# PES DEPARTMENT OF AGRICULTURE



# INVENTORY No. 113



Washington, D. C.

**Issued September 1934** 

PLANT MATERIAL INTRODUCED BY THE DIVISION OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, OCTOBER 1 TO DECEMBER 31, 1932 (Nos. 101158-101584)

#### CONTENTS

Pa	1ge
Introductory statement	1
Inventory.	3
Index of common and scientific names	22

# 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

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). 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, 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.

<sup>&</sup>lt;sup>1</sup> Died Jan. 3, 1934.

#### INVENTORY 2

#### 101158. NEPHELIUM LAPPACEUM L. Sapindaceae. Rambutan.

From Central America. Seeds presented by Wilson Popenoe, 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, yellowish, or orange-yellow. The outer covering from which the spines arise 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 The flavor is mild acid, somewhat suggesting that of the grape.

For previous introduction see 95367.

#### 101159 to 101162.

rom Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received October 3, 1932.

101159. CITHAREXYLUM CAUDATUM L. Verbena-

A shrub 10 to 12 feet high, native to the West Indies. The elliptical to oblong leathery leaves are 3 to 5 inches long, and the white tubular flowers, borne in erect racemes 4 to 9 inches long, are followed by ovoid-oblong black fruits about one-fourth inch long.

101160. EUGENIA Sp. Myrtaceae.

101161. JATROPHA HASTATA Jacq. Euphorbia-

A shrubby perennial about 3 feet high with obovate to oblanceolate hastate leaves and umbellike cymes of small scarlet flowers. It is native to Cuba.

For previous introduction see 90983.

### 101159 to 101162-Continued

101162. OCOTEA CORIACEA (Swartz) Britton. Lauraceae.

An evergreen tree 30 to 40 feet high with oblong-An evergeen tree 30 to 40 feet figh with 60long-lanceolate coriaceous leaves 2 to 6 inches long and panicles of small whitish flowers followed by darkblue 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, École Supérieure d'Agriculture, Athens. Received October 7.

1932 101164 to 101166. CROCUS spp. Iridaceae.

101164. CROCUS BORYI J. Gay.

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 flaments, 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. hadriaticus and is native to arid hills near the sea in Greece.

101166. CROCUS Sp.

101167. ORNITHOGALUM ARABICUM L. Liliaceae. Star-of-Bethleham. Liliaceae.

Bulbs of a herbaceous perennial, native to the Mediterranean region. The thick ovoid bulb

<sup>2</sup> It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the 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 indiffication 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 101168—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.

101168. TULIPA HAGERI 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. Cichoria ceae.

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

101170. Crocus sieberi J. Gay. Iridaceae.

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, Pusa. Received October 8, 1932.

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

## 101172. ACER SIEBOLDIANUM MICRO-PHYLLUM Maxim. Aceraceae. Maple.

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 yellowish flowers are borne on nodding peduncles and the winged fruits, less than an inch long, spread at an obtuse angle.

### 101173 to 101175.

From France. Plants purchased from V. Lemoine & Sons, Nancy. Received October 11, 1932.

101173. THAMNOCALAMUS sp. (Bambusa gracilis Hort.). Poaceae. Bamboo.

A somewhat tender bamboo of the Himalayas, very similar to Thamnocalamus falcata. The thin leaves are linear-lanceolate, and the ligules of the sheaths are rather prominent. The slight purple coloring of the sheath extends around the finely serrulate margin of the blade. The blade is very slightly cross-veined. The genus Thamnocalamus is closely allied to Arundinaria and is often considered as only a section of the latter.

101174. Sasa DISTICHA (Mitf.) E. G. Camus (Bambusa nana Hort.). Poaceae. Bamboo.

A dwarf bamboo of running habit growing 3 to 5 feet high, with rather narrow leaves 2 to 4 inches long, in pronouncedly distichous arrangement.

101175. SHIBATAEA KUMASASA (Zoll.) Makino (Bambusa viminalis Hort.). Poaceae. Bamboo.

This odd little bamboo, which in the past has carried several different botanical names and which looks but little like a bamboo, grows 2 to 6 feet in height. The branches, usually five in

### 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  $5^{\circ}$  to  $10^{\circ}$  F.

# 101176 to 101179.

From Africa. Seeds presented by Charles S. Dolley, Bahamas Plantations Co., Ltd., Nassau, New Providence Island, Bahamas, British West Indies. Received October 7, 1932.

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

101176 to 101178. ALOE spp. Liliaceae.

101176. ALOE KRAPOHLIANA 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 horny point and having a pale-brown prickly margin. The bright-red tubular flowers are borne in a dense raceme 3 to 5 inches long.

101178. ALOE SCHLECHTERI Schoenl.

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

For previous introduction see 98010.

101179. THRYALLIS GRACILIS (Bartl.) Kuntze. Malpighiaceae.

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 Erang Bôm, Province 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, Craigs House, Corstorphine, Edinburgh. Received October 12, 1029

101181. Bell.

101183. Potato.

101182. Elder.

101184. Tam Finlay.

### 101185 and 101186.

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

101185. ALYSICARPUS 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 MUCRONATA 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. Pedaliaceae. Sesame.

From Africa. Seeds presented by D. C. Edwards, Scott Agricultural Laboratories, Nairobi, Kenya. Received October 13, 1932.

Black Sim-Sim. Collected in the coast region of Kenya, and introduced for the use of Department specialists working with drug plants.

# 101188. (Undetermined.)

From Peru. Seeds collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received July 12, 1932. Numbered in October 1932.

No. 198. 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, Carbesen 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 prolifie, and has proved well adapted to the dry conditions of queensland, where there is a short wet season from about Christmas to the beginning of March, and the remainder of the year has very little rain.

#### 101190 to 101193.

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

101190. CRATAEGUS Sp. Malaceae. Hawthorn.

101191. RIBES Sp. Grossulariaceae. Gooseberry.

101192. RUBUS Sp. Rosaceae. Raspberry.

101193. Soja Max (L.) Piper. Fabaceae.

Wild soybeans.

# 101194. Puya chilensis Molina. Bromeliaceae. Puya

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

. Titanca in Peru and cardon in Chile. A shrub 4 to 5 feet high with a yuccalike 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 101199. Callistemon spp. Myrtaceae.

101195. Callistemon acuminatus  $\times$  ?

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

#### 101196. CALLISTEMON LILACINUS E. Cheel.

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

101197. Callistemon paludosus ×?

A hybrid of C. paludosus with pink flowers.

### 101195 to 101204—Continued

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 99403.

101200 to 101204. CALOTHAMNUS spp. Myrtaceae.

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

#### 101200. CALOTHAMNUS ASPER TURCZ.

A hairy evergreen shrub with crowded linear flat leaves and short dense clusters of flowers which have crimson stamens.

101201. CALOTHAMNUS HOMALOPHYLLUS F. Muell

An erect shrub 4 to 6 feet high with thick flat oblanceolate to linear leaves 1 to 2 inches long; the small flowers in 1-sided spikes have richcrimson stamens more than an inch long.

#### 101202. CALOTHAMNUS LONGISSIMUS 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.

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 93834.

#### 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. Pedaliaceae. 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 19, 1932.

101206. (Undetermined.)

A lily with large red or green-yellow flowers.

101207. URCEOLINA MINIATA (Herb.) Benth. and Hook. Amaryllidaceae.

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.

#### 101206 to 101211—Continued

101208. LUPINUS MUTABILIS Sweet. Fabaceae.
South American lupine.

Tallhue or ullush. 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, iilac, white, and yellow.

For previous introduction see 99821,

101209 to 101211. OXALIS spp. Oxalidaceae.

101209. OXALIS SD.

A form with yellow flowers, found on well-drained chiff sides.

101210. OXALIS SD.

A form with yellow flowers, found in rocky well-drained situations above 13,000 feet altitude.

101211. OXALIS SD.

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.

101212. HETEROSPATHE ELATA Scheff. Phoenicaceae. Palm.

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 inconspicuous 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. PALIURUS RAMOSISSIMUS (Lour.) Lam. Rhamnaceae.

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

101215. TABERNAEMONTANA AMBLYOCARPA Urban. Apocynaceae.

A tropical tree, native to Cuba, with elliptic or oblong leaves up to 5 inches long and small inconspicuous 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.

101216. BOMAREA CALDASII (H.B.K.) Herb. Amaryllidaceae.

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. The thin spreading leaves are 3 to 6 inches long, and the orange-red to red flowers, about an inch long, are borne in many-flowered pendulous clusters.

101217 to 101221. RUBUS Spp. Rosaceae.

101217. RUBUS ALPINUS Macfad.

Alpine bramble.

No. 3315. Collected July 29, 1932, at 9,000 feet altitude on the Poas volcano. A climbing or trailing shrub with strong green canes. The

#### 101216 to 101223—Continued

trifoliolate leaves have elliptical serrate leaflets 2 to 4 inches long, and the purple-tinged white flowers, in narrow pubescent panicles, are followed by small blue-black fruits, reported to be the sweetest flavored of any wild fruit in Costa Rica.

101218. RUBUS GLAUCUS Benth.

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 IRASUENSIS Liebm.

From Tierra Blanco, July 23, 1932. A tropical American thorny vine with 5-foliolate leaves consisting of ovate-acuminate, serrulate, darkgreen leaflets, 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. tricho-mallus Schlecht.).

