 29073. A shrub 6 to 8 feet high, native to western China, with linear to ovate-lanceolate serrate leaves 6 inches long. The small greenish-white flowers are borne in clusters on the midrib of the leaves and are followed by globose berries a quarter of an inch in diameter.

94004. ILEX DELAVAYI Franch. Aquifoliaceae.

No. 29054. A bushy shrub with smooth grayish bark and leaves an inch or more

93991 to 94063—Continued.

long, resembling closely those of *I. crenato*. The solitary black berries are ovoid-globular. Native to Yunnan, China.

94005. Jasminum Heterophyllum Glab-RICYMOSUM W. W. Smith. Oleaceae. Jasmine.

No. 29100. A smooth-flowered form of this Himalayan shrub, which is said to be native to China. It is a stout shrubby strong-growing bush with shiny alternate narrowly oval leaves up to 5 inches long and a profusion of golden-yellow flowers up to one-third of an inch long which occur in compound cymes.

For previous introduction see 82371.

94006. LESPEDEZA FORMOSA (Vogel) Koehne. Fabaceae. Purple bushclover.

No. 29058. An erect semishrubby plant, 6 to 12 feet high, with trifoliolate leaves of oblong leaflets and racemes of rose-purple flowers. It is native to Chosen.

For previous introduction see 83481.

94007. Benzoin Cercidifolium (Hemsl.) Rehder (Lindera cercidifolium Hemsl.). Lauraceae.

No. 29087. A shrub up to 25 feet high, native to central China. The suborbleular to ovate leaves, 2 to 5 inches long, are usually entire, but may have three short acute lobes at the tip. The small flowers are followed by ovoid dark-red fruits a third of an inch long.

94008. MALUS THEIFERA Rehder. Malaceae. Tea crab.

No. 29095.

For previous introduction and description see 93913.

94009. PTEROCARYA FORRESTII Hort. Juglandaceae.

No. 29089. A name for which a place of publication and a description have not been found.

94010 to 94041. RHODODENDRON spp. Ericaceae.

94010. No. 1/1931. 94026. No. 17/1931.

94011. No. 2/1931. 94027. No. 18/1931.

94012. No. 3/1931. 94028. No. 19/1931.

94013. No. 4/1931. 94029. No. 20/1931.

94014. No. 5/1931. 94030. No. 21/1931.

94015, No. 6/1931. 94031, No. 22/1931.

94016. No. 7/1931. 94032. No. 23/1931.

94017. No. 8/1931. 94033. No. 24/1931.

94018. No. 9/1931. 94034. No. 25/1931.

94019. No. 10/1931. 94035. No. 26/1931.

94020. No. 11/1931. 94036. No. 27/1931. 94021. No. 12/1931. 94037. No. 28/1931.

94022. No. 13/1931. 94038. No. 29/1931.

94023. No. 14/1931. 94039. No. 30/1931.

94024. No. 15/1931. 94040. No. 31/1931.

94025. No. 16/1931. 94041. No. 32/1931.

94042. RHODODENDRON LEPTOTHRIUM Balf. and Forr. Ericaceae.

A shrub 1 or 2 feet high, with thin lanceolate leaves 2 or 3 inches long and solitary deep-rose crimson-spotted flow.

93991 to 94063—Continued.

ers nearly an inch long. Native to Yunnan, China.

94043. RHUS VERNICIFLUA Stokes. Anacardiaceae. Lacquer-tree.

No. 29057. A tree 25 to 40 feet high, cultivated in Hupeh Province, between 3,000 and 7,000 feet altitude, for its sap which when properly prepared makes a very good varnish with a hard lacquer-like finish. The sap is poisonous to some people. The branches are more or less whorled and the leaves, imparipinnate, five to many foliolate, are from 1 to nearly 3 feet long and clustered at the ends of the branches. The small greenish-white flowers are borne in large axillary panicles.

For previous introduction see 60224.

94044. Rosa omeiensis Rolfe. Rosaceae. Mount Omei rose.

No. 29053. A shrub 12 to 15 feet high, native to southwestern China at 13,000 feet altitude. The bush branches from the base, and the young branches, broadly winged, are carmine. The flowers are white.

94045. SCHIZANDRA CHINENSIS (Turcz.) Baill. Magnoliaceae.

No. 29065. A woody vine, native to northeastern China, with shining dark-green oval leaves and clusters of coral-colored berries.

For previous introduction see 81653.

94046. SENECIO SD. Asteraceae.

94047. SORBUS sp. Malaceae.

Mountain-ash.

No. 29092.

94048. VACCINIUM sp. Vacciniaceae.

No. 29078.

94049. VIBURNUM CORDIFOLIUM Wall. Caprifoliaceae.

No. 29055. A large subtropical shrub with heart-shaped sharply toothed leaves and small dense corymbs of white flowers. Native to the temperate Himala-

94050. VIBURNUM sp. Caprifoliaceae.

94051. (Undetermined.)

No. 33/1931.

94052. (Undetermined.)

No. 34/1931.

94053. (Undetermined.)

No. 35/1931.

94054. (Undetermined.)

No. 36/1931.

94055. (Undetermined.)

No. 37/1931.

94056. (Undetermined.)

No. 38/1931.

94057. (Undetermined.)

No. 39/1931

94058. LYTHRUM SALICARIA L. Lythraceae.

No. 40/1931.

94059. (Undetermined.)

No. 41/1931.

93991 to 94063—Continued.

94060. (Undetermined.)

No. 42/1931.

94061. (Undetermined.)

No. 43/1931.

94062. (Undetermined.)

No. 44/1931.

94063. (Undetermined.)

94064. LITCHI PHILIPPINENSIS Radlk. Sapindaceae.

From the Philippine Islands. Seeds presented by the Bureau of Science, Department of Agriculture and Natural Resources, Manila. Received August 6, 1931.

For previous introduction and description see 93763.

94065. SOLANUM MURICATUM Ait. Solanaceae. Pepino.

From the Madeira Islands. Plants presented by A. S. Noronha, Nusen Regional, Funchal. Received August 6, 1931.

A subshrub, 2 to 3 feet high, indigenous to Peru, which is cultivated as far south as northern Chile. The sweet juicy eggshaped yellow fruits, 4 to 6 inches long, are highly prized by the natives and are sold in the markets.

For previous introduction see 89547.

94066. LITCHI CHINENSIS Sonner (Nephelium litchi Cambess.). Sapindaceae. Lychee.

From India. Plant purchased from Frederico Verela, Calcutta. Received March 22, 1929. Numbered in August, 1931.

Said to be a rose-scented form of the lychee, which is a round-topped tree 30 to 40 feet high with glossy light-green foliage. The globular fruits, 1 inch in diameter, are deep pink when ripe, turning brown when dried, and are borne in clusters of 3 to 20.

94067. Agrostis sp. Poaceae. Dryland brown top.

From New Zealand. Seeds presented by Doctor Levy, Field Division and Plant Research Station, Palmerston North. Received August 7, 1931.

A strain of the ordinary New Zealand brown-top (Agrostis tenuis), which is decidedly more winter-hardy, under New Zealand conditions, than the ordinary brown-top.

94068. CEPHALOCEREUS FLUMINENSIS
(Miquel) Britt. and Rose. Cactaceae. Cactus.

From Brazil. Cuttings presented by P. Campos Porto, Ministerio da Agricultura, Industria e Comercio, Rio de Janeiro. Received August 6, 1931.

