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U. S. DEPARTMENT OF AGRICULTURE.  
BUREAU OF PLANT INDUSTRY.

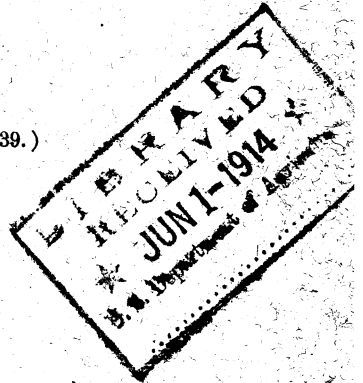
WILLIAM A. TAYLOR, *Chief of Bureau.*

INVENTORY  
OF  
SEEDS AND PLANTS IMPORTED

BY THE

OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION  
DURING THE PERIOD FROM JULY 1 TO  
SEPTEMBER 30, 1912.

(No. 32; Nos. 34093 to 34339.)



WASHINGTON:  
GOVERNMENT PRINTING OFFICE.

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## CONTENTS.

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	Page.
Introductory statement.....	5
Inventory.....	9
Botanical notes and publication of new names.....	39
Index of common and scientific names.....	41

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## ILLUSTRATIONS.

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	Page.
PLATE I. Sudan grass ( <i>Holcus sorghum</i> ) at the Chico Field Station.....	10
II. Branch of a seedling Chinese jujube ( <i>Ziziphus jujuba</i> Miller) which has fruited in Texas.....	10
III. The Medjhoor date, from the Taflelt region, Morocco.....	24
IV. A Tientsin variety of Pai Ts'ai, or Chinese cabbage ( <i>Brassica pekinensis</i> (Lour.) Skeels).....	24
V. Plants of sesame ( <i>Sesamum orientale</i> L.), 3 to 4 feet tall, at the Yar-row Field Station, Rockville, Md.....	30



# INVENTORY OF SEEDS AND PLANTS IMPORTED BY THE OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION DURING THE PERIOD FROM JULY 1 TO SEPTEMBER 30, 1912 (NO. 32; NOS. 34093— 34339).<sup>1</sup>

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## INTRODUCTORY STATEMENT.

This inventory covers a period during which no agricultural explorer was in the field and all the collections were made either by collaborators, American diplomatic or consular officials, representatives of other nations, or interested amateurs who are scattered over the world and who send in on their own initiative seeds of the plants which interest them and which they believe may prove to be of value to this country.

The most interesting introductions included in this inventory, so far as one can judge from the descriptions received with them, may be summarized as follows:

No. 34131, a small-fruited variety of peach from Guadeloupe, French West Indies, sent by Mrs. F. T. F. Du Mont, which has more perfume and savor than the Florida peento; No. 34132, *Sorbus tianschanica*, from central Asia, a shrub or small tree suited to the cool semiarid regions of the United States; No. 34134, *Prunus sibirica*, a species related to the apricots of eastern Siberia, to be used for breeding purposes; Nos. 34140 to 34145, six species of junipers from Russian Turkestan, for use in afforestation work in the arid West; No. 34147, *Medicago coronata*, from Jerusalem, a species found on rocky mountain sides, which reseeds with ease, for use in extensive breeding experiments being carried on at various places throughout the country; No. 34153, *Carissa ovata*, from New South Wales, a drought-resistant species with small fruit, which will interest the hundreds of Florida planters who are growing the *Carissa grandiflora*; No. 34156, a species of *Omphalea*, a tree of the Euphorbiaceæ, which bears edible nuts, slightly resembling the cob nut, according to the literature; No. 34157, *Persea lingue*, from Chile, a possible stock for the avocado; No. 34161, *Strychnos gerrardi*, from Portuguese

<sup>1</sup> A record of new or little-known seeds and plants, procured mostly from abroad, for distribution to experimenters in appropriate locations throughout the United States and its possessions.

This inventory is intended for distribution to the agricultural experiment stations and to the more important private cooperators.

East Africa, an edible-fruited relative of the Kafir orange, *S. spinosa*, which has proved adapted to southern Florida and of which fruiting specimens are now growing at Miami; No. 34163, *Antidesma bifrons*, a euphorbiaceous shrub from Natal, with edible fruit, suited possibly to southern Florida; No. 34177, *Boscia undulata*, the tree which furnishes wood for wagon makers in South Africa, the ash of the South African forests; Nos. 34184 to 34194, 11 varieties of cotton collected by various field men connected with the Bureau of Agriculture at Manila; Nos. 34195 to 34197, three Algerian clovers cultivated and selected by Mr. G. W. Oliver; Nos. 34199 to 34205, seven varieties of mangos from Mauritius, three grafted and four which are said to come true from seed; No. 34210, a species of edible-fruited Spondias from San Jose, Costa Rica, which is propagated by cuttings; No. 34213, suckers of the famous Medjhoor date, from the Tafilelt region of southeastern Morocco, the first suckers of this remarkable date to be imported into this country, where thousands of seedlings are already growing as the result of previous introductions of the seeds; No. 34214, sent by Dr. Yamei Kin, seed of a Chinese corn having a waxy endosperm, similar to a previous introduction which has been used in making many interesting hybrids; No. 34216, a remarkably delicate, practically odorless strain of Pai ts'ai, or Chinese cabbage, which has proved of unusual promise for late summer planting, owing to its extremely rapid growth; No. 34219, the doum palm of Upper Egypt and the Sudan, the seeds of which are employed by manufacturers in Germany as a substitute for vegetable ivory; No. 34252, a native Caucasian beet from the shores of the Black Sea, for the use of beet breeders; No. 34254, the Bolivian black walnut, a variety of *Juglans nigra* which may grow in our tropical possessions; No. 34257, wild teosinte from Durango, Mexico, which will interest the corn breeders, for it is said to cross readily with maize; No. 34259, *Echium auberianum*, a new blue variety of this striking ornamental, which deserves to be tested in the Southern States, its 10-foot flower stems making it a most striking landscape plant; No. 34263, *Bischofia javanica*, a remarkable ornamental tree from Java, of which specimens now growing in northern Florida give an indication of its being a desirable shade tree for that State; Nos. 34264 to 34272, a collection of plums, apricots, and filberts made in Rome by Dr. Gustav Eisen, some of which he believes superior to any varieties with which he is familiar in California; No. 34289, Cambodia cotton, a variety which in southern India has proved superior to any American strain tried there; No. 34291, the *Ta ma* hemp from Hankow, China, a tall-growing variety that may interest Kentucky hemp growers; No. 34308, *Primula forrestii*, a new, fragrant, yellow primrose found in western Yunnan at altitudes of 9,000 to 11,000 feet; No. 34309, the ywapurú, a new plumlike fruit from Paraguay; No. 34330,

*Baryxylum inerme*, a new shade tree with showy yellow flowers, for trial near the shore in southern Florida, Porto Rico, and Panama; and No. 34339, one of the best flavored Hawaiian papayas, bearing flowers of both sexes on the same tree, to be used for grafting purposes in Florida.

Mr. S. C. Stuntz is responsible for the general form of the inventory and, under the supervision of the committee on scientific orthography of this Bureau, for the correctness of the nomenclature, while the identifications of the seeds and the notes on geographic distribution were furnished by Mr. H. C. Skeels, the data sent in by correspondents and travelers being assembled by Miss May Riley.

DAVID FAIRCHILD,  
*Agricultural Explorer in Charge.*

OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION,  
*Washington, D. C., February 10, 1914.*





# INVENTORY.

## 34093 and 34094.

From Philippine Islands. Presented by Mr. O. W. Barrett, chief, Division of Horticulture, Bureau of Agriculture, Manila. Received July 1, 1912.

Seeds of the following; quoted notes by Mr. Barrett:

**34093.** FLACOURTIA SEPIARIA Roxburgh. **Bitongol.**

"A small shrub bearing purplish, sweetish fruit about the size of a small cherry, edible."

*Distribution.*—Dry jungles along coasts in Bengal and Ceylon and eastward through the Malay Archipelago to the Philippines.

**34094.** PARKIA TIMORIANA (DC.) Merrill. **Cupang.**  
(*P. roxburghii* Don.)

"A large, leguminous, ornamental forest tree, indigenous to the Philippines."

"This tree reaches a height of 35 to 40 meters and a diameter of 150 to 180 centimeters. The bole is 15 to 20 meters in length, strongly buttressed, but otherwise fairly regular. The crown, about one-half the height of the tree, is large, vase shaped, widespreading, and open. It is preeminently a tree of rather open and second-growth forests where the dry season is pronounced and is very scarce or entirely absent in those parts where a pronounced dry season is wanting. It prefers good soils and requires a great deal of light and therefore is found in the parang (patches of grass alternating with forest) or on the edges of untouched forests or in open places of dipterocarp forests. The bark is 6 to 12 millimeters in thickness, brown to russet brown in color, often gray where exposed to the sunlight. It has a roughened appearance due to shallow vertical broken lines and is covered with small, brown, corky pustules. The inner bark is dark brownish red in color. The leaves are alternate, doubly compound, large, and fernlike in appearance; the leaflets about 0.5 centimeter in length and whitish beneath. The tree is bare of leaves from one to six weeks during the dry season. The large sapwood is creamy white when fresh and then has a very disagreeable odor. On exposure it discolors rapidly. The heartwood is light brown but is found only in trees 60 centimeters or more in diameter. The wood is light and soft and decays rapidly. The wood is known as *cupang* and has the following uses: Light and temporary construction; packing boxes; wooden soles of shoes; matches. It is known to be good for paper pulp." (*H. N. Whitford, Forests of the Philippines, p. 39-40.*)

**34095 and 34096.** PERSEA AMERICANA Miller. **Avocado.**  
(*P. gratissima* Gaertn. f.)

From Quillota, Chile. Presented by Mr. M. Amaleo, Estacion de Patolojia Vejetal, Servicios de Policia Sanitaria Vejetal, Santiago, Chile. Received July 5, 1912.

Cuttings of the following:

**34095.** "*Fruto verde.*"

**34096.** "*Fruto negro.*"

**34097. MANGIFERA INDICA L.****Mango.**

From San Jose, Costa Rica. Presented by Mr. Carlos Wercklé, Department of Agriculture. Received August 25, 1911. Numbered July 3, 1912.

"*Caribe*. One side golden yellow to orange yellow, the other side scarlet. Nearly no fiber. Large, very good. Flesh orange yellow, peculiar flavor. Very beautiful and highly esteemed. Comes perfectly true from seed. For hot, rather dry regions." (*Wercklé*.)

See No. 30972 for previous introduction.

**34098 and 34099. STIZOLOBIUM spp.**

From Parakimedi Estate, Madras, India, through D. Hooper, esq., Office of Economic Botanist, Calcutta, India, at the request of Mr. C. V. Piper. Received June 24, 1912.

Seeds of the following; quoted notes by Mr. Piper:

**34098.** "*Dukka chikkudu* (Telugu). Seeds oblong, brown and gray marbled."

**34099.** "Seeds ashy gray, with a few black, cloudy splotches. Probably *S. cinereum*."

**34100. ANNONA RETICULATA L.****Custard-apple.**

From Tehuantepec, Mexico. Presented by Mr. W. W. Miller, Los Angeles, Cal. Received July 6, 1912.

**34101. ERIOBOTRYA JAPONICA (Thunb.) Lindl.****Loquat.**

From Rome, Italy. Presented by Dr. Gustav Eisen, California Academy of Sciences, San Francisco, Cal. Received July 2, 1912.

"Seeds taken from fruit as large as average apricots and very fine in taste." (*Eisen*.)

**34102 to 34104. VIGNA SINENSIS (Torner) Savi.****Cowpea.**

From Alexandria, Egypt. Presented by Mr. D. S. Fish, secretary, Alexandria Horticultural Society. Received July 2, 1912.

Seeds of the following; quoted notes by Mr. Fish:

**34102.** *Lubia shami* (Syrian). Without eye spot.

**34103.** *Lubia shami* (Syrian). Brown eyed.

**34104.** *Lubia beladi* (Country). Black eyed.

**34105. MEDICAGO RIGIDULA CINERASCENS (Jord.) Rouy & Fouc.****Alfalfa.**

From Kharput, Turkey. Presented by Mr. William W. Masterson, American consul. Received July 9, 1912.

**34106. DOLICHOS LABLAB L.****Bonavist bean.**

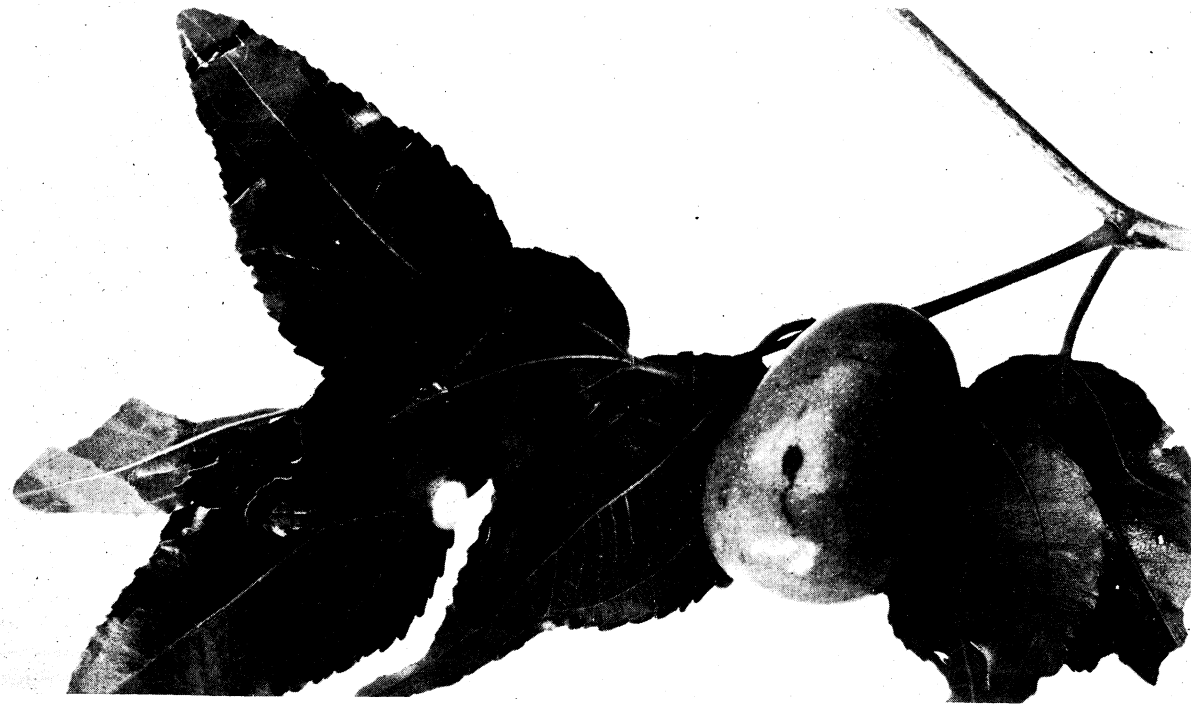
From Pacasmayo, Peru. Presented by Mr. A. D. Selby, botanist, Ohio Agricultural Experiment Station, Wooster, Ohio, who procured it from Mr. B. H. Kauffman. Received July 8, 1912.

