INTRODUCTORY STATEMENT

Inventory no. 113 records the material received by the Division of Foreign Plant Introduction between October 1 and December 31, 1932, a total of 427 numbers (101158–101584), part of which represents material for the use of the Division and part for other divisions and agencies.

Although possibly not obvious to the uninformed reader, the great number of entries of material from Robert M. Grey, superintendent of the Atkins Institution of the Arnold Arboretum at Soledad, Cienfuegos, Cuba (101159–101162, 101212–101215, 101243–101252, 101257, 101260–101265, 101292–101295, 101435–101437, 101462–101464), represent the growing interrelation of that garden and the Department's garden at Coconut Grove, Fla., from which considerable collections of seeds and plants have gone to the garden at Soledad. By this interchange of material each garden is able to increase its collection and study new plants under different climatic conditions—a relation that is cordially appreciated.

Less conspicuous but as important are the contributions, from several sources, of seeds and bulbs of various species of Allium, eventually intended for the use of cooperating specialists in California, also of oats and cottons for Department specialists.

The studies of bamboo are assisted by the accession of 5 numbers, 3 from a French nursery and 2 from an old planting in Florida, all species or forms that contribute to the studies of the difficult variations of this group.

Through the courtesy of Dr. H. Humbert, Muséum National d'Histoire Naturelle, Paris, France, our succulent collection is increased by a collection of species of Bryophyllum, Kalanchoe, and Kitchingia native to Madagascar (101356–101374), for comparative study with previous introductions. From France also, through Prof. D. Bois, of the Muséum National d'Histoire Naturelle, Paris, was received a large collection of cuttings of Ficus species (101309–101343), intended for the work with that genus now under way at Coconut Grove, Fla. Unfortunately, this admirable collection was largely lost, as most of the cuttings did not root.

In a miscellaneous collection of seeds sent by the courtesy of B. V. Skvortzow, Harbin, Manchuria (101395–101406) are several interesting herbs, not spectacular but of garden value. The Agastache rugosa is a nepetalike plant with a long period of summer blooming; another, Scutellaria baicalensis, has much more showy blue-purple flowers than any of its relatives grown here.

Although there are other collections of plants from that area, the two collections from Edwin Ashby, Wittunga, Blackwood, South Australia (101195–101204, 101346–101354) contain seeds of any interesting species and varieties of...
Callistemon and Calothamnus. These are plants that have been recognized in California, but have not been as well tested in the Gulf States, although some species seem more than promising within rather restricted areas.

The botanical determinations were made and the nomenclature determined by the late H.C. Skeels,¹ who had general supervision of this inventory.

Knowles A. Ryerson,
Principal Horticulturist, in Charge.

Division of Foreign Plant Introduction,
Washington, D.C., December 20, 1933.

¹ Died Jan. 3, 1934.
101158. NEPHELIUM LAPPACEUM L. Sapindaceae. Rambutan.

From Central America. Seeds presented by Wilson Popence, research department, United Fruit Co., Tela, Honduras. Received October 6, 1932.

An erect stately tropical tree 35 to 40 feet high, native to the Malay Archipelago and not yet extensively cultivated elsewhere. The compound leaves are composed of 5 to 7 pairs of elliptic, obovate or oblong, glabrate leaflets about 4 inches long, shining and dark green above, paler beneath. The small flowers are in loose axillary and terminal panicles. The fruits, which are produced in clusters of 10 or 12, are oval, about 2 inches in length, and covered with soft fleshy spines less than an inch long. They are crimson, somewhat greenish, shining and dark green above, paler beneath. The outer covering from which the spines arise is thin and leathery and is easily torn off, exposing the white translucent yellowish, or orange-yellow. The outer covering of the spines is thin and leathery and is easily torn off, exposing the white translucent flesh (aril) which adheres to the oblong and flattened seed. The flavor is mild acid, somewhat suggesting that of the grape.

For previous introduction see 90929.

101159 to 101162—Continued

101162. OCOTEA CORIACEA (Swartz) Britton. Lauraceae.

An evergreen tree 30 to 40 feet high with oblong-lanceolate coriaceous leaves 2 to 6 inches long and panicles of small white flowers followed by dark-blue fruits nearly an inch long with red or yellow persistent calyx bases. It is native to the West Indies.

For previous introduction see 90929.

101163. FICUS CARICA L. Moraceae. Common fig.

From Florida. Cuttings presented by H. E. Ellis, Jacksonville. Received February 1, 1930. Numbered in October 1932.

A seedless fig developed by George E. Shepherd, Riverside, Jacksonville, Fla.

101164 to 101168.

From Greece. Seeds and bulbs presented by Prof. P. Th. Anagnostopoulos, Ecole Supérieure d’Agriculture, Athens. Received October 7, 1932.

An autumn-flowering crocus with 3 to 6 linear-lanceolate leaves and white flowers somewhat lilac lined at the base outside and having a yellow throat. The anthers are white and somewhat longer than the filaments, and the scarlet style branches are divided into capillary segments.

101165. CROCUS CARTWRIGHTIANUS Herb.

An autumn-flowering crocus with 1 to 4 violet flowers and narrow slightly ciliate leaves. It is very close to C. hedriaticus and is native to arid hills near the sea in Greece.

101166. CROCUS CORYI J. Gay.

A shrubby perennial about 3 feet high with obvate-oblancoate hastate leaves and umbel-like cymes of small scarlet flowers. It is native to Cuba.

For previous introduction see 90983.

1 It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received. 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.

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3 It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications therefore must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.
101164 to 101165—Continued
produces 5 to 8 glaucous green leaves 12 to 18 inches long and a scape 1 to 2 feet high, bearing a 6- to 12-flowered raceme of fragrant white flowers. The pistil is black and adds to the attractiveness of the flowers. This species is very popular for pot culture.

101166. TULIPA BAYERI Heldr. Liliaceae. Tulip.

Bulbs of a tulip with a flowering stem about a foot high which bears a single flower up to 2 inches long. The perianth segments are brownish on the outside and intensely scarlet within. The 3 or 4 leaves are narrow and grooved. Native to the mountains of Greece.

101169. TRAGOPOGON sp. Cichorieae.

From Turkistan. Seeds presented by the Tuggourt Botanic Garden. Received October 7, 1932.

101170. CROCUS SIEBERI J. Gay. Irideae.

From Greece. Seeds presented by Prof. P. Th. Anagnostopoulos, École Supérieure d'Agriculture, Athens. Received October 8, 1932.

A bulbous perennial, native to Greece, with 4 to 6 linear-lanceolate leaves, glaucous beneath, and lilac flowers with a yellow glabrous throat. The orange anthers are twice as long as the filaments, and the orange-red style branches are nearly entire.

101171. ALLIUM CEPA L. Liliaceae. Onion.

From India. Seeds presented by the director of agriculture, Imperial Institute of Agricultural Research, Fuss. Received October 8, 1932.

Introduced for breeding studies of Department and experiment-station workers.


From Amherst, Mass. Seeds from trees growing on the campus of the Massachusetts Agricultural College, presented by Prof. L. L. Blundell. Received October 8, 1932.

A shrub or small tree, native to Japan, with 7- to 9-lobed leaves only 2 inches broad. The small yellow flowers are borne on nodding peduncles and the orange-red style branches are nearly entire.

101173 to 101175—Continued
number, are diminutive, and each bears a single, terminal, ovate-lanceolate, dark-green leaf 2 to 3 inches long and nearly an inch wide. The foliage is more or less injured at temperatures of 5° to 10° F.

101176 to 101179.


A collection of seeds from the National Botanical Gardens at Kirstenbosch, Cape Colony, Union of South Africa.

101178 to 101179. ALOE spp. Liliaceae.

101178. ALOE KRAPFIIANA Marloth.

A small aloe with a basal rosette of 20 to 30 leaves each about 4 inches long and armed with very numerous small white teeth. The brickred flowers are on a scape 18 inches high.

101177. ALOE LONGISTYLA Baker.

A stemless southern African perennial with a dense rosette of about 30 lanceolate green leaves 6 inches long tapering to a horned point and having a brown downy prickly margin. The brightred tubular flowers are borne in a dense raceme 3 to 5 inches long.

101178. ALOE SCHLECHTERI Schoenb.

An aloe with olive-green leaves about 8 inches long, armed on the margin with brown hornv deltoid prickles. The light-yellow flowers, on short pedicels, are in dense racemes about 6 inches long.

For previous introduction see 98010.

101179. THYLALLIS GRATILIS (Bartl.) Kuntze. Malphigiaceae.

A shrub, native to Central America and naturalized in the West Indies. The narrowly elliptical leaves are 1 to 2 inches long, and the yellow flowers, 1 inch across, are borne in ample panicles.

101180. CITRUS sp. Rutaceae.

From French Indo-China. Seeds presented by M. Poilane, Arboretum de Bienhoa, Cochinchina. Received October 12, 1932.

101181 to 101184. AVENA SATIVA L. Poaceae. Oats.

From Scotland. Seeds presented by William Robb, director of research, Scottish Society for Research in Plant-Breeding, Craig House, Corstorphine, Edinburgh. Received October 12, 1932.

101181. Bell.

101182. Elder.

101183. Potat.

101184. Tam Finlay.

101185 and 101186.

From Australia. Seeds presented by the Botanic Gardens, Darwin, Northern Territory. Received October 12, 1932.

101185. ALYSTYCARBUS VAGINALIS (L.) DC. Fabaceae.

An annual legume from 3 to 6 feet high. Under favorable circumstances it may be cut 2 or 3 times a season.