No. 2860. From Sanjon, south of Fajar, June 10, 1932, at 4,850 feet altitude. Stronggrowing canes, 12 feet high and rather thorny. Flowers and fruits in all stages occur on the same plant. The ripe fruits were slightly acid, but with no characteristic flavor.

101222. TRIMEZA Sp. Iridaceae.

An ornamental plant collected at 10,000 feet altitude.

101223. VAGNERA PANICULATA (Mart. and Gal.) Standl. Convallariaceae.

Collected on the Irazu volcano at 11,000 feet altitude. A perennial herb with ovate-lanceolate, long-acuminate leaves 5 to 6 inches long and panicles of snow-white flowers 2 inches long.

### 101224. Allium CEPA L. Liliaceae. Onion.

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.

From Jamaica Plain, Mass. Plants presented by William H. Judd, Arnold Arboretum. Received October 24, 1932.

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 pulchrum calycinum X scabrum.

101227. RHODODENDRON AURICULATUM Hemsl.

A shrub or small tree up to 20 feet high, native to Hupeh, China. The oblong to oblanceolate auricled leaves, 6 to 12 inches long, are dark green above and clad beneath with flexuous threadlike tomentum. 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.

#### 101228. RHODODENDRON FAURIAE Franch.

A shrub 5 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 6 inches long, and the funnel-

### 101225 to 101238—Continued

campanulate flowers, 1 inch long, borne in racemes of 12 to 15, are white or cream with a pink flush on the median lines of the petals and spotted inside with numerous green spots.

101229. RHODODENDRON GRIERSONIANUM Balf. and Forr.

A shrub 5 to 10 feet high, native to western Yunnan. The narrowly lanceolate leaves, 4 to 8 inches long, are green above and covered beneath with a loose whitish to buff woolly tomentum. The funnel-campanulate flowers, in clusters of 5 to 12, are 2 to 3 inches long and are bright geranium-scarlet dappled inside with darker spots.

For previous introduction see 100892.

101230. RHODODENDRON HYPERYTHRUM Hayata.

A shrub with stout glabrous branches, native to Taiwan. The oblong to lanceolate leathery leaves, 3 to 5 inches long, are smooth above and dotted beneath with reddish punctulations. The funnel-campanulate flowers, 1 to 2 inches long, are purple spotted and are borne in racemose umbels of about 10.

101231. RHODODENDRON PULCHRUM MAXWELLII X PULCHRUM CALYCINUM.

101232. RHODODENDRON MICROPHYTON Franch.

An upright much-branched shrub, 1 to 6 feet high, the branchlets densely clothed with appressed flattened red-brown hairs. The crowded elliptic to lanceolate leaves, about 1 inch long, are dark green above and pale beneath, with scattered red-brown hairs. The funnelform flowers, nearly 1 inch across, are rose color to white, flushed pink, with carmine or crimson dots on the three upper lobes. It is native to Yunnan, China.

101233. Rhododendron microphyton X oldhamii.

101234. Rhododendron scabrum × pulchrum calycinum.

101235. RHODODENDRON Sp.

This plant is a hybrid between a hybrid resulting from R. scabrum and the variety Snowflake of R. obtusum japonicum, crossed with R. old-hamii.

101236. RHODODENDRON Sp.

A hybrid between R. scabrum and the variety Scarlet Prince of R. obtusum japonicum.

101237. RHODODENDRON Sp.

A hybrid between R. scabrum and the variety Snowflake of R. obtusum japonicum.

101238. RHODODENDRON PULCHRUM TEBOTAN (Komatsu) Rehd.

A form with double rose-red flowers having small green leaves in the center.

101239. DEGUELIA ELLIPTICA (Roxb.)
Taub. (Derris elliptica Benth.).
Fabaceae.

From Straits Settlements. Seeds presented by the director of the Botanic Gardens, Singapore. Received October 19, 1932.

A large handsome climbing vine native to southeastern Asia. The compound leaves, 1 foot long, are made up of 9 to 12 thin leathery obovate leaflets 4 to 6 inches long, and the bright-red pea-shaped flowers, 1 inch long, are borne in lax racemes a foot in length. It yields the commercial tuba root used in the manufacture of insecticides. The plant is extensively cultivated in the Malay Archipelago.

For previous introduction see 98918.

101240. CINCHONA CALISAYA Wedd. Rubiaceae.

From the Netherland East Indies. Seeds presented by the director of the Government Cinchona Plantations, Tjinjiroean. Received October 24, 1932.

A tropical shrub with opposite oblong or oblong-lanceolate shining green leaves and terminal panicles of small white and pink flowers. One of the sources of quinine. Native to Bolivia.

For previous introduction see 101064.

101241. SCLERACHNE PUNCTATA R. Br. Poaceae. Grass.

From Java. Seeds presented by the director of the Botanical Garden, Buitenzorg. Received October 24, 1932.

A tropical grass about 2 feet high with a fibrous root and numerous branched stems. The narrow linear-lanceolate leaves vary from 3 to 18 inches in length. Native to Java.

101242. CALANDRINIA BALONENSIS Lindl. Portulacaceae. Parakeelya.

From Australia. Seeds presented by Dr. Darnell-Smith, director of the Botanic Gardens, Sydney, through J. B. Cleland, the University, Adelaide, South Australia. Received October 27, 1932.

A perennial herb about a foot high, native to Queensland, Australia. The thick fleshy oblong-spatulate leaves are less than 1 inch long at the base of the plant while the upper ones are 2 inches long and linear-lanceolate. The large purple flowers, 1 to 2 inches across, are borne in loose terminal racemes.

#### 101243 to 101252.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received October 21, 1932.

101243. Antidesma montanum Blume. Euphorbiaceae.

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. Antidesma Platyphyllum H. Mann. Euphorbiaceae.

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 suboblique red fruits about one half inch long.

101245. CITHAREXYLUM CAUDATUM L. Verbenaceae.

For previous introduction and description see 101159.

101246. Exostemma Longiflorum (Lamb.) Roem. and Schult. Rubiaceae.

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. EXOTHEA PANICULATA (Juss.) Radlk. Sapindaceae.

A tree up to 50 feet high, native to the West Indies. The abruptly pinnate leaves have two oblong leaflets 4 inches long, and the small flowers

#### 101243 to 101252—Continued

are followed by globose purple fruits one half inch long.

101248. HELICTERES SEMITRILOBA Bert. Ster-

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. Momordica cochinchinensis (Lour.) Spreng. 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. PICRAMNIA 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. SERJANIA GLABRATA H. B. K. Sapin-daceae.

A climbing shrub with alternate biternate leaves; the leaflets are elliptic-oblong and coarsely serrate-crenate. The white flowers are in axillary spikelike racemes. Native to the temperate regions in Peru.

101252. THRINAX sp. Phoenicaceae. Palm

101253 to 101255. AVENA SATIVA L. Poaceae. Oats.

From England. Seeds presented by Gartons, Ltd., Warrington. Received October 29, 1932.

101253. Bountiful, a black oat.

101254. Hardy Prolific Black Winter oat.

101255. Unique, a white winter oat.

161256. Annona diversifolia Safford. Annonaceae. Ilama.

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 oblanceolate. The broadly ovoid fruit, about 6 inches long, is clothed in dense grayish fellike 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 98340.

101257. CALYPTROGYNE OCCIDENTALIS (Swartz) G. Maza. Phoenicaceae. Manaca palm.

From Cuba. Plants presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received October 31, 1932.

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 98165.

## 101258 and 101259. LACTUCA SATIVA L. Ciehoriaceae. Garden lettuce.

From the Union of Soviet Socialist Republics. Seeds presented by Prof. N. I. Vavilov, through the Department of New Culture and Introduction, Leningrad. Received November 1, 1932.

Ussun, Chinese stem lettuce. A peculiar vegetable of which the thick inner stalk is eaten; this stalk is about 2½ 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 1990

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.

101261. CITHAREXYLUM TRISTACHYUM Turcz. Verbenaceae.

A spiny tropical shrub with opposite, ovatelanceolate entire leaves and small white flowers in spikelike racemes. Native to Cuba.

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 HOOGENDORPH Andre. Phoenicaceae. 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 10 to 12 plicate pendulous segments with 5 to 7 acute lobes at the apex.

For previous introduction see 98496.

101264. Strophanthus 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

Molane. 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

"树洲城台"

### 101260 to 101265—Continued Caroli

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

# 101266 to 101270. ORYZA SATIVA L. Poaceae. Rice.

From Madagascar. Seeds obtained by Percy G. Kemp, American vice consul, Tananarive. Received 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.

101266. Be.

101267. Botry.

101268. Mena.

101269. Lava, white, long and thin.

161270. 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. ACIPHYLLA COLENSOI 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 bayonetlike 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, terminated by a long stout spine. The small white flowers are in a cylindrical panicle made up of numerous umbels.

#### 101372, ARISTOTELIA FRUTICOSA Hook. f. Elaeocarpaceae.

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. Aristotelia serrata (Forst.) Oliver. Elaeocarpaceae.

A small tree 6 to 30 feet high with red bark, native to New Zealand. The thin, membranous, cordate leaves, 2 to 5 inches long, are deeply irregularly serrate and are red beneath. The small rose-colored flowers, borne in axillary panicles, are followed by dark-red or almost black berries about the size of a pea.

#### 101274. ASTELIA 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 panciles 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 AFOLIATA 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-stalked ovate to triangular leaflets.