"Yuna bean. The sample received is mostly a white-seeded variety, but there is also a brown-seeded variety intermixed."



SUDAN GRASS (HOLCUS SORGHUM) AT THE CHICO FIELD STATION. (S. P. I. No. 34114.)

Apparently the wild or half-domesticated form of our cultivated sorghums, crossing readily with them and entirely lacking the undesirable rootstocks of the ordinary Johnson grass, to which it is related. It promises to be a valuable fodder grass in California, Texas, and the Gulf States. Nine-tenths of an acre at Brownsville, Tex., planted March 5, mowed May 14, yielded hay weighing 7,080 pounds. (Photographed by McKee, July 1, 1913, Chico, Cal.)



Inventory 32, Seeds and Plants Imported.

PLATE II.

BRANCH OF A SEEDLING CHINESE JUJUBE (*ZIZIPHUS JUJUBA* MILLER) WHICH HAS FRUITED IN TEXAS. NATURAL SIZE. (S. P. I. No. 22683.)

Seeds of the "Bottle jujube" were distributed in 1907. This fruit, from one of these seedlings, sent by Mr. F. T. Ramsey, of Austin, Tex., is the largest fruited variety yet in bearing in this country. The flesh is coarse, the skin tough, and the quality only fair. See S. P. I. 34162 for the description of a different variety. (Office photograph No. 10109, August 13, 1912.)

**34109. PANICUM BARBINODE Trinius. Para grass.**

From the Philippine Islands. Presented by Mr. Henry L. Hungerford. Grown at Stock Farm at Alabang, Rizal, near Manila. Received June 3, 1912.

"The seed came originally from Ceylon, where the grass is known as *Panicum muticum*. It closely resembles Para grass but does not seem to have equal forage value." (C. V. Piper.)

*Distribution.*—First described from Brazil; apparently generally distributed in the Tropics.

**34110. HORDEUM VULGARE TRIFURCATUM (Schlecht.) Beaven. Barley.**

From China. Presented by Rev. Horace W. Houlding, South Chihli Mission, Tai Ming Fu, North China. Received November 13, 1911.

**34111 and 34112. OPUNTIA spp. Prickly pear.**

From C. Lerdo, Durango, Mexico. Presented by Dr. Elswood Chaffey. Received at the Plant Introduction Field Station, Chico, Cal., May 16, 1912. Numbered July 15, 1912.

Three cuttings of each of the following:

**34111. OPUNTIA VILIS Rose.**

*Distribution.*—On the footslopes and plains in the vicinity of Zacatecas in central Mexico.

**34112. OPUNTIA AZUREA Rose.**

*Distribution.*—The northeastern part of the Province of Zacatecas in central Mexico.

**34113. GEVUINA AVELLANA Molina. Avellano.**

From Maquehue, Temuco, Chile. Presented by Mr. D. S. Bullock, Lapeer, Mich. Received July 12, 1912.

A beautiful white-flowered proteaceous tree with large rust-colored leaves and coral-red fruit the size of a large cherry. The stone, or nut, is conical, and the kernel has somewhat the taste of hazelnuts; hence the name avellano.

See S. P. I. No. 19115 for previous introduction.

**34114. HOLCUS SORGHUM L. Sudan grass.**

(*Sorghum vulgare* Pers.)

From Khartum, Egypt. Presented by Mr. W. A. Davie, Inspector of Agriculture, for director, Department of Agriculture and Forests, Sudan Government. Received July 12, 1912.

"This is apparently identical with S. P. I. No. 25017. The plant is an annual, closely resembling ordinary Johnson grass in appearance but entirely lacking the rootstocks which make that plant undesirable. Sudan grass is apparently the wild or half domesticated form of our cultivated sorghums, and it crosses readily with the various varieties of sorghum. It has a stem much finer than Amber sorghum and slightly coarser than timothy." (C. V. Piper.)

For an illustration of Sudan grass growing at the Chico Field Station, see Plate I.

**34116. MEDICAGO FALCATA L.**

Collected in the vicinity of Semipalatinsk, Siberia. Purchased from Mr. G. T. Miroshnikov. Received July 11, 1912.

"This is seed of the ordinary 'Sholteek' and is imported for the special purpose of naturalizing this important wild forage plant in various sections of the Northwest,

especially on grazing lands in the Dakotas, Montana, Wyoming, Colorado, and Idaho. It thrives better in sod-grass regions than in bunch-grass sections. See also remarks made under No. 32389." (*Frank N. Meyer.*)

**34117. LITCHI CHINENSIS** Sonnerat. **Litchi.**  
(*Nephelium litchi* Cambess.)

From Soochow, China. Presented by Mr. N. Gist Gee. Received July 15, 1912.

**34118. IRIS TENUISSIMA** Dykes. **Iris.**

From Pitt River region, Goose Valley, Shasta Co., Cal. Presented by Miss Alice Eastwood. Received July 17, 1912.

**34119. ERIOBOTRYA JAPONICA** (Thunb.) Lindl. **Loquat.**

From Rome, Italy. Presented by Dr. Gustav Eisen, California Academy of Sciences, San Francisco, Cal. Received July 16, 1912.

"This shipment contains seeds of both the pear-shaped and apple-shaped loquats of exceptional size, no fruit being less than 2 inches in diameter and some more. They are the best I have seen this year." (*Eisen.*)

**34120 and 34121. ZEA MAYS** L. **Corn.**

From Andahuaylas, Peru. Presented by Mr. W. Henry Robertson, American consul general, Callao, who procured this corn from Mr. Edward Sinclair, a former clerk in the consular office. Received July 16, 1912.

**34120.** White.

**34121.** Yellow.

"Mr. Sinclair states that the yellow is of a sweeter taste than the white, which is more farinaceous, both kinds, however, being highly valued here for culinary purposes. Its grain is unusually large." (*W. Henry Robertson.*)

**34122. CLAVIJA ORNATA** Don.

From Trinidad, British West Indies. Presented by Mr. P. Carmody, director, Department of Agriculture. Received July 16, 1912.

"An evergreen tree attaining a height of 10 to 12 feet, flowers orange colored; racemes drooping, 3 or 4 inches long; leaves long-lanceolate acute, spiny toothed; petioles 2½ inches long." (*Extract from Nicholson's Dictionary of Gardening.*)

*Distribution.*—The island of Trinidad and in the vicinity of Caracas in Venezuela.

**34123. SCHEFFLERA ACTINOPHYLLA** (Endl.) Harms. **Queensland umbrella tree.**

(*Brassaia actinophylla* Endl.)

From Wellington Point, near Brisbane, Queensland, Australia. Presented by Mr. James Pink. Received July 19, 1912.

"This is best known as the Queensland umbrella tree, which is a truly descriptive term for the growth of the foliage. It grows 20 to 30 feet high and flowers on a terminal spike." (*James Pink.*)

"This araliaceous tree, known as "*Pinankaral*" to the natives of Queensland, has large leaves, set like umbrella ribs, at the top of the numerous stems. The wood is soft, close grained, and dark in color, and not durable." (*Maiden, Useful Native Plants.*)

*Distribution.*—The valley of Endeavor River and along the coast in Queensland, Australia.

**34124. ANANAS SATIVUS** Schult. f. **Pineapple.**

From Bowen Park, Brisbane, Queensland, Australia. Presented by Mr. William Soutter, secretary and manager, Queensland Acclimatization Society. Received July 17, 1912.

"Some interesting developments may be looked for with these seeds, as they are from a smooth *Cayenne* crossed with pollen from the *Ripley Queen*. The fruit, weighed with the top, turned the scales at 11 pounds. During the past 30 years I have raised upward of 30,000 plants from seed. These have been, for the greater part, discarded as useless. The selected types now number about a dozen, and these show constancy, and some possess high qualities. The smooth pineapple is an exceptionally shy seeder and responds tardily to pollination. Not so the roughs. They are readily pollinated and produce abundance of seed." (*Soutter*.)

**34125. CALOPHYLLUM INOPHYLLUM** L. **Mast wood.**

From Madras, India. Presented by Mr. José de Olivares, American consul. Received July 19, 1912.

"An evergreen tree which in some localities, especially when near the sea, attains a considerable size. It is indigenous throughout the western peninsula, Orissa, Ceylon, Burma, and the Andaman Islands and is distributed to the Malay Peninsula, Polynesia, Australia, and the islands of eastern Africa. There appears to be little doubt that the true gum tacamahaca, formerly attributed by some writers to *C. inophyllum*, is obtained neither from that nor from any other Indian tree. But when wounded, the stem, and also the fruits of the mast wood, exude a small quantity of bright-green, pleasantly scented resin, soluble in alcohol, which is not collected or made any use of at the present day. Rheede observes, however, that it is emetic and purgative, so that it would appear to have been formerly of medicinal value. From the seeds is expressed a greenish-colored oil known as pinnay or domba oil. According to some, the yield is as great as 60 per cent by weight, and the oil is said to congeal when cooled below 50 degrees. The seeds are collected twice a year—in August and again in February. The oil possesses a disagreeable odor and flavor, but is fairly extensively used for burning and is valued, especially in Polynesia, as an external application in rheumatic affections. The chief centers of production are Bombay, Goa, Travancore, Tinneveli, Tanjore, Puri, etc. It is said to fetch a little more than half the price of coconut oil and is fairly extensively exported from India to Burma. The timber is moderately hard and close grained and by Sebert (Les Bois de la Nouvelle Calédonie) is believed to be magnificent for cabinet work. All the species, and in particular the poon spar, *C. tomentosum*, are highly serviceable for masts, spars, railway sleepers, machinery, etc., but for these purposes are much less in demand than formerly." (*Sir George Watt, Commercial Products of India*.)

**34126. TRITICUM AESTIVUM** L. **Wheat.**  
(*T. vulgare* Vill.)

From La Guayra, Venezuela. Presented by Mr. Thomas W. Voetter, American consul. Received July 23, 1912.

"The grower of this wheat stated that it came to Venezuela originally from the Canary Islands and that it has been found to be the best variety known here to resist dry weather. The sample sent was from a field that was not irrigated and received no rainfall from the time of sowing until harvested. The name of the variety was not known to the grower." (*Voetter*.)



**34127 to 34129.**

From Soochow, China. Presented by Mr. N. Gist Gee. Received July 22, 1912.  
Seeds of the following; quoted notes by Mr. Gee:

**34127.** HORDEUM VULGARE L. **Barley.**

"Used to make a sirup."

**34128.** TRITICUM AESTIVUM L. **Wheat.**

(*T. vulgare* Vill.)

"Used to make flour."

**34129.** HORDEUM VULGARE L. **Barley.**

"Eaten as rice is by the Chinese."

**34130.** CASTILLA ELASTICA Cerv. **Central American rubber.**

From Misantla, Vera Cruz, Mexico. Presented by Mr. C. A. Purpus. Received July 19, 1912.

**34131.** AMYGDALUS PERSICA L. **Peach.**

(*Prunus persica* Stokes.)

From Guadeloupe, French West Indies. Presented by Mrs. F. T. F. Du Mont. Received July 25, 1912.

"In Florida there is a peach which ripens in May and which is locally called the 'pinto [peento] peach.' I have never seen this peach below Rockledge. There is a peach here that is very like it in shape and taste that grows and bears well and stands the heat. Its shape is long, with a decided point at the apex. The stems are slightly indented in the fruit. The fruit is easily detached when ripe. The pulp is juicy, homogeneous, and not stringy. It has more perfume and savor than the Florida peach. It is a freestone and peels easily. It is larger than the Florida peach, the long diameter averaging 1½ inches, the transverse 1½ inches. It is round—not flattened. It resists decay well, even in this heat, from 76 degrees, our coolest nights, to 90 degrees always in the afternoons, some of the fruit lasting after being gathered for four days. It seems to me this peach would do well in southern Florida. The stones I am sending were taken from the fruit between July 9 and 14." (*Mrs. Du Mont.*)

**34132 to 34145.**

From Novospassko, Syzran-Riazan R. R., Russia. Presented by Mr. A. D. Woeikov. Received July 24, 1912.

Seeds of the following:

**34132.** SORBUS TIANSHANICA Ruprecht. **Mountain ash.**

(*Pyrus tianshanica* Franch.)