A cactus, native to Brazil, with large cylindrical stems several inches thick, erect, spreading, or pendent. The stems are covered with white hairs intermixed with long yellow bristles, and the small red or purple fruits are almost hidden in the white wool of the fruiting heads.

94069. Ananas satīvus Schult, f. Bromeliaceae. Pineapple.

From the Union of South Africa. Plants presented by D. Gunn, Port Elizabeth. Received April 26, 1920. Numbered in August, 1931.

Natal. The fruit of the Natal pineapple as grown at Coconut Grove in southern Florida is rather small, usually not over 6 or 7 inches long by nearly 5 inches in diameter. The exterior is somewhat rough and of a bright yellow when ripe. In quality the variety ranks high, the flesh being sweet, mild in flavor, and almost free from fiber; the core is small. The chief disadvantage of the Natal is its small size, some fruits being too small for market. The variety is outstanding in the large number of suckers, often a dozen or more, it produces at the base of the plant immediately after fruiting.

94070 to 94073.

From China. Plants presented by G. Weidman Groff, Lingnan University, Canton. Received August 4, 1931.

94070. ATALANTIA sp. Rutaceae.

No. 168. From seed obtained through the Institute Scientifique, Saigon.

94071. ATALANTIA sp. Rutaceae.

No. 220. From the Botanical Garden, Saigon. This plant is propagated by cuttings, and it is very difficult to root.

94072. CITRUS MEDICA L. Rutaceae. Citron.

No. 128. Wagner citron from French Indo-China; grafted on lemon.

94073. CITRUS SINENSIS (L.) Osbeck. Rutaceae. Orange.

No. 110. Seedling plants of the Caibe orange from Indo-China.

94074. Arachis Hypogaea L. Fabaceae. Peanut.

From Uruguay. Seeds presented by Eduardo P. Brito, Facultad de Agronomia, Catedra de Agricultura, Montevideo. Received August 21, 1931.

The Asiatic variety of peanut.

94075 to 94086.

From India. Seeds presented by the Curator, Lloyd Botanic Garden, Darjeeling, through Ralph A. Fenton, Portland, Oreg. Received August 4, 1931.

94075. DAPHNE PAPYRACEA Wall. (D. cannabina Wall.). Thymelaeaceae.

A shrub up to 8 feet high, native to the temperate slopes of the Himalayas in India. The thinly coriaceous oblanceolate leaves are 2 to 4 inches long, and the fragrant yellowish white flowers, half an inch long, are in terminal heads.

94076. DAPHNE INVOLUCRATA Wall. Thymelaeaceae.

A lax shrub up to 20 feet high, with thin oblong-lanceolate leaves 3 to 6 inches long and silky white fragrant flowers in long-stemmed heads. It is native to the Sikkim region in India.

94077. MEIBOMIA FLORIBUNDA (D. Don.) Kuntze. Fabaceae.

A woody thickly pubescent Himalayan plant with very copious axillary and terminal racemes of red flowers.

For previous introduction see 86684.

94075 to 94086—Continued.

94078. MEIBOMIA HETEROCARPA (L.) Kuntze. Fabaceae.

An erect or suberect undershrub found throughout the Himalayas and in Burma. All of the bushy species of this genus are said to contain good fibers, used in some cases for paper making.

For previous introduction see 47723.

94079. PYRULARIA EDULIS (Wall.) DC. Santalaceae.

A medium-sized thorny tree native to the tropical slopes of the Himalayas up to an altitude of 5,000 feet. The leaves are 3 to 7 inches long, rather fleshy, oblong, with entire margins. The staminate flowers are in racemes, and the pistillate are solitary, producing edible pearshaped drupes 2 inches long.

For previous introduction see 46095.

94080 to 94082. TERMINALIA spp. Combretaceae.

94080. TERMINALIA BELLERICA (Gaertn.) Roxb.

The small round fruits of this handsome tropical Indian tree have been exported from India for tanning purposes under the name myrobalans. The yellowish-gray wood is used for general construction. The tree also has merit as a shade tree for avenues, with its huge buttressed trunk and long horizontal branches.

For previous introduction see 68866.

94081. TERMINALIA MYRIOCARPA Huerck and Muell. Arg.

A very valuable timber tree of northeast Assam. It reaches a height of 80 to 100 feet, is deciduous, and fruits in January and February before the leaves appear.

For previous introduction see 53470.

94082. TERMINALIA TOMENTOSA (ROXb.) Wight and Arn.

A large tree, 80 to 100 feet tall, with hard, leathery leaves 5 to 9 inches long and erect terminal racemes of dull-yellow flowers. In India the tree appears to thrive best in heavy binding soils, and the dark-brown wood is valued for general construction purposes.

For previous introduction see 66243.

94083. TRICHOSANTHES CUCUMERINA L. Cucurbitaceae.

An annual vine with 5-lobed, broadly cordate leaves 2 to 4 inches across and lemonlike fruits 1 to 3 inches long. It is native to India and is used in native medicine.

94084. Turpinia pomifera (Roxb.) DC. Staphyleaceae.

A small tree with odd-pinnate leaves 1 to 2 feet long, made up of three to nine ovate crenate-serrate leaflets 3 to 8 inches long. The small yellowish flowers are in terminal panicles 6 to 10 inches long and are followed by fleshy green-yellow or red subglobose fruits 2 inches in diameter. It is native to the subtropical slopes of the Himalayas in India.

94085. STEPHANIA ROTUNDA Lour. Menispermaceae.

A large climber, native to the northwestern Himalayas, with tuberous roots.

94075 to 94086—Continued.

large peltate leaves up to 7 inches in width, and axillary umbels of yellow flowers.

For previous introduction see 47804.

94086. WALLICHIA DENSIFLORA Mart. Phoenicaceae. Palm.

A palm with a very short stem or, sometimes, stemless, found throughout the tropical Himalayas from Kumaon eastward. The leaves are 8 to 10 feet long, the spathes are purple, and the male flowers are yellow while the female flowers are purplish. The dull-purple fruits are about half an inch long. The leaves are sometimes used for fodder and also for thatching.

For previous introduction see 47858.

94087 and 94088. SOLANUM MELONGENA L. Solanaceae. Eggplant.

From the Union of South Africa. Seeds presented by Dr. Raimond H. Marloth, Department of Agriculture, Pretoria. Received August 7, 1931.

94087. An early variety with long purple fruits.

94088. A variety with round purple fruits,

94089 to 94094.

From Ceylon. Seeds presented by T. H. Parsons, Curator, Royal Botanic Gardens, Peradeniya. Received August 10, 1931

94089, CARYOPHYLLUS AROMATICUS L. Myrtaceae. Clove.

A small tree, 12 to 15 feet high, native to the Molucca Islands, now cultivated widely in tropical regions for the dried unopened flower buds, which constitute the cloves of commerce.

For previous introduction see 89026,

94090. ONCOSPERMA FASCICULATUM Thwaites. Phoenicaceae. Palm.

The Katu-kitul palm of Indo-Malaya is one of the graceful cluster palms which make magnificent groups 40 to 60 feet high in the Peradeniya Gardens. The stems are spiny and make it unsuitable for small gardens, but useful fer large parks.

For previous introduction see 88674.

94091. ONCOSPERMA FILAMENTOSUM Blume. Phoenicaceae. Palm.

The Nibung is a cluster palm of great beauty which rises to a height of 50 feet and waves its pinnate leaves in the slightest breeze. Like its relative, Oncosperma fasciculatum, it is a spiny palm and therefore not suited for small gardens. The great clumps of this palm are wonderfully effective in a proper setting.