# 101276. CLEMATIS FOETIDA Raoul.

A stout woody vine, often covering small trees native to New Zealand. The slightly coria-

# 101271 to 101291—Continued

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

#### 101277. CLEMATIS HEXASEPALA DC.

A smaller and more slender vine than C. indivisa, with pale-green, coriaceous, trifoliolate leaves having ovate-oblong to ovate-cordate toothed leaflets 1 to 3 inches long. The numerous flowers, 1 to 2 inches across, have 6 to 8 white sepals.

# 101278. CLEMATIS INDIVISA Willd. 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. DIANELLA INTERMEDIA 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 panicle of small purplish flowers with bright-orange anthers is followed by broadly oblong blue berries nearly an inch in length.

#### 101280. Dodonaea viscosa (L.) Jacq. Sapindaceae. Hopbush.

A native New Zealand small tree or large bush with linear-oblong leaves 1 to 3 inches long. The green flowers, in small terminal panieles, are followed by flat dark-brown winged fruits. The plant is used as a hedge, and the hard-wood is valued for making mauls, as it does not split.

# 101231. Dracophyllum strictum Hook. f. Epacridaceae.

A freely-branching New Zealand shrub with erect coriaceous leaves, from a shea hing base, which taper to a rigid point, and small terminal panicles of numerous white flowers.

#### 101282. LEPTOPTERIS SUPERBA (Col.) Presl. Osmundaceae. Fern.

A fern with a stout rhizome forming an erect caudex 1 to 3 feet high, native to New Zealand. The tripinnatifid fronds, 2 to 4 feet long, are broadly lanceolate, and the closely overlapping limear-oblong pinnules, one half inch long, are pinnatifid almost to the base.

#### 101283. LEUCOGENES GRANDICEPS (Hook. f.) Beauverd. 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. MYOSOTIDIUM HORTENSIA (Decaisne)-Basil (M. nobile Hook.). Boraginaceae.

A stout succulent perennial herb, 1 to 3 feet high, native to the Chatham Islands. The thick fleshy radical leaves, 6 to 12 inches long, are broadly cordate or reniform, and the blue flowers, one half inch across, are borne in dense corymbose cymes.

# 101285. NERTERA DEPRESSA Banks and Soland. Rubiaceae. Beadplant.

A creeping perennial herb native to the Andes from the Tropics 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.

For previous introduction see 98040.

45945-34---2

#### 101271 to 101291—Continued

101286. 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 3 to 5 obovate, coarsely serrate leaflets 2 to 6 inches long, and the small flowers, borne in large compound umbels, are followed by globular purpleblack fruits one-fifth inch in diameter.

101287. OLEARIA CHEESEMANH 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.

101288. 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.

.101289. Parsonsia heterophylla A. Cunn. 'Apocynaceae.

A tall, slender, branching vine, woody at the base, with coriaceous leaves varying from linear to obovate, 2 to 4 inches long. The terminal and axillary, many-flowered cymes of small, fragrant, white flowers are followed by cylindrical pods 6 inches long. Native to New Zealand.

101290. PITTOSPORUM BUCHANANI Hook. f. Pit tosporaceae.

A shrub or small tree up to 20 feet high, native to New Zealand. The oblong to lanceolate membranous leaves, 2 to 5 inches long, are silky pubescent, and the small, dark-purple flowers are borne in axillary clusters.

101291. Pratia angulata (Forst. f.) Hook. f. Campanulaceae.

A slender, creeping, herbaceous perennial forming broad matted patches. The stems are 2 to 7 inches long, the rather fleshy ovate to orbicular leaves, less than one-half inch long, are sinuate dentate, and the axiliary flowers, less than 1 inch long, are white with purple streaks. It is native to New Zealand.

For previous introduction see 91294.

### 101292 to 101295.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cientuegos. Received October 31, 1932.

101292. POLYGALA OBLONGATA (Britton) Blake (Badiera oblongata Britton). Polygalaceae.

A tropical evergreen shrub, native to Cuba and the Bahama Islands, with oblong-obovate leathery leaves about 1 inch long and small flowers in very short racemes.

101293. BELAIRIA MUCRONATA Griseb. Fabaceae.

A thorny shrub with shining-green leaves composed of 3 to 9 linear-oblong mucronate leaflets; the flowers are followed by small membranous pods. It is native to Cuba.

101294. SOLANUM MACRANTHUM Dunal. Solanaceae.

A very rapid-growing tree with large, darkgreen, spiny leaves and a great profusion of large, blue-violet flowers which change color from day to day, becoming a pale blue and later fading to white.

For previous introduction see 97852.

### 101292 to 101295-Continued

101295. Zamia integrifolia Ait. Cycadaceae.

A cycad, native to the West Indies, with a trunk 12 to 18 inches high and a crown of pinnately compound leaves somewhat resembling a palm. The alternate leaflets, in 7 to 16 pairs, are oblong to lanceolate and are sometimes dentate at the apex.

### 101296 and 101297. ALLIUM SATIVUM L. Liliaceae. Garlic.

From China. Bulbs presented by W. M. Hayes, Tenghsien, Shantung. Received November 9, 1932.

Locally grown varieties, introduced for the use of Department specialists.

### 101298 and 101299.

From Australia. Seeds presented by Arthur F. Street, R. W. Cameron & Co., Inc., Sydney, through Monson Morris, Hollyberry Farm, Aiken, S.C. Received November 4, 1932.

101298. CALANDRINIA BALONENSIS Lindl. Portulacaceae. Parakeelya.

For previous introduction and description see 101242.

101299. CALANDRINIA REMOTA J. M. Black. Portulacaceae. Parakeelya.

A low procumbent annual, or possibly perennial, 4 to 12 inches high, native to South Australia. The succulent, linear-spatulate leaves are less than an inch long, and the rather large purple to white flowers are 1 to 2 inches across. It is of possible value as a forage plant.

# 101300. Phoenix RECLINATA Jacq. Phoenicaceae. Senegal date palm.

From Africa. Seeds presented by the director of agriculture, Western Provinces, Zaria, Nigeria. Received November 4, 1932.

A tropical and South African date palm 20 to 30 feet high with green reclinate pinnate leaves 6 to 9 feet long composed of rigid leaflets and yellowish fruits half an inch long with a sweetish pulp.

For previous introduction see 101144.

## 101301 and 101302.

From India. Seeds presented by W. Head, deputy director of gardens, Saharanpur, United Provinces. Received November 3, 1932.

101301. Amygdalus persica L. Amygdalaceae. Peach.

A good type. Introduced for the use of Department specialists.

101302. PRUNUS Sp. Amygdalaceae. Plum Ladakh.

# 101303 to 101306.

From Malta. Seeds presented by J. Borg, superintendent, Department of Agriculture, Valletta. Received November 3, 1932.

101303. Amygdalus Persica Nectarina Ait. Amygdalaceae. Nectarine.

A white nectarine.

101304. PRUNUS ARMENIACA I.. Amygdalaceae.
Alexandrine.

101305. PRUNUS ARMENIACA L. Amygdalaceae.
Apricot:

101306. PRUNUS DOMESTICA L. Amygdalaceae.

St. John's.

Common plum.

1400,000,000

#### 101307. Gossypium stocksii Marters. 101309 to 101343—Continued Malvaceae. Cotton.

From India. Seeds presented by M. Afzal, Cotton Research Laboratory, Lyallpur, 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 coat is carefully with the coat is carefully with the coat is carefully. split with a knife or the seed is rubbed upon a piec of fine sandpaper which allows access of water and helps germination.

# 101308. TRITICUM AESTIVUM L. (T. vulgare Vill.). Poaceae. Common wheat.

From China. Seeds presented by Albert N. Steward, College of Agriculture, University of Nanking. Received November 11, 1932.

Nanking no. 716.

Introduced for the use of Department specialists.

# 101309 to 101343. Figure spp.

From France. Scions presented by Prof. D. Bois, Museum National d'Histoire Naturelle, Paris. Received November 11, 1932.

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 8 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 CANNONII (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

#### 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.

#### 101814. FIGUS DUSENII Warb.

A tree up to 40 feet high, native to tropical Africa. The entire obovate to elliptic leaves are 2 to 9 inches long, and the globose or ovoid fruits are borne in sessile axillary pairs. Possibly a form of F. thollingii.

#### 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 oblong-ovate and entire, and the sessile fruits, less than one-half inch in diam-eter, are purple, sometimes with yellow dots.

101316. FICUS GLABERRIMA Blume.

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

#### 101317. FIGUS 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 re-pand, 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 beaves are entire or toothed, and the hispid yellow fruits are borne in clusters on the old wood.

101319. FIGUS LUCESCENS Blume (F. infectoria Roxb.). Dotted fig.

A low deciduous tree, native to India. The membranous oblong-ovate leaves, 3 to 5 inches long, are slightly subcordate, and the globose fruits, one-fourth inch in diameter, are whitish flushed and dotted with red.

#### 101320. FICUS KERSTINGII 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. of the shoots.

#### 101321. FIGUS 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 hidfel upper at the area. a bidfid umbo at the apex

#### 101322. FICUS LYRATA Warb.

A tree up to 40 feet high, native to tropical Africa. The rigid leathery lyre-shaped leaves are 6 to 12 inches iong 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 purple branchlets, native to tropical Africa. The oblong-ovate to broadly cordate leaves are 7 to 10 inches long, and the axillary subglobose 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 I to 4 inches long, having rounded cordate 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 PROLIXA 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

# 101309 to 101343-Continued

elliptic to obovate parchmentlike leaves are 4 to 6 inches long, scabrous on both surfaces, and the roughly scabrous fruits, solitary or in axillary pairs, are obovoid to subglobose and about half an inch in diameter. This species is referred to F. exasperata by some authorities.