"A rowan occurring in the higher mountain regions of central Asia. Generally of shrubby growth, though occasionally found to be a small tree. Of value as an ornamental garden and park tree for the cool, semiarid sections of the United States." (*F. N. Meyer.*)

**34133.** ASPARAGUS TRICHOPHYLLUS Bunge. **Asparagus.**

"An asparagus of twining habits found in sandy and alkaline deserts in central Asia. Of value, possibly, in breeding work." (*F. N. Meyer.*)

**34134.** PRUNUS SIBIRICA L. **Plum.**

"A species of Prunus, closely related to the apricots, occurring in eastern Siberia, Manchuria, and Mongolia. May be of value in breeding experiments." (*F. N. Meyer.*)

**34132 to 34145—Continued.**

- 34135.** CRATAEGUS sp. **Hawthorn.**  
 "A haw occurring on stony places along water courses in central Asia. May be of value as a stock for pears in the drier sections of the United States." (F. N. Meyer.)
- 34136.** CRATAEGUS sp. **Hawthorn.**  
 "*Dolana.*"
- 34137.** ACER GINNALA SEMENOVII (Reg. and Herd.) Pax. **Maple.**  
 "A maple of shrubby growth, generally found on dry, rocky places in central Asia. Of value as an ornamental tall shrub or small tree in the drier parts of the United States." (F. N. Meyer.)
- 34138.** ROSA sp. **Rose.**  
 "*Flor. roseis.*"
- 34139.** ROSA sp. **Rose.**  
 "*Jt Murut.*"
- 34140.** JUNIPERUS PSEUDOSABINA Fischer and Meyer. **Juniper.**  
 "*Haz artsha.* A juniper growing on very dry, sun-burned mountain slopes in Russian Turkestan. Much sought after as fuel. May be valuable for afforestation purposes in the arid and semiarid sections of the United States." (F. N. Meyer.)
- 34141.** JUNIPERUS COMMUNIS OBLONGA (Bieb.) Loudon. **Juniper.**  
*Distribution.*—A form of juniper with longer leaves and smaller oblong fruits found in the trans-Caucasian region of southeastern Russia.
- 34142.** JUNIPERUS sp. **Juniper.**  
 "*Saur artsha.*"
- 34143.** JUNIPERUS sp. **Juniper.**
- 34144.** JUNIPERUS sp. **Juniper.**  
 "*Kara artsha.*"
- 34145.** JUNIPERUS sp. **Juniper.**  
 "*Sary artsha.*"

**34147 to 34151. MEDICAGO spp.**

From Jerusalem, Palestine. Presented by Mr. E. F. Beaumont. Received July 19, 1912.

Seeds of the following:

- 34147.** MEDICAGO CORONATA (L.) Gaertn.  
 "I am very much impressed with the very hardy character of this. It is found in all localities and especially on rocky mountain sides where the soil is only a few inches deep on the rock. This year the later rains were practically a failure, a fact which further shows its drought-resisting qualities. Although its seeds are small, it reseeds with ease." (Beaumont.)
- 34148.** MEDICAGO RUGOSA Desr.  
*Distribution.*—The countries bordering on the Mediterranean from Spain through Italy and Greece to Asia Minor and Syria, and in northern Africa.
- 34149.** MEDICAGO MARINA L.
- 34150.** MEDICAGO MINIMA (L.) Grufb.
- 34151.** MEDICAGO ROTATA Boiss.

**34152. ILEX PARAGUARIENSIS St. Hil. Yerba maté.**

From Buenos Aires, Argentina. Presented by Mr. C. F. Mead, Caballero, Paraguay. Received July 16, 1912.

See No. 29097 for previous introduction and description.

**34153. CARISSA OVATA R. Brown.**

From Sydney, New South Wales. Presented by Mr. J. H. Maiden, Botanic Gardens. Received July 30, 1912.

"Warialda, New South Wales. Growing at the foot of hills of a volcanic nature, subjected to periodical droughts, early flowering and late in fruiting. Fruits small, owing to the very extreme drought during the past two years." (*John Luke Boorman, collector.*)

"This little bush produces a very pleasant fruit, which is both agreeable and wholesome. It is like a sloe, egg-shaped, and about half an inch long. It exudes a viscid, milky juice and contains a few woody seeds. 'I can testify that the fruit is both agreeable and wholesome, and I never knew an instance of any evil consequences, even when they were partaken of most abundantly.' (*Tenison-Woods.*)" (*Maiden, Useful Native Plants.*)

**34154 and 34155. IPOMOEA BATATAS (L.) Poir. Sweet potato.**

From Auckland, New Zealand. Presented by A. Yates & Co. Received July 31, 1912.

One tuber of each of the following:

**34154.** Red skin.

**34155.** White skin.

"Varieties of South Sea Island sweet potatoes." (*Yates & Co.*)

**34156. OMPHALEA sp. (?)**

From Bocono, Colombia, South America. Presented by Mr. W. O. Wolcott, Brooklyn, N. Y. Received July 26, 1912.

"I can give you no definite information about these nuts except what the natives told me, as I bought them in the town at the foot of the mountains and did not see the trees. The natives told me they grew high up in the mountains where it is quite cold—but not freezing—probably 7,000 to 8,000 feet or more, as Bocono, where I got them, is about 5,000 feet. They say the trees grow very large, 12 to 18 inches in diameter and 50 to 60 feet high, and are very prolific in nuts. They call the nuts by two names—*nueces* (nuts) and *pan del pobre* (poor people's bread). I have traveled for the last 20 years all over Venezuela and Colombia and have never seen them except at this one place. It rains a good deal in those mountains for about six months of the year, from April to September or October, the rest of the year being dry. I got these last March, just at the end of the season. I should judge they would make fine stock feed in meal; in fact, the natives eat them, and they told me they fatten their hogs on them finely, as the shells are thin and very brittle. The meats appear to have much oil. I find them rather hard when dry. When I got them the meats were softer than chestnuts when first gathered." (*Wolcott.*)

**34157. PERSEA LINGUE (Ruiz and Pav.) Nees. Lingue.**

From Santa Ines, Chile. Presented by Mr. Salvador Izquierdo. Received August 31, 1911. Numbered August 1, 1912.

"The bark of the lingue is used on a large scale for tanning leather, and the leaves are poisonous to animals. As a medicine, the bark is a powerful astringent and was formerly exported in considerable quantities." (*Espinoza, Plantas Medicinales de Chile.*)

See No. 24208 for previous introduction.

**34158 to 34160.**

From Honolulu, Hawaii. Presented by Dr. E. V. Wilcox, Hawaii Agricultural Experiment Station. Received August 2, 1912.

**34158.** DIOSCOREA SATIVA L. **Yam.**

**34159.** DIOSCOREA PENTAPHYLLA L. **Yam.**

**34160.** SMILAX SANDWICENSIS Kunth. **Uhi.**

"A tall, slender climber with a woody, unarmed stem and tuberous rhizomes which are eaten by the Hawaiians in times of scarcity."

**34161. STRYCHNOS GERRARDI N. E. BROWN. Quaqua.**

From Province of Mozambique, Portuguese East Africa. Presented by the Inspector of Agriculture. Received August 5, 1912.

"A small tree, 3 to 10 meters high, without thorns and with exceedingly variable leaves. Fruit one celled, globose, 5 to 7 centimeters in diameter, glaucous, glabrous, often spotted, with a hard shell and numerous flat seeds lying in acidulous, edible pulp. Abundant from Natal to Inhambane, especially on the sandy soils." (*Sim, Forest Flora of Portuguese East Africa.*)

**34162. ZIZIPHUS JUJUBA Miller. Jujube.**

(*Z. sativa* Gaertn.)

From Washington, D. C. Presented by Mr. Leslie Reynolds, superintendent, U. S. Botanic Garden, Washington, D. C., through Mr. Frank N. Meyer. Received August 2, 1912.

"A large-fruited variety of the jujube found growing in the United States Botanic Garden. Has successfully withstood severe freezes." (*F. N. Meyer.*)

For an illustration of a seedling Chinese jujube which has fruited in Texas, see Plate II.

**34163 to 34179.**

From Durban, Natal. Presented by Dr. J. Medley Wood, Durban Botanical Gardens. Received July 29, 1912.

Seeds of the following:

**34163.** ANTIDESMA BIFRONS Tulasne.

(*A. venosum* Meyer.)

"A euphorbiaceous shrub or small tree 5 to 15 feet in height, having a wide distribution through central East and West Africa. The smooth, dark-red fruit, one-half inch long or less, is eaten by natives and children. It is not very palatable and probably might be injurious if eaten in quantity." (*Sim, Forest Flora of Cape Colony.*)

**34164.** BAPHIA RACEMOSA (Hochst.) Baker. **Violet pea.**

"An erect shrub or small-branched tree with ascending branches from Natal. It is easily distinguished from all leguminous Cape shrubs in having simple, unifoliate, ovate-lanceolate leaves. It has ornamental, white, strongly violet-scented flowers with an orange spot at the base of the standard and is known in Natal as the violet pea. Wood too small to be used for timber but, if cut in winter, peeled at once, and seasoned, makes good implement handles." (*Sim, Forest Flora of Cape Colony.*)

## 34163 to 34179—Continued.

**34165.** CAPPARIS CITRIFOLIA Lamarck.

"A straggling shrub 5 to 8 feet high or with climbing branches where protected. Abundant in eastern Cape Colony and also in Natal. Decoction of the roots used in local and native medicine." (*Sim, Forest Flora of Cape Colony.*)

**34166.** CARISSA GRANDIFLORA (E. Meyer) DC.

Amatungulu.

**34167.** WARNERIA THUNBERGIA (L. f.) Stuntz.

(*Gardenia thunbergia* L. f., Supplementum Plantarum Systematis Vegetabilium, p. 162, 1781.)

Seeds of this white-flowered rubiaceaceous shrub were received under the name *Gardenia thunbergia* L. f. In publishing this name, the younger Linnæus cited *Thunbergia capensis* Montin (Kongl. Vetensk. Acad. Handl. Stockholm, vol. 34, p. 288, pl. 11, 1773). Montin, however, merely characterized the genus *Thunbergia*, with neither binomial nor citations. The specific name given by Linnæus filius is therefore the earliest and should be adopted. The reason for using the generic name *Warneria* for the plants usually referred to the genus *Gardenia* is explained under *Warneria augusta* Stickman, S. P. I. No. 30498, in Bulletin No. 242, Bureau of Plant Industry, p. 14, 1912.

"A small, much-branched tree, 8 to 15 feet high, with a smooth, white, unarmed stem up to 9 inches in diameter. Leaves very variable. Flowers terminal, solitary, strongly scented, large, white, and attractive. Fruit woody, very hard, oval or oblong, 2 to 4 inches long, 2 inches in diameter, many seeded, remaining on the trees for several years, increasing in size with age, and, finally, either smooth or roughened, but usually white. The strongly scented white flower makes this a favorite garden flowering tree, and it is also used as a stock for grafting the double *Gardenia florida* (*Warneria augusta* Stickman) upon. The wood is hard, heavy, and strong, and used for making tools, etc." (*Sim, Forest Flora of Cape Colony.*)

**34168.** IPOMOEA ALBIVENIA (Lindl.) Sweet.

*Distribution.*—A perennial shrubby climber with large white flowers, found in the Kalahari region of South Africa and in Natal.

**34169.** TRICALYSIA FLORIBUNDA (Harvey) Stuntz.

(*Kraussia floribunda* Harvey, Hooker's Journal of Botany, vol. 1, p. 21, January, 1842.)

(*Coffea kraussiana* Hochstetter, Flora, vol. 25, p. 237, April, 1842.)

(*Tricalysia kraussiana* (Hochst.) Schinz, Mem. Herb. Boiss., vol. 10, p. 67, 1900.)

Seeds of this rubiaceaceous shrub from Natal were received under the name *Kraussia floribunda* Harvey. This name, published in January, 1842, was based on Krauss's No. 121, which was also the type of *Coffea kraussiana* Hochstetter, published in April, 1842. As the plant is now considered to belong to the genus *Tricalysia* and the combination *Tricalysia floribunda* seems never to have been published, it is necessary to adopt it now.

"Small tree up to 20 feet in height and 1 foot in diameter, with fluted stem. Leaves evergreen. Fruit a small, black berry. Wood heavy, hard, not used." (*Sim, Forest Flora of Cape Colony.*)

**34170.** MABA NATALENSIS Harvey.

"A tree 20 to 50 feet high, with horizontal, densely foliated branches. Fruit one-half inch in length, acorn shaped in the green calyx cup, yellow when ripe, rather succulent, though hardly edible. Frequent on the coast through Natal. Usually on the sand dunes or behind them. Rarely large enough for use." (*Sim, Forest Flora of Cape Colony.*)

**34163 to 34179**—Continued.**34171. PTERYGOCARPUS FLORIBUNDUS** (Meyer) Stuntz.

(*Dregea floribunda* Meyer, *Commentariorum de Plantis Africae Australioris*, vol. 1, fasc. 2, p. 199, 1837.)

Seeds of this asclepiadaceous plant from South Africa were received under the name *Dregea floribunda* Meyer. The generic name *Dregea* had, however, been used by Ecklon and Zeyher in June, 1836 (*Enumeratio Plantarum Africae Australiae Extratropicae*, p. 350) for certain umbelliferous plants now considered to belong to *Peucedanum*. It is therefore necessary to adopt the generic name *Pterygocarpus*, published by Hochstetter in 1843 (*Flora*, vol. 26, bd. 1, p. 78). The type species of Hochstetter's genus is *P. abyssinicus*, a plant congeneric with *P. floribundus*.

**34172. ONCOBA KRAUSSIANA** (Hochst.) Planchon.

*Distribution*.—A much-branched shrub with large white flowers found in the woods in the vicinity of Durban, in Natal, South Africa.

**34173. OSTEOSPERMUM MONILIFERUM** L.

*Distribution*.—A diffuse shrub with bright-yellow flowers found along the coast of South Africa from Natal to Cape Colony.

**34174. OXYANTHUS PYRIFORMIS** (Hochst.) Skeels.

(*O. natalensis* Sond.)

See S. P. I. No. 31856 for previous introduction.

**34175. PAVETTA REVOLUTA** Hochst.

"A large shrub or small tree, smooth, free flowering, and apparently confined to the coast. On the coast dunes from Port Elizabeth to Natal, scarce, and of no economic use." (*Sim, Forest Flora of Cape Colony*.)

Introduced for use as an ornamental in Florida.

**34176. PSYCHOTRIA CAPENSIS** (Eckl.) Vatke.

"Usually a shrub, sometimes a tree, up to 10 to 15 feet high, with 3 to 6 inches stem diameter, and with crooked and forked timber. A common Natal shrub of no economic use." (*Sim, Forest Flora of Cape Colony*.)

Introduced for use as an ornamental in Florida.

**34177. BOSCIA UNDULATA** Thunberg.

**White ironwood.**

(*Toddalia lanceolata* Lam.)

