



Issued September 8, 1915.

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 JANUARY 1  
TO MARCH 31, 1913.

(No. 34; Nos. 34728 to 35135.)



WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1915

## BUREAU OF PLANT INDUSTRY.

---

*Chief of Bureau, WILLIAM A. TAYLOR.*

*Assistant Chief of Bureau, KARL F. KELLERMAN.*

*Officer in Charge of Publications, J. E. ROCKWELL.*

*Chief Clerk, JAMES E. JONES.*

---

### FOREIGN SEED AND PLANT INTRODUCTION.

#### SCIENTIFIC STAFF.

David Fairchild, *Agricultural Explorer in Charge.*

P. H. Dorsett, *Plant Introducer, in Charge of Plant Introduction Field Stations.*

Peter Bisset, *Plant Introducer, in Charge of Foreign Plant Distribution.*

Frank N. Meyer and Wilson Popenoe, *Agricultural Explorers.*

H. C. Skeels, S. C. Stuntz, and R. A. Young, *Botanical Assistants.*

Allen M. Groves, Nathan Menderson, and Glen P. Van Eseltine, *Assistants.*

Robert L. Beagles, *Superintendent, Plant Introduction Field Station, Chico, Cal.*

Edward Simmonds, *Superintendent, Subtropical Plant Introduction Field Station, Miami, Fla.*

John M. Rankin, *Superintendent, Yarrow Plant Introduction Field Station, Rockville, Md.*

E. R. Johnston, *Assistant in Charge, Plant Introduction Field Station, Brooksville, Fla.*

Edward Goucher and H. Klopfer, *Plant Propagators.*

*Collaborators: Aaron Aaronsohn, Director, Jewish Agricultural Experimental Station, Haifa, Palestine;*

Thomas W. Brown, *Gizeh, Cairo, Egypt;* Dr. Gustav Eisen, *California Academy of Sciences, San Francisco, Cal.;* E. C. Green, *Serviço do Algodão, Rio de Janeiro, Brazil;* A. C. Hartless, *Seharunpur Botanic Gardens, Seharunpur, India;* Barbour Lathrop, *Chicago, Ill.;* William S. Lyon, *Gardens of Nagtajan, Manila, P. I.;* Miss Eliza R. Scidmore, *Yokohama, Japan;* Charles Simpson, *Little River, Fla.;* Dr. L. Trabut, *Director, Service Botanique, Algiers, Algeria;* E. H. Wilson, *Arnold Arboretum, Jamaica Plain, Mass.*

## CONTENTS.

---

Introductory statement.....	Page. 5
Inventory.....	9
Botanical note and publication of a new name.....	46
Index of common and scientific names.....	47

---

## ILLUSTRATIONS.

---

PLATE I. A large-fruited fine-flavored papaya ( <i>Carica papaya</i> L.) from Yucatan (S. P. I. No. 34903).....	Page. 24
II. An evergreen shade tree ( <i>Harpephyllum caffrum</i> Bernh.) for windy locations in Florida (S. P. I. No. 34943).....	24
III. Fruiting tree of the Menakher date palm (S. P. I. No. 35083).....	40
IV. A new palmetto ( <i>Inodes exul</i> O. F. Cook), discovered by Mr. Cook at Victoria, Tex. (S. P. I. No. 35116).....	40
V. The Veranero avocado ( <i>Persea americana</i> Miller) from Caracas, Ven- ezuela (S. P. I. No. 35121).....	44
VI. Root and vine of the yam bean ( <i>Cacara erosa</i> (L.) Kuntze, formerly known as <i>Pachyrhizus angulatus</i> Rich.) (S. P. I. No. 35135).....	44





# INVENTORY OF SEEDS AND PLANTS IMPORTED BY THE OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION DURING THE PERIOD FROM JANUARY 1 TO MARCH 31, 1913 (NO. 34; NOS. 34728 TO 35135).

---

## INTRODUCTORY STATEMENT.

The period covered by this inventory was characterized by no especially notable explorations, and the material listed is therefore largely that sent in by correspondents in foreign countries who are interested in plant-introduction work and have sent material in response to requests or on their own initiative. The growth of a keen interest in the domestication of wild plants all over the world is one of the most remarkable phenomena observable in connection with the foreign correspondence of the Office of Foreign Seed and Plant Introduction. That the exchange of seeds and plants of a purely experimental character builds up this interest and leads to the improvement of the crop plants of the world there can be no possible doubt, and there are some importations in this inventory which, though little known now, may play a distinctly important rôle in some of the plant industries of the country.

The cultivation of the avocado has reached the stage when every new and promising variety is deserving of a thorough trial. The two varieties from Campeche and Merida, Yucatan, collected by Mr. Collins (Nos. 34855 and 34856), the yellow-skinned variety known as Veranero from the higher altitudes of Venezuela, collected by Prof. Pittier (No. 35121), and the seedling (No. 34831) found by Dr. Eisen in the Pincio Gardens in Rome will be interesting to prospective as well as present growers of the fruit.