#### 101329. FICUS PYRIFORMIS 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 solitary axillary pear-shaped fruits are less than an inch long.

#### 101330. FIGUS QUERCIFOLIA Roxb.

A creeping or decumbent shrub, 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.

#### 101331. FICUS RACEMIGERA BUL.

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.

#### 101332. FIGUS RETUSA L.

A large tropical tree with aerial roots, leathery leaves 4 inches long, and red or yellow fruits onethird of an inch in diameter. Native to the East Indies.

# 101333. FIGUS RUBIGINOSA Desf. Ru

A tree with wide spreading branches throwing out woody roots like the banyan tree. The elliptical coriaceous leaves, 3 to 4 inches long, are smooth above and covered with rusty tomentum beneath.

For previous introduction see 90711.

### 101334. Ficus schlechteri Warb.

An East Indian tree with smooth obovate to oblanceolate leaves about 3 inches long and peashaped fruits one-third inch in diameter, borne in pairs in the leaf axils.

#### 101335. FICUS SUBTRIPLINERVIA Mart. Gomero.

A Brazilian forest tree with a dense crown of obtuse papery leaves, prominently three-veined at the base. The small axillary fruits are globular.

### 101336. FIGUS TELOUKAT Batand, and Trab.

A large tree with smooth, leathery, entire, oblong-ovate, cordate leaves about 4 inches long and small, fleshy, globose, pinkish fruits scarcely half an inch in diameter. Teloukat is the Touareg name for this tree in northern Africa where it is native.

#### 101337. FICUS THOLLONII Hort.

A name for which a place of publication and a description have not been found.

#### 101333. FICUS TILIAEFOLIA Baker.

A shrub with stout brown branchlets and cordate-triangular, green, entire leaves, scabrous above, 4 to 5 inches long. The leathery fruits are 1 inch in diameter. Native to Madagascar.

# 101339. FIGUS TRACHYPHYLLA (Miquel) Fenzl.

A large spreading tree, native to tropical Africa. The broadly cordate leaves, 2 to 5 inches long, are obtusely serrate, and the pear-shaped axillary fruits, 1 to 2 inches long, are densely tomentose. This tree is said to yield a hard reddish rubber.

#### 101340. Ficus Triangularis Warb.

A tropical African tree, closely related to F. furcata, with small, triangular, leathery leaves 2 inches long with revolute margins and small, green, brown-spotted fruits one-fourth inch in diameter.

### 101309 to 101343—Continued

#### 101341. FICUS TRIMENI King.

A gigantic tree with very few aerial roots, native 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 axiliary pairs.

#### 101342. Ficus utilis Sim.

Zulu fig.

A medium-sized tree native to eastern Africa from Zululand to Somaliland. It is almost evergreen, except in long droughts. The fruit is worthless, but the natives use the thick bark, when beaten out, for bags, clothing, etc.

#### 101343. FIGUS VILLOSA Blume.

A strong-climbing shrub, native to the Malay Archipelago, with the branchlets, underside of the leaves, and the fruits covered with red-brown tomentum. The leathery, cordate leaves are 5 to 10 inches long, and the orange-yellow fruits, one-third inch in diameter, are clustered in axillary tubercles.

#### 101344. Rubus hawaiensis A. Gray. Rosaceae. Akala.

From Hawaii. Seeds presented by W. T. Pope, senior horticulturist, Agricultural Experiment Station, Honolulu. Received November 9, 1932.

A wild raspberry, native to Hawaii between, 3,500 and 5,000 feet altitude, which grows over 15 feet high. The large fruits, 1½ inches long and about 1 inch in diameter, have a rather sharp, but pleasant acid flavor.

# 101345. Rubus idaeus L. Rosaceae. European raspberry.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Plant Indus try, Leningrad. Received November 11, 1932.

Grown in the Leningrad district.

# 101346 to 101354.

From Australia. Seeds presented by Edwin Ashby, Wittunga. Blackwood, South Australia. Received November 10, 1932.

# 101346 to 101351. Callistemon spp. Myrtaceae.

#### 101346. CALLISTEMON PALLIDUS (Bonpl.) DC.

Closely related to *C. salignus*, from which it is said to differ by the upright habit of growth. It is an erect shrub 6 to 8 feet high and is said to be restricted to Tasmania.

# 101347 and 101348. Callistemon paludosus $\times$ ?

For previous introduction see 101197.

101347. A hybrid with cream flowers.

101348. A hybrid with lovely pink flowers.

101349. CALLISTEMON RIGIDUS R. Br.

A tall shrub, sometimes 30 feet high, native to New South Wales. The narrowly linear leaves are 2 to 5 inches long, and the scarlet flowers, with dark-red stamens an inch long, are borne in large dense spikes.

#### 101350. CALLISTEMON RUGULOSUS DC.

For previous introduction and description see 101198.

101351. Callistemon salignus (J. E. Smith) Sweet.

For previous introduction and description see 101199.

#### 101352, CALLITRIS Sp. Pinaceae.

101353. LEPTOSPERMUM SCOPARIUM Forst. Myrtaceae. Manuka.

Variety persiciflora, with pink flowers.

#### 101346 to 101354—Continued

101354. THRYPTOMENE SD. Myrtaceae.

Closely related to T. strongylophylla.

101355. ACACIA LEPTOCLADA 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 tong and yellow flowers in round racemes, larger than the leaves, produced at the ends of the branches. It is native to New South Wates, Australia.

#### 101356 to 101374.

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

101856 to 101361, BRYOPHYLLUM spp. Crassulacese.

101356. BRYOPHYLLUM ALICIAE (R. Hamet) Berger (Kalanchoe aliciae R. Hamet).

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

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 miniata 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 miniata subpeltata, a form said to have smaller leaves with a longer and more slender petiole, 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 sensile, 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 101372. KALANCHOE spp. Crassulaceae.
101362. KALANCHOE AROMATICA Perrier.

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

### 101356 to 101374—Continued

10 mm

#### 101363. KALANCHOE BEHARENSIS Drake.

A shribby succulent about 12 feet high with large, thick, fleshy, ovate leaves up to 8 inches long. These are rusty tomentose 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 91525.

101364. KALANCHOE FEDTSCHENKOI Ham. and Perr.

A rather small succulent about 10 inches high with crenate, rounded-oval leaves 1½ inches long, bluish-green overcast 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 panicled cyme. Native to Madagascar.

101366. KALANCHOE GLOBULIFERA COCCINEA Perrier.

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

For previous introduction see 95552.

#### 101367. KALANCHOR GOMPHOPHYLLA Baker.

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. hildebrandtii.

### 101368. KALANCHOE LAXIFLORA Baker.

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, oblong-spatulate leaves 3 to 5 inches long, and yellow flowers, one third inch long, in dense terminal cymes. Native to central Madagascar.

#### 101370. KALANCHOE SYNSEPALA Baker.

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

### 101371. KALANCHOE TOMENTOSA Baker.

A fleshy perennial, densely covered throughout with short brown hairs. The sessile elongated 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 WALDHEIMII Ham. and Perr.

A slender fleshy plant with a rather slender stem up to a foot high and opposite, subsessile, flat, obovate, crenulate leaves over 2 inches long. The rose-colored flowers are in a lax terminal corymblike inflorescence. Native to Madazascar.

#### 101373. KITCHINGIA CAMPANULATA Baker.

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. Сначота EDULIS Chayote. Cucurbitaceae.

From Guatemala, Fruits purchased from Don Jorge Garcia Salas, Director General of Agricul-ture, 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,

101379. Syringa oblata dilatata × vulgaris. Oleaceae.

101380. Syringa villosa × sweginzowii. Ole-Lilac. aceae.

Hermoine.

#### 101381 to 101383.

From Huancayo, Peru. Bulbs and roots presented by Paul G. Ledig, Magnetic Observatory of the Carnegie Institution, Washington, D.C. Re-ceived November 16, 1932.

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 thick-ened leaf stem, apparently as a sort of water storage, as they grow on very precipitous clifs 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.

A low deciduous shrub with imbricated linear serrulate leaves and terminal clusters of small bell-shaped flowers. Native to the Aleutian Islands.

101385. SORBUS KAMTSCHATCENSIS Komorov. Malaceae. Mountain-ash.

A tree about 6 feet high with smooth, gray-brown bark, stout branches, and opaque, ovate-lanceolate, acuminate leaflets. The small pinkish fruits are in clusters 3 to 4 inches across. Native to the Kamchatka Peninsula.

#### 101386. Corypha umbraculifera L. Phoenicaceae. Talipot palm.

rom Ceylon. Seeds presented by T. H. Parsons, curator of the Royal Botanic Garden, Peradeniya. From Ceylon. 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 panieles 20 feet long. It is native to

For previous introduction see 93530.

# 101387 and 101388. LUPINUS MUTA-BILIS Sweet. Fabaceae.

South American lupine.

From Huancayo, Peru. Seeds presented by Paul G. Ledig, Magnetic Observatory of the Carnegie Institution, Washington, D.C. Received No-vember 16, 1932.

Tallhue, ullush. 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 vellow.

101387. Speckled seeds. 101388. White seeds.

#### 101389 to 101393. ALLIUM SDD. aceae.

From China. Seeds presented by Albert N. Steward, College of Agriculture, University of Nanking. Received November 16, 1932.

101389. ALLIUM CEPA L.

Australian Brown. A variety introduced into China, probably from Australia.