101186. STYLOSANTHES WUCRONATA Willd, Fabaceae.

A much-branched undershrub, 1 to 2 feet high, native to southern Asia and tropical Africa. The rigidly coriaceous trifoliolate leaves have oblong leaflets about one half inch long, and the inconspicuous flowers are in small dense heads. Of possible value as a forage crop.
101187. **SESAMUM ORIENTALE** L. *Sesamaceae.*


101188. (Undetermined.)


No. 106. Collected April 16, 1932, at Rio Colorado, near Merced, Peru, at 2,800 feet altitude. A leguminous shrub up to 4 feet high, with flowers which vary from white to light violet.

101189. **DIOSCOREA ALATA** L. *Dioscoreaceae.* Winged yam.

From Australia. Tubers presented by J. A. Hamilton, Carbons via Cairns, North Queensland. Received October 17, 1932.

Tubers generally cylindrical, with reddish inner skin and white flesh partly colored with red-purple. It is a good table variety, very prolific, and has proved well adapted to the dry conditions of Queensland.

No. 101206 to 101211. (Undetermined.)


No. 106. Collected April 16, 1932, at Rio Colorado, near Merced, Peru, at 2,800 feet altitude. A leguminous shrub up to 4 feet high, with flowers which vary from white to light violet.

101190 to 101193.

From Manchuria. Seeds purchased from L. Pittsin, Harbin. Received October 13, 1932.

101190. **CHATEAUSP.** Malacese. Hawthorn.


Wild soybeans.

101194. **PUYA CHILESIS** Molina. *Bromeliaceae.*

No. 101206 to 101211. (Undetermined.)


No. 106. Collected April 16, 1932, at Rio Colorado, near Merced, Peru, at 2,800 feet altitude. A leguminous shrub up to 4 feet high, with flowers which vary from white to light violet.

101190 to 101193.

From Manchuria. Seeds purchased from L. Pittsin, Harbin. Received October 13, 1932.

101190. **CHATEAUSP.** Malacese. Hawthorn.


Wild soybeans.


Seeds presented by William Hertrich, superintendent, Huntington Botanic Garden, San Marino, California, from plants growing in the garden. Received October 13, 1932.

*Thanas* in Peru and cardon in Chile. A shrub 4 to 5 feet high with a yucca-like mass of foliage. The narrow, often recurved leaves, 2 to 4 feet long, are armed along the margins with strong glaucous recurved spines or thorns. The compound spike of large yellow flowers, each 2 inches across and sessile or nearly so, terminates a perfectly straight flower stalk 3 to 5 feet tall.

101195 to 101204.

From Australia. Seeds presented by Edwin Ashby, Wittunga, Blackwood, South Australia. Received October 13, 1932.

101195 to 101196. **CALLISTEMON** spp. *Myrtaceae.*

101195. **CALLISTEMON ACUMINATUS** × ?

A hybrid of *C. acuminatus* having flowers which vary from pink to deep crimson.

101196. **CALLISTEMON LILACINUS** E. Chees.

A shrub about 8 feet high with alternate, linear-lanceolate, mucronate leaves. The flowers, in dense cylindrical spikes, are characterized by long conspicuous purple-line filaments. It is native to New Zealand and Western Australia.

101197. **CALLISTEMON PALUDOSUS** × ?

A hybrid of *C. paludosus* with pink flowers.

101198. **CALLISTEMON RUGULOSUS** DC.

A shrub up to 12 feet high with narrowly lanceolate leaves 1 to 3 inches long and clusters of flowers having crimson filaments and yellow anthers.

101199. **CALLISTEMON SALIGNUS** (J. E. Smith) Sweet.

A tall shrub or small tree up to 40 feet high with distinctly penni-nerved, lanceolate leaves 1 to 3 inches long and small flowers, in spikes 1 to 2 inches long, which have bright-yellow stamens usually not more than half an inch in length.

For previous introduction see 96403.

101200. **CALLISTEMON ANGUSTIFOLIUS** F. Muell.

Native Western Australian shrubs very much like the Callistemons but with a much longer flowering period.

101201. **CALOTHAMNUS ROMALOPHYLLUS** F. Muell.

A low shrub with softly pubescent, corky branchlets. The terete leaves are 6 to 12 inches long, and the small flowers, immersed in the swollen corky stem, have several bundles of stamens nearly an inch long.

101202. **CALOTHAMNUS LONGISIMUS** F. Muell.

A tail evergreen shrub 6 to 12 feet high with subulate terete leaves about an inch long and flowers with blood-red stamens as long as the leaves.

101203. **CALOTHAMNUS QUADRIFIDUS** Ait.

An erect evergreen bush 7 feet high 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 98384.

101204. **CALOTHAMNUS SANGUINEUS** Labill.

A tall evergreen shrub 6 to 12 feet high with subulate terete leaves about an inch long and flowers with blood-red stamens as long as the leaves.

101205. **SESAMUM ORIENTALE** L. *Sesamaceae.* Sesame.

From Africa. Seeds presented by D. C. Edwards, Scott Agricultural Laboratories, Department of Agriculture, Nairobi, Kenya. Received October 17, 1932.

Sim-Sim. From the native market at Bukura; grown at 4,800 feet altitude where the annual rainfall is 52 inches. Introduced for the use of Department specialists.

101206 to 101211.

From Huancayo, Peru. Bulbs and seeds presented by Paul G. Ledig, Huancayo Magnetic Observatory, Carnegie Institution of Washington, D.C. Received October 16, 1932.

101206. (Undetermined.)

A lily with large red or green-yellow flowers.

101207. **URCEOLINA MINIATA** (Herb.) Benth.

A bulbous perennial native to the Andes of Peru and Bolivia. The solid scape, 1 foot high, bears 2 to 6 pendent urn-shaped scarlet flowers 2 inches long, after which appear the narrowly ovate leaves 1 foot long.

For previous introduction see 93770.
PLANT MATERIAL INTRODUCED

101206 to 101211—Continued

Tabebuia or utillus. A handsome half-woody shrub about 6 feet high which is usually broad and bushy in habit. Above the attractive foliage rise the spikes of varicolored pea-shaped flowers. The predominant colors are blue, lilac, white, and yellow.

For previous introduction see 99821.

101209 to 101211. Oxalis spp. Oxalidaceae.

101209. Oxalis sp. A form with yellow flowers, found on well-drained cliff sides.

101210. Oxalis sp. A form with yellow flowers, found in rocky well-drained situations above 15,000 feet altitude.

101211. Oxalis sp. A form with white flowers, found in clay soil near the observatory.

101212 to 101215.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received October 17, 1932.


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 94191.

101213. Oncoba echinata Oliver. Flacourtiaceae.

A smooth shrub with thin leathery oval leaves, small inconstant flowers, and round prickly fruits about 1 inch in diameter. It is native to eastern tropical Africa. The seeds contain 46.6 percent of fat, and an analysis of this fat has shown that it contains 87.5 percent of chaulmoogric acid, which is used in the treatment of leprosy.

101214. Paljurus Ramosissimus (Lour.) Lam. Rhamnaceae.

A shrub, native to China and Japan, resembling the Christ-thorn, P. spinosa-christi, but having both spines straight and longer pubescent leaves.


A tropical tree, native to Cuba, with elliptic or oblong leaves up to 5 inches long and small inconstant flowers in terminal clusters.

101216 to 101223.

From Costa Rica. Seeds collected by Prof. H. E. Stork, Carleton College, Northfield, Minn. Received October 17, 1932.


No. 2873. Collected at 11,000 feet altitude on the Irazu volcano, Costa Rica. A twining ornamental plant, native to the Andes as far south as Peru. Irazu volcano, Costa Rica. A twining ornamental plant collected at 11,000 feet altitude.

101217. Rubus alpinus Macfad. Alpine bramble.

No. 3315. From Cerro de la Muerta, June 27, 1932, at 10,000 feet altitude. A red-fruited raspberry with canes 6 feet high.

101218. Rubus glaucescens Bent. Andes raspberry.

No. 3033. From Cerro de la Muerta, June 27, 1932, at 10,000 feet altitude. A red-fruited raspberry with canes 6 feet high.

101219 and 101220. Rubus irascens Diagrams. L. Hemsl.

From Tierra Blanca, July 29, 1932. A tropical Andean raspberry with 5-foliate leaves consisting of ovate-acuminate, serrulate, dark-green leaves, 1 to 2 inches long, and small hairy fruits, not known to be edible.

101219. No. 3257. Plants with pinkish flowers and sour fruits, found at 7,000 feet altitude, growing along fence rows.

101220. No. 3258. Large plants, 10 to 12 feet high with rather sour reddish fruits, found at 6,700 feet altitude.

101221. Rubus urticaefolius Poir. (R. trichomatus Schlecht.).

An ornamental plant collected at 10,000 feet altitude.


Collected on the Irazu volcano at 11,000 feet altitude. A perennial herb with ovate-lanceolate, long-acuminate leaves to 6 inches long and panicules of white-flowers 2 inches long.


From India. Seeds presented by the Punjab Department of Agriculture, Lyallpur, Punjab. Received October 19, 1932.

A mixture of several locally grown varieties.

101225 to 101238. Rhododendron spp. Ericaceae.


101225. Rhododendron Oldhamii Maxim. A much-branched, partly deciduous red-hairy shrub, 3 to 18 feet high, with thin leathery oblong lanceolate dark-green leaves and red flowers 2 inches wide in terminal umbels. Native to Taiwan.