A really excellent fodder tree, such as that found by Mr. Collins in general use in Yucatan, can hardly fail to be of interest to forage-crop specialists. It is called the ramon, or bread-nut tree, and affords good fodder during the dry season around Merida (No. 34876).

Hardy ornamental shrubs which will stand the trying climates of the Great Plains are in great demand among those whose homes are there, and the collection of poplars, honeysuckles, and cotoneasters (Nos. 34784 to 34805), secured by Mr. Frank N. Meyer from Mr. A. D. Woeikoff, at Novospassko, Russia, should prove interesting to these. The tamarisk, as a drought and alkali resistant tree, is already

attracting attention in the Southwest, and a Kashgar species (No. 34780) will be a welcome addition to the collections which are being propagated for distribution there.

Among forage grasses *Poa pallens* (No. 34807), from Argentina, said to resemble Kentucky bluegrass, and *Eragrostis superba* (No. 34818), one of the best native South African pasture grasses of the high veld, where there are only 10 inches of rainfall, are worthy of special mention. A certain interest attaches to the introduction of *Stevia rebaudiana* (No. 34883), as this is the plant which several years ago thrilled the sugar-manufacturing world with its supposed possibilities. It was discovered, however, that the sweetness, which was said to be 16 times that of cane sugar, was produced by a glycerin and not by a new sugar.

The huge-fruited papaya (No. 34777) and a dwarf form which fruits when 7 feet high (No. 34903) from Yucatan, may be useful for the large amount of papain they can produce, even though their fruits may be too large to ship well.

A new and spineless holly (No. 34836), one of Mr. E. H. Wilson's discoveries in central China, with slender flexible branches and leaves 4 to 5 inches long, will probably become popular wherever it proves hardy. A beautiful red-flowered variety of *Leptospermum scoparium* (No. 34853) from New Zealand, which will thrive in the citrus belt, and *Sterculia quadrifida* (No. 34873), with brilliant crimson pods, from Queensland, will be welcomed by the residents of Florida and California.

The breeders interested in the improvement of our plums and cherries will be glad to have plants of the wild plum of the Maritime Alps, *Prunus brigantina* (No. 34851).

Those experimenters who have already grown male vines of the Chinese yangtaw, *Actinidia chinensis* (No. 35133), will be glad to plant out a specimen grown from cuttings of a female vine which fruited in Chelsea, London, in 1911.

Our already large collection of oriental persimmons has been enriched by three new kaki varieties (Nos. 34970 to 34972), among which is a large-fruited form used for drying purposes. The best dried persimmons are almost as palatable as dried figs.

It is to be hoped that somewhere in Florida amateurs can grow the curious ear flower of the Aztecs (No. 35039), used by them to flavor their chocolate perhaps centuries before the Spaniards landed in Mexico.

The new edible bean of Togoland (No. 34916), which buries its pods quite as the peanut does, and an undetermined plant from Angola, which produces edible tubers like potatoes (No. 34913), will appeal to the curious among our experimenters and may have unsuspected possibilities in them.

Whether the Palmyra palm of India (No. 35040) can be grown in southern California or Florida remains to be seen. In India it thrives in a hot, dry climate similar to ours and is cultivated for its sugar and the toddy which the Indians make from its sap. On the mainland of India and in Ceylon 100,000 acres of these palms are said to be cultivated.

Some remarkable forest trees and shrubs are possibly to be found among the 14 species of seed (Nos. 34837 to 34850) received from Castlemaine, Victoria, Australia.

From a previous introduction (No. 22326) Mr. Conner, at Chilli-cothe, Tex., has selected a dwarf form of kafir (No. 34911), similar to *feterita*, which seems to have unusual drought-resistant qualities, making it worthy of further distribution.

The manuscript of this inventory has been prepared by Miss May Riley, the botanical determinations have been made and the notes on geographic distribution compiled by Mr. H. C. Skeels, and the notes on nomenclature have been prepared under the supervision of the Committee on Scientific Orthography by Mr. S. C. Stuntz, who has general supervision of the inventories, as well as of the other publications of this office.

DAVID FAIRCHILD,  
*Agricultural Explorer in Charge.*

OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION,  
*Washington, D. C., December 8, 1914.*



# INVENTORY.

---

## 34728 to 34730.

From Trivandrum, Travancore, southern India. Presented by the Director of Agriculture. Received January 2, 1913.

Plants of the following:

**34728.** CYMBOPOGON CITRATUS (DC.) Stapf. **Lemon grass.**  
(*Andropogon citratus* DC.)<sup>1</sup>

See S. P. I. No. 33786 for previous introduction and description.

**34729.** CYMBOPOGON NARDUS (L.) Rendle. **Citronella.**  
(*Andropogon nardus* L.)

See S. P. I. No. 33787 for previous introduction.

**34730.** VETIVERIA ZIZANIOIDES (L.) Nash. **Vetiver.**  
(*Andropogon squarrosus* L. f.)

*Distribution.*—A stout grass found throughout the plains and lower hills of India, up to an elevation of 4,000 feet; generally cultivated and escaped into fields in Louisiana.

## 34731. PHASEOLUS VULGARIS L. **Bean.**

From Bigstone, S. Dak. Presented by Mr. C. J. Brand, of the Bureau of Plant Industry. Received December 30, 1912.