101390. ALLIUM FISTULOSUM L.

From the Sun Tomb. Originally from a foreign source.

101391 and 101392. ALLIUM PORRUM L.

Introduced seed which is now being cultivated

101391. From the University Garden.

101392. From the Sun Tomb.

101393. ALLIUM SATIVUM L.

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 eymes. The slightly succulent red fruits are about one-third inch in diameter.

# 101395 to 101406.

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

101395. ACONITUM KUSNEZOFFII Reichenb. nunculaceae. Monk Monkshood.

An erect, hardy, herbaceous perennial, native to northeastern Asia, with terminal clusters of bluish flowers.

一个 网络克莱斯内尔

### 101395 to 101406—Continued

101396. ACONITUM LYCOCTONUM L. Ranunculaceae. Yellow wolfsbane.

A slender perennial reaching a height of 6 feet, with yellow or whitish flowers. Native to Europe and Siberia.

101397. Cucurbita moschata Duchesne. Cucurbitaceae. Cushaw.

Variety melonaeformis.

101398. HETEROPAPPUS HISPIDUS (Thunb.) Less. Asteraceae.

A perennial herb, native to eastern Asis, 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 trifoliolate leaves. Native to northern China.

For previous introduction see 90548.

101400. AGASTACHE RUGOSA (Fisch. and Mey.). Kuntze (Lophanthus rugosus Fisch. and Mey). Menthaceae. Wrinkled giant-hyssop.

A summer-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.

101403. PAPAVER NUDICAULE L. Papaveraceae. Iceland poppy.

Variety amurense, from the Hingan Mountains, with foliage rather coarser than the type and fairly uniform orange-yellow flowers.

101403. SCUTELLARIA BAICALENSIS Georgi. Menthaceae. Baikal skullcap.

Locally known as mountain tea. A low subshrubby perennial forming a spreading mass of stems, covered with lanceolate leaves from which ascending shoots 6 to 12 inches high are produced, each terminated in late summer by a head of large and brilliant blue-purple flowers.

101404. Soja Max (L.) Piper (Glycine ussuriensis Sieb. and Zucc.). Fabaceae. Soybean.

A wild form.

101405. VIOLA IRCUTIANA Turcz. Violaceae.

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 varieqata, but has smaller flowers.

101406. VIOLA SEOULENSIS Nakai. Violaceae.

Violet.

A perennial violet with oblong or ovate-oblong, long-stemmed leaves an inch in length and pale violet flowers. Native to Chosen.

101407 to 101409. Chayota Edulis Jacq. Cucurbitaceae. Chayote.

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. ASTRAGALUS 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 trifoliolate 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. Elazari-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.

# 101414 to 101425. Gossypium spp. Malvaceae. Cotton.

From Africa. Seeds presented by Dr. Trevor Trought, Plant Breeding Section, Department of Agriculture and Forests, Shambat, Khartoum, Anglo-Egyptian Sudan. Received November 21, 1032

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 SD.

C.B. 1014. Natural seed.

101419. Gossypium sp.

C.B. 1015. Selfbred seed.

101490. 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.

### 101414 to 101425—Continued

101424. Gossypium sp.

C.B. 1020. Selfbred seed.

101425. Gossypium sp.

C.B. 1021. Selfbred seed.

# 101426 to 101432. Gossypium Herbaceum L. Malvaceae. Cotton.

From the Union of Soviet Socialist Republics. Seeds presented by N. A. Malinovsky, Central Agricultural Plant Breeding Station, Ganja Station, Azerbaijan, Transcaucasia. Received November 21, 1932.

101426. C.B. no. 1022. U.S.S.R. no. 101.

101427. C.B. no. 1023. U.S.S.R. no. 590 (?)

101428. C.B. no. 1024. U.S.S.R. no. 593.

101429. C.B. no. 1025. U.S.S.R. no. 606.

101430. C.B. no. 1026. U.S.S.R. no. 672.

101431. C.B. no. 1027. U.S.S.R. no. 703.

101432. C.B. no. 1028. U.S.S.R. no. 767.

# 101433. Lycopersicon esculentum Mill. Solanaceae. Tomato.

From Florida. Seeds presented by M. D. Mc-Naughton, Coconut Grove. Received December 1, 1932.

A large medium-red tomato up to 4 inches in diameter. The meat is almost solid with very few seeds, and the flavor is very mild, almost no acid. The vine seems to be blight resistant, and the seeds are supposed to have come originally from Africa.

## 101434. MELINIS MINUTIFLORA Beauv. Poaceae. Molasses grass.

From Colombia. Seeds presented by Willis C. McGuire, Medellin, through Raymond Phalen, American vice consul, Medellin. Received November 30, 1932.

Introduced for the use of Department specialists.

#### 101435 to 101437.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Seledad, Cienfuegos. Received November 28, 1932.

101435. Cassia nodosa Buch.-Ham. Caesalpiniaceae.

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

For previous introduction see 97868.

101436. GLORIOSA SPECIOSA (Hochst.) Engler (G. abyssinica A. Rich.). Melanthiaceae. Glorylily.

An erect bulbous perennial 1 to 2 feet high, native to tropical Africa. The lanceolate leaves, 5 to 6 inches long, are sometimes tendril-bearing at the tip, and the yellow flowers, 2 to 3 inches long, have reflexed segments and are borne on nodding pedicels 3 to 4 inches long.

#### 101437. VOLKAMERIA ACULEATA L. Verbenaceae.

A spiny climbing shrub 10 to 15 feet high, native to the West Indies. The thin elliptic-obovate leaves are 1 to 2 inches long, and the salverform white flowers with purple stamens are borne in axillary cymes.

# 101438 to 101446. Hondeum distriction Palmella Harlan. Poaceae. Two-rowed barley

From Hungary. Seeds presented by the Hungarian Commercial and Exchange Bank, Budapest. Received November 28, 1932.

101438 to 101442. Hungarian spring seed barley.

101438. No. 2327.

101441. No. 2485.

101439. No. 2439.

101442. No. 2486.

101440. No. 2440.

101443 to 101445. Czechoslovakian spring barley.

101443. No. 3030-A.

101445. No. 3159.

101444. No. 3158.

101446. Hungarian spring seed barley, no. 2305.

#### 101447 to 101453.

From the Philippine Islands. Seeds presented by Arthur J. Fischer, director, Bureau of Forestry Manila. Received November 30, 1932.

101447. Ormosia calavensis Azaola. Fabaceae.

Bahia. A large tropical tree with unequally pinnate leaves consisting of 7 or 9 ovate leaflets. The violet-colored flowers are followed by small woody pods containing 2 or 3 coral-pink seeds. Native to the Philippine Islands.

# 101448. PINUS INSULARIS Endl. Pinaceae. Benguet pine.

A tall three-needle tropical pine which grows on the highlands in the Philippine Islands between 3,000 and 8,000 feet altitude. The flaccid slender leaves are 7 to 9 inches long, and the ovoid cones are about 3 inches long.

101449. PTEROCARPUS VIDALIANUS Rolfe. Faba-

Prickly narra. A tree native to the island of Luzon, with alternate, unequally pinnate leaves composed of 5 to 13 ovate papery pellucid-punctate leafiets 2 to 4 inches long. The small yellow flowers are followed by circular winged pods over an inch in diameter.

101450. SINDORA SUPA Merr. Caesalpiniaceae.

Supa. A timber tree, native to the Philippine Islands.

101451. VITEX PARVIFLORA Juss. Verbenaceae. Chaste-tree.

For previous introduction and description see 101265.

101452. WALLACEODENDRON CELEBICUM Koord. Mimosaceae.

Banuyo. A tall tree, native to the Celebes, with red-brown bark and compound leaves. The flowers resemble those of Mimosa, and the large pods are similar to those of Entada.

101453. XANTHOSTEMON VERDUGONIANUS Naves. Myrtaceae.

Mancone or palo de hierro. A large evergreen tree with subopposite or subverticillate, obovate cuneate rounded leathery leaves 1 to 3 inches long, and small red-purple flowers in terminal cymes. Native to the island of Mindanao, Philippines.

# 101454. EPHEDRA INTERMEDIA Schrenk and Mey. Gnetaceae.

From India. Seeds presented by R. N. Parker, forest botanist, Forest Research Institute, Dehra Dun. Received November 26, 1932.

#### 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 Sungaria.

# 101455 to 101459. RUBUS spp. Rosaceae. Raspberry.

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.

Sucrée de Metz.

101457. Rubus sp.

Rote Riesen.
10.458. Rubus sp.

Surpasse Merreille rouge.

101459. RUBUS CRATAEGIFOLIUS Bunge. Hawthorn raspberry.

An erect or spreading raspberry 3 to 5 feet high, native to China and Japan. The cordate serate 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. Onion.

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

101460. Brown.

101461. White.

#### 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 3, 1932.

101462, Cassia excelsa Schrad. Caesalpiniaceae

Variety angustifolia: a narrow-leaved form of C. excelsa which is a rigid shrub over 6 feet high with stout spines half an inch long, leathery leaves less than an inch long, and small red flowers. Native to northern Argentina.

101463. CLUSIA MINOR L. Clusiaceae.

A tropical American 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 101133.

101464. SELENICEREUS 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.

From Java. Seeds presented by A. J. Sitts, N. V. Java Sumatra Handelmaatschappil, at the request of Messrs. Hard and Rand, New York, N.Y. Received December 10, 1932.