"A large evergreen tree, often 2 to 5 feet in diameter, with a clean, tall stem in high forests; frequent also as a bush or small, spreading tree in scrub forests. Flowers from September to December, according to locality and season; fruit ripens in autumn; 8,000 dry fruits weigh 1 pound and contain about 30,000 seeds. The seeds germinate easily, and the cultivation of the tree is simple. Timber white, close grained, tough, hard, and heavy. Usually to be had sound in the mountain forests up to 2 feet diameter and with 10 to 20 rings to the inch. Used mostly by wagon makers. In toughness, it is the ash of the South African forests." (*Sim, Forest Flora of Cape Colony*.)

**34178. TURRAEA OBTUSIFOLIA** Hochst.

"A free-flowering shrub, 3 to 5 feet high, common on the dunes along the coast of Cape Colony and Natal. It is never large enough to be of economic value further than its use in holding fully exposed sea dunes; its showy flowers and seeds make it worth cultivation where it will grow. Flowers during early summer, fruits in autumn." (*Sim, Forest Flora of Cape Colony*.)

**34179. TURRAEA HETEROPHYLLA** Smith.

See 31863 for previous introduction.

**34180. MALUS sp. Crab apple.**  
(*Pyrus* sp.)

From Jamaica Plain, Mass. Presented by Mr. Charles W. Livermore, Brookline, Mass. Received August 7, 1912.

See No. 32360 for previous introduction and description.

**34181. MICROCOS LATERIFLORA L.**  
(*Grewia asiatica* L., Mantissa, p. 122, 1767.)

From Saff, Egypt. Presented by Mr. Alfred Bircher, The Middle Egypt Botanic Gardens. Received August 6, 1912.

Seeds of this yellow-flowered tillaceous shrub from India were received under the name *Grewia asiatica*. The generic names *Microcos* and *Grewia*, which are recognized as congeneric, were both published in *Species Plantarum*, 1753, *Microcos* on page 514 and *Grewia* on page 964. *Microcos* having priority of publication, it is necessary to adopt it. The present species was published by Linnæus as *Grewia asiatica* in 1767, but had been previously published (*Species Plantarum*, p. 514, 1753) as *Microcos lateriflora*, which name it is necessary to use here.

**34182. STIZOLOBIUM CINEREUM** Piper and Tracy.

From Baitul, Central Provinces, India. Presented by D. Hooper, esq., Office of Economic Botanist, Botanical Survey of India Department. Received August 6, 1912.

"Locally called 'dadaball.'" (*Hooper*.)

**34183. PISUM ARVENSE L. Pea.**

From Khotan, Chinese Turkestan. Received through Mr. Frank N. Meyer, agricultural explorer for this Department, September 11, 1911. Numbered August 9, 1912.

Brownish black seeds. Picked out of S. P. I. No. 31806. See that number for remarks.

**34184 to 34194. GOSSYPIUM spp. Cotton.**

From Manila, Philippine Islands. Presented by Mr. M. M. Saleeby, Bureau of Agriculture. Received July 13, 1912.

"These seeds were collected and briefly described by several of our field men stationed in the above provinces, and the following is a description of each species or type as given by them." (*Saleeby*.)

**34184. GOSSYPIUM ARBOREUM L.**

"*Gapas Kinachila*. Locality, southern part of Cebu, principally in the towns of Oslob, Buljo-on, and Dalaguete. This species is planted usually as a garden or dooryard crop throughout the greater part of the province. It is grown to a greater extent in the towns mentioned above, where the fiber is used for spinning and for the weaving of cloth by primitive wooden looms. It is supposed to have been introduced by the Spaniards, but when and by whom it was introduced could not be determined. Several of the natives claim that it was introduced from China, but no definite proof is given to sustain this claim. It has been grown for at least several generations. The name, translated into English, means 'Spanish cotton.' Full-grown plants average about 2 meters in height, while isolated plants sometimes reach the height of 3½ meters. The flowers are white. On the inside of the corolla, extending from the base half-way up to the tips, the petals are purple. There are no distinct purple spots at the base of the petals, but there is a purple coloration at the base of the outside of the petals, gradually fading into white."

## 34184 to 34194—Continued.

34185. *Gossypium hirsutum* L.

"*Gapas Sanglay*. Locality, Cebu. This is one of the brown cottons of the Philippines. It is planted to a very limited extent as a garden or dooryard plant. It is supposed to have been introduced by the Spaniards, but the origin and time of its introduction could not be determined. The word 'gapas' means 'cotton' and 'sanglay' means 'mixed' or 'mixed breed' and corresponds to the Spanish word 'mestizo.' The fiber is used to a very limited extent for spinning. The leaves and immature bolls are sometimes used by the natives as a medicine for the treatment of fever. The plant averages about  $1\frac{1}{2}$  meters in height. The flowers are yellow, and there are no purple spots at the base of the petals."

34186. *Gossypium* sp.

"*Toguillo*. This is apparently the kidney cotton, or *Gossypium brasiliense*. Locality, Iloilo Province. The isolated plants are found widely distributed in Panay and other islands of the archipelago. Formerly the lint was used in several districts in Iloilo Province for weaving purposes, but since the introduction of the *Taal* species it has been almost replaced by the latter. The original as well as other data relating to its introduction could not be determined. The oldest natives declare that to their definite knowledge it has been grown in Panay for more than 40 or 50 years. How much longer before that it had been planted is only a matter of conjecture. In Iloilo it is known as 'Toguillo,' 'Guillo,' or 'Visaya.' In two or three instances the fiber of this cotton is grown for commercial purposes. In some localities it is used for making fish nets, its supposed superior strength making it more valuable than the *Taal* for that purpose. It is generally grown as a perennial shrub that attains the height of 4 to 5 meters if allowed to follow its natural habit. The leaves are 4 or 5 lobed, usually the latter, and measure 10 to 22 centimeters in diameter. The bolls are longer and narrower than those of the *Taal*, measuring 4 to 5 centimeters by 2.5 to 3 centimeters. The seeds are black and quite free from fuzz, five to nine being developed in each valve. The fiber is finer, longer, and stronger than that of the *Taal*. The flowers are yellow, with red spots at the bases of the petals. The fiber is about 3 centimeters in length. Several samples of it have lately been forwarded to firms in the United States, and the reports received were very favorable. The demand for this cotton is almost unlimited, and the price quoted was 20 cents per pound and will constantly remain 4 to 6 cents per pound above that of the middling Upland."

34187. *Gossypium hirsutum* L.

"*Taal*. This species was introduced into Panay about 15 years ago from the region around Taal Mountain, in Batangas Province; hence the significance of the local name. Practically speaking, this cotton is the only one grown here commercially or with any attempt at systematic planting. It is usually cultivated alternately with rice; for this, and the further fact that it is a more heavy producer of lint, its cultivation has been gradually superseding that of *Toguillo*. It is planted as a field crop in the towns of Guimbal and Miagao, of Iloilo Province, and the towns of Bugason and Valderama, of Antique Province. Its origin could not be ascertained. It is probably the same as the 'Bulac Damo,' of Batangas. A few years back the production and spinning of this kind of cotton, and also the weaving of cotton cloth from it, constituted the chief household industry of Panay. The quantities of cloth and blankets manufactured from it were, it is said, in excess of the local consumption. The introduction of the Chinese cotton yarn and cloth by the Chinese merchants during recent years has resulted in a considerable decline in the production of this and other cottons, and to-day imported Chinese cloth



**34184 to 34194**—Continued.

and blankets have largely superseded the stronger homemade articles. The plants attain the height of 0.8 meter to 1½ meters. The flowers are white to pink in color, and there are no color spots at the bases of the petals. The leaves are either 3 to 5 lobed, usually the former, measure 6 to 12 centimeters in diameter, and produce a pubescence on their under surfaces. The bolls are nearly spherical, averaging 4 centimeters in diameter. The prevailing number of valves per boll is four, though three to five are common. The seeds are brown and covered with fuzz. The lint measures about 2½ centimeters in length.”

**34188. GOSYPIUM HIRSUTUM L.**

“*Candava*. Our field man in Panay described this as being a variety of the *Taal* species mentioned above. (S. P. I. No. 34187.) He was led to this belief by the fact that the plants are apparently identical, with no difference whatever except in the color of the lint. I have not seen the plant producing this brown lint, but am inclined to think it is a separate species. The cultivation is very limited, and the production of the fiber is estimated at not more than 1 per cent of that of *Taal*.” (Saleeby.)

**34189. GOSYPIUM sp.**

“*Gapas*. Locality, Tacloban, Leyte Province. The name means ‘cotton.’ It is planted merely as a garden or dooryard plant. It was introduced into Leyte Province either from Batangas or Ilocos Norte. Its fiber is used to a very limited extent for spinning. No articles of importance are made from it. The plants range from 1½ to 2½ meters in height. The flowers are yellow, and there are also purple spots at the bases of the petals. A specimen was turned over to Mr. Merrill, our botanist, for identification. He has not given a final report on it, but believes it is *Gossypium nankin*.”

**34190. GOSYPIUM sp.**

“*Bulac Damo*. Our field man has not sent his report regarding this variety. Judging from the lint and seed, however, I am inclined to think it is the same as the *Taal* species of Panay.” (Saleeby.)

**34191. GOSYPIUM HIRSUTUM L.**

“This cotton is similar to *Gapas Sanglay* (S. P. I. No. 34185). The description applies to this variety in every respect, except that in the latter the leaves and bolls are slightly larger than the former. Only two plants of this variety were found, which were grown in a low and rather damp place. This variety may be the same as the regular *Gapas Sanglay* (S. P. I. No. 34185), and the large size of the bolls and leaves may be due to a more fertile soil with sufficient moisture. Locality, Cebu Province.”

**34192. GOSYPIUM sp.**

“*Bulac Saot-Bayo*. A kind of cotton from Batangas Province, regarding which we have no information.”

**34193. GOSYPIUM sp.**

“*Bulac Cahoz*. This is apparently the same as the *Toguillo* cotton of Iloilo (S. P. I. No. 34186). The word ‘cahoz’ means tree, and in this case refers to the fact that this species is grown as a perennial crop.”

**34194. GOSYPIUM HIRSUTUM L.**

“*Bulac Saot-Pula*. From Batangas Province. This is probably the same as the *Candava* variety (S. P. I. No. 34188) of the *Taal* cotton of Iloilo. The name ‘Taal’ indicates that the Iloilo species must have been introduced from the region around Taal Mountain, in Batangas Province.”

**34195 to 34197. TRIFOLIUM spp.**

**Clover.**

Grown in the United States Department of Agriculture greenhouses at Washington, D. C., by Mr. G. W. Oliver, who collected the original seed in Algeria. Numbered August 9, 1912.

Seeds of the following; quoted notes by Mr. Oliver:

**34195.** TRIFOLIUM sp.

(Oliver No. 3.) "Makes a low growth, but abundant; seems to be annual."

**34196.** TRIFOLIUM ANGUSTIFOLIUM L.

(Oliver No. 13.) "Grows rapidly, annual, about 15 inches high."

**34197.** TRIFOLIUM PROCUMBENS L.

(Oliver No. 28.) "Very tall form."

**34199 to 34208.**

From Port Louis, Mauritius. Purchased from the Department of Forests and Gardens, through Mr. G. Regnard. Received August 5, 1912.

Plants of the following:

**34199 to 34205.** MANGIFERA INDICA L.

**Mango.**

**34199 to 34201.** Grafted plants.

**34199.** *Augusta*.

**34201.** *Aristide*.

**34200.** *Jose*.

**34202 to 34205.** Not grafted, but keeping the qualities of the species.

**34202.** *Torse*.

**34204.** *Maison Rouge*.

**34203.** *Figet*.

**34205.** *Dauphine*.

**34206.** DIMOCARPUS LONGAN LOUR.

**Longan.**

(*Nephelium longana* Cambess.)

"Fruit small and spherical, the size of a hazelnut, smoother than the litchi, reddish, rosy, or yellow. Pulp relatively thin, translucent, very juicy, sweet, with a characteristic taste of ether. The name dragon's-eye given to this species is due to the black spot which the seed bears at the hilum." (*Capus and Bois, Produits coloniaux.*)

**34207.** PIMENTA ACRIS (Swartz) Kostel.

**Bayberry.**

**34208.** PIMENTA OFFICINALIS Lindley.

**Allspice.**

*Distribution.*—The allspice tree, found in southern Mexico and southward throughout tropical America and in the West Indies. Cultivated in the Tropics of the Old World.

**34209 and 34210.**

From San Jose, Costa Rica. Presented by Mr. Carlos Wercklé, Museo Nacional. Received August 10, 1912.

Cuttings of the following:

**34209.** SAPIUM UTILE PREUSS.

**34210.** SPONDIAS sp.

**Sismojo.**

"*Sismojo*. Small tree, common in hedgerows and propagated by cuttings. The fruit of the typical variety is small, oval, reddish yellow in color, and of acid taste. The jocote, jocote tronador, and sismojo seem to be cultivated races of the same species." (*Pittier, Plantas Usuales de Costa Rica.*)

**34211. AMYGDALUS PERSICA L.****Peach.***(Prunus persica Stokes.)*

From Soochow, China. Presented by Mr. N. Gist Gee, Soochow University.  
Received August 12, 1912.

"Small hardy peach." (*Gee.*)

**34212 and 34213.**

From Algiers, Algeria. Presented by Dr. L. Trabut, director, Service Botanique.  
Received August 12, 1912.

**34212. PISTACIA ATLANTICA Desf.****Betoom.**

"This round-topped tree, which grows only singly and not in forests, is characteristic of the high plateaus of the Atlas Mountains. The fruits are gathered for use by the Arabs." (*Martins, Von Spitzbergen zur Sahara.*)

**34213. PHOENIX DACTYLIFERA L.****Date.**

"*Medjhoal.* This date comes from the Tafilet (also written Tafilet and Tafil-alet) region in southeastern Morocco. It is the finest variety in the Tafilet country, but is unknown in America and comparatively little known in Europe, except in England and Spain, in both of which countries it brings a higher price than any other date on the market in spite of the fact that it is almost never put up in attractive form but is sold in bulk. Dates of this variety can be found in practically every grocery in Spain, where they are known as 'Datiles de Berbería.'

"The fruit is large, from 2 to 2½ inches long and from three-fourths to 1 inch thick. It is semitranslucent, dark brown in color, and has flesh rather firm in texture and of a most delicious flavor. It is much darker in color than the Deglet Noor variety and keeps much better. The dates always have the calyx (zenta) attached to the stem end.