“The parent seed from which this sample was produced in 1912 was brought to Redwood Falls, Minn., from Schleswig-Holstein, Germany, in 1852, by Mrs. Herman Neuenberg. This sample was grown by my mother in her garden. It is more productive than the sorts usually grown in the Northwest, has a longer growing season, cooks much more quickly when cooked as a green snap bean, and recovers after a severe frost and continues to produce.” (Brand.)

## 34732. NORMANBYA MERRILLII Beccari. **Bonga de China.**

From Manila, Philippine Islands. Presented by Mr. O. W. Barrett, chief, Division of Horticulture, Bureau of Agriculture. Received January 7, 1913.

“A medium-sized palm with graceful, somewhat curved, pinnate leaves, somewhat resembling the common betelnut palm, but not so tall. The leaves are rather glaucous, and the pretty crimson fruits are borne just below the leaves in medium-sized bunches, the individual fruits less than 1 inch long. One of our most ornamental medium-sized palms, which thrives remarkably well in Manila.” (E. D. Merrill.)

## 34733. ZEA MAYS L. **Corn.**

From Malta. Presented by Lieut. Col. E. P. S. Roupell, Lieutenant Governor and Chief Secretary to Government of Malta, through the American consul, Mr. James Oliver Laing. Received January 6, 1913.

“Maltese-grown corn, very red in color. This produces only one head per seed and on unirrigated ground the plant is about 2 feet 6 inches high. On irrigated ground the plant will grow 5 or 6 feet high.”

---

<sup>1</sup> The italicized names in parentheses are the Index Kewensis names, added for convenience in connecting the names used in this Inventory with the foreign literature in regard to the plants.

**34734 to 34751.**

From Lawang, Java. Presented by Mr. M. Buysman, Jardin Botanique. Received December 2, 1912.

Seeds of the following:

**34734.** ACANTHOSICYOS HORRIDA Welw. **Narras.**

See S. P. I. Nos. 31401 and 31738 for previous introduction and description.

**34735.** ACROCOMIA TOTAI Mart. **Palm.**

*Distribution.*—A palm found in the provinces of Santa Cruz de la Sierra, Chiquitos, and Moxos, in Bolivia.

**34736.** ANACARDIUM sp. **Cashew.**

“From Japan.”

**34737.** CITRULLUS VULGARIS Schrad. **Watermelon.**

**34738.** PTYCHOSPERMA GRACILIS. Labill. **Alexandra palm.**

“This wood is beautifully marked, and is much in favour for walking sticks, the outer portion being cut into suitable thicknesses for this purpose. It grows to a height of 70 to 80 feet, and occurs in Queensland.” (*Maiden, Useful Native Plants of Australia.*)

**34739.** CARYOTA SOBOLIFERA Mart. **Palm.**

*Distribution.*—A palm 15 to 25 feet high, growing in the vicinity of Malakka, in the Malay Peninsula.

**34740.** CROTALARIA GRANTIANA Harvey.

See S. P. I. No. 31844 for previous introduction.

**34741.** ELAeis GUINEENSIS Jacq. **African oil palm.**

See S. P. I. No. 22713 for previous introduction.

**34742.** LICUALA PELTATA Roxb. **Palm.**

“An ornamental fan palm from Assam, Burma, etc.”

See S. P. I. No. 22711 for previous introduction.

**34743.** LOXOCOCCUS RUPICOLA (Thwaites) Wendl. and Drude. **Dotalu.**

“A pinnate-leaved palm from the moist region of Ceylon, occurring at an elevation of from 1,000 to 5,000 feet. Stems slender, erect, growing to a height of from 20 to 30 feet.” (*Macmillan, Handbook of Tropical Gardening and Planting.*)

**34744.** ONCOSPERMA FILAMENTOSUM Blume. **Nibung palm.**

*Distribution.*—A tall palm found in the islands of the Malay Archipelago.

**34745.** RHAPIS FLABELLIFORMIS L'Herit. **Palm.**

See S. P. I. No. 22707 for previous introduction.

**34746.** RICINUS COMMUNIS L. **Castor bean.**

“From Ecuador.”

**34747.** ROYSTONEA REGIA (H. B. K.) Cook. **Royal palm.**

(*Oreodoxa regia* H. B. K.)

**34748.** SAGUERUS PINNATUS Wurm. **Palm.**

(*Arenga saccharifera* Labill.)

See S. P. I. No. 26937 for previous introduction.

**34749.** THEA SINENSIS L. **Tea.**

(*Camellia thea* Link.)

See S. P. I. Nos. 26330 to 26343 for previous introductions.

**34750.** (Undetermined.)

**34751.** (Undetermined.)

**34752 to 34754. NICOTIANA RUSTICA L.****Tobacco.**

From Scafati, Italy. Presented by Mr. A. Splendore, director, Royal Experimental Institute for the Cultivation of Tobacco. Received January 4, 1913.

"This *Nicotiana rustica*, abundantly fertilized with night soil (from cess pools or pits), may yield up to 30 or more quintals of leaves per hectare, with a nicotine content of over 10 per cent in our climate." (*Splendore*.)