Pakantan, 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. McRostie, 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 Versuchsstation für Pflanzenshutz, 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.

 101468. B-3081.
 101475. B-3226.

 101469. B-3169.
 101476. B-3238.

 101470. B-3183.
 101477. B-3257.

 101471. B-3184.
 101478. B-3266.

 101472. B-3185.
 101479. B-3270.

 101473. B-3186.
 101480. B-3271.

 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.

101484. LESPEDEZA CYRTOBOTRYA Miquel. Fabaceae. Bushclover.

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, Pusa, India, through A. McLean, deputy director of agriculture, East Central Circle, Pyinmana, Burma. Received December 9, 1932.

A locally grown variety.

# 101486 to 101488. PRUNUS SERRULATA Lindl. Amygdalaceae.

Oriental cherry.

From England. Plants purchased from John Waterer Sons & Crisp, Ltd. Twyford. Berks. Received December 10, 1932.

#### 101486 to 101488—Continued

101486. Ko-fugen. 101488. Oshokun.

101487. Oku-miyako.

#### 101489 to 101496.

From Egypt. Seeds presented by Alfred Bircher, Middle Egypt Botanic Station, El Saff. Received December 5, 1932.

101489. Annona macrocarpa Barb.-Rodr. Annonaceae

A Brazilian tree 10 to 12 feet high, with a thick trunk, oblong-elliptic leathery leaves about 4 inches long, and large ovoid-cordate fruits about 5 inches in diameter with white pulp. In Matto Grosso the natives call this "araticum grande da serra."

101490. ARECASTRUM Sp. Phoenicaceae. Palm. 101491. CEREUS HEXAGONUS (L.) Mill. Cactaceae.

A tall columnar cactus up to 45 feet high, branching at the base, the joints usually six-angled. The flowers are 8 to 10 inches long with the outer segments purple and the inner ones white. The ovoid edible fruits are 3 to 6 inches long and have white or pinkish pulp. It is native to the West Indies and to the northern part of South America.

For previous introduction see 90870.

101492. NAGEIA ELATA (R. Br.) F. Muell. (Podocarpus elata R. Br.). Taxaceae.

A tree 50 to 100 feet high, native to Australia. The oblong-linear to linear-lanceolate leaves are 2 to 6 inches long, straight or slightly falcate, with a prominent midrib. The inconspicuous flowers are followed by slightly succulent ovoid to globular brown fruits about one-fourth inch in diameter.

101493 to 101495. PSIDIUM spp. Myrtaceae. Guava.

101493. PSIDIUM ARACA Raddi.

A tropical American shrub which bears small edible yellow fruits, said to contain few seeds.

101494. PSIDIUM CORIACEUM Mart.

A tropical shrub, 3 to 10 feet high, with leathery obovate leaves and dark-purple fleshy fruits the size of plums. It is native to Brazil.

101495. PSIDIUM CUJAVILLUS Burm. f.
Dwarf guava.

A small shrub with small yellow fruits resembling those of *Psidium araca* in size and color, but with dry calyx segments. The fruit is very aromatic with much-accentuated strawberry flavor. The leaves resemble the common guava but are broader.

101496. ZIZIPHUS JOAZEIRO Mart. Rhamnaceae.

Jua. A tree, native to the eastern part of Brazil, which under favorable conditions forms a beautiful, dense, green, umbrageous head of foliage nearly 30 feet in diameter. The oval to ovate leaves, about 2 inches long, are somewhat hard and brittle in texture. The cream-yellow fruits are nearly an inch in diameter and almost round. The thick layer of mealy fiesh is rather insipid and adheres very closely to the seed. Cattle and horses are very fond of both the leaves and fruits of this tree, and its principal value would seem to be as a source of stock food in the dry areas of the southwestern United States.

# 101497 and 101498. SESAMUM ORIENTALE L. Pedaliaceae. Sesame.

From Southern Rhodesia. Seeds presented by H. G. Mundy, chief, Division of Plant Industry,

#### 101497 and 101498—Continued

Department of Agriculture, Salisbury. Received December 8, 1932.

101497. A variety with black seeds.

101498. A variety with white seeds.

101499. ALLIUM CEPA L. Liliaceae. Onion.

From India. Seeds presented by the superintendent of the Modi-Bag Agricultural College, Poona, through the horticulturist to the Government, Bombay Presidency, Poona. Received December 8, 1932.

A locally grown variety.

Introduced for the use of Department specialists

101500. ELEOCHARIS TUBEROSA (Roxb.) Schult. Cyperaceae.

Tubers presented by Albert P. Ding, Portland, Oreg. Received December 14, 1932.

A Chinese vegetable which grows very much in the same manner as wet-land rice. The corms or tuberous rhizomes are mostly eaten raw but are also sliced or shredded in soups and in meat and rice dishes. The plants need a hot summer tomature and are grown on a muck or clay soil.

101501. MUCUNA BENNETTI F. Muell. Fabaceae.

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

D'Albertis creeper. A tropical climber with leaves made up of three ovate-lanceolate glabrous leaflets, 3 to 5 inches long, and bearing short racemes of large showy scarlet flowers. It grows in New Guinea on the banks of rivers or in swampy places.

#### 101502 and 101503.

Plants presented by C. E. Pleas, Chipley, Fla. Received December 16, 1932.

101502. BAMBUSA MULTIPLEX (Lour.) Reausch. Poaceae. Hedge bamboo.

These plants represent a distichous or fern-leaved variety of the hedge bamboo which has slender culms with green stripes of various widths on a yellowish or pinkish ground color and is of dwarf habit, usually not more than 5 feet high. However, the variety shows a strong tendency to revert to the species type, in which the leaves are much longer and fewer on the branchlets, and culms up to 30 feet high are produced. The foliage then appears similar in form to that of the well-known varieties Alphonse Karri and Argentea striata. The new culms of this dwarf variety usually appear during June and extend their branches and leaves within a few weeks, differing in these respects from the type and from the large-growing varieties of the species.

For previous introduction see 99289.

101503. BAMBUSA MULTIPLEX (Lour.) Reausch... Poaceae. Hedge bamboo.

An ordinary, large-growing, green form of the hedge bamboo, reverted from the dwarf variety under F.P.I. 101502.

101504 and 101505. AVENA SATIVA L. Poaceae. Oats.

From Wales. Seeds presented by Prof. E. T. Jones, Welsh Plant Breeding Station, Aberystwyth. Received December 16, 1932.

101504. Aberystwyth white no. 81, winter oats.

101505. Aberystwyth white no. 82, winter oats.

101506 and 101507. TRITICUM AESTI-VUM L. (T. vulgare Vill.). Poaceae. Common wheat.

From England. Seeds presented by G. D. A. Bell, School of Agriculture, University of Cambridge. Received December 13, 1932.

101506. Iron. 101507. Wilhelmina.

# 101508 to 101521.

From Argentina. Seeds presented by the Botanic Garden, Buenos Aires. Received December 17, 1932.

101508. Arechavaletaia uruguayensis Speg. Flacourtiaceae.

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.

101509. ASPIDOSPERMA PEROBA Sald. Gama.

This tree, whose wood is used in naval construction, has a thin, clear, ash-colored bark, cracked longitudinally; the heartwood is of rare beauty, with a wavy pattern. The tree is distinguished by it spreading, obovate-oblong, undulate leaves.

101510. BLEPHAROCALYX 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. CNICOTHAMNUS 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. Faba-

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 rhomboid-oblong dentate leaves and corymbs of violet flowers.

101515. GUETTARDA URUGUENSIS 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 salvershaped 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.

#### 101508 to 101521—Continued

101517. JODINA RHOMBIFOLIA 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. PITHECOLLOBIUM ALBICANS (Kunth) Benth. 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 leaflets, 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 TRIFLORA 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.

101520. Schinus terebinthifolius aroiera (Vell.) L. Marchand. Anacardiaceae.

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. TERMINALIA 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. Isabelina.

101523. Carita, or little face.

101524. Colorado, or red.

101525. No. 4. unnamed.

101526 and 101527. Gossypium punctatum Schum. and Thonn. Malvaceae. Cotton.

From French Equatorial Africa. Seeds presented through T. H. Kearney, Bureau of Plant Industry. Received December 13, 1932.

101526. C.B. 1030. From Lion "Agent Agricole", Zangba.

101527. C.B. 1031. From Fouroumbalan.

101528 to 101532. TRITICUM AESTIVUM L. (T. vulgare Vill.). Poaceae.

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

101528. Baroota wonder.

### 101528 to 101532-Continued

101529. Cadia.

101530. Duri.

101531. Petatz surprise.

101532. Turvey.

# 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.

# 101534. DIOSPYROS TUTCHERI Dunn. Diospyraceae. Persimmon.

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.

101548. From Girzapur, United Provinces.

101547. From Indore, Central India.

101548. From Iyzabar.

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 Raebareli, United Provinces.

101556. From Raebareli, United Provinces.

101557. From Saltanpur.

101558. From Tisuhi, Girzapur, United Provinces.

#### 101559 to 101568.

From France. Seeds presented by A. Guillaumin, Muséum National d'Histoire Naturelle, Paris. Received December 21, 1932.

Seeds of cultivated plants, collected at Urumchi, Sinkiang, in September 1931.

101559. AMYGDALUS PERSICA L. Amygdalaceae. Peach.

#### 101559 to 101568—Continued

101560. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.

101561. HELIANTHUS ANNUUS L. Asteraceae.

Common sunflower.