101226. Rhododendron Pulcherum Calycinum x Scabrum. A shrub or small tree up to 20 feet high, native to Hopeh, China. The oblong to oblong-lanceolate acrifoliate leaves, 6 to 12 inches long, are dark green above and clad beneath with flexuous threadlikeomentum. The funnel-shaped flowers, in clusters of 7 to 15, are 2 to 4 inches long and are white or rose pink, splashed with green at the base inside.

101227. Rhododendron auriculatum Hemsl. A shrub or small tree up to 10 feet high, native to Japan, the branchlets being clothed with thin loose white floccose tomentum. The oblong elliptic to obovate leaves are 3 to 5 inches long, and the funnel-
101295 to 101238—Continued

... leaves are 3 to 5 inches long, and the small flowers are followed by compressed subbicolor red fruits about one half inch long.

101245. CITHAREXylum CAUDATUM L. Verbenaceae.

A tree 20 to 30 feet high, native to the Hawaiian Islands. The subcoriaceous, ovate to obovate leaves are 3 to 5 inches long, and the small flowers are followed by compressed subbicolor red fruits about one half inch long.

101246. DITHEA PANICULATA (Juss.) Radlk. Sapindaceae.

A tree up to 40 feet high with softly tomentose branchlets, native to the Malay Peninsula. The oblong to elliptic-lanceolate leaves are 4 to 6 inches long, and the inconspicuous flowers are followed by subglobose red fruits, one tenth of an inch long, borne in spikes 3 inches long.

101244. ANTELSMA PLATYPHYLLUM H. MANN. Euphorbiaceae.

A small tropical tree, native to northeastern South America, with smooth linear-lanceolate leaves over 2 inches long and fragrant white and pink flowers on stems 4 to 5 inches long.

101247. EUPHORBIUM longiflorum (Lamb.) Roem. and Schult. Euphorbiaceae.

A small tropical tree, native to northeastern South America, with smooth linear-lanceolate leaves over 2 inches long and fragrant white and pink flowers on stems 4 to 5 inches long.

101248. EXOSTEMMA LONGIFLORUM (Lamb.) Roem. and Schult. Euphorbiaceae.

A small tropical tree, native to northeastern South America, with smooth linear-lanceolate leaves over 2 inches long and fragrant white and pink flowers on stems 4 to 5 inches long.
101243 to 101252—Continued

are followed by globose purple fruits one half inch long.

101248. HELICERES SEMITRIOBA Bert. Sterculiacae. A shrub 8 to 12 feet high, native to the West Indies, with cordate, sinuate-toothed or sometimes 3-lobed leaves, 1 to 3 inches long, and small flowers in axillary clusters.

101249. MORORICA COCHINCHINENISS (Lour.) Sprang. Cucurbitaceae. A very vigorous, tall climber, native to the Philippine Islands, producing large round green-yellow, attractive fruits which should make it popular as an ornamental vine. The immature fruits are boiled and eaten by the Filipinos. The numerous large round flat seeds appear to be very rich in oil.

101250. PIGRAMNIA PENTANDRA Swartz. Simaroubaceae. A small tree with compound leaves made up of 5 to 9 oblong-obovate, shining leaflets 2 to 3 inches long, and pendulous racemes of small white flowers followed by ovoid red to dark-blue, berrylike fruits. Native to the West Indies.

101251. SEMIANIA GLABRATA H. B. K. Sapindaceae. A climbing shrub with alternate binate leaves; the leaflets are elliptic-oblong and coarsely serrate-crenate. The white flowers are in axillary spike-like racemes. Native to the temperate regions in Peru.


101253. Bountiful, a black oat.

101254. HARDY PROLIFIC BLACK Winter oat.

101255. Unique, a white winter oat.

101256. ANNONA DIVERSIFOLIA Safford. Annonaceae. Liana. From Guatemala. Seeds presented by Don Jorge Garcia Salas, Director General de Agricultura. Received October 27, 1932.

A small tree, native to Mexico and tropical America, with brown-gray aromatic bark. The thin membranous leaves, 5 inches long, are broadly elliptical to oblongate. The broadly ovoid fruit, about 6 inches long, is clothed in dense grayish felt-like tomentum and, when mature, is usually covered with stout thick protuberances. The hard smooth golden-brown nutlike seeds are embedded in the edible cream-colored or rose-tinted flesh.

For previous introduction see 99460.


A beautiful and rare palm with a straight smooth stem sometimes reaching a height of 50 feet. The pinnate leaves are from 8 to 12 feet long.

For previous introduction see 99165.

101258 and 101259. LACTUCA SATIVA L. Cichoriaceae. Garden lettuce. From the Union of Soviet Socialist Republics. Seeds presented by Prof. I. Vavilov, through the Department of New Culture and Introduction, Leningrad. Received November 1, 1932.

USUN, Chinese stem lettuce. A peculiar vegetable of which the thick inner stalk is eaten; this stalk is about 3½ feet long and 2 inches in diameter, and it is cut into slices and boiled. The leaves are discarded, as they are bitter. The original seed was collected by an expedition to central China in 1929.

101258. No. 5. 101259. No. 17.

101260 to 101265.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received October 26, 1932.

101260. ARTOCARPUS INTEGRA (Thunb.) L. Moraceae. Jackfruit. A very large tree native to southern India and the Malay Archipelago, valued chiefly for its enormous fruits, a single one of which may weigh over 100 pounds. These fruits, which are borne on the trunk and older branches, are usually irregularly oblong and are always green, with the rind consisting of somewhat hexagonal knobs. When ripe the fruits have a powerful odor, and the stronger the latter the better the quality of the fruit. With the exception of the rind and core, the entire fruit is eaten, the white or cream-colored, soft flaky pulp being used either raw or boiled and fried. The large seeds are roasted and used in curries.

For previous introduction see 98799.


101262. IXORA FRASERI Hort. Rubiaceae. Said to be a hybrid closely resembling I. chinensis and having flowers with a scarlet tube and a brilliant salmon limb.

101263. LIVISTONA HOOGENDORPII André. Phoe- niciaceae. Palm. A tall Javanese palm with fan-shaped leaves 4 to 6 feet wide on spiny petioles 3 to 5 feet long, red brown at the base and becoming olive green near the blade. The blades are made up of stout pendulous segments with 5 to 7 acute lobes at the apex.

For previous introduction see 98496.

101264. STROFANTHUS SARMENTOSUS DC. Apocynaceae. An ornamental tropical woody climber with white and purple flowers. The seeds contain a poisonous alkaloid which is used as a heart stimulant.

101265. VITEX PARVIFLORA Juss. Verbenaceae. Chaste-tree. A timber tree native to the Philippine Islands which, under favorable conditions becomes 100 feet high and 20 feet in diameter, although it is usually smaller. The pale-yellow wood is hard and heavy but easy to work and is a good substitute for teak. It is considered one of
101280 to 101289—Continued

ecous trifoliolate leaves have ovate to cordate
leaflets 1 to 2 inches long, and the small yellow
flowers, in large panicles, are strongly odorous
but are said not to be fœtid.

101287. CLEMATIS HEXASP HILA DC.
A smaller and more slender vine than C.
fadires, with pale-green, coriaceous, trifoliolate
leaves, with ovate-oblong leaflets, havingToothed leaflets 1 to 3 inches long. The
numerous flowers, 1 to 2 inches across, have
6 to 8 white sepals.

101278. CLEMATIS INDIVIUA Wild.
New Zealand clematis.
A large woody climber with stout stems often
2 to 3 inches in diameter, native to New Zealand.
The coriaceous trifoliolate leaves have cordate
to linear-oblong leaflets 1 to 4 inches long,
usually entire, and the white flowers are 2 to 4
inches across.

101279. DIANTHUS INTERMEDIATE Endl. Liliaceae.
A perennial herb, native to New Zealand, with
numerous sword-shaped leaves, 3 feet long,
crowded at the base of a scape 2 feet high. The
spreading panicles of small purple flowers,
with bright-orange anthers is followed by broadly
oblong blue berries nearly an inch in length.

101280. DONONIA VISCOSA (L.) Jacq. Sapindo-

101281. DRACOPHYLLUM STRICITUM Hook. f. Epacridaceae.
A freely-branching New Zealand shrub with
erect coriaceous leaves, from a sheathing base,
which taper to a rigid point, and small terminal
panicles of numerous white flowers.

101282. LEPTOPTERIS SUPERBA (Col.) Presl. Gumundaceae.

101283. LEUCOREGUS GRANDICIPES (Hook. f.) Beauv. Asteraceae.
A densely tufted perennial herb, 2 to 3 inches
high, native to New Zealand. The densely
imbricated spreading or recurved leaves, one fourth
to one third inch long, are obovate-spatulate, flat
or concave, and clothed on both surfaces with
appressed silvery tomentum. The small flowers
are congested into a densely bracteate head.

101284. MYOSOTIDUM HORTENSIA (Decaisne) Basil (M. robii Hook.). Boraginaeae.
A Stout succulent perennial herb native to the Andes
from the Pacific to Cape Horn and to New Zealand.
The broadly ovate leathery leaves are
one-sixth inch long, and the small greenish
axillary flowers are followed by orange berries
the size of a pea, which nearly cover the mat
of foliage.

A creeping perennial herb native to the Andes
from the Pacific to Cape Horn, and to New Zealand.

101286—Continued

101271 to 101291—Continued

the best construction timbers of the islands, as it
resists well the action of fungi and sea water,
teredo, and white ants.