Seeds of the following:

**34752.** "*Brasile leccese*. Originally from Brazil, established in the cultivated district of Nardo, Province of Lecce."

**34753.** "*Brasile selvaggio*. Wild Brazilian, originally from Brazil, established in the Palermo district."

**34754.** "*Erbasanta*. Originally from Brazil, established in the cultivated district of Cava dei Terreni, Province of Lecce."

**34755 to 34767.**

From Lawang, Java. Presented by Mr. M. Buysman, who received these seeds from Paraguay. Received December 2, 1912.

Seeds of the following:

**34755.** CITRUS sp.

"Large fruits."

**34756.** CITRUS sp.

"With brown skin."

**34757.** COCOS ROMANZOFFIANA Cham.

**Palm.**

"An elegant palm, reaching a height of 40 feet, native of extratropical Brazil."

**34758.** COLLETIA CRUCIATA Gill. and Hook.

"An evergreen rhamnaceous shrub from Chile, with pale yellow flowers."

**34759.** POUTERIA NERIIFOLIA (Hook. and Arn.) Radlk.

(*Lucuma nerifolia* Hook. and Arn.)

See S. P. I. No. 8951 for previous introduction.

**34760.** MYRTUS sp.

"Edible fruit."

**34761.** MYRTUS sp.

"Edible fruit."

**34762.** PHILODENDRON ROBUSTUM Schott.

*Distribution*.—A climbing shrubby aroid found in tropical America.

**34763.** PSIDIUM GUAJAVA L.

**Guava.**

"Wild."

**34764.** ROLLINIA sp.

"Wild plant."

**34765.** THUNBERGIA ALATA Bojer.

"A yellow-flowered climber from South America."

*Distribution*.—A shrubby climber with orange or buff flowers, growing in tropical Africa and generally cultivated in the Tropics.

**34766.** (Undetermined.)

**34767.** IPOMOEA QUAMOCLIT L.

**Cypress vine.**

"Climber, red flowered."



**34768. ELEUSINE CORACANA (L.) Gaertner.****Ragi.**

From Bangalore, Mysore, India. Presented by Mr. H. V. Krishnayya, Acting Officer in Charge of the Agricultural Department. Received January 8, 1913.

"*Hasaragumbi*. The ground should be plowed 4 to 6 times with an ordinary plow; rake with a bullock rake a day or two before sowing, sow with a country drill as a mixed crop, mixture being jola (*Andropogon sorghum*) and avare (*Dolichos lablab*), middle or end of June. Should be weeded with a hand hoe, two to four times, as required. (The particular plat from which the sample is brought was weeded only once.) It is harvested and stacked in November; thrashing and winnowing, December to February; yield, 1,500 to 2,000 lbs." (*Krishnayya*.)

**34769 and 34770.**

From Hangchow, China. Presented by Rev. J. H. Judson, Hangchow College. Received January 10, 1913.

Seeds of the following:

**34769.** *SAPINDUS* sp.

**Soapberry.**

**34770.** *THEA SINENSIS* L.

**Tea.**

(*Camellia thea* Link.)

**34771. CHAETOCHLOA ITALICA (L.) Scribn.****Kursk millet.**

(*Setaria italica* Beauv.)

Grown at Akron, Colo., in 1912. Received December 26, 1912.

"This strain of millet is the product of a single plant selected at the Belle Fourche, S. Dak., Experiment Farm, in 1908, by Mr. A. C. Dillman, of the Office of Alkali and Drought Resistant Plant Breeding Investigations. The original seed (S. P. I. No. 22420) was obtained from the Dakota Improved Seed Company from a selected strain of Kursk millet developed by Prof. W. A. Wheeler. This strain of millet is of excellent forage type, is good in seed production, and is drought resistant." (*Dillman*.)

**34772. MEDICAGO CARSTIENSIS Wulfen.**

From Edinburgh, Scotland. Presented by Prof. Bayley Balfour, regius keeper, Royal Botanic Garden. Received January 13, 1913.

**34773 and 34774.**

From German East Africa. Presented by the Usumbwa Company, Post Tabora. Received January 14, 1913.

**34773.** *CURCUMA LONGA* L.

**Turmeric.**

"Resembles ginger in the nature and form of its rhizomes and rounded tubers, but larger and shorter. In commerce they are separated into 'longs' and 'rounds.' In India much of the turmeric is used for dyeing silk, because the tuber contains a starch associated with a coloring matter (curcumine) of a beautiful orange yellow. Because of its essential aromatic oil it is used as a condiment in the Far East, and especially in the manufacture of curry. Many tribes of Polynesia use it to stain their bodies and their hair. Curcuma is known still in the spice trade under the name of Indian saffron, and in the West Indies under that of coolie saffron." (*Capus et Bois, Les Produits Coloniaux*.)

**34774.** *CARICA PAPAYA* L.

**Papaya.**

**34775. CITRUS sp.****Orange.**

From Shaowu, Fukien, China. Presented by Rev. J. E. Walker, D. D. Received January 13, 1913.