101562 and 101563. HORDEUM VULGARE COELESTE L. Poaceae. Six-rowed barley.

101564. Hordeum vulgare nigrum (Willd.) Beaven. Poaceae. Six-rowed barley.

101565. Phaseolus vulgaris L. Fabaceae.
Common bean.

101566. SORGHUM VULGARE Pers. Poaceae.

101567. TRITICUM AESTIVUM L. (T. vulgare Vill.)
Poaceae. Common wheat.

101568. ZEA MAYS L. Poaceae.

A----

# 101569. CITRUS Sp. Rutaceae.

From French Indo-China. Seeds presented by M. Poilane, Institut des Recherches Agronomique de l'Indochine, Division de Botanique. Received December 21, 1932.

Wild shaddock.

#### 101570 and 101571.

From Palestine. Seeds presented by the acting director of agriculture and forests, Jerusalem. Received December 21, 1932.

101570. NEPETA CURVIFLORA Boiss. Menthaceae.

A hairy perennial up to 3 feet high with oblong obtuse crenate leaves about 1 inch long and skyblue flowers half an inch long in short, rather dense cymes. Native to Asia Minor.

101571. THYMUS CAPITATUS (L.) Hoffm. and Link. Menthaceae. Thyme.

A low woody perennial with stout rigid branches, very short, stiff, linear leaves, and rosy flowers in dense ovoid heads. Native to the Mediterranean region.

# 101572 and 101573.

From Cuba. Scions presented by Charles F. Fetter, 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.

European 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 28, 1932.

A locally grown red onion.

#### 101576 to 101584.

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

101578. CICER ARIETINUM L. Fabaceae.

Chickpea.

Bengal grain.

101577. Cucumis sativus L. Cucurbitaceae. Cucumber.

101578. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. Cushaw. Local name, pumpkin.

101579. DOLICHOS BIFLORUS L. Fabaceae.
Twinflower dolichos.
A brown variety.

### 101576 to 101584—Continued

101580. Dolichos biflorus L. Fabaceae.
Twinflower dolichos.

A dark-purple variety; south Indian horse grain.

101581. Phaseolus mungo L. Fabaceae. Urd. Variety radicatus.

101582. RAPHANUS SATIVUS L. Brassicaceae. Radish.

101583. TRICHOSANTHES ANGUINA L. Cucurbitaceae. Snakegourd.

Long.

101584. Vigna sinensis ('Torner) Savi. Fabaceae. Cowpea.

### INDEX OF COMMON AND SCIENTIFIC NAMES

Acacia leptoclada, 101355. Acer sieboldianum microphyllum, 101172. Aciphylla colensoi, 101271. Aconium kusnezoffii, 101395. Calyptrogyne occidentalis, 101257. Cassia excelsa, 101462. nodosa, 101435. Castanea sativa, 101467. Celtis selloviana, 101511 Celtis selloviana, 101511.
Cereus hexagonus, 101491.
Chaste-tree. See Vitex parviflora.
Chayota edutis, 101375-101378, 101407-101409.
Chayota ese Chayota edutis.
Cherry, oriental. See Prunus serrulata.
Chestnut, Spanish. See Castanea sativa.
Chickpea. See Cicer arietinum.
Cicer arietinum, 101576.
Circhona calisaya, 101240.
Cütharerylum caudatum, 10159, 101245.
tristachuum. 101261. tristachyum, 101261 tristachyum, 101261.
Citrullus vulgaris, 101560.
Citrus spp., 101180, 101599.
Clematis afoliata, 101275.
foetida, 101276.
hexasepala, 101277.
indivisa, 101278.
Clematis, New Zealand.
Clusia minor, 101463.
Cnicothamnus lorentzii, 101512.
Coffa aexibica 101465. Amygdalus persica, 101301, 101559. persica nectarina, 101303. Annona diversifotia, 101256. macrocarpa, 101489. Antidesma montanum, 101243. platyphyllum, 101244. Apricot. See Prunus armeniaca. Arecastrum sp., 101490. Arechavaletaia uruguayensis, 101508. Aristotelia fruticosa, 101272. serrata, 101273. Artocarpus integra, 101260. Aspidosperma peroba, 101509. Catas anno., 101405.
Coffea arabica, 101465.
Coffea arabica, 101465.
Coffea Arabian. See Coffea arabica.
Corn. See Zea mays.
Corypha umbraculifera, 101386.
Cotton. See Gossypium spp.
Cowpea. See Vigna sinensis.
Crataegus sp., 101190.
Crocus sp., 101166.
boryi, 101164.
cartwrightianus, 10165.
sieberi, 101170.
Cucumber. See Cucumis sativus.
Cucumis sativus, 101577.
Cucurbita moschata, 101397, 101578.
Cushaw. See Cucurbita moschata. Aspidosperma peroba, 101509. Astelia nervosa, 101274. Astragalus onobrychis, 101410. Avena sativa, 101181-101184, 101253-101255, 101504, 101505. Badiera oblongata. See Polygala oblongata. Bamboo. See Sasa disticha, Shibataea kumasasa, and Thamnocalamus sp. and Thamnocalamus sp.
hedge. See Bambusa multiplex.
Bambusa gracitis. See Thamnocalamus sp.
multiplex, 101502, 101503.
nana. See Sasa disticha.
viminalis. See Shibataea kumasasa.
Banyan tree. See Ficus benghalensis.
Barley. See Hordeum spp.
Beadplant. See Nertera depressa.
Bean, common. See Phaseolus vulgaris.
lima. See P. lunatus.
Belatria mucronata, 101293.
Blepharocalyz tweediei, 101510.
Bomarea caldasii, 101216.
Bourreria revoluta, 101394.
Bramble, Alpine. See Rubus alpinus.
Bryophyllum aliciae, 101356.
daigremontianum, 101357. D'Albertis creeper. See Mucuna bennetti. Daubentonia tripetii, 101513. Daubentonia tripetii, 101613.
Depuelia elliptica, 101239.
Derris elliptica. See Deguelia elliptica.
Dianella intermedia, 101279.
Dioscorea alata, 101189.
Diospyros tutchert, 101634.
Dodonaea viscosa, 101280.
Dolichos biflorus, 101579, 101580.
Dolichos twinflower. See Dolichos biflorus
Dracophyllum strictum, 101281. Bryophyllum aticae, 101350.
daigremontianum, 101357.
miniatum, 101358, 101359.
scandens, 101360.
tubiflorum, 101361.
Bushclover. See Lespedeza cyrtobotrya.
shrub. See L. bicolor. Eleocharis tuberosa, 101500 Eucotaurs twoerosa, 101000. Epphedra intermedia, 101454. Eugenia sp., 101160. Eupatorium guadalupense, 101514. Exostemma longiflorum, 101246. Exothea paniculata, 101247. Calandrinia balonensis, 101242, 101298. remota, 101299. Callistemon acuminatus X ?, 101195. Fern. See Leptopteris superba. Ficus aggregata, 101309. baroni, 101310. Callistemon acuminatus × ?, 101195.
lilacinus, 101196.
pallidus, 101346.
pallidus, 101348.
pallidus, 101349.
rigidus, 101349.
rugulosus, 101199, 101350.
salignus, 101199, 101351.
Callitris sp., 101352.
Calothamnus asper, 101200.
homalophyllus, 101201.
longissimus, 101202.
quadrifidus, 101203.
sanquineus, 101204.
Calycotome spinosa, 101411. baroni, 101310. benghalensis, 101311. cannonii, 101312. carica, 101163. diversifolia, 101313. dusenii, 101314. glabella, 101315. glaberrima, 101315.
glaberrima, 101316.
heterophylla, 101317.
hispida, 101318.
infectoria. See F. l ucescens.
kerstingii, 101320.
lucescens, 101319.
lutea, 101321.

```
Lactuca sativa, 101258, 101259.
Lathyrus davidii, 101399.
sativus, 101535-101558.
Leek. See Allium porrum.
Leptopteris superba, 101282.
   Ficus-Continued.
                     us—Continued.
lyrata, 101322.
ovata, 101323.
pandurata, 101324.
parietalis, 101325.
pierrei, 101326.
                                                                                                                                                                                                                                                                                   Leptopteris superba, 101282.
Leptospermum scoparium, 101353.
Lespodeza bicolor, 101483.
cyrtobotrya, 101484.
Lettuce, garden. See Lactuca sativa.
Leucogenes grandiceps, 101283.
Lilac. See Syrings spp.
Livistona hoogendorpii, 101263.
Lophanthus rugosus. See Agastache rugosa.
Lupine, South American. See Lupinus mutabilis.
Lupinus mutabilis, 101208, 101387, 101388.
Lycopersicon esculentum, 101433.
                     prolixa, 101327.
punctifera, 101328.
pyriformis, 101329.
quercifolia, 101330.
                     quercifota, 101330.
racemigera, 101331.
retusa, 101332.
rubiginosa, 101333.
schlechteri, 101334.
subtriplineria, 101335.
subtriplinervia, 101335.
teloukat, 101336.
thollomi, 101337.
tiliaefolia, 101338.
trachyphylla, 101339.
triangularis, 101340.
trimeni, 101341.
vtilosa, 101342.
villosa, 101343.
Fig. See Ficus spp.
common. See F. carica.
dotted. See F. lucescens.
fiddleleaf. See F. pandurata.
mistletoe. See F. diversifolia.
rusty. See F. rubiginosa.
Zulu. See F. utilis.
Flacourtia indica, 101572.
                                                                                                                                                                                                                                                                                   Manuka. See Leptospermum scoparium.
Maple. See Acer sieboldianum microphyllum.
Melinis minutiflora, 101434.
Menziesia glabella, 101412.
Metaplexis japonica, 101401.
stauntoni. See M. japonica.
Momordica cochinchinensis, 101249.
Monkshood. See Aconitum kusnezoffii.
Mountain-ash. See Sorbus kamtschatcensis.
Mucuna bennetti, 101501.
Musatdidum hortensia, 101984.
                                                                                                                                                                                                                                                                                    Myosotidium hortensia, 101284.
nobile. See M. hortensia.
                                                                                                                                                                                                                                                                                   Nageia elata, 101492.
Nectarine. See Amygdalus persica nectarina.
Nepeta curviflora, 101570.
Nephelium lappaceum, 101158.
Nettera depressa, 101285.
Nothopanax colensoi, 101286.
   Garlic. See Allium sativum.
Giant-hyssop, wrinkled. See Agastache rugosa.
Gloriosa abyssinica. See G. speciosa.
Gloriosa abyssinica. See G. speciosa.
speciosa, 101436.
Glorylily. See Gloriosa speciosa.
Glycine ussuriensis. See Soja max.
Gomero. See Ficus subtriplinervia.
Gooseberry. See Ribes sp.
Gossypium spp., 101414-101425.
herbaceum, 101426-101432.
punctatum, 101526, 101527.
stocksii, 101307.
Grape, European. See Vitis vinifera.
Grass. See Poa sp., and Sclerachne punctata.
molasses. See Melinis minutiflora.
Guava. See Psidum spp.
dwarf. See P. cujavillus.
Guettarda uruguensis, 101515.
                                                                                                                                                                                                                                                                                   Oats. See Avena sativa.
Ocotea coriacea, 101162.
Olearia cheesemanii, 101287.
Oncoba echinata, 101213.
Onion. See Allium cepa.
Welsh. See A. fistulosum.
Ormosia calavensis, 101447.
Ornithogalum arabicum, 101167.
Oryza sativa, 101266-101270, 101481, 101482.
Oxalis spp., 101209-101211, 101382, 101383.
                                                                                                                                                                                                                                                                                     Pachystegia insignis, 101288
                                                                                                                                                                                                                                                                                   Paliurus ramosissimus, 101214.
Palm. See Arccastrum sp., Heterospathe elata,
Livistona hoogendarpii, and Thrinax sp.
Indian date. See Phoenix sylvestris.
manaca. See Calyptrogyne occidentalis.
Senegal date. See Phoenix rectinata.
talipot. See Corypha umbraculifera.
Papaver nudicaule, 101402.
Parakeelya. See Calandrinia spp.
Parsonsia heterophylla, 101289.
Peach. See Amvadalus nersica
                                                                                                                                                                                                                                                                                     Paliurus ramosissimus, 101214.
 Hackberry. See Celtis selloviana.
Hawthorn. See Crataegus sp.
Helianthus annuus, 101561.
Heliaters semitriloba, 101248.
Heteropappus hispidus, 101398.
Heterospathe elata, 101212.
Hopbush. See Dodonaea viscosa.
Hordeum distichon palmella, 101438-101446.
vulgare coeleste, 101562, 101563.
vulgare nigrum, 101564.
                                                                                                                                                                                                                                                                                 Parsonsia heterophylla, 101289.
Peach. See Amygdalus persica.
Peppertree. See Schinus terebinthifolius aroiera.
Persimmon. See Diospyros tutcheri.
Phaeolus lunatus, 101522-101525.
mungo, 101581.
vulgaris, 101565.
Phoeniz reclinata, 101300.
sylvestris, 101574.
Phyllodoce aleutica, 101384.
Picramnia pentandra, 101250.
Pine, Benguet. See Pinus insularis.
Pinus insularis, 10148.
Pithecollobium albicans, 101518.
Pithecollobium albicans, 101500.
Plum. See Prumus sp., 101302.
common. See P. domestica.
Podos pp., 101466.
Podocarpus elata. See Nageja elata.
 Ilama. See Annona diversifolia.
Ilex paraguariensis, 101516.
Ixora fraseri, 101262.
 Jackfruit. See Artocarpus integra.
Jatropha hastata, 101161.
Jodina rhombifolia, 101517.
   Kalanchoe aliciae. Sec
aromatica, 101362.
beharensis, 101363.
daigremontianum.
                                                                                              See Bryophyllum aliciae.
                                                                                                                    See Bryophyllum
                                montianum.
                     fedtschenkoi, 101364.
globulifera, 101365.
globulifera coccinea, 101366.
                                                                                                                                                                                                                                                                                   Poa sp., 101466.
Podocarpus elata. See Nageia elata.
Polygala oblongata, 101292.
Poppy, Iceland. See Papaber nudicaule.
Pratia angulata, 101291.
Prunus sp., 101302.
armeniaca, 101804, 101305.
domestica, 101306.
serulata, 101306.
serulata, 101486-101488.
Peidium araca 101433.
                      gomphophylla, 101367.
laxiflora, 101368.
                     miniatum. See Bryophyllum miniatum. orgyalis, 101369. synsepala, 101370. tomentosa, 101371. waldheimii, 101372. shinain manayalista, 101372.
                                                                                                                                                                                                                                                                                    Psidium araca, 101493.
coriaceum, 101494.
cujavillus, 101495.
   Kitchingia campanulata, 101373. peltata, 101374.
```