For previous introduction see 88675.

94092. PHOENICOPHORIUM BORSIGIANUM (Koch) Stuntz (P. Wendl.) Phoenicaceae. Palm.

This noble palm, famous for its beauty, is indigenous to the Seychelles Islands. The mature palm is wholly destitute of spines, whereas in the young state the deep orange-red petioles are clothed with black needlelike spines 1 to 3 inches long. The young leaves are orange beneath and

94089 to 94094—Continued.

mottled with orange-brown spots above. The difference between the young and the mature plants is so great that a person unfamiliar with the palm would consider them different species. The flower spike is from 3 to 6 feet in length, divided into numerous slender branches swollen at the base and densely covered above with yellow flowers each about a quarter of an inch in diameter.

For previous introduction see 36486.

94093. ACTINORHYTIS CALAPPARIA Wendl. and Drude. Phoenicaceae. Palm.

A robust palm 40 feet high with a smooth stem conspicuously ringed, large pinnate leaves 9 feet long and 6 feet wide, and a large pendulous cluster of small flowers followed by ovoid red fruits 3 inches long. Native to the East Indies.

For previous introduction see 88861.

94094. SCHLEICHERA TRIJUGA Willd. Sapindaceae.

Ceylon oak. A handsome shade tree which resembles a European evergreen oak. The small fruits are edible and slightly acid.

For previous introduction see 66659.

94095 to 94098.

From Java. Seeds presented by the Curator, Botanic Gardens, Buitenzorg. Received August 11, 1931.

94095. Cassia timoriensis DC. Caesalpiniaceae.

A rather low tree with slender downy branches, pale-green leaves up to 9 inches long, bright-yellow flowers, and thin glossy fexible pods sometimes 6 inches long. The tree is distributed throughout the Malay Archipelago and the Philippines.

For previous introduction see 72433.

94096. CLERODENDRUM MACBOSIPHON Hook. f. Verbenaceae.

An erect shrub with opposite oblanceolate notched or pinnatifid leaves and terminal cymes of tubular pure white flowers 4 to 5 inches long with red stamens 2 inches long. It is native to tropical Africa.

For previous introduction see 90871.

94097. PHOENIX PUSILLA Gaertn. Phoenicaceae. Palm.

A dwarf palm about 4 feet high, with pinnate leaves having spiny petioles and dark-green sword-shaped leaflets, also black fruits. The stem is said to contain a farinaceous pith. It is native to Ceylon.

For previous introduction see 93415.

94098. SALAKKA EDULIS Reinw. (Zalacca edulis Schult.). Phoenicaceae. Palm.

A stemless palm with pinnate leaves having long, often serrate, prickles and linear-lanceolate long-pointed leaflets 1 to 2 feet long and whitish beneath. The brown scaly pear-shaped fruits are 2 to 3 inches long and contain an acid edible pulp. It is native to the Malay Archipelago.

94099. Pyracantha crenulata rogersiana A. B. Jacks. Malaceae.

Firethorn.

Plants growing at the Chico Plant Introduction Garden, Chico, Calif., selected out of F. P. I. 55996. Numbered in August, 1931.

Usually a shrub, native to southwestern China, with evergreen oblanceolate unequally serrulate leaves 1 to 2 inches long. The glabrous corymbs of small white flowers are followed by reddish-orange fruits about one-third of an inch in diameter.

94100 to 94150.

From China. Seeds collected by the Forrest Expedition, 1930-32, to southwestern China and presented by Maj. Lionel de Rothschild, London, England. Received August 6, 1931.

94100. PITTOSPORUM FLORIBUNDUM Wight and Arnott. Pittosporaceae.

A handsome subtropical tree with a short straight trunk, spreading branches, and numerous yellowish flowers in terminal panicles. The tree has light-colored strong tough wood and yields an aromatic resin or oleo-resin having very adhesive properties. The tree is native to the outer Himalayas, ascending to 3,500 feet.

For previous introduction see 75964.

94101 to 94150. RHODODENDRON spp. Ericaceae.

94101 to 94104. RHODODENDRON ADENO-PHORUM Balf. and Smith.

A shrub up to 7 feet high with thick lanceolate leaves up to 5 inches long and rose-colored flowers over an inch long in lax umbels. Native to Yunnan, China.

94101. No. 29256. 94103. No. 29313. 94102. No. 29312. 94104. No. 29314.

94105 to 94107. RHODODENDRON BAL-FOURIANUM AGANNIPHOIDES Diels.

A shrub 4 to 9 feet high, with leathery oblong or narrowly ovate leaves 2 to 3 inches long, the lower surface of which is covered with a spongy indumentum, and pale-rose fleshy flowers an inch across, with crimson markings. Native to Yunnan.

94105. No. 29244. 94107. No. 29264 94106. No. 29263.

94108. RHODODENDRON BEESIANUM Diels.

No. 29247. A shrub 15 to 20 feet high, with leathery purplish-green narrowly oblanceolate leaves about 6 inches long and deep rich-rose flowers up to 2 inches across. Allied to R. delavayi Franch. Native to Yunnan.

94109 and 94110. RHODODENDRON CLIVICOLUM Balf. and Smith.

A shrub 3 to 5 feet high, with thick leathery oblong-elliptic leaves about 1 inch long and flowers with a white limb and yellow tube, in terminal headlike umbels. Native to Yunnan.

94109. No. 29267, 94110, No. 29283.

94111. RHODODENDRON CROCEUM Balf. and Smith.

No. 29322. A shrub up to 22 feet high, with somewhat papery oblong

94100 to 94150—Continued.

leaves up to 5 inches long and fleshyellow red-spotted flowers over 1 inch long in racemose umbels. Native to Yunnan.

94112 and 94113. RHODODENDRON CUCUL-LATUM Hand.-Maz.

A stout shrub about 10 feet high, with rigid lanceolate leaves up to 4 inches long and white flowers flushed pink in umbels of 15 to 20 flowers. Native to Szechwan, China.

94112. No. 29257. 94113. No. 29317. 94114 and 94115. RHODODENDRON GLOBIG-ERUM Balf. and Forr.

A stout shrub about 2 feet high, with rigid leathery oblong-oval leaves 2 to 3 inches long and white flowers, spotted with crimson, an inch long, in compact umbels. Native to Szechwan.

94114, No. 29130, 94115, No. 29258.

94116 and 94117. RHODODENDRON HEMI-TRICHOTUM Balf. and Forr.

A small twiggy bush nearly 3 feet in height, with very thin interlacing profusely floriferous hairy branches. The leathery narrow-oblong leaves are an inch long, and the pale rose flowers are in small umbels. Native to southwestern China.

94116. No. 29248, 94117. No. 29273.

94118. RHODODENDRON INTRICATUM Franch

No. 29266. A bushy plant with dark-green, oval-rounded leaves, white scaly beneath and half an inch long, and purplish flowers two-fifths inch across, in twos and threes. Native to Szechwan, China.

94119. RHODODENDRON MIMETES SIMU-LANS Tagg. and Forr.

No. 29281. A shrub 3 to 7 feet high, with thick short branches, leathery cordate-elliptic leaves 3 to 4 inches long with a splitting indumentum, and white, rose-ringed flowers in a lax umbel. Native to Szechwan.

94120. RHODODENDRON MULIENSE Balf. and Forr.

No. 29249. A dwarf, small-leaved shrub less than 3 feet high, native to Szechwan, China. The bright-yellow flowers, half an inch long, are in compact terminal umbels.