101271 to 101291. ORYZA SATIVA L. Poaceae. Rice.
From Madagascar. Seeds obtained from Percy G.
Kemp, American rice consul, Taranaki. Re-
ceived October 25, 1932.
A collection of the principal rice varieties grown in
Madagascar, introduced for comparison with the
varieties now being grown in this country.

101286. Be.

101287. Botry.

101288. Men.

101289. Lava, white, long and thin.

101290. Vato, a mixed sample of chalky reddish
rice.

101271 to 101291. From New Zealand. Seeds purchased from A.
Wilkinson, Tauranga. Received July 25, 1932.
Numbered in November 1932.

101271. AGIPHILLAS COLONISSO Hook. f. Apiaceae.
A stout erect perennial herb 2 to 5 feet high, native
to New Zealand. The numerous radical
leaves form a circle of bayonettleike spikes around
the base of the stem, each 1 to 3 feet long, pinnate
or bipinnate at the base with few secondary,
narrowly linear leaflets 5 to 15 inches long, ter-
minated by a long stout spine. The small white
flowers are in a cylindrical panicle made up of
numerous umbels.

101272. ANISTOTELIA BERTICIUS Hook. f. Elaeo-
carpaceae.
An erect or decumbent much-branched shrub,
3 to 8 feet high, native to New Zealand. The
coriaceous leaves vary from linear to obovate and
are entire, crenate, serrate, or lobed. The small
flowers are solitary or in small racemes and
are followed by small yellowish berries.

101273. ANISTOTELIA SERRATA (Forst.) Oliver. Elaeocarpaceae.
A small tree 6 to 30 feet high with red bark,
native to New Zealand. The densely imbri-
cated spreading or recurved leaves, one fourth to
one-sixth inch long, and the small greenish
flowers, borne in axillary panicles,
are followed by dark-red or almost black berries
about the size of a pea.

101274. ASTELLA NERVOSA Banks and Soland. Liliaceae.
A stout densely tufted New Zealand perennial
often forming extensive masses on swampy
grounds in forests. The spreading lanceolate
leaves are 2 to 8 feet long with the midrib and
several other nerves colored red. The fragrant
flowers, borne in large panicles on scapes 1 to 2
feet high, are greenish black and are followed by
bright orange-yellow berries.

101275 to 101278. CLEMATIS spp. Ranunculaceae.

101275. CLEMATIS APOLLIAE J. Buch. A perennial with wiry leafless stems, native
to New Zealand. The flowers are greenish
white, nearly an inch across, and are borne in
axillary fascicles of 2 to 5. On young plants the
leaves are occasionally developed and consist of
a persistent petiole and three minute long-
terminal leaflets.

101276. CLEMATIS COPITIDA Raoul. A stout woody vine, often covering small trees
native to New Zealand. The slightly cori-
aceous trifoliolate leaves have ovate
and is foliated.
101271 to 101291—Continued

101288. NOTHOPANAX COLENSOI (Hook. f.) Seem. Araliaceae. A glabrous shrub or small tree up to 15 feet high, native to New Zealand. The palmately compound coriaceous leaves are made up of 5 to 5 obovate, coarsely serrate leaflets 2 to 6 inches long, and the small flowers, borne in large compound umbels, are followed by globular purple-black fruits one-fifth inch in diameter. From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received October 31, 1932.

101287. OEARIA CHEESEMANII Cockayne and Allen. Asteraceae. A much-branched shrub 3 to 12 feet high, native to New Zealand. The membranous linear-lanceolate to oblong-lanceolate leaves, 2 to 4 inches long, have sinuate margins, and the small heads of white flowers are borne in large rounded corymbs. From New Zealand. The spherical heads, 3 inches in diameter, of white flowers are borne in large compound corymbs. Axillary, many-flowered cymes of small, fragrant, white flowers are followed by cylindrical pods one-fifth inch in diameter. Native to New Zealand. The palmately compound leaves are made up of 3 to 9 linear-oblong mucronate leaflets; the flowers are followed by small, violet-purple fruits 1/5 inch in diameter. From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received October 31, 1932.

101286. PACHYSTEgia INSIGNIS (Hook. f.) Cheesem. Asteraceae. A robust spreading New Zealand shrub, 6 to 9 feet high, with stout densely tomentose branches, thick leathery oblong entire leaves, 3 to 7 inches long, white tomentose beneath, and large hemispherical heads, 3 inches in diameter, of white flowers on peduncles a foot long. Native to New Zealand. The oblong to lanceolate leaflets, less than one-half inch long, are sinuate dentate, and the axillary flowers, less than 1 inch long, are white with purple streaks. It is native to New Zealand. The oblong to lanceolate and are sometimes dentate at the apex. From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received October 31, 1932.

101285. ZAMIA INTEGRIFOLIA All. Cycadaceae. A cycad, native to the West Indies, with a trunk 12 to 18 inches high and a crown of pinately compound leaves somewhat resembling a palm. The alternate leaflets, in 16 pairs, are oblong to lanceolate and are sometimes dentate at the apex. From Cuba. Bulbs presented by W. M. Hayes, Tenghsien, Shantung. Received November 9, 1932.


101283. AMYGDALUS PERSICA NECTARINA Ait. Amygdalaceae. Apricot. A tropical evergreen shrub, native to Cuba and the Bahamas Islands, with oblong-obovate leathery leaves about 1 inch long and small flowers in very short racemes. A good type. Introduced for the use of Department specialists. From Africa. Seeds presented by W. Head, deputy director of gardens, Saharanpur, United Provinces. Received November 3, 1932.


101281. AMYGDALUS PERSICA L. Amygdalaceae. Apricot. A very rapid-growing tree with large, dark-green, spiny leaves and a great profusion of large, blue-violet flowers which change color from light blue to day, becoming a pale blue and later fading to white. For previous introduction see 97852.
From India. Seeds presented by M. Azfar, Cotton Research Laboratory, Lyalpur, through T. H. Kearney, Bureau of Plant Industry. Received November 10, 1932.
A shrubby tropical Indian cotton, with small yellow flowers, which is native to the Sind district; it is of the 13-haploid-chromosome group and therefore will not cross with the American types. The seed is difficult to germinate. It is sown in India about June, and before sowing the cost is carefully split with a knife or the seed is rubbed upon a piece of fine sandpaper which allows access of water and helps germination.

From China. Seeds presented by Albert N. Stewart, College of Agriculture, University of Nanking. Received November 11, 1932.
Nanking no. 716.
Introduced for the use of Department specialists.

101309 to 101348. Ficus spp. Moraceae. Fig.

101309. Ficus aggregata Vahl.
An East Indian woody climber with oval, obtuse, glabrous leaves 3 inches long, punctate above, and clusters of sessile globose fruits.

101310. Ficus baroni Baker.
A tree, native to central Madagascar, with glossy brown bark and alternate closely set leaves resembling those of Laurocerasus officinalis in size and appearance. The sessile roundish fruits are one-half inch in diameter.

101311. Ficus benghalensis L. Banyan tree.
A large tree 75 to 100 feet high, rooting from the branches. The branchlets are softly pubescent, the broadly ovate coriaceous leaves are 4 to 6 inches long and the globose red fruits, borne in pairs, are about the size of small cherries. The tree is native to India and northern Africa.

For previous introduction see 98394.

101312. Ficus cannottii (Bull) N. E. Brown.
A tropical tree with pinnatifid hairy leaves which become entire and ovate-oblong when older. The upper surface of the leaves is dark bronze red on bronzy green with the lower surface vinous purple. The subglobose yellowish fruits are one-half inch in diameter. Native to the Society Islands.

101313. Ficus diversifolia Blume. Mistletoe fig.
A smooth shrub or small tree, native to India. The broadly obovate leaves, 1 to 3 inches long, and the small solitary, dull-red or yellow fruits resemble the mistletoe.

101314. Ficus duseinii Warb.
A tree up to 40 feet high, native to tropical Africa. The entire obovate to elliptical leaves are 2 to 8 inches long, and the globose or ovoid fruits are borne in sessile axillary pairs. Possibly a form of F. thollotii.

101315. Ficus glabella Blume.
A small glabrous tree native to the Malay Peninsula. The thin not very leathery leaves, 2 to 4 inches long, are obovate-oblong and entire, and the sessile fruits, less than one-half inch in diameter, are purple, sometimes with yellow dots.

101309 to 101348—Continued

101316. Ficus glaberrima Blume.
An East Indian tree with oblong acuminate leaves 3 to 6 inches long and small pea-shaped fruits.

101317. Ficus heterophylla L. f.
A creeping shrub, native to tropical India and Ceylon. The leaves, 1 to 3 inches long, vary from lanceolate and entire to broadly cordate with rounded, toothed, or deeply lobed margins, and the solitary axillary fruits vary from globose to long pyriform.

101318. Ficus hispida L. f.
A shrub or small tree native to tropical Asia and Australia. The opposite rough-hairy leaves are entire or toothed, and the hispid yellow fruits are borne in clusters on the old wood.

101319. Ficus lucensens Blume (F. infectoria Roxb.). Dotted fig.
A low deciduous tree, native to India. The membranous oblong-ovate leaves, 3 to 6 inches long, are slightly subcoriaceous, and the globose fruits, one-fourth inch in diameter, are white flushed and dotted with red.

101320. Ficus kestinghi Warb.
A tree up to 20 feet high, native to tropical Africa. The rigid leathery leaves, 4 to 6 inches long and broad, are heart shaped and are dark green with red nerves. The obovoid fruits, one-half inch long, are in axillary fascicles at the tips of the shoots.