"The four offshoots comprised under this number were secured for Dr. L. Trabut by Si Mohammed ben Idris Fassi in the Er Reteb region, that part of Tafilet said to produce the best quality of this well-known date, which has made the whole Tafilet country famous.

"This gift from the Service Botanique of the Algerian Government to the Department of Agriculture marks an epoch in American date culture. These selected offshoots from the best locality in Tafilet will not only show how this famous variety succeeds in the New World deserts, but will also make it possible to determine how truly it has been reproduced by the seedlings, some thousands of which are already growing in California." (*W. T. Swingle.*)

For an illustration of the Medjhoal date, natural size, see Plate III.

**34214 to 34216.**

From Tientsin, China. Presented by Dr. Yamei Kin. Received August 10, 1912.  
Seeds of the following; quoted notes by Dr. Kin.

**34214 and 34215. ZEA MAYS L.****Corn.**

**34214.** "This is the northern Chinese corn which is of the waxy-endosperm kind, though perhaps somewhat different from the kind (S. P. I. No. 34053) I sent before."

**34215.** "This species of the above corn had become mixed with some foreign corn and shows it clearly. The Chinese say that the foreign corn grows less cob and a given area producing corn will give more grain per bushel measure, but when milled to take off the outer skin of the kernel, which it seems they do before eating it, the foreign corn has so much thicker skin that a given lot of corn does not give as much meal as the Chinese."



THE MEDJHOOL DATE, FROM THE TAFILELT REGION, MOROCCO. NATURAL SIZE.  
(S. P. I. No. 18630.)

This is a dark-colored variety of very unusual size and good flavor. It is exported to Spain and England, but is unknown in American markets. S. P. I. No. 34213 consists of four offshoots of this variety presented by the Service Botanique of the Algerian Government, especially secured by Dr. L. Trabut, director of that service and collaborator of the Office of Foreign Seed and Plant Introduction. (Office photograph No. 1826, May 28, 1906.)



Inventory 32, Seeds and Plants Imported.

PLATE IV.

A TIENTSIN VARIETY OF PAI TS'AI, OR CHINESE CABBAGE (*BRASSICA PEKINENSIS* (LOUR.) SKEELS). (S. P. I. No 34216.)

This variety has been tested for several seasons in various parts of America and has proved to be a promising late vegetable. It makes a very rapid fall growth, can be planted after the summer vegetables are harvested or about the time turnips are sown, and makes a long, narrow head before freezing weather. (Photographed by Crandall, No. 13540, December, 1913, Chevy Chase, Md.)

**34214 to 34216—Continued.****34216.** BRASSICA PEKINENSIS (Lour.) Skeels. **Pai ts'ai.**

"Fine Chinese cabbage seed. The people here plant thinly, either in rows, and then pull up the weak sprouts, or scatter over a space and then transplant. The latter method is said to yield the best plants, though for a while the young shoots appear to suffer; yet when the autumn weather comes on and they are well manured the transplanted shoots will make better growth. The plants must be manured heavily when about 8 or 10 inches high—not sooner, or they will burn out, as they say, and not later, or they will not make the growth before cold weather sets in. To get the extra-fine close heads, tie up the leaves when they are pretty well grown, so that the leaves which are loose and long will not fall away from the center and become frost-bitten. The plants should be planted not less than 2 feet apart, in rows that have at least 3 feet space between, as the cabbages need a good deal of room. When well grown, the average plant will weigh, after being trimmed for the market, about 8 or 9 catties; nearly 2 feet long, mostly crisp white stem, and but little green leaf. I do not know how much nourishment there may be in it, but it is the main staple of the diet of the people here in the north during the winter. With plenty of coarse whole-wheat flour, maize, and cabbage, the people make a good growth certainly here."

For an illustration of a field of Chinese cabbage as grown at Chevy Chase, Md., see Plate IV.

**34217 and 34218.**

From McCale Sana, Lumbwa, British East Africa. Presented by Mrs. Ernest Smith. Received August 12, 1912.

Seeds of the following:

**34217.** (Undetermined.)

"Wild coffee."

**34218.** PHOENIX sp.

"These wild dates are all growing on the river banks; some are growing in the river itself. I fancy this is how they have managed to survive, as the Lumbwa natives have been most destructive with grass fires and burning out everything, and when they wanted a new piece of ground to cultivate they would set fire to the forest as the easiest way of clearing the ground they wanted to use." (Smith.)

**34219.** HYPHAENE THEBAICA (L.) Martius. **Doum palm.**

From Hamburg, Germany. Presented by Mr. Robert P. Skinner, American consul general. Received August 7, 1912.

Seeds imported through the German importers, who purchase them for use in button making, in order to determine the possibility of securing large quantities of good quality doum-palm seeds for planting purposes. Immense quantities of seeds are imported through Hamburg to supply the button manufacturers of Germany with a cheap substitute for the vegetable ivory produced by the nuts of *Phytelephas* species.

**34220 to 34249.** ORYZA SATIVA L. **Rice.**

From Manila, Philippine Islands. Presented by Mr. F. W. Taylor, Director of Agriculture, through Mr. O. W. Barrett, chief, Division of Horticulture, Bureau of Agriculture. Received August 10, 1912.

"The yield of these rices varies from 5,000 kilos per hectare down to 3,800 kilos, but, since these yields are considerably affected by local conditions, weather, etc., there

is no need, in my opinion, to give the approximate yield of each variety (the only two yielding 5,000 kilos per hectare are Nos. 579 [S. P. I. No. 34234] and 598 [S. P. I. No. 34233], most of the others running about 4,000 to 4,300 kilos per hectare). The data regarding the number of days for maturing the crop are, of course, not of much value to you, considering the vastly different conditions under which these varieties will be grown in the States and considering the variation of the individual sensitiveness of the varieties to local influences." (*Barrett.*)

Seeds of the following:

34220. <i>Arabon.</i>	34235. <i>Macan Santa Rita.</i>
34221. <i>Binugayan carcar.</i>	34236. <i>Macan Silangan.</i>
34222. <i>Baybay.</i>	34237. <i>Magpunit.</i>
34223. <i>Binatad.</i>	34238. <i>Minaya.</i>
34224. <i>Binankero.</i>	34239. <i>Pilapil.</i>
34225. <i>Calodo.</i>	34240. <i>Piniling Daniel.</i>
34226. <i>Cabayuran.</i>	34241. <i>Quinabuay.</i>
34227. <i>Calobang.</i>	34242. <i>Quinanay.</i>
34228. <i>Cavitenang nagmalu.</i>	34243. <i>Quinatia.</i>
34229. <i>Ilangitnon.</i>	34244. <i>Quiriquiri.</i>
34230. <i>Joquianan.</i>	34245. <i>San Pablo.</i>
34231. <i>Lauá.</i>	34246. <i>Tayading pulá.</i>
34232. <i>Mancasar.</i>	34247. <i>Takilid.</i>
34233. <i>Manticanon.</i>	34248. <i>Tungcadol.</i>
34234. <i>Manabun-ac.</i>	34249. <i>Virgen.</i>

### 34250 and 34251.

From Saff, Egypt. Presented by Mr. Alfred Bircher, The Middle Egypt Botanic Gardens. Received August 6, 1912.

34250. *DOVYALIS CAFFRA* (Hook. and Harv.) Warb. **Kei-apple.**  
(*Aberia caffra* Hook. and Harv.)

"A small tree, 12 to 30 feet in height, often thornless when in tree form, but exceedingly thorny when kept cut as a hedge, for which purpose it is much used, as it is impenetrable and when once established stands drought remarkably well. The seeds soon lose their vitality when kept dry, but germinate freely when fresh, and the plants are easily transplanted in the various nursery stages if not allowed to get a secure foothold, which they do rapidly. It does not succeed where frosts are regularly severe, but elsewhere requires to be cut twice a year to keep it in good hedge form and makes a dense 5-foot hedge in five years. It stands cutting to any extent, and if a hedge has been allowed to make too much headway when young and becomes open below it can be cut to the ground level and started afresh from the coppice shoots. Blanks in a hedge, if not too wide, can be remedied by interplaiting branches. The fruit is globose or depressed globose, minutely velvety, 1 to 1½ inches in diameter, bright yellow, resembling an apricot, edible, and used in preserves, but of too high flavor to be used alone. It is too sour for dessert use unless perfectly ripened under bright sunshine. It is sometimes attacked by the common peach maggot." (*Sim, Forest Flora of Cape Colony.*)

34251. *CORDIA MYXA* L. **Sebesten.**

"In India the tender young fruit is eaten as a vegetable and is pickled; the ripe fruit is eaten and is greedily devoured by the birds; the kernel is eaten and tastes somewhat like a filbert; that of the cultivated tree is better. The

**34250 and 34251—Continued.**

wood is soft and is said to have furnished the timber from which the Egyptian mummy cases were made. It is one of those used for preparing fire by friction in India. It is olive colored, grayish, or light brown, coarse grained, easy to work, strong, and seasons well; it is readily attacked by insects. It is used for boat building in India, for well curbs, gunstocks, and agricultural implements, and in Bengal for canoes. It is an excellent fuel. The weight of a cubic foot varies from 28 to 42 pounds. The viscid pulp of the fruit is used as birdlime in India, and the kernel is used for marking linen, but the mark is fugacious. The bark is extracted in ribbon-like layers and then twisted into cordage. In its lace-bark appearance the bast resembles sterculia. It is white in color, soft, and of inferior tenacity." (*Maiden, Useful Native Plants, and Dodge, Useful Fiber Plants.*) •

*Distribution.*—A shrub or low tree cultivated in the Tropics of the Old World from Egypt through India and Cochin China to Australia.

**34252. BETA sp. Beet.**

From Artwin, in the southwestern part of the Caucasus, Russia, on the shore of the Black Sea. Presented by Mr. A. Rolloff, director, Botanic Garden, Tiflis, Caucasus, Russia. Received August 13, 1912.

Seeds of the native Caucasian beet, introduced for the work of plant breeders interested in this genus.

**34253. CARISSA OVATA R. Brown.**

From Brisbane, Queensland. Presented by Mr. J. F. Bailey, Botanic Gardens. Received August 15, 1912.

For previous introductions and descriptions, see S. P. I. Nos. 31111 and 34153.

**34254. JUGLANS AUSTRALIS Griseb. Walnut.**

From Sucre, Bolivia. Presented by Mr. Ernest F. Moore, British vice consul. Received August 10, 1912.

"*Boliviensis.* These are from the same species of walnut that grows in the tropical Santa Cruz, but were taken from a higher altitude, approximately 7,500 feet, and not more than 100 miles from Sucre." (*Moore.*)

**34255 and 34256. VIGNA SINENSIS (Torner) Savi. Cowpea.**

From Paramaribo, Surinam. Presented by Dr. P. J. S. Cramer, Director of Agriculture. Received August 14, 1912.

Seeds clay or buff colored. Quoted notes by Dr. J. Sack, Acting Director of Agriculture.

**34255.** "*Djari pesie.* Is grown as a vegetable principally."

**34256.** "Grown as a vegetable and also as a forage crop."

**34257. EUCHLAENA MEXICANA Schrad. Teosinte.**

From Durango, Mexico. Presented by Mr. T. C. Hamm, American consul, who obtained it from Dr. H. W. Jackson. Received August 19, 1912.

"The plant known as teosinte, or asece, which is supposed to be the antecedent of common maize, grows in some parts of the State of Durango. The plant occurs in a wild state. Only one attempt, so far as I have been able to learn, has been made to cultivate it. Two or three years ago a Mexican ranchman gathered a quantity of the seed, which he planted as a forage crop, with most excellent results. The plant



flowers in the month of July and matures in November. The height attained by the plant varies greatly according to soil, climatic conditions, etc., the full-grown plant running from about 50 to 75 inches in height in this State. Teosinte closely resembles the common maize in its earlier stages, but becomes more bushy as it develops, owing to the large number of suckers thrown out by the parent stalk. The leaf is very similar to that of the maize in all stages of its development. A single stalk of teosinte will have from 10 to 15 ears which, unless the teosinte has mixed with maize, have practically no cob or core.

"The reason why little or no use is made of this valuable plant is that when planted near corn it readily crosses with the latter and spoils the corn crop, which is the staple agricultural crop of this district. It is reported that the natives have made tortillas from the ground seed of teosinte, but such instances are very rare." (*Hamm.*)

### 34258 and 34259.

From Teneriffe, Canary Islands. Presented by Dr. George V. Perez. Received August 16, 1912.

#### 34258. ECHIUM AUBERIANUM Webb and Berth.

"This is a very striking Teneriffe alpine plant growing at the Canadas on its rocky walls at an elevation of between 8,000 and 9,000 feet above sea level. It throws up in the second year a single thyrus of beautiful pink flowers. I have just had one in flower  $3\frac{1}{2}$  meters high (11 feet 8 inches). *Echium wildpretii*, which I do not have, is probably this same plant or a hybrid of it. The latter has been cultivated at Kew Garden for over 10 years.

"This may turn out to be a valuable fodder plant in southern California, as goats are fond of it. Its rosette of leaves is more than 1 yard across." (*Perez.*)

*Distribution.*—A pink-flowered perennial found on the alpine slopes of the island of Teneriffe.

#### 34259. ECHIUM CANDICANS $\times$ SIMPLEX.

"This is a new hybrid obtained this year by the writer. The thyrus is light blue; a beautiful plant." (*Perez.*)

### 34260 to 34262.

From Teneriffe, Canary Islands. Presented by Dr. George V. Perez. Received August 16, 1912.

Seeds of the following:

#### 34260. PANCRATIUM CANARIENSE Ker.

"This is a Canary plant of the coast region, like *P. maritimum*. It flowers in October." (*Perez.*)

*Distribution.*—A bulbous plant with irislike leaves and umbels of large white flowers, found in the Canary Islands.