94121. RHODODENDRON EDGARIANUM Rehd. and Wils.

No. 29268. A small-leaved bushy fastigiate plant with lilac-colored flowers nearly half an inch long in terminal pairs. Native to Yunnan.

94122 and 94123. RHODODENDRON RADINUM Balf. and Smith.

A dwarf bushy shrub 1 to 2 feet high, native to Yunnan, China. The long-stemmed leaves are about 1 inch long, and the rosy-white flowers, half an inch long, are in small dense umbels.

94122. No. 29250. 94123. No. 29271. 94124 to 94129. Rhododendron sphaeroblastum Balf. and Forr.

A shrub about 5 feet high, with thick leathery oval-oblong leaves up

94100 to 94150—Continued.

to 6 inches long and white, pink-tinged flowers in racemose umbels. Native to Szechwan, China.

94124. No. 29245. 94127. No. 29262.

94125. No. 29246. 94128. No. 29320.

94126. No. 29252. 94129. No. 29321.

94130. RHODODENDRON TELMATEIUM Baif. and Smith.

No. 29269. A low shrubby plant up to 3 feet high, with oblong or narrowly lanceolate leaves about half an inch long and solitary rose-purple flowers half an inch long. Native to Yunnan, China.

94131. RHODODENDRON YUNNANENSE Franch. Yunnan rhododendron.

No. 29323. A low shrub, 6 feet or less high, with narrowly elliptic, somewhat hairy leaves and few-flowered clusters of broadly funnel-shaped flowers, white, with the upper lobes spotted blood red. Native to Yunnan, China.

94132. RHODODENDRON sp.

No. 29131.

94133. RHODODENDRON sp. No. 29242.

94134. RHODODENDRON sp. No. 29243.

94135. RHODODENDRON sp. No. 29251

94136. RHODODENDRON sp. No. 29253.

94137. RHODODENDRON Sp.

94138. RHODODENDRON Sp.

No. 29259.

94139. RHODODENDRON sp. No. 29260.

94140. RHODODENDRON Sp.

No. 29278.

No. 29254

94141. RHODODENDRON Sp.

No. 29280.

94142. RHODODENDRON sp.

No. 29282.

94143. RHODODENDRON Sp.

No. 29325.

94144. RHODODENDRON sp.

No. 29326.

94145. RHODODENDRON sp.

No. 29327.

94146. RHODODENDRON sp.

No. 29328.

94147. RHODODENDRON Sp.

No. 29329.

94148. RHODODENDRON Sp.

No. 29331.

94100 to 94150-Continued.

94149. RHODODENDRON Sp.

No. 29333.

94150. RHODODENDRON sp.

No. 29341.

94151 to 94173.

From Japan. Seeds arranged for by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry; collected near Tokyo and sent by N. Suyetake through the United States Consulate, Tokyo. Received August 7, 1931.

94151. CYTISUS SCOPARIUS (L.) Link. Fabaceae. Scotch broom.

No. 7970. Japanese name, Enishida.

94152. ILEX INTEGRA Thunb. Aquifoliaceae. Holly.

No. 7968. An evergreen Japanese shrub or tree up to 40 feet in height, with oval or oblong, usually entire, leaves 2 to 3 inches long and globular or ovoid red berries.

For previous introduction see 67361.

94153 to 94173. SOJA MAX (L.) Piper (Glycine hispida Maxim.). Fabaceae. Soybean.

Nos. 94153 to 94157 are from the Naganoken Agricultural Experiment Station.

94153, No. 7945. Takiya,

94154. No. 7946. *Mejiro No. 1*, white eye No. 1.

94155. No. 7947. Akazaya, red pod.

94156. No. 7948. Rikuu No. 22.

94157. No. 7949. Ginpaku, silver white.

94158. No. 7950. Karihatakiya. From the Niigataken Agricultural Experiment Station.

Nos. 94159 to 94162 are from the Kagoshimaken Agricultural Experiment Station.

94159. No. 7951. Kiizaya, yellow pod.

94160. No. 7952. Wase kindaizu, early gold soybean.

94161. No. 7953. *Kindaizu*, gold soybean.

94162. No. 7954. Shirokuch No. 1, white mouth No. 1.

Nos. 94163 to 94173 are from the Chibaken Agricultural Experiment Station.

94163. No. 7955. Aogaridaizu. Used as a green manure.

Nos. 94164 to 94168 are used as green manure or for forage purposes.

94164. No. 7956. *Kurosengokukinai No. 4*, black 5,000 bushels Kindi No. 4.

94165. No. 7957. Kurosengokukinai No. 1, black 5,000 bushels Kindi No. 1.

94166. No. 7958. Chasengoku No. 82, brown 5,000 bushels No. 82.

94167. No. 7959. Chasengoku No. 12, brown, 5,000 bushels No. 12.

94151 to 94173—Continued.

94168. No. 7960. Chasengoku No. 9, brown 5,000 bushels No. 9.

Nos. 94169 to 94173 are used for bean curd, miso, shoyu, and general cooking.

94169. No. 7961. Hakka, white flower.

94170. No. 7962. Sennarikimusume, bunching maiden.

94171. No. 7963. Bobiki, waxed.

94172. No. 7964. Kimusume, maiden.

94173. No. 7965. Keburui, shake hair.

94174 and 94175.

From the Union of South Africa. Seeds purchased from De Mole & Kisch, Maritzburg, Natal Province. Received August 14, 1931.

94174. ARISTEA ECKLONI Baker. Iridaceae.

A small herbaceous perennial with a rosette of linear leaves 6 to 18 inches long and flattened flower stems 12 to 15 inches high. The bright blue flowers, one-third inch long, are borne in clusters arranged in a lax corymbose panicle with ascending branches. It is native to southern Africa.

For previous introduction see 66262.

94175. ZANTEDESCHIA REHMANNI Engl. Araceae. Calla.

A dwarf perennial, native to southern Africa, with long-petioled lanceolate unequal-sided leaves dotted with light green and white. The spathes of this form are said to be pale clear pink.

94176 to 94201.

From the Philippine Islands. Seeds presented by the Director of Forestry, Department of Agriculture and Natural Resources, Manila, Received August 20, 1931.

94176. ADENANTHERA PAVONINA L. Mimosaceae. Redbead.

A handsome deciduous tree, native to the East Indies, with spreading branches. The bipinnate leaves have 2 to 6 pairs of pinnae, each pinna having 2 to 12 pairs of oval obtuse glabrous leaflets. The small white and yellow fragrant flowers, borne in racemes, are followed by glossy scarlet biconvex seeds.

For previous introduction see 51809.

94177. ADONIDIA MERRILLII Beccari. Phoenicaceae. Palm.

Bonga de China or bonga de Jolo. A medium-sized palm with graceful, somewhat-curved pinnate leaves, resembling the common betel-nut palm, but not so tall. The crimson fruits, less than an inch long, are borne just below the leaves. In Manila this palm is grown as an ornamental.

For previous introduction see 88868.

94178. ALBIZZIA ACLE (Blanco) Merr. Mimosaceae.

A large tree up to 100 feet high and 3 to 4 feet in diameter, native to the Philippine Islands. The bipinnate leaves have two pinnae each bearing three to six pairs of ovate leaflets 2 to 6 inches long, and the yellow-green flowers, borne

94176 to 94201—Continued.

in small heads, are followed by flat pods 10 to 15 inches long, constricted between the seeds.