"On a recent visit to a small city near the back side of this province we were presented with some unusually large oranges, a little tart, but thin skinned, tender, juicy, and rich. The largest ones measured nearly 3 inches in diameter, cross section, and were regular in shape. In this region 5 to 10 degrees of frost occur." (*Walker.*)

**34776. PHASEOLUS AUREUS Roxb.****Mung bean.**

From Beira, Portugese East Africa. Presented by Mr. R. H. B. Dickson, Assistant Director of Agriculture. Received January 10, 1913.

"On the Zambezi River this seed is termed '*Soroko*,' on the coast '*Shoombi*,' and in the interior between Beira and the Zambezi River it is known as '*Zoombi*.'" (*Dickson.*)

**34777. CARICA PAPAYA L.****Papaya.**

From Merida, Mexico. Collected by Mr. G. N. Collins, of the Bureau of Plant Industry. Received January 14, 1913.

"This seed was secured in the market at Merida, Mexico, December 29, 1912. These seeds are from a specimen measuring 19 inches in length by 22 inches in circumference." (*Collins.*)

**34778 to 34780.**

From Angers, France. Purchased from Charles Detriche, sr. Received January 14, 1913.

**34778. ARISTOTELIA CHILENSIS** (Molina) Stuntz.  
(*A. macqui* L'Herit.)

**Maqui.**

**34779. POPULUS SIMONII** Carrière.

**Poplar.**

*Distribution.*—A poplar belonging to the *candicans* group, found in the province of Yunnan in China.

**34780. TAMARIX KASHGARICA** Lemoine.

**Tamarisk.**

*Distribution.*—A Tamarix with small, glaucous leaves which are closely appressed to the stem, found in central Asia.

**34782 and 34783.**

From Jamaica Plain, Mass. Presented by the Arnold Arboretum. Received January 2, 1913.

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

**34782. CRATAEGUS ARNOLDIANA** Sargent.

**Hawthorn.**

"This is one of the best of the large-flowered, large-fruited species. The fruit ripens in August and is edible."

**34783. ACANTHOPANAX RICINIFOLIUM** (Sieb. and Zucc.) Seem.

"A desirable hardy ornamental tree from northern Japan."

**34784 to 34805.**

From Novospassko, Syzran-Riazan R. R., Russia. Purchased from Mr. A. Woeikoff by Mr. Frank N. Meyer, of the Bureau of Plant Industry. Received January 15, 1913.

Plants of the following:

**34784. ACER GINNALA SEMENOVII** (Reg. and Herd.) Pax.

**Maple.**

"(No. 8.)"

**34784 to 34805—Continued.**

- 34785.** CORYLUS AVELLANA L. **Filbert.**  
 "(No. 7.)"
- 34786.** COTONEASTER IGNAVA Wolf.  
 "(No. 6.)"
- 34787.** HALIMODENDRON HALODENDRON (Pallas) Voss.  
 (*Halimodendron argenteum* Fisch.)
- 34788.** LONICERA FLORIBUNDA Boiss. and Buhse. **Honeysuckle.**  
 "(No. 5.)"  
*Distribution.*—A shrub with reddish yellow flowers and red berries, found at an elevation of 4,000 feet on the slopes of the mountains in northern Persia.
- 34789.** POPULUS ALBA L. **Poplar.**  
 "(No. 10.)"
- 34790.** POPULUS DELTOIDES Marsh. **Poplar.**  
 (*Populus monilifera* Ait.)  
 "(No. 21.)"
- 34791.** POPULUS BALSAMIFERA L. **Poplar.**  
 "(No. 13.)"
- 34792.** × POPULUS BEROLINENSIS Koch. **Poplar.**  
 "(No. 15.)"
- 34793.** POPULUS DELTOIDES Marshall. **Poplar.**  
 "(No. 20.)"
- 34794.** POPULUS CANDICANS Aiton. **Poplar.**  
 "(No. 14.)"
- 34795.** POPULUS NIGRA L. **Poplar.**  
 "(No. 18.)"
- 34796.** POPULUS NIGRA L. **Poplar.**  
 "(No. 19) *Pushkiniana.*"
- 34797.** POPULUS LAURIFOLIA Ledeb. **Poplar.**  
 "(No. 12.)"
- 34798.** POPULUS SIMONII Carrière. **Poplar.**  
 "(No. 16.)"  
*Distribution.*—A tree found in the vicinity of Peking, China.
- 34799.** POPULUS SUAVEOLENS Fischer. **Poplar.**  
 "(No. 22.)"
- 34800.** POPULUS TREMULA L. **Poplar.**  
 "(No. 17.)"
- 34801.** POPULUS PETROWSKIANA Schroeder. **Poplar.**  
 "(No. 11.)"
- 34802.** PRUNUS MAXIMOWICZII Rupr.  
 "(No. 1.)"
- 34803.** PRUNUS PROSTRATA Labill. **Bush cherry.**  
 "(No. 2.)"
- 34804.** TAMARIX PENTANDRA Pallas. **Tamarisk.**  
 "(No. 4.)"

*Distribution.*—A shrub or small tree with flowers ranging from rose color to white, found on the low banks of streams from southern Russia and Asia Minor eastward to Turkestan and Persia.