#### 34261. ASPARAGUS ALBUS L.

**Asparagus.**

"*Pastorianus*. This plant has been written about lately as simulating *Larix*. I received notes from Mr. Fairchild about it last year." (*Perez.*)

#### 34262. GENISTA SPLENDENS Webb and Berth.

"This is a native of the mountains of Palma (Canary Islands), where it is called 'Gacia Blanca' in contrast to *Cytisus stenopetalus*, which is called 'Gacia.' It is a beautiful plant with somewhat silvery leaves and bright orange-yellow flowers. It is a forage plant also, like *Cytisus stenopetalus*, which is much employed as such in Palma." (*Perez.*)

**34263. BISCHOFIA JAVANICA Blume.****Toog.**

From Buitenzorg, Java. Presented by the director, Department of Agriculture. Received August 12, 1912.

"A tall tree known as toog, with a fairly regular, unbuttressed, short bole with a wide-spreading crown. It is intolerant of shade. The bark is dark brown, soft to the touch, shedding in thin, large scales. The inner bark is red with a thin, dark-red latex. The leaves are alternate, trifoliate, and smooth, with the edges of the leaflets toothed. The sapwood is light cream colored; the heartwood is red, moderately hard, and moderately heavy." (*Whitford, Forests of the Philippines.*)

**34264 to 34272.**

From Rome, Italy. Presented by Dr. Gustav Eisen, California Academy of Sciences, San Francisco, Cal. Received August 14, 1912.

Seeds of the following; quoted notes by Dr. Eisen:

**34264. PRUNUS ARMENIACA L.****Apricot.**

"These seeds were procured in a restaurant in Rome. Locality not known. This variety is probably the finest apricot I have ever tasted, being larger than our average Moorpark, globular, but with apex characteristically pointed, the point being short but very acute and set off suddenly and distinctly. Ripens evenly all around. Very sweet and highly flavored. Color deep orange."

**34265. PRUNUS ARMENIACA L.****Apricot.**

"These apricots are said to come from the vicinity of Frascati, near Rome, in the Alban Hills. Some are said to have sweet seeds."

**34266. CORYLUS AVELLANA L.****Filbert.**

"From Boscotrecase, near Naples. Name: *San Giovanni*. The earliest filbert known in that part of Italy, ripening by June 24. Of very good quality, though not as highly flavored as the wild nut, but remarkably well filled and solid. Valuable on account of its earliness."

**34267. PRUNUS DOMESTICA L.****Plum.**

"*Papagone*. Average  $2\frac{1}{2}$  inches long by  $1\frac{1}{2}$  inches wide. Largest  $2\frac{3}{4}$  to even 3 inches long by  $1\frac{5}{8}$  inches wide; elongate ovoid; greenish yellow, darker green on shaded side. Stalk short, half inch to less in length. Fine gray bloom. Very thin and smooth skin. Seed very thin pitted, sulcate edge, and remarkably small for the size of the fruit. Flesh firm, sweet, and highly flavored, adheres slightly to the stone."

**34268. PRUNUS DOMESTICA L.****Plum.**

"Prune called *Prunaringia*, grown near Naples. The name may also, and more properly, be spelled *Prunarigno* or *Prunarignia*, and I am told that possibly it means Pruno di India, though I prefer to think that the name in some way refers to the main characteristic of the fruit—one or two vertical cracks ('rigno') when the fruit is fully ripe. In size this prune or plum resembles the *Papagone* but is more irregular. General shape like *Papagone*, but the color is deeper green. Very sweet and even more flavored, but the value of this splendid plum is lowered by the fact that when ripe it always possesses one or more vertical splits on the cheek. Thus, it does not present the same fine appearance as the *Papagone* and could not stand long shipment; but for canning and preserving this plum should be excellent. The seed, in proportion to the fruit, is considerably larger than the *Papagone* but somewhat similar in shape; thin and oblong, but less curved than the *Papagone*. Both ripen at about the same time and are at the height of perfection at Boscotrecase by August 1."

## 34264 to 34272—Continued.

34269. PRUNUS ARMENIACA L. Apricot.

"*Crisomelo*. From Boscotrecase. Very large, rounded oblong without points, color orange, ripens evenly all around."

34270. PRUNUS ARMENIACA L. Apricot.

"These apricots are all from the same garden and are said to be *Crisomelo*. As, however, the lots differ from each other, I take it that they must be from different trees, probably seedlings, though about this I can give no absolute information, not having collected them myself. But the fact that the seeds differ in size as well as in shape from the other *Crisomelos*, to me indicates a difference in variety. I have, however, been assured that all were selected from the best *Crisomelos*."

34271. PRUNUS DOMESTICA L. Plum.

"Roman market. Best plum coming to this market, and seems especially good for shipment, as the flesh is firm. Size 2 to 2½ inches long by 1½ inches wide. Color green with red cheek. No particular name. Quality fair, but neither so sweet nor so well flavored as *Papagone* and *Prunaringia*, S. P. I. Nos. 34267 and 34268, which both belong to the Naples market."

34272. PRUNUS DOMESTICA L. Plum.

"Very large, globular, golden yellow. A variety of Reineckede of the very best quality. From Frascati."

34274. ANNONA RETICULATA L. Custard-apple.

From Puerto Plata, Dominican Republic. Presented by Mr. Charles M. Hathaway, jr., American consul. Received August 16, 1912.

34275. AMYGDALUS PERSICA L. Peach.

(*Prunus persica* Stokes.)

From Soochow, China. Presented by Mr. N. Gist Gee. Received August 19, 1912.

"This is a mixed lot of peach seeds containing some from red clingstones and some from white freestones."

34289. GOSSYPIUM HIRSUTUM L. Cotton.

From Coimbatore, India. Presented by Mr. R. Cecil Wood, president, Agricultural College, through Mr. C. V. Piper. Received August 20, 1912.

"*Cambodia*. This cotton is said to have been introduced from Cambodia into southern India, where it has yielded far more heavily than any other cotton. It is of the American Upland type." (*Piper*.)

"This cotton has a close resemblance to the American Upland type and has been looked upon as an American cotton that has been acclimatized in Cambodia, though this may not prove to be the case. There is historical evidence of the introduction of a superior type of cotton from Siam to Louisiana in early days, and this may have been the origin of the long-staple varieties formerly grown so extensively in the Delta regions of Louisiana and Mississippi. Thus the Cambodia cotton may prove to be related to the American long-staple type. A variety of Upland cotton from Cochin China was studied in Egypt in 1910 which may prove to be similar to the present importation. An account of this cotton was published in Bulletin 210 of the Bureau of Plant Industry on Hindi Cotton in Egypt. The Cambodia cotton has been grown for a few years in southern India and has given much better results than any variety introduced from America. An account of the experiments in India was published in the Daily Consular and Trade Reports, December 7, 1910," (*O. F. Cook*.)



PLANTS OF SESAME (*SESAMUM ORIENTALE* L.) 3 TO 4 FEET TALL, AT THE YARROW FIELD STATION, ROCKVILLE, MD. (S. P. I. No. 26438.)

An important oil seed, much cultivated in China, India, Palestine, and to some extent in Mexico. Selection work will be necessary to do away with the shattering of the seed as soon as it is ripe. The oil is important for table use, and the seeds are much used in confectionery in oriental countries. See S. P. I. No. 34290. (Photographed by Dorsett, No. 8175, July 23, 1911.)

**34290 and 34291.**

From Hankow, China. Presented by Mr. Roger S. Greene, American consul general. Received August 21, 1912.

Seeds of the following; quoted notes by Mr. Greene:

**34290.** *SESAMUM ORIENTALE* L. **Sesame.**  
(*S. indicum* L.)

"*Tzu ma.* A good culinary oil is expressed from these seeds."

For an illustration of sesame plants growing at the Yarrow Field Station, Rockville, Md., see Plate V.

**34291.** *CANNABIS SATIVA* L. **Hemp.**

"*Ta ma.* Said to be the hemp which grows higher than all other kinds. I am told that there are two principal varieties of *ta ma* hemp in this neighborhood, one of which yields three crops a year, while the other yields only one crop. This tall hemp of which I am sending you seed gives only one crop."

**34292. BOMBAX** sp.

From Shek Lung, China. Presented by Mr. A. J. Fisher. Received August 10, 1912.

"This tree at first has a great many sharp thorns on its trunk, but after four or five years these thorns disappear. It grows into a big, high tree. I should think that it would not stand frost. It sheds its leaves in the winter here. In the spring before the leaves come it shows a red flower, followed by pods in which the cotton and seed are borne. It seems to be native to this soil and grows very easily and quickly. It is not cultivated, but usually grows up wild. It is called *min fa shue* (cotton tree). It is used by the Chinese for making pillows and is dearer than the imported cotton. It seems very good, for it does not gather in lumps like the ordinary cotton." (*Fisher.*)

**34293 and 34294.** *HOLCUS SORGHUM* L. **Sorghum.**  
(*Sorghum vulgare* Pers.)

From Cedar Hill, Tex. Presented by Mr. D. C. Nance, through Mr. C. V. Piper. Received August 26, 1912.

"This is a small, sweet-stemmed, kafirlike sorghum, but with a looser head than ordinary kafir. Mr. Nance writes that he has grown Red kafir continuously since 1908. The seed of it was obtained from the David Hardie Seed Co., of Dallas, Tex. 'I saw nothing peculiar growing among my Red kafir until 1911, when I discovered a few plants of kafirita. My attention was directed to them by reason of their diminutive size and early maturity. I noticed further that some plants bore red seeds and others white, and from this fact I gathered that kafirita was not merely a dwarf Red kafir, so I searched out the fields—6 acres—for other similar plants and obtained perhaps 2 ounces of seed in all. This I planted carefully in 1912, and the plants bred perfectly true. I suppose that we may as well assume that the plant originated here on my farm. It is evidently not just a dwarf Red kafir, for that view does not account for the white seeds. However, excepting this feature, together with a constantly yellow tinge of the whole plant except the seed, it is a perfect dwarf Red kafir.' (D. C. Nance, letter, August 7, 1912.)" (*C. V. Piper.*)

**34293.** White.

**34294.** Red.

**34295 to 34297. IRIS spp.****Iris.**

From California. Presented by Miss Alice Eastwood, San Francisco, Cal. Received August 26, 1912.

Seeds of the following; quoted notes by Miss Eastwood:

**34295.** IRIS TENUISSIMA Dykes.

"From Goose Valley, Shasta Co., Cal. Collected by Wallace Dillman."

**34296.** IRIS sp.

"Dunsmuir, Cal. I think it is *Iris tenuissima*, but it may be *Iris amabilis*. Collected by Alice Eastwood."

**34297.** IRIS AMABILIS Eastwood.

"Collected by Mr. G. P. Rixford, Loomis, Placer Co., Cal.

**34299 and 34300.**

Presented by Dr. C. F. Rife, Naperville, Ill. Received August 22, 1912.

**34299.** CARICA PAPAYA L.

**Papaya.**

"From the Marshall Islands, Oceania. Mummy apple, called *pawpaw* in Australia." (*Rife.*)

**34300.** ANNONA RETICULATA L.

**Custard-apple.**

"From Tahiti, Society Islands." (*Rife.*)

**34301 and 34302.**

From Edinburgh, Scotland. Presented by Prof. Bayley Balfour, Royal Botanic Garden. Received August 23, 1912.

Seeds of the following:

**34301.** CYTISUS HILLEBRANDTHI (Christ) Briquet.

*Distribution.*—A spreading leguminous plant found on the mountains in Gran Canaria Island in the Canaries.

**34302.** CYTISUS ALBUS MICROPHYLLUS Aschers. and Graebn.

(*C. austriacus* L.)

*Distribution.*—A white-flowered, small-leaved leguminous plant found on the slopes of the Balkans in southern Europe.

**34303 to 34308.**

From Edinburgh, Scotland. Presented by Prof. Bayley Balfour, Royal Botanic Garden. Received August 23, 1912.

Seeds of the following:

**34303.** ACACIA WHANII F. Mueller.

*Distribution.*—A leguminous shrub with flowers in globular heads, found in Victoria in Australia.

**34304.** BERBERIS GUIMPELI Koch and Bouche.

**Barberry.**

**34305.** CARISSA BISPINOSA (L.) Desf.

**Amatungulu.**

(*C. arduina* Lam.)

**34306.** PITTOSPORUM EUGENIOIDES Cunningham.

**Tarata.**

"A beautiful tree, sometimes 40 feet in height, whose pale-green, broadly oblong leaves, 2 or 3 inches long, with undulating margins, emit, when bruised, a lemonlike odor. The delicate venation and light-colored, almost white midrib add to the beauty of the leaf. The Maoris mix the resinous exudation from the white bark with the juice of the sow thistle and work it into a ball,

**34303 to 34308—Continued.**

which they chew. In October (in New Zealand) the tree produces large corymbs of yellowish green flowers, whose heavy, honeyed odor is almost sickly in its intensity. The plant is probably often self-pollinated, but though stamens and pistils are always present one or the other is often abortive, so that the flowers are often practically unisexual. The wood of this species, like that of the other species of the genus, is almost worthless. The tree is often cultivated for its beauty and is sometimes used to form an ornamental hedge." (*Laing and Blackwell, Plants of New Zealand.*)

*Distribution.*—A small round-headed tree with very fragrant flowers, found on the North Island and the South Island of New Zealand.

**34307. PRIMULA SINOLISTERI Balf. f.****Primrose.**

"This plant is of special horticultural interest. It was introduced in 1908 by Bees, Ltd., grown from Forrest's seeds, and promises to be in our gardens what *P. obconica* Hance ought to have been, but is not. *P. sinolisteri* Balf. f. has not the irritant hairs. It is a free grower, forming compact masses of dark green, acutely lobed leaves, and the trusses of white (sometimes lilac) flowers are many. In our northern climate it is not quite hardy—like true *P. obconica* Hance in that respect. It was sent out as *P. listeri* King—a venial error of naming—and the name *sinolisteri* has been given in the hope of making the change of nomenclature less disturbing." (*Balfour, Chinese and Other Primulas, Jour. Roy. Hort. Soc., vol. 29, p. 142, 1913.*)

**34308. PRIMULA FORRESTII Balf. f.****Primrose.**

"*P. forrestii*, of the section *Callianthæ*, is a curious as well as a beautiful species, and a lover of dry, stony situations. The flowers are large and numerous, of a rich deep shade of orange, and fragrant. The foliage is densely coated with glandular hairs, and, in the fresh state, has a peculiar, but not unpleasant, aromatic odor. The plant is specially adapted to the situation in which it is commonly found, i. e., the crevices of dry, shady limestone cliffs, in having a long, intensely tough, woody rootstock of 2-3 feet in length. The base of this is very tapered, generally only a few inches being inclosed in the crevices of the rocks. From this point the plant is pendulous for almost the full length of the remainder of the rootstock, a few inches of the growing apex being turned out and upwards. The rootstock for two-thirds of its length is covered with the induviae of previous year's foliage, which, at the apex, form a dense matted mass with the fresh foliage and flowers arising from the center. Judging from the length of the rootstocks of specimens seen growing, allowing two whorls of leaves for one year's growth, a very liberal estimate, some plants must reach the age of 50-100 years. Another feature which pointed to great age in the species was, the cliffs behind some of the larger specimens were scored and worn to the depth of fully an inch by the motion of the plants in the wind." (*Forrest, Primulaceæ from Western Yunnan, Notes from the Edinburgh Royal Botanic Garden, vol. 4, p. 15, 1908.*)

*Distribution.*—A primrose with fragrant deep-yellow flowers, found on the slopes of the mountains at an elevation of 9,000 to 11,000 feet in the northwestern part of the province of Yunnan in China.