94179. ALBIZZIA PROCERA (Roxb.) Benth. Mimosaceae.

A tall handsome tropical tree, often 60 to 80 feet high, with yellowish or greenish-white bark, large compound leaves, and terminal panicles of yellowish-white flowers. In Burma, Bengal, and southern India, where this tree is native, the brown heartwood is used for making agricultural implements. agricultural implements.

For previous introduction see 61594.

180. AMERIMNON SISSOO (Re Kuntze (Dalbergia sissoo Roxb.). 94180. AMERIMNON (Roxb.)

A large deciduous tree native to tropical and subtropical regions of the lower Himalayas. It is highly esteemed for the strong elastic durable wood which seasons well and does not warp or split. The thin layer of sapwood is white, while the heartwood is brown with darker longitudinal veins and is very bard. hard.

For previous introduction see 55411.

94181. BAUHINIA MALABARICA Roxb. Caesalpiniaceae.

A small erect bushy tree, with thick rigid deeply bifid somewhat heart-shaped leaves 2 to 3 inches long. The small white flowers are in dense sessile axillary clusters. The rather turgid, straight, firm, narrow pods are a foot long. Its native habitat is the mountainous country of northeastern India.

For previous introduction see 87520.

94182. CAESALPINIA SAPPAN L. Caesalpiniaceae.

A shrubby leguminous tree, native to India and the Malay Archipelago, which bears showy yellow flowers. The wood yields a red dye, and the bark is used for tanning. It is said to be an excellent hedge plant and to endure rather poor dry soils.

For previous introduction see 88108.

94183. CANANGIUM O D O R A T U M (Lam.) Baill. Annonaceae. Ylang-ylang.

A large quick-growing tree, 60 to 80 feet high, native to the Philippines, Guam, and Java. The large greenishyellow flowers are strongly scented and yield by distillation the popular perfume, ylang-ylang.

For previous introduction see 51811.

94184. CARLUDOVICA PALMATA Ruiz and Pav. Cyclanthaceae.

A stemless plant, native to Peru, with palmately divided, palmlike leaves about 2 feet across, on petioles 4 to 6 feet high. The leaves are used for making Panama

94185. CASSIA JAVANICA L. Caesalpiniaceae.

A small tree with gorgeous pink flowers over 2 inches across, borne in large clusters during February.

For previous introduction see 67542.

94176 to 94201—Continued.

94186. CEDRELA ODORATA L. Meliaceae. Cigarbox cedar.

A tree, sometimes 100 feet tall, with handsome bright-green compound leaves 10 to 20 inches long. It is native to the West Indies and is the tree which pro-duces the cigar-box wood of Cuba.

For previous introduction see 59302.

94187. ERYTHRINA FUSCA Lour. Faba-Coraltree.

A large handsome tropical shrub up to 8 feet high, with prickly brown bark. unarmed compound narrow leaflets, and terminal racemes of brown-red flowers. Native to French Indo-China.

For previous introduction see 72436.

94188. ERYTHRINA VARIEGATA ORIENTALIS
(L.) Merr. (E. lithosperma Blume).
Fabaceae.
Dapdap.

A moderate-sized spineless leguminous tree, native to the East Indies. It is of very rapid growth, with trifoliolate leaves and red flowers. In Ceylon the tree is used to shade crop plants, and also the foliage is lopped for use as green manure.

For previous introduction see 81923.

94189. FLACOURTIA RUKAM Zoll, and Mor. Flacourtiaceae.

A handsome unarmed Malayan droughtresistant tree with leathery leaves and edible berries, about the size of cherries, which are said to make excellent pre-

For previous introduction see 80770.

94190. GNETUM INDICUM (Lour.) Merr. (G. funiculare Blume). Gnetaceae.

Bulso. A tropical woody vine with brick-red fruits in bunches like grapes, each containing a nut which when roasted has the flavor of a chestnut. Native to the Philippines.

For previous introduction see 81494.

94191. HETEROSPATHE ELATA Scheff.

A tall unarmed palm with a straight slender stem and long pinnate leaves, growing in protected situations and where the rainfall is evenly distributed. It is one of the most attractive and graceful palms and will make a good plant for the conservatory and possibly a good house plant.

For previous introduction see 89203.

94192. Hura CREPITANS L. Euphorbia-ceae. Sandboxtree.

Monkey dinner-bell. An ornamental tree, native to the American Tropics, which attains a height of 100 feet. The broad-ovate repand-dentate poplarlike leaves are on long petioles. The small reddish flowers are followed by deeply ribbed capsules 3 inches wide and over an inch thick, which explode with a loud noise when ripe and throw the seeds many feet. Cattle eat the falling leaves and thrive on them. The lumber is used for tanks, vats, etc.

For previous introduction see 35592.

94193. INTSIA BIJUGA (Colebr.) Kuntze (Afzelia bijuga Gray). Caesalpinia-

94176 to 94201—Continued.

A tall tree 100 feet or more in height, with fragrant white and reddish flowers borne in large conspicuous clusters. The wood is valued as building material.

For previous introduction see 63772.

94194. LAGERSTROEMIA SPECIOSA (Muench.) Pers. (L. flosreginae Retz.). Lythraceae. Queen crapemyrtle.

A tree 50 to 60 feet high, with leaves 4 to 8 inches long and large panicles of flowers which change in color from rose to purple from morning to evening. This is the chief timber tree of Assam, eastern Bengal, and Chittagong, India, where it occurs along river banks and in swampy ground. It is commonly cultivated as an avenue tree.

For previous introduction see 49538.

94195. LEUCAENA GLAUCA (L.) Benth. Mimosaceae.

A shrub or tree up to 30 feet high, with a smooth trunk, bipinnate leaves made up of four to eight pinnae bearing 10 to 20 pairs of narrowly lanceolate leaflets half an inch long, and globular heads of small white flowers. The young branches are used as forage.

For previous introduction see 88156.

94196. OCHROMA LAGOPUS Swartz. Bombacaceae. Balsa wood.

A West Indian tree up to 60 feet high, with large yellowish white flowers. The wood, stronger and much lighter than basswood, is used for refrigeration purposes, insulation, and airplane construction. The very small seeds are embedded in a silk-cotton lint which is used in life preservers, as it does not absorb water.

For previous introduction see 73124.

94197. ORANIA PALINDAN (Blanco) Merr. Phoenicaceae. Palm.

Banga. A tall unarmed ornamental palm, native to the interior of Bukidnon, Mindanao, found between 900 and 1,500 feet altitude. The trunk is straight and remarkably uniform in diameter, rarely exceeding 6 inches. The leaves are pinnate and silvery beneath. The natives use the straight-grained, durable wood for floors, fences, etc.

For previous introduction see 46738.

94198. PITHECOLLOBIUM SCUTIFERUM (Blanco) Benth. Mimosaceae.

A small tree 10 to 12 inches in diameter, native to the Philippines. The bipinnate leaves have one pair of pinnae each bearing two to three pairs of oblong to ovate leaflets 4 to 6 inches long. The small flowers are borne in panicles and are followed by large curved red pods which open and show the blue seeds.

94199. SIDEROXYLON MACRANTHUM Merr. Sapotaceae.

A large Philippine tree with somewhat leathery shining leaves up to 7 inches in length and small creamy white flowers which are crowded in clusters at the tips of the branches. The roundish fruits, slightly over an inch in diameter, are two seeded or three seeded.

For previous introduction see 54895.

94200. SWIETENIA MACROPHYLLA King. Meliaceae. Mahogany.

94176 to 94201—Continued.