**34784 to 34805—Continued.****34805.** *ULMUS GLABRA SUBEROSA* (Moench) Guerke."No. 3, *Forma turkestanica* Regel."*Distribution.*—A form of *Ulmus glabra* having winged branches, found in southern Europe.**34806 and 34807.**

From Canadon de las Vacas, Santa Cruz, Argentina. Presented by Mr. H. T. Reynard. Received January 7, 1913.

**34806.** *BROMUS UNIOLOIDES* (Willd.) H. B. K.

See S. P. I. No. 31896 for previous introduction.

**34807.** *POA PALLENS* Poir.*Distribution.*—A grass resembling Kentucky bluegrass found in the vicinity of Buenos Aires, in Argentina.**34809. CASSIA OBOVATA** Colladon.

From South Africa. Presented by Mr. J. Burt Davy, government agrostologist and botanist, Union of South Africa, Department of Agriculture, Pretoria. Received January 20, 1913.

"Seeds from the southwestern Transvaal and Bechuanaland. The root is supposed to possess medicinal virtues and the leaves are said to be used in tropical Africa as a substitute for and adulterant of commercial senna. I have no personal experience of its merits. The plant prefers a sandy soil and grows in a region of summer rain with a 15 to 20 inch rainfall." (*Davy.*)*Distribution.*—A partly woody perennial found in Upper Guinea and Lower Guinea and in Abyssinia and Egypt, in Africa, and from Arabia eastward to the western part of India, in southern Asia.**34810. CASSIA OCCIDENTALIS** L.

Presented by Mr. Walter W. Charter, Director of Agriculture, Quelimane, Portuguese East Africa. Received January 22, 1913.

**34811 to 34816.**

From Tokyo, Japan. Presented by the Tokyo Plant, Seed, and Implement Co. Received January 6, 1913.

**34811.** *VIGNA SINENSIS* (Torner) Savi.**Cowpea.**

"Kintoki."

**34812 TO 34816.** *PHASEOLUS ANGULARIS* (Willd.) W. F. Wight.**Adzuki bean.****34812.** "*Muroran.*"**34815.** "*Dainagon.*"**34813.** "*Shiro-wase.*"**34816.** "*Kuro-wase.*"**34814.** "*Aka-wase.*""In order to make the bean meal, the bean is first boiled or steamed. The outer skin then is easily separated by sieving through meshes or by press. Water being then taken off or evaporated from the product, bean meal remains, which may be used for making cakes and confections at once, or may be dried for future use." (*T. Watase.*)

**34817 and 34818.**

From South Africa. Presented by Prof. J. Burt Davy, government agrostologist and botanist, Union of South Africa, Department of Agriculture, Pretoria. Received January 15, 1913.

**34817. CHAETOCHELOA LINDENBERGIANA (Nees) Hitchc.**

(*Panicum lindenbergianum* Nees, Flor. Afr. Austral., p. 47, 1841.)

- (*Setaria lindenberghiana* (Nees) Stapf, Flora Capensis, vol. 7, p. 422, 1899.)

Seeds of this South African grass were received under the name *Setaria lindenberghiana* Stapf. The generic name *Chaetochloa* is now used for this genus. *Chaetochloa lindenberghiana* seems never to have been published, and it is necessary to adopt it here. (*A. S. Hitchcock.*)

*Distribution.*—A perennial grass found in tropical East Africa and southward to the Cape.

**34818. ERAGROSTIS SUPERBA Peyritsch.**

"This is one of our best native pasture grasses on the high veld and extends also to the bush veld, its range being from about 3,500 feet (or lower) to 5,500 feet or more. It is common in sandy soils in British Bechuanaland, where the rainfall is perhaps not more than 10 inches, coming in summer." (*Davy.*)

*Distribution.*—A perennial grass found in Portuguese West Africa and southward to the Cape.

**34819. ELICHRYSUM ORIENTALE (L.) Gaertn.****Immortelle.**

From Toulon, France. Presented by Mr. M. F. Mansfield, consular agent, through the American consul general at Marseille. Received November 25, 1913.

"The choice of soil is very important. Rocky or sandy soils with southern exposure are best adapted for this purpose. In rich, deep, cold soils the immortelle is killed by the first frosts.

"After the soil has been broken and well prepared, the ground is laid out in rows 40 to 50 centimeters apart (15.74 to 19.68 inches); in these rows the young plants are set out at a distance of 30 to 35 centimeters (11.81 to 13.77 inches) from each other. Care should be taken to heap up the soil about the roots. These early plants should be watered by means of a sprinkler. If it should rain after the planting, sprinkling would be unnecessary. It would be advisable during the first four or five days to protect these young plants from the hot rays of the sun. When they have begun to grow, they should be exposed to the full rays of the sun, and during the winter protected from the cold, for the immortelle is very sensitive to frost. It is for this reason that the immortelle is cultivated at Ollioules and Bandol only in soils well exposed to the sun and upon the southern slopes.