**34309. CARYOPHYLLUS sp.***(Eugenia sp.)*

From Paraguay. Presented by Mr. C. F. Mead, Buenos Aires. Received August 16, 1912.

"In the Guarany language this fruit is called *ywapurú*. I have never seen it in any place except in the monte in the district between Sapucay and Asuncion, nor

can I find any mention of it in any botanical books. It grows in bush form to a height of about 2 meters, the fruit, which is about the size and coloring of a dark-red plum, being borne in clusters about the main stalks. I have never tasted the fruit, but it is very highly spoken of by the natives here." (*Mead.*)

**34311. PRUNUS CERASUS L. Cherry.**

From Abchasia, Western Caucasus. Presented by Mr. A. Rolloff, director, Botanic Garden, Tiflis, Caucasus, Russia. Received September 9, 1912.

These are said by Mr. Rolloff to be seeds of wild, sour cherries and were sent in under the name *Cerasus caproniana abchasia*.

**34312. SYZYGIVM SMITHII (Poir.) Niedenzu.**

(*Eugenia smithii* Poir.)

From Melbourne, Australia. Presented by Mr. J. Cronin, curator, Botanic and Domain Gardens. Received September 9, 1912.

"A close-wooded tree from 1 to 3 feet in diameter and from 80 to 120 feet in height. The bark contains about 17 per cent of tannic acid and 3.6 per cent of gallic acid. The white, purplish-tinted fruits are produced in profusion, are acidulous and wholesome, and are eaten by the natives, small boys, and birds." (*Maiden, Australian Native Plants.*)

*Distribution.*—A tree found in North Australia, Queensland, New South Wales, and Victoria, in Australia.

**34313. SOLANUM TUBEROSUM L. Potato.**

From La Paz, Bolivia. Presented by Mr. Horace G. Knowles, American consul. Received September 9, 1912.

"A smooth, clean-looking, thin-skinned, white potato of fine flavor and said to be a good keeper." (*Knowles.*)

"Tubers of medium size, decidedly round-oblate in shape; skin dark red; eyes large and deep. In many respects the tubers resemble the American variety known as 'Bliss Triumph'". (*William Stuart.*)

**34314. HORDEUM sp. Barley.**

From La Paz, Bolivia. Presented by Mr. Horace G. Knowles, American consul. Received September 9, 1912.

"The straw of this barley grows to more than 4 feet in height and must have considerable nourishment, as it is about the only feed given to the animals in this altitude of Bolivia." (*Knowles.*)

**34315. RAPHIA sp. Rafia palm.**

From McCale Sana, Lumbwa, British East Africa. Presented by Mrs. Ernest Smith. Received September 13, 1912.

"This palm is indigenous to this country, and the midrib of the huge leaves is largely used in the roofing of the buildings." (*Smith.*)

**34316. COLOCASIA sp. Dasheen.**

From Boca Ceiga, via Largo, Fla. Presented by Mr. T. S. Baldwin, in care of Baldwin & Bosworth. Received August 19, 1912.

"From the appearance of the corm and tubers, this dasheen is of the Japanese type. The corm is acrid in the raw state and is of coarse texture, strong flavor, and deep-violet color when cooked. The tubers are nonacrid when raw, are rather moist when cooked, and have a flavor much like the ordinary potato." (*R. A. Young.*)



**34317. TRITICUM AESTIVUM L.****Wheat.***(T. vulgare Vill.)*

From Italy. Presented by Mr. William W. Burt, American vice consul, Florence. Received September 10, 1912.

"Grown in the Pistoja district. The statement from the grower is that the crop this year has been poor both in quality and quantity, that the seed is sown in the latter part of October and the first part of November, and the wheat is gathered in the first part of July. This wheat was grown on a plain at 184 feet above sea level." (*Burt.*)

**34318 and 34319.**

From Manila, Philippine Islands. Presented by Mr. O. W. Barrett, chief, Division of Horticulture, Bureau of Agriculture. Received September 16, 1912.

**34318. ARECA CATECHU L.****Betel palm.**

*Distribution.*—A tall palm found in the damp, hot regions of Asia and eastward through the Malay Archipelago to the Philippines.

**34319. ORANIA REGALIS Blume.****Palm.**

"A rare palm of the Philippines, rather closely related, I believe, to the coconut, and which I believe would make an interesting greenhouse plant; it should also make a good ornamental for southern Florida, Porto Rico, and Cuba." (*Barrett.*)

See S. P. I. Nos. 3799 to 3801 for previous introduction.

**34320 to 34325.**

From Puerto Plata, Dominican Republic. Presented by Mr. Charles M. Hathaway, jr., American consul. Received September 9, 1912.

Seeds of the following; quoted notes by Mr. Hathaway:

**34320. ACHRAS ZAPOTA L.****Sapota.**

"The fruit is ellipsoid in shape, exterior dark russet, somewhat like mushrooms or fungi, interior deep crimson verging toward coral but darker. Its taste is sweet and spicy and hardly likely to appeal to the average American palate."

**34321 to 34325. ANNONA SQUAMOSA L.****Sweetsop.**

"The English-speaking islanders call this the 'sugar-apple.' It is, to my taste, a fine fruit."

"*Annona squamosa* L. is perhaps the most widely cultivated of all the custard-apples. It is essentially tropical, while the cherimoya (*Annona cherimola* Miller) is subtropical and will not flourish at sea level in hot countries. The fruit varies in quality, and, as in other fruits which have been cultivated for a long time, care should be taken in selecting the best varieties for asexual propagation. For this reason the seeds of the various fruits sent to the department have been kept distinct." (*W. E. Safford.*)

**34326 to 34328.**

From Nogent-sur-Marne (Seine), France. Presented by Mr. E. Prudhomme, director, Colonial Garden. Received September 19, 1912.

**34326. CYMBOPOGON SCHOENANTHUS (L.) Spreng.****Ginger grass.***(Andropogon schoenanthus L.)*

See S. P. I. No. 29456 for description.

**34326 to 34328—Continued.****34327.** PIPER CUBEBA L. f.**Cubeb pepper.**

"The cubebs of commerce, which are of importance chiefly in medicine, are the berries of a species of pepper vine, easily distinguished from the ordinary pepper by the stalked and larger berries, or 'corns.' The plant is a native of Java, Sumatra, etc., and thrives under similar conditions as pepper, requiring live or artificial supports and a certain amount of shade. The world's supply of cubebs is obtained chiefly from Java, where the plant is cultivated. The plants are best propagated by cuttings taken from among the top or fruitful shoots, such plants being more productive than those taken from near the base." (*Macmillan, Handbook of Tropical Gardening.*)

*Distribution.*—A climbing shrub found in Java and other islands of the Malay Archipelago.

**34328.** PIPER CHABA Hunter.

*Distribution.*—Commonly cultivated in India and the Malay Archipelago.

**34329.** SECALE CEREALE L.**Rye.**

From Wronow, Koschmin, Posen, Germany. Presented by Saatzuchtwirtschaft Fritz Claassen. Received September 12, 1912.

Original R. von Rümker winter rye No. 2.

**34330.** BARYXYLUM INERME (Roxb.) Pierre.

(*Peltophorum ferrugineum* Benth.)

From Manila, Philippine Islands. Presented by Mr. E. D. Merrill, botanist, Bureau of Science. Received September 21, 1912.

"This tree is a native of the Philippines and is one of the best shade trees that we have. It is evergreen and bears large terminal panicles of very showy yellow flowers. The species is of wide distribution in the Malayan region, and in the Philippines grows in nature near the seashore. It will certainly thrive in Cuba, Porto Rico, and Panama, and probably in southern Florida and in southern California. There is an excellent colored figure of it in the third edition of Blanco's "Flora de Filipinas." (*Merrill, in letter of August 20, 1912.*)

*Distribution.*—A tall, unarmed tree found in Ceylon and eastward through the Malay Archipelago to northern Australia.

**34331 to 34333.** CUCUMIS MELO L.**Muskmelon.**

From Soochow, China. Presented by Mr. N. Gist Gee. Received September 23, 1912.

Seeds of the following; quoted notes by Mr. Gee:

**34331.** "Round, green melon. Very nice."**34332.** "Yellow-and-white striped melon, 6 to 8 inches in length."**34333.** "Small white melon, sweet, 4 to 5 inches in length."**34334.** RUBUS LASIOCARPUS Smith.**Raspberry.**

From India. Presented by Mr. John W. B. Field, Castlemaine, Victoria, Australia. Received September 9, 1912.

See S. P. I. No. 32453 for description.

**34335. TRITICUM DICOCCUM Schrank. White emmer.**

From Italy. Presented by Mr. William W. Burt, American vice consul, Florence.  
Received September 10, 1912.

"These are typical heads of white emmer, a cereal related to spelt and wheat."  
(*C. R. Ball.*)

**34336. OLEA EUROPEA L. Olive.**

From Kew, England. Presented by Dr. David Prain, director, Royal Botanic  
Garden. Received September 30, 1912.

"*Cinditiva.*"

Cuttings.

**34339. CARICA PAPAYA L. Papaya.**

From Honolulu, Hawaii. Presented by Mr. J. E. Higgins, horticulturist, Hawaii  
experiment station. Received September 30, 1912.

"A monœcious variety and our best in flavor." (*Higgins.*)

Seeds.



## BOTANICAL NOTES AND PUBLICATION OF NEW NAMES.

### PLANT LISTED IN A PREVIOUS INVENTORY.

- 26116.** *VILLARESIA CHILENSIS* (Molina) Stuntz.  
(*Citrus chilensis* Molina, Saggio sulla Historia Naturali Chili, p. 171, 1782.)  
(*Villaresia mucronata* Ruiz and Pavon, Flora Peruviana, vol. 3, p. 9, pl. 231, 1802.)

Seeds of this Chilean icacinaceous tree were received under the name *Villaresia mucronata* Ruiz and Pavon. The earliest name applied to this plant, however, was *Citrus chilensis* Molina, which specific name it is necessary to adopt.

### PLANTS LISTED IN THIS INVENTORY.

- 34167.** *WARNERIA THUNBERGIA* (L. f.) Stuntz.  
(*Gardenia thunbergia* L. f., Supplementum Plantarum Systematis Vegetabilium, p. 162, 1781.)

Seeds of this white-flowered rubiaceaceous shrub were received under the name *Gardenia thunbergia* L. f. In publishing this name, the younger Linnæus cited *Thunbergia capensis* Montin (Kongl. Vetensk. Acad. Handl. Stockholm, vol. 34, p. 288, pl. 11, 1773). Montin, however, merely characterized the genus *Thunbergia*, with neither binomial nor citations. The specific name given by Linnæus filius is therefore the earliest and should be adopted. The reason for using the generic name *Warneria* for the plants usually referred to the genus *Gardenia* is explained under *Warneria augusta* Stickman, S. P. I. No. 30498, in Bulletin No. 242, Bureau of Plant Industry, p. 14, 1912.

- 34169.** *TRICALYSIA FLORIBUNDA* (Harvey) Stuntz.  
(*Kraussia floribunda* Harvey, Hooker's Journal of Botany, vol. 1, p. 21, January, 1842.)  
(*Coffea kraussiana* Hochstetter, Flora, vol. 25, p. 237, April, 1842.)  
(*Tricalysia kraussiana* (Hochst.) Schinz, Mem. Herb. Boiss., vol. 10, p. 67, 1900.)

Seeds of this rubiaceaceous shrub from Natal were received under the name *Kraussia floribunda* Harvey. This name, published in January, 1842, was based on Krauss's No. 121, which was also the type of *Coffea kraussiana* Hochstetter, published in April, 1842. As the plant is now considered to belong to the genus *Tricalysia* and the combination *Tricalysia floribunda* seems never to have been published, it is necessary to adopt it now.

- 34171.** *PTERYGOCARPUS FLORIBUNDUS* (Meyer) Stuntz.  
(*Dregea floribunda* Meyer, Commentariorum de Plantis Africae Australioris, vol. 1, fasc. 2, p. 199, 1837.)

Seeds of this asclepiadaceous plant from South Africa were received under the name *Dregea floribunda* Meyer. The generic name *Dregea* had, however, been used by Ecklon and Zeyher in June, 1836 (Enumeratio Plantarum Africae Australiae Extratropicae, p. 350), for certain umbelliferous plants now considered to belong to *Peucedanum*. It is therefore necessary to adopt the generic name *Pterygocarpus*, published by Hochstetter in 1843 (Flora, vol. 26, bd. 1, p. 78). The type species of Hochstetter's genus is *P. abyssinicus*, a plant congeneric with *P. floribundus*.

**34181. MICROCOS LATERIFLORA L.**

(*Grewia asiatica* L., Mantissa, p. 122, 1767.)

Seeds of this yellow-flowered tiliaceous shrub from India were received under the name *Grewia asiatica*. The generic names *Microcos* and *Grewia*, which are recognized as congeneric, were both published in *Species Plantarum*, 1753, *Microcos* on page 514, and *Grewia* on page 964. *Microcos* having priority of publication, it is necessary to adopt it. The present species was published by Linnæus as *Grewia asiatica* in 1767, but had been previously published (*Species Plantarum*, p. 514, 1753) as *Microcos lateriflora*, which name it is necessary to use here.