101321. Ficus lutea Vahl.
A tall spreading tree with whorled branches, native to tropical Africa. The ovate-oblong leathery leaves, 4 to 8 inches long, are finely reticulate with the nerves whitish above and pale green below. The globose axillary yellow fruits, borne in pairs, are smaller than cherries and have a bifiid umbo at the apex.

101322. Ficus lynata Warb.
A tree up to 40 feet high, native to tropical Africa. The rigid leathery lyre-shaped leaves are 6 to 12 inches long and 5 to 7 inches broad, and the globose fruits, about 2 inches in diameter, are borne in sessile axillary pairs.

101323. Ficus ovata Vahl.
A large tree with a broad crown and ribbed purplish branches, native to tropical Africa. The oblong-obovate to broadly cordate leaves are 7 to 10 inches long, and the subglobose, brown fruits, 1 to 2 inches in diameter, are surrounded while young with reddish coriaceous bracts.

101324. Ficus pandurata Hance. Fiddleleaf fig.
A low diffuse shrub with leaves 1 to 4 inches long, having rounded coriaceous bases and rounded-oblong upper portions. The red fruits, nearly as large as cherries, are borne singly in the axils of the leaves. It is native to China.

101325. Ficus parietalis Blume.
An attractive tree, native to tropical Asia. The large oblong leaves are shining deep green above and dull green below, and the golden-yellow fruits are three-fourths of an inch in diameter.

101326. Ficus pierrei Hort.
A name for which a place of publication and a description have not been found.

101327. Ficus prolifica Forst. f.
A tropical tree with oblong-lanceolate acuminate leaves, punctate beneath, and fruits borne in pairs. Native to the Society Islands.

101328. Ficus punctifera Warb.
A tree with spreading branches and soft-gray, smooth bark, native to tropical Africa. The
1. **Ficus ptyriformis** Hook. and Arn.

A shrub with pubescent branchlets, native to tropical India and China. The linear-lanceolate to oblong-lanceolate leaves are 2 to 4 inches long, and the soliitary axillary pear-shaped fruits are less than an inch long.

2. **Ficus shihleri** Warb.

A small tree about 30 feet high, native to the forests of New Caledonia. The membranous elliptic entire leaves are 3 to 8 inches long, and the small orange fruits are in long racemes.

3. **Ficus pyriformis** Hook. and Arn.

A shrub with pubescent branchlets, native to tropical Asia. The coarsely sinuate-crenate, deeply lobed leaves are 2 to 5 inches long, and the red fruits, about half an inch in diameter, vary from egg shape to pea shape.

4. **Ficus racemigbra** Bur.

A creeping or decumbent shrub, native to tropical Asia. The cosely sinuate-crenate, deeply lobed leaves are 2 to 5 inches long, and the red fruits, about half an inch in diameter, vary from egg shape to pea shape.

5. **Ficus triangularis** Warb.

A tropical African tree, closely related to tropical Asia. The elliptic, entire, leathery leaves are 3 to 5 inches long, and the warty, globose fruits, less than one-half inch in diameter, are borne in sessile axillary pairs.

6. **Ficus alternifolia** Sim.

A medium-sized tree native to eastern Asia. The elliptic, entire, leathery leaves are 3 to 5 inches long, and the warty, globose fruits, less than one-half inch in diameter, are borne in sessile axillary pairs.

7. **Ficus tiliiformis** Hook. and Arn.

A tiny tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 2 to 4 inches long, and the small fleshy, globose fruits are about one inch in diameter.

8. **Ficus rugulosa** Blume.

A small tree about 30 feet high, native to tropical Africa. The elliptic entire leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

9. **Ficus rugosissima** Linn.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

10. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

11. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

12. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

13. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

14. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

15. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

16. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

17. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

18. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

19. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

20. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

21. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

22. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

23. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

24. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

25. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

26. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

27. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

28. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

29. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

30. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

31. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

32. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

33. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

34. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

35. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

36. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

37. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

38. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

39. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

40. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

41. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.

42. **Ficus rubiginosa** Desf.

A small tree about 30 feet high, native to tropical Asia. The oblong-lanceolate leaves are 3 to 5 inches long, and the small orange fruits are in long racemes.
101346 to 101354—Continued

101344. Typhomenea sp. Myrtaceae.
Closely related to T. stroniptophila.

101355. Acacia leptocladia A. Cunn. Mimosaceae.
From Australia. Seeds presented by Kate O. Sessions, Pacific Beach, Calif. Received November 9, 1932.

A glabrous shrub with compound leaves made up of oblong coriaceous leaflets one-twelfth of an inch long and yellow flowers in round racemes larger than the leaves, produced at the ends of the branches. It is native to New South Wales, Australia.

101356 to 101374.

From France. Plants presented by Dr. H. Humbert, Muséum National d'Histoire Naturelle, Paris. Received November 11, 1932.


101357. Bryophyllum daigremontianum (Ham. and Perr.) Berger (Kalanchoe daigremontianum Ham. and Perr.).
A brown-green succulent perennial, native to Madagascar, becoming about 2 feet high. The leaves are petiolate, sometimes peltate, green within, barred with brown, deeply crenate, budding from the angles. The small deep-pink flowers are in lax terminal panicles.

101358 and 101359. Bryophyllum miniatum (Hilsenb. and Boj.) Berger. (Kalanchoe miniatum Hilsenb. and Boj.).

101358. An erect, slender, fleshy plant 1 to 2 feet high, native to Madagascar. The smooth, green, oval-obtuse leaves are up to 3 inches long, with shallow, crenate, sinuous margins and slightly pink petioles. The small flowers, bright red with brown spots, are in a lax terminal panicle.

101359. Received as Kalanchoe miniatia subspeltata, a form said to have smaller leaves with the leaves in the center of the shoot always peltate.

101360. Bryophyllum scandens (Perrier) Berger.
A succulent climbing plant with a slender stem and sessile, linear-lanceolate, thick, dark-green leaves 2 to 3 inches long, bearing 5 or 6 bulbiferous teeth at their apex. The dark-violet flowers, one-third inch long, are in a lax, many-flowered inflorescence. Native to Madagascar.

101361. Bryophyllum tubiflorum Harv.
An erect herb a foot high with terete fleshy leaves 1 to 2 inches long, tipped with three linear erect teeth and two broad reflexed teeth. The scarlet flowers are in terminal clusters. Native to Madagascar.

101362 to 101373. Kalanchoe spp. Crassulaceae.

A succulent climbing plant with a slender stem and sessile, linear-lanceolate, and the small flowers, greenish yellow with red lines, are in terminal cymes.

101363. Kalanchoe beharense Drake.
A shrubby succulent about 12 feet high with large, thick, fleshy, ovate leaves up to 8 inches long. These are rust-colored above and silvery below, both surfaces becoming dingy with age. The pale-yellow flowers are borne in ample terminal panicles. Native to Madagascar.

For previous introduction see 91325.

101364. Kalanchoe fedtschenkoi Ham. and Perr.
A rather small succulent about 10 inches high with crenate, rounded-ovate leaves 1/2 inches long, bluish-green overcoat with purple, and small purplish flowers in a loose cluster terminating the slender stem. Native to Madagascar.

101365. Kalanchoe globulifera Perrier.
A succulent plant with a short, ascending, hairy stem and 6 to 8 crowded obovate-spatulate glabrous leaves about 1 inch long. The small yellow or bright-red flowers, half an inch long, are in a panicked cyme. Native to Madagascar.

101366. Kalanchoe globulifera cucinica Perrier.
A stout, branched, succulent perennial up to a foot high with elongated, thick, irregularly toothed, obovate-spatulate leaves over 2 inches long and numerous bright-scarlet flowers in large terminal cymes. Native to Madagascar.

For previous introduction see 95552.

An erect perennial about a foot high with fleshy, obovate-cuneate, nearly entire leaves 1 inch long and yellow flowers in a dense corymbose panicle. Native to Madagascar and closely allied to K. sidebrandtii.

A somewhat woody succulent plant, native to Madagascar, which becomes 6 feet high, but requires bushes or other support to stand erect. The stem terminates in a large lax corymb of deep rose flowers.

101369. Kalanchoe orgyalis Baker.
An erect succulent perennial with stems 6 to 7 feet long, obovate-spatulate leaves 3 to 5 inches long, and yellow flowers, one third inch long, in dense terminal cymes. Native to central Madagascar.

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

101371. Kalanchoe tomentosa Baker.
A fleshy perennial, densely covered throughout with short brown hairs. The sessile-gated leaves are about 2 inches long, and the flowers are in a narrow panicle about 6 inches long. It is native to central Madagascar.

101372. Kalanchoe walldemi Ham. and Perr.
A slender fleshy plant with a rather slender stem up to a foot high and opposite, subsessile, flat, obovate, crenulate leaves up to 2 inches long. The rose-colored flowers are in a lax terminal corymbose inflorescence. Native to Madagascar.

A stout-stemmed, fleshy plant with sessile, linear-oblong, obtuse, conspicuously crenate...
101356 to 101374—Continued
leaves 2 to 3 inches long. The 12 to 20 bright-red flowers are in a lax globose compound terminal cyme. Native to Madagascar.

101374. KITCHINGIA PELTATA Baker.
A succulent herbaceous ornamental with leaves petiolate, almost peltate, crenate, 2 to 3 inches long, green with red margins, and pink petioles and stems.

101375 to 101378. CHAYOTA EDULIS Jacq. Cucurbitaceae. Chayote.
From Guatemala. Fruits purchased from Don Jorge Garcia Salsa, Director General of Agriculture, Guatemala City. Received November 15, 1932.
Native name, guisquil.