A large tree, native to tropical America, with compound leaves made up of three to five pairs of elliptic-oblong leaflets 4 to 8 inches long and small flowers in panicles. The ovoid woody fruits are 6 inches long and contain winged seeds 3 to 5 inches long. This species forms the mahogany being marketed at the present time.

94201. TECTONA GRANDIS L. f. Verbenaceae.

The common teak is a native to southern and central India. The young branches are quadrangular, the leaves opposite and elliptical or egg-shaped, and the white flowers are borne in terminal panicles. The wood is highly prized by shipbuilders because of its great strength and durability.

For previous introduction see 66242.

94202. Scilla chinensis Benth. Liliaceae.

From China. Bulbs collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received September 12, 1930. Numbered in August, 1931.

No. 7003. Collected on the mountain side, near the eight famous temples near Peiping. A bulbous perennial, native to China, with two or three linear channeled leaves a foot in length and a scape about 2 feet high bearing a raceme nearly a foot long of delicate rose-pink flowers a quarter of an inch across. The flowers appear in the early summer.

94203. ICHTHYOMETHIA PISCIPULA (L.) Hitch. Fabaceae.

From the American Virgin Islands. Seeds presented by Claud L. Horn, Horticulturist, Agricultural Experiment Station, Christiansted, Saint Croix. Received August 25, 1931.

An irregularly branched tree up to 50 feet high, with reddish-brown scaly bark and stout branches. The pinnate leaves, 15 inches long, have seven to nine oblong to obovate leaflets 4 inches long, and the pea-shaped white flowers, tinged with red, are borne in panicles 4 to 8 inches long. It is native to the West Indies and northern Mexico.

94204 and 94205. ANANAS SATIVUS Schult. f. Bromeliaceae. Pineapple.

From Jamaica, British West Indies. Plants presented by A. P. Hanson, Agricultural Instructor, Stony Point. Received August 28, 1931.

94204. Jamaica black.

94205. Sam Clark.

94206. RHAPIDOPHYLLUM HYSTRIX Wendl. and Drude. Phoenicaceae.

Needle palm.

From Georgia. Seeds presented by Benjamin W. Hunt, Eatonton. Received January 14, 1930. Numbered in August, 1931.

An attractive dwarf fan palm, native to the lowlands of South Carolina, Georgia, and Florida, but very local in its distribution. It is now quite rare and appears to be approaching extinction as a wild plant. The 2-foot to 3-foot stems are erect

94206—Continued.

or creeping, with leaves dark shiny green above and silvery gray beneath. The leaves reach a height of 3 to 4 feet. Slender sharp black spines up to a foot long project from the trunk in every direction and also surround and protect the inflorescence. The staminate and pistillate flowers are borne on separate plants.

94207. Lagunaria Patersonii (Andrews) Don. Malvaceae.

From Sicily. Seeds presented by Giardino Allegra, Catania. Received July 31, 1931.

A tree up to 50 feet high, native to the Norfolk Islands. The broadly lanceolate to ovate-oblong leaves are 3 to 5 inches long, and the pale-rose hibiscuslike flowers, 2 to 3 inches across, are in axillary clusters of three to five.

94208. Ananas satīvus Schult. f. Bromeliaceae. Pineapple.

From Jamaica, British West Indies. Plants presented by A. P. Hanson, Agricultural Instructor, Stony Point. Received August 29, 1931.

Jamaica Sugar.

94209. BAMBUSA LONGISPICULATA Gamble. Poaceae. Bamboo.

From India. Seeds presented by R. N. Parker, Forest Botanist, New Forest, Dehra Dun. Received August 29, 1931.

An Indian clump bamboo with bright green stems 20 to 80 feet high and numerous branches bearing dense foliage. It appears to differ from Bambusa tulda only in the larger spikelets.

For previous introduction see 81495.

94210. Figus Rigo F. M. Bailey. Moraceae. Fig.

From Hawaii. Plants presented by H. L. Lyon, in charge, Department of Botany and Forestry, Experiment Station of the Hawaiian Sugar Planters' Association, Honolulu. Received August 31, 1931.

A tree with angular branches and alternate oblong to ovate leaves 3 to 4 inches long. The small fruits, about one-fourth of an inch in diameter, have three persistent basal bracts which are large in proportion to the size of the fruit. This tree is a source of rubber in the Rigo district of New Guinea.

94211. RAPHIA VINIFERA Beauv. Phoenicaceae. Palm.

From the Canal Zone. Seeds presented by James Zetek, Mojinga Swamp, Balboa. Received August 31, 1931.

The sugar or wine palm of west tropical Africa. A large handsome palm with immense pinnate leaves and ornamental fruits in enormous pendent bunches 10 to 12 feet long. This is a striking palm for large parks.

For previous introduction see 70746.

94212 to 94222.

From New Zealand. Plants presented by George A. Green, Secretary, New Zealand Horticultural Trades Association (Inc.), Auckland. Received September 1, 1931. 94212 to 94222—Continued.

94212 to 94215. CITRUS spp. Rutaceae.

94212. CITRUS LIMONIA Osbeck. Lemon.

Benjamin type. A short-thorned Lisbon.

For previous introduction and description see 93848.

94213 and 94214. CITRUS GRANDIS (L.) Osbeck (U. decumana Murr.) Grapefruit.

94213. Poorman (Morrison's type).

For previous introduction and description see 93849.

94214. New Zealand (Morrison's type).

94215. CITRUS LIMONIA Osbeck. Lemon.

Doncaster Lisbon.

94216 to 94218. PRUNUS SALICINA Lindl. Amygdalaceae. Japanese plum.

94216. Purple King.

94217. Wilson's early. A hybrid between the Japanese plum, Burbank, and Prunus cerasifera divaricata, the cherry plum.

94218. Naata.

94219. AMYGDALUS PERSICA NECTABINA Ait. Amygdalaceae. Nectarine.

94220. PRUNUS sp. Amygdalaceae. Plum. Dreadnought.

94221. AMYGDALUS PERSICA L. (Prunus persica Stokes). Amygdalaceae.
Prizetaker.

94222. PRUNUS sp. Amygdalaceae. Plum. Sharp's Early.

94223 to 94225. Mangifera indica L. Anacardiaceae. Mango.

From Tahiti, Society Islands. Bud wood presented by Harrison W. Smith, Papeari. Received September 3, 1931.

94223. Rougier.

94224. Mission. This is considered the best variety on the island.

94225. Tutehau. An excellent variety which comes true from seed.

94226. ARTOCARPUS LAKOOCHA ROXb. Moraceae.

From Ceylon. Seeds presented by S. W. Parsons, Curator, Royal Botanic Gardens, Peradeniya. Received August 4, 1931.

Kana-gona or tampang-manis. A handsome tropical tree with deep-green leaves and yellowish green sour fruits 2 inches in diameter. The edible fruits are good for stewing.

For previous introduction see 76877.

94227. Cucumis melo L. Cucurbitaceae. Melon.

From Cuba. Seeds purchased from Severino Wilson, Playa del Vapor, Habana. Received August 4, 1931.

Melon de Castilla. A commercial variety introduced for the use of department specialists.

94228. CALOPOGONIUM MUCUNOIDES Desv. Fabaceae.

From Brazil. Seeds presented by Dr. A. Bitancourt, Estação de Agrostologia, Deodoro, via Rio de Janeiro. Received August 4, 1931.

False or6. A tropical American legume with stems 3 to 10 feet long which form roots at each node, and racemes, 1 to 4 inches long, of pale-blue flowers. It forms a mat of foliage 1 to 2 feet thick and is used as a cover crop. It is also good for forage.