## INDEX OF COMMON AND SCIENTIFIC NAMES.

- Aberia caffra*. See *Dovyalis caffra*.  
*Acacia whanii*, 34303.  
*Acer ginnala semenovii*, 34137.  
*Achras zapota*, 34320.  
 Alfalfa. See *Medicago rigidula cinerascens*.  
 Allspice. See *Pimenta officinalis*.  
 Amatungulu. See *Carissa* spp.  
*Amygdalus persica*, 34131, 34211, 34275.  
*Ananas sativus*, 34124.  
*Andropogon schoenanthus*. See *Cymbopogon schoenanthus*.  
*Annona reticulata*, 34100, 34274, 34300.  
     *squamosa*, 34321 to 34325.  
*Antidesma bifrons*, 34163.  
     *venosum*. See *Antidesma bifrons*.  
 Apple, crab. See *Malus* sp.  
 Apricot, Crismelo, 34269, 34270.  
     (Italy), 34264, 34265.  
*Areca catechu*, 34318.  
 Ash, mountain. See *Sorbus tianschanica*.  
 Asparagus. See *Asparagus* spp.  
*Asparagus albus*, 34261.  
     *trichophyllus*, 34133.  
 Avellano. See *Gevuina avellana*.  
 Avocado. See *Persea americana*.  
  
*Baphia racemosa*, 34164.  
 Barberry. See *Berberis guimpeli*.  
 Barley, beardless, 34110.  
     (Bolivia), 34314.  
     (China), 34127, 34129.  
*Baryxylum inerme*, 34330.  
 Bayberry. See *Pimenta acris*.  
 Beet. See *Beta* sp.  
*Berberis guimpeli*, 34304.  
*Beta* sp., 34252.  
 Betoom. See *Pistacia atlantica*.  
*Bischofia javanica*, 34263.  
 Bitongol. See *Flacourtia sepiaria*.  
*Bombax* sp., 34292.  
 Bonavist bean. See *Dolichos lablab*.  
*Boscia undulata*, 34177.  
  
*Brassia actinophylla*. See *Schefflera actinophylla*.  
*Brassica pekinensis*, 34216.  
  
 Cabbage, Chinese. See *Brassica pekinensis*.  
*Calophyllum inophyllum*, 34125.  
*Cannabis sativa*, 34291.  
*Capparis citrifolia*, 34165.  
*Carica papaya*, 34299, 34339.  
*Carissa arduina*. See *Carissa bispinosa*.  
     *bispinosa*, 34305.  
     *grandiflora*, 34166.  
     *ovata*, 34153, 34253.  
*Caryophyllus* sp., 34309.  
*Castilla elastica*, 34130.  
 Cherry. See *Prunus cerasus*.  
*Clavija ornata*, 34122.  
 Clover (Oliver No. 3), 34195.  
     (Oliver No. 13), 34196.  
     (Oliver No. 28), 34197.  
*Coffea kraussiana*. See *Tricalysia floribunda*.  
 Coffee, wild, 34217.  
*Colocasia* sp., 34316.  
*Cordia myxa*, 34251.  
 Corn (China), 34214, 34215.  
     (Peru), 34120, 34121.  
*Corylus avellana*, 34266.  
 Cotton, Cambodia, 34289.  
     Candava, 34188.  
     Bulac-Cahoz, 34193.  
     Bulac Damo, 34190.  
     Bulac Saot-Bayo, 34192.  
     Bulac Saot-Pula, 34194.  
     Gapas, 34189.  
     Gapas Kinachila, 34184.  
     Gapas Sanglay, 34185.  
     Taal, 34187.  
     Toguillo, 34186.  
 Cowpea (Egypt), 34102 to 34104.  
     (Surinam), 34255, 34256.  
 Crab apple. See *Malus* sp.  
*Crataegus* spp., 34135, 34136.

- Cubeb pepper. See *Piper cubeba*.  
*Cucumis melo*, 34331 to 34333.  
 Cupang. See *Parkia timoriana*.  
 Custard-apple. See *Annona reticulata*.  
*Cymbopogon schoenanthus*, 34326.  
*Cytisus albus microphyllus*, 34302.  
   *austriacus*. See *Cytisus albus*.  
   *hillebrandtii*, 34301.
- Dasheen. See *Colocasia* sp.  
 Date, Medjool (Tafilelt), 34213.  
   wild (British East Africa), 34218.  
*Dimocarpus longan*, 34206.  
*Dioscorea pentaphylla*, 34159.  
   *sativa*, 34158.  
*Dolichos lablab*, 34106.  
*Dovyalis caffra*, 34250.  
*Dregea floribunda*. See *Pterygocarpus floribundus*.
- Echium auerianum*, 34258.  
   *candicans* × *simplex*, 34259.  
 Emmer, white. See *Triticum dicoccum*.  
*Eriobotrya japonica*, 34101, 34119.  
*Euchlaena mexicana*, 34257.  
*Eugenia* sp. See *Caryophyllus* sp.  
   *smithii*. See *Syzygium smithii*.
- Filbert. See *Corylus avellana*.  
*Flacourtia sepiaria*, 34093.
- Gardenia thunbergia*. See *Warneria thunbergia*.  
*Genista splendens*, 34262.  
*Gevuina avellana*, 34113.  
*Gossypium* spp., 34186, 34189, 34190,  
   34192, 34193.  
   *arboreum*, 34184.  
   *hirsutum*, 34185, 34187, 34188,  
   34191, 34194, 34289.
- Grass, ginger. See *Cymbopogon schoenanthus*.  
   Para. See *Panicum barbinode*.  
   Sudan. See *Holcus sorghum*.  
*Grewia asiatica*. See *Microcos lateriflora*.
- Hawthorn. See *Crataegus* spp.  
 Hemp. See *Cannabis sativa*.  
*Holcus sorghum*, 34114, 34293, 34294.  
*Hordeum* sp., 34314.  
   *vulgare*, 34127, 34129.  
   *trifurcatum*, 34110.  
*Hyphaene thebaica*, 34219.
- Ilex paraguariensis*, 34152.  
*Ipomoea albivenia*, 34168.  
   *batatas*, 34154, 34155.  
*Iris* sp. 34296.  
   *amabilis*, 34297.  
   *tenuissima*, 34118, 34295.  
 Ironwood, white. See *Boscia undulata*.  
*Juglans australis*, 34254.  
 Jujube. See *Ziziphus jujuba*.  
 Juniper, 34140 to 34145.  
*Juniperus* spp., 34142 to 34145.  
   *communis oblonga*, 34141.  
   *pseudosabina*, 34140.
- Kei-apple. See *Dovyalis caffra*.  
*Kraussia floribunda*. See *Tricalysia floribunda*.
- Lingue. See *Persea lingue*.  
 Litchi. See *Litchi chinensis*.  
*Litchi chinensis*, 34117.  
 Longan. See *Dimocarpus longan*.  
 Loquat. See *Eriobotrya japonica*.
- Maba natalensis*, 34170.  
*Malus* sp., 34180.  
*Mangifera indica*, 34097, 34199 to 34205.  
 Mango, Aristide, 34201.  
   Augusta, 34199.  
   Caribe, 34097.  
   Dauphine, 34205.  
   Figet, 34203.  
   Jose, 34200.  
   Maison Rouge, 34204.  
   Torse, 34202.
- Maple. See *Acer ginnala senenovii*.  
 Mast-wood. See *Calophyllum inophyllum*.  
*Medicago coronata*, 34147.  
   *fulcata*, 34116.  
   *marina*, 34149.  
   *minima*, 34150.  
   *rigidula cinerascens*, 34105.  
   *rotata*, 34151.  
   *rugosa*, 34148.
- Melon. See *Cucumis melo*.  
*Microcos lateriflora*, 34181.  
 Mountain ash. See *Sorbus tianschanica*.  
 Muskmelon. See *Cucumis melo*.
- Nephelium litchi*. See *Litchi chinensis*.  
   *longana*. See *Dimocarpus longan*.



- Olea europea*, 34336.  
 Olive. See *Olea europea*.  
*Omphalea* sp., 34156.  
*Oncoba kraussiana*, 34172.  
*Opuntia azurea*, 34112.  
     *vilis*, 34111.  
*Orania regalis*, 34319.  
*Oryza sativa*, 34220 to 34249.  
*Osteospermum moniliferum*, 34173.  
*Oxyanthus natalensis*. See *Oxyanthus*  
     *pyriformis*.  
     *pyriformis*, 34174.  
 Pai ts'ai. See *Brassica pekinensis*  
 Palm, betel, 34318.  
     doum, 34219.  
     (Philippines), 34319.  
     rafia, 34315.  
*Pancratium canariense*, 34260.  
*Panicum barbinode*, 34109.  
 Papaya (Hawaii), 34339.  
     (Marshall Islands), 34299.  
*Parkia roxburghii*. See *Parkia timoriana*.  
     *timoriana*, 34094.  
*Pavetta revoluta*, 34175.  
 Pea. See *Pisum arvense*.  
     violet. See *Baphia racemosa*.  
 Peach (China), 34211, 34275.  
     (Guadeloupe), 34131.  
*Peltophorum ferrugineum*. See *Baryxylum inermis*.  
*Persea americana*, 34095, 34096.  
     *gratissima*. See *Persea americana*.  
     *lingue*, 34157.  
*Phoenix* sp., 34218.  
     *dactylifera*, 34213.  
*Pimenta acris*, 34207.  
     *officinalis*, 34208.  
 Pineapple. See *Ananas sativus*.  
*Piper chaba*, 34328.  
     *cubeba*, 34327.  
*Pistacia atlantica*, 34212.  
*Pisum arvense*, 34183.  
*Pittosporum eugenioides*, 34306.  
 Plum, Papagone, 34267.  
     Prunaringia, 34268.  
     (Rome), 34271, 34272.  
     (Russia), 34134.  
 Potato (Bolivia), 34313.  
     sweet, 34154, 34155.  
 Prickly pear. See *Opuntia* spp.  
 Primrose. See *Primula* spp.
- Primula forrestii*, 34308.  
     *sinolisteri*, 34307.  
*Prunus armeniaca*, 34264, 34265, 34269,  
     34270.  
     *cerasus*, 34311.  
     *domestica*, 34267, 34268, 34271,  
     34272.  
     *persica*. See *Amygdalus persica*.  
     *sibirica*, 34134.  
*Psychotria capensis*, 34176.  
*Pterygocarpus floribundus*, 34171.  
*Pyrus* sp. See *Malus* sp.  
     *tianschanica*. See *Sorbus tianschanica*.  
 Quaqua. See *Strychnos gerrardi*.  
 Queensland umbrella tree. See *Schefflera actinophylla*.  
*Raphia* sp., 34315.  
 Raspberry. See *Rubus lasiocarpus*.  
 Rice, Arabon, 34220.  
     Baybay, 34222.  
     Binankero, 34224.  
     Binatad, 34223.  
     Binugayan carcar, 34221.  
     Cabayuran, 34226.  
     Calobang, 34227.  
     Calodo, 34225.  
     Cavitenang nagmalii, 34228.  
     Ilangitnon, 34229.  
     Jequianan, 34230.  
     Lauá, 34231.  
     Macan Santa Rita, 34235.  
         Silangan, 34236.  
     Magpunit, 34237.  
     Manabun-ac, 34234.  
     Mancasar, 34232.  
     Manticanon, 34233.  
     Minaya, 34238.  
     Pilapil, 34239.  
     Piniling Daniel, 34240.  
     Quinaluay, 34241.  
     Quinanay, 34242.  
     Quinatia, 34243.  
     Quiriquiri, 34244.  
     San Pablo, 34245.  
     Takilid, 34247.  
     Tayading pulá, 34246.  
     Tungcadol, 34248.  
     Virgen, 34249.  
*Rosa* spp., 34138, 34139.  
 Rose. See *Rosa* spp.

- Rubber. See *Castilla elastica*.  
*Rubus lasiocarpus*, 34334.  
 Rye. See *Secale cereale*.
- Sapium utile*, 34209.  
 Sapota. See *Achras zapota*.  
*Schefflera actinophylla*, 34123.  
 Sebesten. See *Cordia myxa*.  
*Secale cereale*, 34329.  
 Sesame. See *Sesamum orientale*.  
*Sesamum indicum*. See *Sesamum orientale*.  
*orientale*, 34290.  
 Sismoyo. See *Spondias* sp.  
*Smilax sandwicensis*, 34160.  
*Solanum tuberosum*, 34313.  
*Sorbus tianschanica*, 34132.  
 Sorghum, 34114, 34293, 34294.  
*Sorghum vulgare*. See *Holcus sorghum*.  
*Spondias* sp., 34210.  
*Stizolobium cinereum*, 34182.  
 spp., 34098, 34099.  
*Strychnos gerrardi*, 34161.  
 Sweet potato. See *Ipomoea batatas*.  
 Sweetsop. See *Annona squamosa*.  
*Syzygium smithii*, 34312.
- Tarata. See *Pittosporum eugenoides*.  
 Teosinte. See *Euchlaena mexicana*.  
*Toddalia lanceolata*. See *Boscia undulata*.
- Toog. See *Bischofia javanica*.  
*Tricalysia floribunda*, 34169.  
*Trifolium* sp., 34195.  
*angustifolium*, 34196.  
*procumbens*, 34197.  
*Triticum aestivum*, 34126, 34128, 34317.  
*dicoccum*, 34335.  
*vulgare*. See *Triticum aestivum*.  
*Turraea heterophylla*, 34179.  
*obtusifolia*, 34178.
- Uhi. See *Smilax sandwicensis*.  
 Undetermined, 34217.
- Vigna sinensis*, 34102 to 34104, 34255, 34256.
- Walnut. See *Juglans australis*.  
*Warneria thunbergia*, 34167.
- Wheat (China), 34128.  
 (Italy), 34317.  
 (Venezuela), 34126.
- Yam. See *Dioscorea* spp.  
 Yerba maté. See *Ilex paraguariensis*.
- Zea mays*, 34120, 34121, 34214, 34215.  
*Ziziphus jujuba*, 34162.  
*sativa*. See *Z. jujuba*.