101375. A small round, ivory-white variety.
101376. A small pear-shaped, dark-green variety.
101377. A short, broad, dark-green variety.
101378. A pear-shaped, light-green variety.

101379 and 101380.
From Canada. Scions presented by F. L. Skinner, Dropmore, Manitoba. Received November 16, 1892.

101379. STRINGA OBLATA DILATATA X VULGARIS. Oleaceae. Lilac. Exceii.
101380. STRINGA VILLOSA X SWEGINZOWII. Oleaceae. Lilac. Hermine.

101381 to 101383.

101381. (Undetermined.)
From the Hacienda Acopalca at 13,000 feet altitude. A lily with red blossoms which come just out of the ground like a crocus, but the blossoms are more tubular.

101382. OXALIS sp. Oxalidaceae.
No. 2. From the Hacienda Acopalca at 13,000 feet altitude. Found between the stones in an old stone wall along the road fill over a low swampy ditch.

101383. OXALIS sp. Oxalidaceae.
No. 4. From the Hacienda Chamiseria at 11,600 feet altitude. An oxalis with a very much thickened leaf stem, apparently as a sort of water storage, as they grow on very precipitous cliffs which dry out completely during the dry season.

101384 and 101385.
From Alaska. Seeds purchased from Walter J. Eyerdam, Seattle, Wash. Received November 15, 1932.

101384. PHYLLODOCE ALEUTICA (Spreng.) Heller. Ericaceae.
A low deciduous shrub with imbricated linear serulate leaves and terminal clusters of small bell-shaped flowers. Native to the Aleutian Islands.

101385. SOBIES KAMTSCHATCENSIS KOMOPOY. Malpighiaceae. Mountain-ash.
A tree about 6 feet high with smooth, gray-brown bark, stout branches, and opaque, ovate-lanceolate, acuminate leaves. The small pinkish fruits are in clusters 2 to 4 inches across. Native to the Kamchatka Peninsula.

101386. CORYPHA UMBRACTIFLERA L. Phoeniceae. Talipot palm.
From Ceylon. Seeds presented by T. H. Parsons, curator of the Royal Botanic Garden, Peradeniya. Received November 19, 1932.
A large fan palm up to 80 feet high. The leaves, 12 feet long and 16 feet broad, are made up of lobed segments, and the creamy white flowers are in terminal panicles 20 feet long. It is native to Ceylon.

101387 and 101388. LUPINUS MUTILATILIS Sweet. Fabaceae.
South American lupine.

'Tallhue, ultikus. A handsome half-woody shrub about 6 feet high which is usually broad and bushy in habit. Above the attractive foliage rise numerous spikes of varicolored pea-shaped flowers. The predominant colors are blue, lilac, white, and yellow.

101388. Splckled seeds. 101389. White seeds.

101389 to 101393. ALLIUM spp. Liliaceae.
From China. Seeds presented by Albert N. Steward, College of Agriculture, University of Nanking. Received November 15, 1932.

101389. ALLIUM CRPA L. Onion. Australian Brown. A variety introduced into China, probably from Australia.

101390. ALLIUM FISTULOSUM L. Welsh onion.
From the Sun Tomb. Originally from a foreign source.

101391 and 101392. ALLIUM PORRUM L. Leek.
Introduced seed which is now being cultivated n China.

101391. From the University Garden.
101392. From the Sun Tomb.

101393. ALLIUM SATIVUM L. Garlic.
A variety cultivated near the university nursery. The flowers are white, and both leaves and scapes are used as a vegetable.

101394. BOURRERIA REVOLUTA H. B. K. Boraginaceae.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received November 18, 1932.
A shrub or small tree native to the West Indies. The leathery ovate leaves are 1 to 2 inches long, and the rather large, white flowers are borne in terminal cymes. The slightly succulent red fruits are about one-third inch in diameter.

101395 to 101406.
From Manchuria. Seeds presented by B. V. Skvorzov, Botanical Department, 2-d High School, Chinese Eastern Railway, Harbin. Received November 18, 1932.

101395. ACONITUM KUSNEZOFFII Reichenb. Ranunculaceae.

101396. Aconitum kusnezoffii. Monkshood.
An erect, hardy, herbaceous perennial, native to northeastern Asia, with terminal clusters of bluish flowers.
101395 to 101406—Continued

101396. ACONITUM LYOCTONUM L. Ranunculaceae. Yellow wolfsbane. 
A slender perennial reaching a height of 6 feet, with yellow or whitish flowers. Native to Europe and Siberia.

Variety meloaeformis.

101398. HETEROPAPPUS HISPIDUS (Thunb.) Less. Asteraceae.
A perennial herb, native to eastern Asia, with rough stems and linear leaves having ciliate margins. The azure-blue, asterlike flower heads form broad corymbose clusters 8 to 10 inches across.

101399. LATHYRUS DAVIDII Hance. Fabaceae. 
A white-flowered climber, 3 to 4 feet high, with membranous trifoliate leaves. Native to northern China.

For previous introduction see 90548.

101400. AGASTACHE RUGOSA (Fisch. and Mey.). Kunzite (Lophanthus rugosa Fisch. and Mey.). Mentheacae. 
A flowering perennial herb, 2 to 4 feet high, with cordate, serrate, rugose, scented leaves and attractive lavender flowers in reddish calyces crowded into dense oblong spikes. Native to China.

101401. METAPLEXIS JAPONICA (Thunb.) Makino (M. stauntoni Schult.). Asclepiadaceae. 
A climbing shrubby milkweed, native to China and Japan, with opposite, cordate, undulate leaves and small, pale-rose to white flowers in axillary clusters.

101402. PAPAVER NUDICAULE L. Papaveraceae. Iceland poppy.
Variety aurensens, from the Hingan Mountains, with foliage rather coarser than the type and fairly uniform orange-yellow flowers.

101403. SCUTELLARIA BAICALENSIS Georgi. Mentheacae. 
A low spiny shrub, about 5 feet high, with triangular, serrate leaves and small, pale-rose to white flowers in terminal clusters.

101404. SOJA MAX (L.) Piper (Glycine maxima Ledeb.). Fabaceae. Soybean.
A wild form.

A perennial violet, native to dry hilly regions in the Kaja River, Siberia. It has oval-cordate leaves and rose-violet flowers and is similar to Viola arizogata, but has smaller flowers.

101406. VIOLA SEQUULINIS Nakai. Violaceae. 
A perennial violet with oblong or oval-oblong, long-stemmed leaves an inch in length and pale violet flowers. Native to Chosen.

From Guatemala. Fruits presented by Don Jorge Garcia Salas, Director General of Agriculture, Guatemala City. Received November 26, 1932.
Native name, guisquil.

101407. Large, round, ivory-white variety.
101408. Small, pear-shaped, ivory-white variety.
101409. Small, ovoid, dark-green variety.

101410 and 101411.
From France. Seeds presented by R. Salgues, directeur de Station Botanique de Brignoles. Received November 29, 1932.

101410. ASTRAEALES ONOBRYCHIS L. Fabaceae. 
A hairy, gray-green perennial with a thick, woody, branched rhizome and a decumbent stem up to 2 feet in length. The leaves have 8 to 10 pairs of lanceolate leaflets, and the rather large purplish flowers are in clusters of 10 to 12. Native to south-central Europe.

101411. CALYCOTOME SPINOSA (L.) Link. Fabaceae. 
A low spiny shrub, about 5 feet high, with trifoliate leaves, hairy beneath, and yellow flowers about three fourths of an inch long. Native to the Mediterranean region.

101412. MENZIESIA GLABELLA A. Gray. Ericaceae. 
From Canada. Seeds presented by Prof. John Davidson, University of British Columbia, Vancouver, British Columbia. Received November 26, 1932.

An erect shrub 6 to 10 feet high, native to northwestern America. The elliptic to obovate leaves are 1 to 3 inches long, and the dull-colored, urn-shaped flowers, less than half an inch long, are borne in terminal clusters.

101413. SESAMUM ORIENTALE L. Pedaliaceae. Sesame.
From Palestine. Seeds presented by Dr. I. Elazar-Volcani, director of the experiment station at Tel-Aviv. Received November 25, 1932.

A strain of a common local variety, selected by the division of plant breeding because of the larger number of sections in the capsule. The capsules of this strain contain three or four sections instead of the usual two.

From Africa. Seeds presented by Dr. Trevor Trotight, Plant Breeding Section, Department of Agriculture and Forests, Shambat, Khartoum, Anglo-Egyptian Sudan. Received November 21, 1932.

101414. GOSSYPIUM sp. C.B. 1010. Natural seed.
101415. GOSSYPIUM sp. C.B. 1011. Selfbred seed.
101416. GOSSYPIUM sp. C.B. 1012. Natural seed.
101417. GOSSYPIUM sp. C.B. 1013. Selfbred seed.
101418. GOSSYPIUM sp. C.B. 1014. Natural seed.
101419. GOSSYPIUM sp. C.B. 1015. Selfbred seed.
101420. GOSSYPIUM sp. C.B. 1016. Natural seed.
101421. GOSSYPIUM sp. C.B. 1017. Selfbred seed.
101422. GOSSYPIUM sp. C.B. 1018. Natural seed.
101423. GOSSYPIUM sp. C.B. 1019. Selfbred seed.
101424. GOSSYPIUM sp. C.B. 1020. Natural seed.
From Hungary. Seeds presented by the Hungarian Commercial and Exchange Bank, Budapest. Received November 23, 1932.