"Cultivation of the immortelle is exceedingly simple. It consists in spading lightly the ground about the plant and applying a suitable fertilizer. The ground should be spaded whenever weeds spring up around the plants. As for the fertilizer, it consists of oil cakes and stable manure, which is placed about the roots of the young plants when they have attained a certain development. The fertilizer should be renewed in this region every year, in October or November.

"The immortelle commences to yield after the second year and continues to bloom even more than 20 years. In this region the flower is gathered in June or July. At the moment the flowers commence to open and show a small red point in the center and are of a beautiful golden yellow, they should be gathered. When the flowers have arrived at this degree of maturity, they should be immediately gathered, for they open very rapidly and lose their commercial value. After the flowers have been

gathered, they are exposed to the sun for drying. When dry, they are made into bouquets and hung up in dry rooms, out of reach of mice." (*Mansfield*.)

*Distribution*.—An herbaceous perennial found in Asia Minor and cultivated generally in the countries of southern Europe bordering on the Mediterranean Sea.

### 34820 and 34821.

From St. Petersburg, Russia. Presented by Mr. Slobool Schicoff, Director of Agriculture. Received January 20, 1913.

34820. *NICOTIANA RUSTICA* L.

Tobacco.

34821. *NICOTIANA TABACUM* L.

Tobacco.

### 34822. *MELILOTUS OFFICINALIS* (L.) Desr. Yellow sweet clover.

From India. Presented by Gen. F. Booth Tucker, the Salvation Army, The Mall, Simla. Received January 8, 1913.

"This seed was received as *Medicago falcata*." (*H. N. Vinall*.)

### 34823. *CHENOPODIUM QUINOA* Willd.

Quinoa.

From Puno, Peru. Presented by Mr. C. Bues. Received December 28, 1912.

"Seed of a Peruvian grain. It is exceedingly nourishing and might interest breakfast-food manufacturers. Grows on semiarid land; is sown in rows and gives big crops. Adaptable strains might be selected. Grows at 10,000 to 11,000 feet altitude and even higher. Sown near the beginning of the rainy season. The plant resembles a weed very common in the States and should not be pulled as a weed." (*Bues*.)

### 34824 and 34825.

From Buitenzorg, Java. Presented by Mr. T. E. van der Stok, through Mr. C. V. Piper, of the Bureau of Plant Industry. Received January 25, 1913.

34824. *CANAVALI ENSIFORME* (L.) DC.

Jack bean.

"White bean."

See S. P. I. No. 32647 for previous introduction

34825. *CANAVALI GLADIATUM* (Jacq.) DC.

Sword bean.

"Gray bean."

See S. P. I. No. 32646 for previous introduction.

### 34826 and 34827. *GOSSYPIUM HIRSUTUM* L.

Cotton.

From Zomba, Nyasaland Protectorate. Presented by Mr. E. W. Davy, for the Director of Agriculture. Received January 27, 1913.

34826.

34827.

"(No. 16.)"

"(No. 57.)"

### 34828. *ANANAS SATIVUS* Schult. f.

Pineapple.

From Ibadan, southern Nigeria. Presented by Mr. Frank Evans, Department of Agriculture. Received January 25, 1913.

Seeds.

94948°—15—3

**34829. PERILLA NANKINENSIS (Lour.) Decaisne.***(Perilla arguta Benth.)*

From Hankow, China. Presented by Mr. J. Paul Jameson, American vice consular general. Received January 27, 1913.

"*Su tze.*"

**34830. CITRUS LIMONIA × GRANDIS.**

From Algiers, Algeria. Presented by Dr. L. Trabut. Received January 28, 1913.

**34831. PERSEA AMERICANA Miller.****Avocado.***(Persca gratissima Gaertn. f.)*

From Rome, Italy. Presented by Dr. Gustav Eisen, California Academy of Sciences, San Francisco, Cal. Received January 30, 1913.

"Cuttings were procured from Pincio." (*Eisen.*)

See S. P. I. No. 34698 for previous introduction.

**34832 and 34833.****Palm.**

From Port Louis, Mauritius. Presented by Mr. G. Regnard. Received January 20, 1913.

**34832. DECKENIA NOBILIS Wendland.**

See S. P. I. No. 34079 for previous introduction.

**34833. ROSCHERIA MELANOCHOETES Wendland.**

See S. P. I. No. 33347 for previous introduction.

**34834. ROSA LESCHENAULTIANA Red. and Thor.****Rose.**

From Kew, England. Presented by Sir David Prain, director, Royal Botanic Gardens. Received January 31, 1913.

Cuttings.

**34835. FERONIELLA OBLATA Swingle.**

From Saigon, Cochin China. Presented by Mr. P. Morange, Director of Agriculture. Received January 29, 1913.

See S. P. I. Nos. 29341 and 34636 and Inventory 31, p. 84, for previous introductions and descriptions.

**34836. ILEX CORALLINA Franchet.****Holly.**

From Orleans, France. Presented by Barbier & Cie., at the request of Vilmorin-Andrieux & Cie., Paris, France. Received February 19, 1913.