For previous introduction see 77294.

94229 to 94231. Brassica spp. Brassica spp.

From Peiping, China. Seeds collected by Peter Liu. Received August 4, 1931.

A collection of commercial varieties purchased from a gardener near Peiping and introduced for the use of department specialists.

94229. BRASSICA JUNCEA (L.) Coss.

Chieh t'sai, pepper beet or turnip. This variety of Chinese turnip is very commonly used for making pickles.

94230. BRASSICA JUNCEA (L.) COSS.

Da tou ching, large leaf green cabbage. A variety used in the south of China for making soup.

94231. Brassica OLERACEA CAPITATA L. Cabbage.

Yang bai t'eat, foreign cabbage, also called da tou t'eat or large head cabbage. This variety is fried with meat or made into pickles.

94232. Prunus sp. Amygdalaceae.

From Persia. Scions presented by Jalil K. Hashimzade, American Agricultural School, Urumia (Rezaieh). Received April 1, 1930. Numbered in August, 1931.

A native Persian plum.

94233 and 94234.

From New Zealand. Plants presented by H. R. Wright, Avondale. Received July 30, 1930. Numbered in August, 1931.

94233. PRUNUS NIGRA Ait. Amygdalaceae. Canada plum.

94234. MALUS HALLIANA Koehne. Mala-

Variety Parkmanii. A double-flowered form; named for Francis Parkman, the historian, in whose garden near Boston it was first grown in this country.

For previous introduction see 49081.

94235 to 94242.

From the Union of South Africa. Seeds presented by M. Wilman, McGregor Museum, Kimberley. Received September 8, 1931.

94235 to 94237. ACACIA spp. Mimosaceae. 94235. ACACIA GIRAFFAE Willd.

The Kameel-doorn of the Transvaal as valuable tree for arid regions in the warm temperate zone. The ripe pods are eaten greedily by stock. The tree thrives in sandy soil, attains a large size, and the dark reddish-brown

94235 to 94242—Continued.

wood is used by the natives in making spoons, knife handles, etc.

For previous introduction see 64215.

94236. ACACIA HORRIDA (L.) Willd. (A. karroo Heyne).

A spreading flat-topped spiny tree about 20 feet high, widely distributed throughout South Africa. The fragrant yellow flower heads are often visited by bees, but the main value of the tree in South Africa is as a shade for stock.

For previous introduction see 68137.

94237. ACACIA STOLONIFERA Burchell.

A spiny shrub said to have underground stoloniferous stems. The bipinnate leaves have three to seven pairs of pinnae, each bearing 7 to 15 pairs of oblong-lanceolate leaflets. The stipular spines, in pairs, are spreading and are white with recurved brown tips. The heads of fragrant whitish flowers are followed by straight yellow obliquely striate pods. It is native to southern Africa.

94238. Arctotis fastuosa Jacq. Asteraceae.

An erect branching annual plant, 2 to 3 feet high, covered with jointed hairs. The scattered leaves, 3 to 4 inches long, are elliptic-lanceolate with coarsely toothed or sinuate margins, and the large showy flower heads have bright-orange rays. It is native to southern Africa.

94239, CLEMATIS BRACHIATA Thunb. Ranunculaceae.

A climbing vine, native to southern Africa, with bipinnate or tripinnately parted leaves having ovate toothed leaflets. The fragrant white flowers, 1 to 2 inches across, are borne in elongated panicles and are followed by orbicular margined fruits with feathery tails.

94240. Gossypium sp. Malvaceae. Cotton.

A wild cotton from Angola.

94241. TARCHONANTHUS MINOR Less. Asteraceae.

A strongly resin-scented shrub, native to southern Africa, with oblong to obovate entire leaves 1 to 2 inches long and short racemes of small woolly flower heads. It is said to be a good stock feed.

94242. ALOE SCHLECHTERI Schoenl. Liliaceae.

An aloe from southern Africa with olivaceous leaves about 8 inches long, armed on the margin with brown horny deltoid prickles. The light-yellow flowers are in dense racemes about 6 inches long on a short peduncle.

94243. AGAVE VILMORINIANA Berger. Amaryllidaceae.

From California. Plants presented by William Hertrich, Superintendent, Huntington Botanic Garden, San Marino. Received September 10, 1931.

One of the most beautiful of the soft-leaved agaves. It has no thorns or spikes on the foliage and has a very beautiful inflorescence.

94244. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Rutaceae.

Mandarin orange.

From French Indo-China. Seeds purchased from M. Poilane, Institut des Recherches Agronomique, de l'Indochine, Division de Botanique, Annam. Received September 10, 1931.

Said to be one of the most prized varieties in southern French Indo-China.

94245. Pereskia Grandifolia Haw. Cactaceae. Bush pereskia.

From the Canal Zone. Plants presented by J. E. Higgins, Director, Canal Zone Experiment Gardens, Summit. Received September 14, 1931.

A shrub or tree 6 to 15 feet high, with a short spiny trunk, fleshy branches, oblong leaves 3 to 6 inches long, and terminal clusters of rose-colored to white flowers 1 to 2 inches across. It is native to Brazil.

For previous introduction see 93495.

94246. Gossypium sp. Malvaceae.

Cotton.

From Africa. Seeds presented by F. M. Grissett, Kribi, Cameroun. Received September 15, 1931.

A variety cultivated by the natives 100 miles southeast of Kribi.

94247 to 94257.

From China. Plants presented by G. Weidman Groff, Lingman University, Canton. Received September 15, 1931.

94247. CLAUCENA LANSIUM (Lour.) Skeels (C. wampi Oliver). Rutaceae. Wampi.

No. 377. Wong pei. Purchased in the Canton market. A very ornamental small tree, 18 to 20 feet high. In the spring it bears small dense panicles of whitish sweet-scented flowers, and in midsummer the grapelike clusters of edible berries appear. The individual fruits are about the size of a large marble, with a rough pale straw-yellow orangelike rind covered with glands filled with green balsamic oil. The rather large seeds, one to three in number, are inclosed in colorless juicy pulp which has an agreeable aromatic acid flavor. The wampi is a native of southern China, where the berries are highly esteemed as a dessert fruit and as preserves.

For previous introduction see 55598.

94248. Dracontomelon sinense Stapf. Anacardiaceae.

No. 379. Yan min or ngan min. From the Lingnan University gardens. A tree 25 to 30 feet high with brownish-yellow ovoid fruits from 1 to 2 inches in diameter. The taste is pleasant but slightly acid.

For previous introduction see 54655.

94249 to 94257. LITCHI CHINENSIS Sonner. Sapindaceae. Lychee.

A collection of varieties from the Lingnan University gardens.

94249. No. 349. Chung un hung.

94250. No. 357. Chong un hung.

94251. No. 351. Kwa luk.

94252. No. 350. Kuei wei.

94247 to 94257—Continued.

94253. No. 358. Shan chi.

94254. No. 194. Pat po keung,

94255. No. 205. Shan chi.

94256. No. 376. Shan chi. Originally from the Tsang Shen district.

94257. No. 365. Tai tso.

94258. CINNAMOMUM BURMANNI Blume. Lauraceae.

From Sumatra. Seeds presented by Edward Jacobson, Fort de Kock. Received September 15, 1931.

An evergreen tree, native to Java, with shining-green, ovate-oblong papery leaves of variable size, usually 2 to 6 inches long, emitting a cinnamon aroma.