101446. Hordeum distichon. Poaceae. Two-rowed barley

From Cuba. Seeds presented by Robert M. Grey, Mectellin, through Raymond Phalen, American vice consul, Medellin. Received November 28, 1932.

101450. SINDORA SUPA. Caesalpiniaceae. A timber tree, native to the Philippine Islands.


For previous introduction and description see 101265.

101452. Wallaceldonendron celebicum. Koord. Mimosaceae. Buugo. A tall tree, native to the Celebes, with red-brown bark and compound leaves. The flowers resemble those of *Mimosas*, and the large pods are similar to those of *Entada*.

101453. Xanthostemon verdugonianus. Myrtaceae. Mancone or palo de hierro. A large evergreen tree with subopposite or subverticillate, obovate cuneate rounded leaflets 2 to 4 inches long. The small yellow flowers are followed by circular winged pods over an inch in diameter.

101454—Continued

A shrubby leafless plant with a creeping rootstalk and a short, woody stem, 3 to 4 inches high, simple or with a few branches. It is native to Sumatra.

101455 to 101459. RUBUS spp. Rosaceae.

From the Union of Soviet Socialist Republics. Plants presented by Prof. P. M. Zhukovsky, Institute of Plant Industry, Leningrad. Received December 4, 1932.

101455. RUBUS sp. Hollandische rote.

101456. RUBUS sp. Sucre de Metz.

101457. RUBUS sp. Rote Riesen.

101458. RUBUS CRATAEGIFOLIUS Bunge. Hawthorn raspberry.

101459. RUBUS CATECHOPOLIUS Bunge. Hawthorn raspberry.

An erect or spreading raspberry 3 to 5 feet high, native to China and Japan. The corde serrate leaves are 3- to 5-lobed, and the white flowers, borne in terminal clusters, are followed by small orange-red fruits.

101460 and 101461. ALLIUM CEPA L. Liliaceae.

From India. Seeds presented by P. G. Dani, office of the superintendent, Kirkee, Poona. Received December 5, 1932.


101462 to 101464.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received December 8, 1932.


A shrub or small tree 25 feet high, often starting as an epiphyte, with thick obovate leaves, 4 to 6 inches long, and axillary solitary showy pink flowers.

For previous introduction see 101333.

101464. SELINIGERUS GRANDIFLORUS (L.) Britton and Rose. Cactaceae. Queen-of-the-night.

A creeping or clambering vine, native to Jamaica, with stout blue-green stems often 1 inch in diameter, armed with brown spines. The fragrant nocturnal flowers, 6 to 8 inches long, are pale pink with yellow stamens.

101465. COFFEA ARABICA L. Rubiaceae.

Arabian coffee.


Pakistan, a coffee grown in Mandehling district, Sumatra, which is considered, by some, to be the finest coffee-growing district in the world.

101466. POA sp. Poaceae. Grass.

From Canada. Seeds presented by Dr. G. P. McGristie, University of Manitoba, Winnipeg. Received December 14, 1932.

Introduced for the use of Department specialists.

101467. CASTANEA SATIVA Mill. Fagaceae. Spanish chestnut.

From Germany. Seeds presented by the Verwaltungsstelle für Pflanzenschutz, Halle (Saale). Received December 8, 1932.

Introduced for the use of Department specialists.

101468 to 101480. SACCHARUM OFFICINARUM L. Poaceae. Sugarcane.

From the West Indies. Cuttings presented by Mr. McIntosh, Department of Agriculture, Barbados. Received December 7, 1932.


101474. B-3218.

101481 and 101482. ORYZA SATIVA L. Poaceae. Rice.

From Siam. Seeds presented by J. R. Redfield, Phoenix, Ariz. Received December 2, 1932.

Hill rice, the chief rice of northern Siam, so called because it may be grown on hillsides, is dependent on the rain, and thus does not require that the roots be submerged in water.

101483 and 101484.

From Japan. Seeds presented by the Laboratory of Plant Pathology, Kyushu Imperial University, Fukuoka. Received December 4, 1932.

101483. LESPEDEZA BICOLOR Turcz. Fabaceae. Shrub bushclover.

A bushy perennial which bears a profusion of rose-purple flowers during the early autumn, practically covering the drooping branches which sometimes become 6 feet in length.

For previous introduction see 93119.


A shrub about 6 feet high, resembling L. bicolor in habit, with oval-oblong leaflets and dense clusters of purple flowers. Native to Japan.

For previous introduction see 90549.

101485. ALLIUM SATIVUM L. Liliaceae. Garlic.

From India. Bulbs presented by the Imperial Agriculturist, Fusa, India, through A. McLean, deputy director of agriculture, East Central Circle, Pyinmana, Burma. Received December 9, 1932.

A locally grown variety.


From England. Plants purchased from John Waterer Sons & Crisp, Ltd, Twyford, Berks. Received December 16, 1932.
From Egypt. Seeds presented by Alfred Bircher, Middle Egypt Botanic Station, El Saff. Received December 5, 1932.

From Southern Rhodesia. Seeds presented by H. G. Mundy, chief, Division of Plant Industry, Rhodesia, and by the seedsmen and growers in the southern Rhodesia Agricultural Society. The seeds were received December 16, 1932.

From Wales. Seeds presented by Prof. E. T. Jones, Welsh Plant Breeding Station, Aberystwyth. The seeds were received December 16, 1932.

From Southern Rhodesia. Seeds presented by H. G. Mundy, chief, Division of Plant Industry, and by the seedsmen and growers in the southern Rhodesia Agricultural Society. The seeds were received December 16, 1932.

From India. Seeds presented by the superintendent of the Modi-Bag Agricultural College, Poona, through George Muir Smith, Urika, Port Moresby, Papua. Received December 8, 1932.

From New Guinea. Seeds presented by A. E. Maclain, through George Muir Smith, Urika, Port Moresby, Papua. Received December 12, 1932.

From the Philippines. Seeds presented by Dr. J. L. J. de Leon, chief, Division of Agriculture, Manila. Received December 16, 1932.

From the United States. Seeds presented by Dr. J. L. J. de Leon, chief, Division of Agriculture, Manila. Received December 16, 1932.

From England. Seeds presented by the superintendent of the Modi-Bag Agricultural College, Poona, through George Muir Smith, Urika, Port Moresby, Papua. Received December 8, 1932.

From Japan. Seeds presented by Prof. H. G. Mundy, chief, Division of Plant Industry, and by the seedsmen and growers in the southern Rhodesia Agricultural Society. The seeds were received December 16, 1932.

From Australia. Seeds presented by Dr. J. L. J. de Leon, chief, Division of Agriculture, Manila. Received December 16, 1932.
From Argentina. Seeds presented by the Botanic Garden, Buenos Aires. Received December 17, 1932.

101509. ASPIDOSPERMA PEROBA (Kunth) Berg. Myrtaceae.

A large shrub 6 to 10 feet high with alternate, elliptic, entire, shining dark-green leaves 2 to 3 inches long, inconspicuous purplish flowers in spikes, and small pinkish berries. Native to Uruguay.

101510. BŒPHAROCALYX TWEEDIEI (Hook. and Arn.) Berg. Myrtaceae.

A subtropical tree, native to Uruguay, with lanceolate acute leaves and axillary flowers in pairs.

For previous introduction see 94768.

101511. CELTIS SELLOVIANA Miquel. Ulmaceae.

Hackberry. A much-branched spiny shrub, native to southern Brazil, with narrow, membranous, light green, sharp-pointed leaves less than an inch long and inconspicuous flowers.

101512. CHNOTHAMNUS LORENTZII Griseb. Asteraceae.

A handsome shrub about 20 feet high with thick branches, oval leaves about 5 inches long, and purple flowers in large solitary heads. Native to Tucuman, Argentina.

101513. DAUBENTONIA TRIPETII Poit. Fabaceae.

A shrub or small tree, native to Argentina, with pinnately compound leaves which are dull green above and paler beneath. The rather large, orange-red flowers are borne in drooping racemes.

For previous introduction see 94773.

101514. EUPATORIUM GUADALUPENSE Spreng. Asteraceae.

A West Indian perennial composite with alternate hombold-oidong dentate leaves and corymbs of violet flowers.

101515. GUERTTARDA URUGUENSIIS Cham. and Schlecht. Rubiaceae.

A small tree up to 20 feet high with twisted branches. The membranous leaves of varied forms ranging from ovate to lanceolate, are about 3 inches long and 1 inch across. The axillary, long, pedunculate cymes of white flowers have salver-shaped corollas and are followed by cylindrical ovoid drupes one-third inch in diameter.

101516. ILEX PARAGUARIENSIS St. Hil. Aquifoliaceae.

Yerba maté. A tender, evergreen, Paraguayan holly the leaves of which are dried and used to make a beverage called maté, or Paraguay tea.

For previous introduction see 94775.

From Puerto Rico. Seeds presented by T. B. McClelland, director, Agricultural Experiment Station, Mayaguez. Received December 15, 1932.

101517. JODINA RHOMBIOPIA Hook. and Arn. Santalaceae.

Quebrachillo. A low, bushy, slender-branched tree with three-pointed spiny leaves. The wood is white and smooth and the bark thick. It is native to Brazil.

101518. PITTACOLLOBIUM ALBICANS (Kunth) Bentham. Mimosaceae.

A spiny tree up to 60 feet high, native to Mexico. The pinnately compound leaves are made up of 4 to 6 pairs of pinnae each bearing numerous small ovate leaves, and the inconspicuous flowers are followed by flat pods said to contain about 18 percent of tannin and to yield a black dye.