Pterocarpus vidalianus, 101449. Puya. See Puya chilensis. Puya chilensis, 101194.

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

Radish. See Raphanus sativus.
Rambutan. See Nephelium lappaceum.
Ramontchi. See Flacourtia indica.
Raphanus sativus, 101582.
Raspberry. See Rubus spp.
Andes. See R. glaucus.
European. See R. idaeus.
hawthorn. See R. crataegifolius.
Rhododendron spp., 101235-101237.
auriculatum, 101227.
fauriae, 101228.
griersonianum, 101229.
hyperythrum, 101230.
microphyton, 101232.
microphyton, 101232.
microphyton, 101233.
oldhamii, 101225.
pulchrum calycinum/scabrum, 101226.
pulchrum culcinum/scabrum, 101231.
pulchrum tebotan, 101238.
seabrum/pulchrum calycinum, 101231.
Ribes sp., 101191.
Rice. See Oryza sativa.
Rubus spp., 10127.
crataegifolius, 101459.
glaucus, 101218.
havaiensis, 101344.
idaeus, 101345.
irasuensis, 101219, 101220.
trichomaltus. See R. urticaefolius.
urticaefolius, 101221.
Ruprechita triffora, 101519.

Saccharum officinarum, 101468-101480.
S2sa disticha, 101174.
Schinus terebinthifotius aroiera, 101520.
Sclerachne punctata, 101241.
Scutellaria baicalensis, 101403.
Selenicereus grandiflorus, 101464.
Serjania glabrata, 101251.
Sesame. See Sesamum orientale.
Sesamum orientale, 101187, 101205, 101413, 101497, 101498.
Shibataea kumasasa, 101175.
Shidora supa, 101450.
Skullcap, Baikal. See Scutellaria baicalensis.
Snakegourd. See Trichosanthes anguina.
Soja maz, 101193, 101404.
Solanum macranthum, 101294.
Sorbus kamtschateensis, 101385.

Sorghum vulgare, 101566.
Soybean. See Soja max.
Star-oi-Bethlehem. See Ornithogalum arabicum.
Strophanthus sarmentosus, 101264.
Sugarcane. See Saccharum officinarum.
Sunflower, common. See Helianthus annuus.
Stylosanthes mucronata, 101186.
Syringa oblata dilatata×vulgaris, 101379.
villosa×sweginzovii, 101380.

Tabernaemontana amblyocarpa, 101215.
Terminalia triflora, 101521.
Thamnocalamus sp., 101173.
Thrinax sp., 101252.
Thypalis gracilis, 101179.
Thyptomene sp., 101354.
Thyme. See Thymus capitatus.
Thyme. See Lycopersicon esculentum.
Tragopogor sp., 101169.
Trichosanthes anguina, 101583.
Trimeza sp., 101222.
Triticum aestinum, 101308, 101506, 101507, 101528–
101532, 101567.
vulgare. See T. aestivum.
Tulip. See Tulipa hageri.
Tulipa hageri, 101168.

Undetermined, 101188, 101206, 101381. Urceolina miniata, 101207. Urd. See Phaseolus mungo.

Vagnera paniculata, 101223.
Vetch, bitter. See Lathyrus sativus.
Vigna sinensis, 101584.
Viola ircutiana, 101405.
scoulensis, 101406.
Vilet. See Viola spp.
Viter parvifora, 101265, 101451.
Vitis vinifera, 101573.
Volkameria acultata, 101437.

Wallaceodendron celebicum, 101452. Watermelon. See Citrullus vulgaris. Wheat, common. See Triticum aestivum. Wolfsbane, yellow. See Aconitum lyocotonum. Wrinkled giant-hyssop. See Agastache †ugosa. Xanthostemon verdugonianus, 101453.

Yam, winged. See Dioscorea alata. Yerba maté. See Ilex paraguariensis.

Zamia integrifolia, 101295. Zea mays, 101568. Ziziphus joazeiro, 101496.

U. S. DEPARTMENT OF AGRICULTURE OFFICE OF INFORMATION LIBRARY

LIBRARY

LIBRARY

PLEASE RETURN TO

U. LIBRARY

U. LIBRARY