94259. Anopterus glandulosus Labill, Escalloniaceae.

From Tasmania. Seeds presented by L. A. Received September 17, 1931.

Mountain-laurel. A tall evergreen Tasmanian shrub with spreading branches, oblong dentate leaves 4 to 6 inches long clustered at the ends of the branches, and axillary racemes of white flowers.

For previous introduction see 76702.

94260 to 94262.

From Cuba. Seeds collected by John G. Jack, Arnold Arboretum, Jamaica Plain, Mass. Received September 18, 1931.

94260. CLIDEMIA HIRTA (L.) D. Don. Melastomaceae.

A slender branching shrub 3 to 8 feet high with ovate leaves half an inch long, and axillary racemes of small campanulate, white or rosy flowers. It is native to tropical America.

94261. HUERTA CUBENSIS Griseb. Anacardiaceae.

A tropical tree with compound leaves composed of 8 to 10 pairs of narrow-oblong leaflets 3 to 4 inches long and minute flowers in lax axillary panicles. Native to western Cuba.

94262. SECURINEGA BAMIFLOBA (Ait.)
Muell. Arg. (S. flueggeoides Muell.
Arg.). Euphorbiaceae.

A shrub with slender wandlike branches, ovate-lanceolate bright-green or yellow-green leaves 1 to 2 inches long, and axillary clusters of inconspicuous greenish-white flowers, followed by green capsules. It is native to China and Japan.

94263. Figure sp. Moraceae. Fi

From Africa. Scions presented by Dr. W. L.
Thompson,
Rhodesia. Received September 18, 1931.

A wild fig which bears small but edible fruits.

94264 to 94266.

From France. Seeds presented by R. Salgues, Brignoles Botanic Garden. Received September 21, 1931.

94264. GENTIANA LUTEA L. Gentianaceae. Yellow gentian.

94264 to 94266—Continued.

A coarse perennial, too large for the rock garden, with 3-foot 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.

For previous introduction see 78932.

94265. LATHYRUS CICERA L. Fabaceae.

A vine, either prostrate or ascending, with slightly winged glabrous stems up to 8 inches long. The small lanceolate leaves are in pairs on winged petioles; the upper leaves have simple undivided tendrils half as long as the leaf; the lower leaves have no tendrils. The solitary dull-red flowers, less than an inch long, are either erect or nodding.

For previous introduction see 40798.

94266. ORNITHOGALUM PYRENAICUM Liliaceae.

A bulbous plant about 2 feet high, with narrow onionlike leaves and whitish flowers on a simple leafless stalk. It is native to Europe.

For previous introduction see 40798

94267. MUCUNA Sp. Fabaceae.

From French Indo-China. Seeds presented by M. Pollane, Institut des Recherches Agronomiques de l'Indochine, Division de Botanique. Received February 15, 1930. Numbered in September, 1931.

94268. ANANAS Schult. SATIVIIS Bromeliaceae. Pineapple.

From Brazil. Plants received through L. W. Jangeneel, California Packing Corp. Received August 21, 1930. Numbered in September, 1931.

94269. GARCINIA MANGOSTANA L. Clu-Mangosteen. siaceae.

From Central America. Plants purchased from the United Fruit Co., through Wil-son Popenoe, Research Department, Tela, Honduras. Received September 6, 1930. Numbered in September, 1931.

94270. MANGIFERA INDICA L. Anacardiaceae. Mango.

rom Hawaii. Plants presented by W. T. Pope, senior horticulturist, Agricultural Experiment Station, Honolulu. Received November 3, 1930. Numbered in September 1031 ber, 1931.

Victoria. A variety of mango which is not attacked by the Mediterranean fruit fly.

94271. EUGENIA DENSIFLORA (Blume) Duthie. Myrtaceae.

From Java. Seeds presented by the director, Botanic Gardens, Buitenzorg. Received December 18, 1930. Numbered in September, 1931.

A tree, native to the Malay Archipelago, with oblong leaves 4 to 10 inches long and axillary cymes of clear rose-colored flowers and round fruits about half an inch in diameter.

94272. CITRUS Sp. Rutaceae.

From the Union of Soviet Socialist Republics. Plants presented by Maj. C. R. Olberg, Tiflis, Transcaucasia. Received September 22, 1931.

94272—Continued.

An orange, known locally as a mandarin, and very similar to the tangerine, but larger, sweeter, and seedless. It is said to have come originally from Japan.

94273. PRUNUS ARMENIACA L. Amyg-Apricot. dalaceae.

From Chile, South America. Plants pre-sented by Dr. Alberto Graf Marin, Chief, Servico de Sanidad Vegetal. Received September 24, 1931. Received

94274. Rhus sp. Anacardiaceae.

From China. Seeds presented by T. D. Payne, China Inland Mission, Luchang, Yunnan. Received September 25, 1931.

Paint tree. The Chinese make a superior varnish out of the sap of this tree, although a bad skin poisoning is often contracted in the handling of it. The Tibetan Lisu people make a fair substitute for lard out of the seed.

94275 to 94277.

From Australia. Seeds presented by F. J. S. Wise, Agricultural Advisor, Broome, Western Australia. Received September

A collection of grass seeds which are suited to semiarid conditions.

94275. ASTREBLA SQUARROSA Hubbard.

A leafy tufted perennial grass with short rhizomes from which rise the nearly erect stems to a height of 6 to 8 feet. The linear leaves are 15 inches long, and the spikelike flattened racemes are 4 to 8 inches long. It is native to Australia.

94276. ASTREBLA Sp. Poaceae. Grass.

94277. ERAGROSTIS CHAETOPHYLLA Steud. Poaceae.

The slender rigid densely tufted stems up to 12 inches high rise from a somewhat bulbous slightly woolly base and are leafy to the top. The narrow panicles, 1 to 3 inches long, are made up of thin flat spikelets. It is native to Australia.

94278 and 94279.

rom Peru. Seeds presented by Paul G. Ledig, Magnetic Observatory of the Car-negie Institution of Washington, D. C., Huancayo. Received September 28, 1931.

94278. MIMULUS sp. Scrophulariaceae.

No. 1. A low shrub with woody stems, which grows in sunny situations in very rocky places.

94279. MIMULUS sp. Scrophulariaceae.

No. 2. A short-stemmed herb which grows in rocky soils in partly shady situations (such as the side of a cliff only touched by the sun in the morning or evening).

94280. PIPER METHYSTICUM Forst. Piperaceae.

om Hawaii. Cuttings presented by W. T. Pope, Senior Horticulturist, Office of Experiment Stations, Honolulu. Re-ceived September 29, 1931. From Hawaii.

94280—Continued.

Kava or awa. A nearly glabrous shrub, native to the Pacific Islands, 8 to 10 feet high, with round-oval leaves, deeply cordate at the base and acuminate at the apex. From the root of this plant is made the drink known as kava, awa, or yaquona.

94281. Passiflora quadrangularis L. Passifloraceae. Giant granadilla.

From Central America. Seeds presented by the United Fruit Co., through Wilson Popence, Research Department, Tela, Honduras. Received September 29, 1931.

An ornamental Brazilian vine producing strongly perfumed fruits which ripen from

94281—Continued.

yellow to orange and have flesh about an inch thick.

For previous introduction see 78595.

94282. PIPER METHYSTICUM Forst. Piperaceae.

From the Society Islands. Plant and cuttings presented by Harrison W. Smith, Papeari, Tahiti. Received September 30, 1931.

For previous introduction and description see 94280.

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