101519. RUPRECHTIA TRIPLORA Griseb. Polygonaceae.

A shrub 6 feet or more in height, with reddish, rigid, ovate, acute leaves about 2 inches long and small dull-reddish flowers. Native to the Gran Chaco, Argentina.


A shrub 3 to 10 feet high, or, sometimes, a small tree 20 feet high. The variable membranous leaves are unequally pinnate and are composed of 5 to 9 oblong to obovate-oblong leaflets 2 to 3 inches long. The small white flowers are followed by scarlet berries in panicles 2 to 4 inches in length.

For previous introduction see 94784.

101521. TERMINALLA TRIFLORA (Griseb.) Lillo, Combretaceae.

Palo amarillo. A tree 30 to 40 feet high, native to Argentina, with papery obovate-oblong leaves 2 inches long.

101522 to 101525. PHASEOLUS LUNATUS L. Fabaceae. Lima bean.

From Puerto Rico. Seeds presented by T. B. McClelland, director, Agricultural Experiment Station, Mayaguez. Received December 15, 1932.

A collection of lima beans from Barrio Cain Alto, of San German. Introduced for comparison with types now being grown on the Pacific coast.

101522. Isabela.ita.

101523. Carita, or little face.

101524. Colorado, or red.

101525. No. 4, unnamed.


101529. C.B. 1031. From Fouroumbalan.


From Australia. Seeds presented by H. Wenholz, director of plant breeding, Department of Agriculture, Sydney, New South Wales. Received December 13, 1932.

101528. Baroofa wonder.
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PLANT MATERIAL INTRODUCED

101528 to 101552—Continued

101529. Cadia.
101530. Duri.
101531. Petats surprise.
101532. Turevy.

101533. ALLIUM CEPA L. Liliaceae. Onion.
From Burma. Seeds presented by A. McLean, deputy director of agriculture, East Central Circle, Pyinmana. Received December 16, 1932.
A hard compact red onion of medium size.

From China. Seeds presented by G. Weidman Groff, Botanic Gardens, Hong Kong. Received December 19, 1932.
A small tree with rough bark, smooth, elliptic, acuminate leaves about 4 inches long, and globose fruits about an inch in diameter. Native to Hong Kong.

101535 to 101558. LATHYRUS SATIVUS L. Fabaceae. Bitter vetch. From India. Seeds presented by F. K. Jackson, director, Institute of Plant Industry, Indore, Central India. Received December 9, 1932.
101535. From Allahabad, United Provinces.
101536. From Behraich.
101537. From Behraich.
101538. From Ballia, United Provinces.
101539. From Ballia bazar, Parbabgarh, United Provinces.
101540. From Beraunda bazar, Girzapon.
101541. From Barabauki, United Provinces.
101542. From Benares, United Provinces.
101543. From Benares, United Provinces.
101544. From Benares bazar, United Provinces.
101545. From Girzapur, United Provinces.
101546. From Girzapur, United Provinces.
101547. From Indore, Central India.
101548. From Izabar.
101549. From Nanpara.
101550. From Parbabgarh, United Provinces.
101551. From Ballia bazar, Parbabgarh, United Provinces.
101552. From Patti bazar.
101553. From Patti bazar.
101554. From Patti bazar.
101555. From Raebarelli, United Provinces.
101556. From Raebarelli, United Provinces.
101557. From Saltanpur.
101558. From Tisuhi, Girzapur, United Provinces.

101559 to 101568—Continued

101561. HORDEUM VULGARE COELESTE L. Poaceae. Six-rowed barley.
101563. PHASEOLUS VULGARIS L. Fabaceae. Common bean.
101564. CITRUS sp. Rutaceae. Wild shaddock.
101565. AMYGDALUS PERSICA L. Amygdalaceae. Peach.
101568. ZEA MAYS L. Poaceae. Corn.


101570 and 101571.

From Palestine. Seeds presented by the acting director of agriculture and forests, Jerusalem. Received December 21, 1932.
101570. NEPTA CURVIFLORA Boiss. Menthaeaceae. A hairy perennial up to 3 feet high with oblong obtuse crenate leaves about 1 inch long and sky-blue flowers half an inch long in short, rather dense cymes. Native to Asia Minor.

101572 and 101573.

From Cuba. Scions presented by Charles F. Petter, Isla de Pinos. Received December 27, 1932.
101572. FLACOURTIA INDICA (Burm. f.) Merr. Flacourtiaceae. Ramontchi. A spiny arborescent Philippine shrub 20 feet high with crenate leaves, small white flowers, and smooth dark-purple fruits containing a sweet juicy pulp.
101573. VITIS VINIFERA L. Vitaceae. An Italian wine grape.

101574. PHOENIX SYLVESTRIS (L.) Roxb. Phoenicaceae. India date palm.
From England. Seeds presented by the director of the Royal Botanic Gardens, Kew. Received December 27, 1932. A pinnate-leaved palm, 25 to 40 feet high, with leaves about 15 feet long and orange-yellow fruits. Native to India.
For previous introduction see 101145.

101575. ALLIUM CEPA L. Liliaceae. Onion.
From India. Seeds presented by the agricultural officer, Northwest Frontier Province, Taru Jabba, Peshawar District. Received December 25, 1932. A locally grown red onion.
101576 to 101584.

From India. Seeds presented by W. O'Brien, Coxsley, Hyderabad, Deccan. Received December 28, 1932.

101580. Dolichos biflorus L. Fabaceae. Twinflower dolichos. A dark-purple variety; south Indian horse grain.
PLANT MATERIAL INTRODUCED

Pterocarpus vidalitamus, 101449.
Puya. See Puya chilenensis.
Puya chilenensis, 10194.

Queen-of-the-night. See Selinicereus grandiflorus.

Radish. See Raphanus sativus.
Rambutan. See Nephelium lappaceum.
Ramontchi. See Pyacouria indica.
Raphanus sativus, 101582.
Raspberry. See Rubus spp.
Andes. See R. glaucus.
European. See R. idaeus.
thawlorn. See R. crataegifolius.
Rhododendron spp., 101236-101237.
auriculatum, 101227.
faunae, 101228.
griersonianum, 101229.
hyperythrum, 101230.
microphyton, 101232.
microphytonXoldhamii, 101233.
oldhamii, 101225.
pulchrum calycinumXscabrum, 101226.
pulchrum maxwelliXpulchrum calycinum, 101223.
pulchrum tebotan, 101238.
scabrumXpulchrum calycinum, 101224.
Ribes sp., 101191.
Rice. See Oryza sativa.
Rubus spp., 101192, 101455-101458.
alpinus, 101217.
crataegifolius, 101459.
glaucus, 101218.
hawaiensis, 101344.
idaeus, 101345.
irasuensis, 101219, 101220.
trichomallus. See R. urticaefolius.
urticaefolius, 101221.
Ruprechtia triflora, 101519.
Saccharum officinarum, 101468-101480.
Sasa disticha, 101174.
Schinus terebinthifolius aroida, 101520.
Sclerachne punctata, 101241.
Scutellana baicalensis, 101403.
Selenicereus grandiflorus, 101464.
Serjania glabrata, 101251.
Sesame. See Sesamum orientale.
Sesamum orientale, 101187, 101205, 101413, 101497, 101498.
Shibataea kumasasa, 101175.
Sindora supa, 101450.
Skullcap, Baikal. See Scutellaria baikalensis.
Snakegourd. See Trichosanthes anguina.
Soja max, 101193, 101404.
Solanum macranthum, 101294.
Sorbus kantchischensis, 101585.
Sorghum vulgare, 101566.
Soybean. See Soja max.
Star-of-Bethlehem. See Ornithogalum arabicum.
Strophanthus sarmentosus, 101264.
Sugarcane. See Saccharum officinarum.
Sunflower, common. See Helianthus annuus.
Spondias muraena, 101186.
Spring obiata dilatataXvulgaris, 101379.
tilosXseepsynovii, 101380.
Tabernaemontana amblyocarpa, 101215.
Terminalia triflora, 101521.
Thamnocalamus sp., 101173.
Thrinax sp., 101252.
Thry hypnotes sp., 101344.
Thyme. See Thymus capitatus.
Thymus capitatus, 101571.
Tomato. See Lycopersicon esculentum.
Tragopogon sp., 101129.
Trichosanthes anguina, 101583.
Trimeza sp., 101222.
Triticum aestivum, 101308, 101506, 101507, 101529-101532, 101567.
vulgaris. See T. aestivum.
Tulip. See Tulipa hageri.
Tulipa hageri, 101168.
Undetermined, 101188, 101206, 101381.
Uroleina minuta, 101207.
Urd. See Phaseolus mungo.
Vagnera paniculata, 101223.
Vetch, bitter. See Lathyrus sativus.
Vigna sinensis, 101584.
Viola iridigera, 101405.
scoulenis, 101406.
Viol. See Viola spp.
Vitis pariflora, 101265, 101451.
Vita eimifera, 101373.
Volkameria aceuta, 101437.
Wallaceodendron celebicum, 101452.
Watermelon. See Citrullus vulgaris.
Wheat, common. See Triticum aestivum.
Wolfsbane, yellow. See Aconitum lycoctonum.
Wrinkled giant-hyssop. See Agastache foeroosa.
Xanthotheon verdugonianus, 101483.
Yam, winged. See Dioscorea alata.
Yerba maté. See Ilex paraguariensis.
Zamia integrifolia, 101295.
Zea mays, 101568.
Ziziphus joazeiro, 101496.