"Among the new hollies recently introduced from China this is one of the most remarkable; it is entirely different from all other hollies existing in our collections in its peculiar habit. According to Franchet it reaches a height of from 3 to 4 meters. It is a bushy shrub, smooth in all parts, with lenticular bark and glutinous buds. Its branches, long and slender, bend gracefully without being pendent; being very flexible, they are waved by the slightest breeze. Its leaves are very long, from 4 to 5 inches, and from 1½ to 1½ inches in width, are thin and rapidly become coriaceous; they are ovate lanceolate, finely denticulate, brilliant deep green above and pale green beneath. The fruits are numerous, small, coral red, whence comes the specific name. This shrub, which is so graceful, has none of the rigidity of our hollies; it grows rapidly and does not seem dependent on the nature of the soil. It has stood our

winters without injury, even as young seedlings; perhaps it is rash to present it as hardy for the north of France, but I am sure that for the climate of central France it will be an open-air shrub. It will be very decorative for the cliffs of wild gardens, in large rockeries, just as it will have its place in massed effects with other species. We have grown this interesting novelty from seeds sent by Mr. E. H. Wilson, which were collected in the thickets near Mupin, central China, at altitudes of from 1,500 to 1,800 meters. He had already met this species the preceding year in the ravines around Ichang." (*Léon Chenault, Revue Horticole, November 16, 1912.*)

### 34837 to 34850.

From Australia. Presented by Lieut. Col. J. W. B. Field, Castlemaine, Victoria, Australia. Received January 8, 1913.

Seeds of the following:

**34837.** *ACACIA ELATA* Cunningham. **Cedar wattle.**

See S. P. I. No. 1800 for previous introduction.

*Distribution.*—A handsome tree, often 60 feet high, found in shaded ravines in the Blue Mountains in New South Wales, Australia.

**34838.** *ACACIA SPECTABILIS* Cunningham. **Mudgee wattle.**

See S. P. I. No. 30783 for previous introduction.

**34839.** *BORONIA PINNATA* Smith.

*Distribution.*—A smooth shrub about 2 feet in height bearing wandlike branches with pinnate leaves and rose-colored flowers, which have the odor of the hawthorn. Found in New South Wales and Victoria, Australia, and in Tasmania.

**34840.** *BRACHYCHITON ACERIFOLIUM* Mueller. **Flame tree.**  
(*Sterculia acerifolia* Cunn.)

See S. P. I. No. 4607 for previous introduction.

*Distribution.*—A large timber tree with racemes of rich red flowers. Found in the valleys of rivers in New South Wales in Australia.

**34841.** *DILLWYNIA ERICIFOLIA* Smith.

*Distribution.*—An erect heathlike shrub found in wet, sandy places along streams in Queensland, New South Wales, and Victoria, Australia, and in the northern part of Tasmania.

**34842.** *KENNEDYA RUBICUNDA* (Schneevooght) Ventenat.

See S. P. I. No. 19792 for previous introduction.

*Distribution.*—A perennial climbing vine with drooping racemes of dark-red flowers 1 to 2 inches long. Found in Queensland, New South Wales, and Victoria, Australia.

**34843.** *LAGUNARIA PATERSONII* (Andrews) Don. **Queensland pyramid tree.**

"An Australian tree, with white, close-grained, easily worked wood used for building, which grows to a height of 40 to 60 feet and to a diameter of 1½ to 2½ feet. The bark furnishes a very beautiful fiber on maceration." (*Maiden, Useful Native Plants of Australia.*)

*Distribution.*—A tree with large, pale-red, nearly white, flowers, growing on Norfolk Island, east of Australia, and in Queensland.

**34844.** *LEPTOSPERMUM FLAVESCENS* Smith. **Tantoon.**

*Distribution.*—A tall shrub found along the banks of streams in Queensland, New South Wales, and Victoria, Australia, and in Tasmania.



**34837 to 34850—Continued.**

- 34845.** *PALLASIA CAPENSIS* Christm.  
(*Calodendrum capensis* Thunb.)

See S. P. I. No. 31857 for previous introduction.

- 34846.** *PITHECOLOBIUM PRUINOSUM* Benth.

See S. P. I. No. 7212 for previous introduction.

*Distribution.*—A tree with the flowers in globular umbels found along streams in Queensland and New South Wales, Australia.

- 34847.** *PIRTOSPORUM REVOLUTUM* Dryander.

*Distribution.*—A tall shrub with tomentose shoots and leaves. Found on ridges and in river valleys in Queensland, New South Wales, and Victoria, Australia.

- 34848.** *POLYSCIAS ELEGANS* (Moore and Mueller) Harms.  
(*Panax elegans* Moore and Mueller.)

*Distribution.*—A large and handsome tree found along rivers and on shores of Queensland and New South Wales, Australia.

- 34849.** *CORDYLINE TERMINALIS* Kunth. **Palm lily.**

*Distribution.*—A shrubby plant found in the tropical part of India and eastward through the Malay Archipelago to Australia.

- 34850.** *CORDYLINE BAUERI* Hook. f.

*Distribution.*—A treelike plant often 20 feet high found on Norfolk Island, east of Australia.

**34851. PRUNUS BRIGANTINA Villars.**

From Nice, France. Presented by Dr. F. Mader. Received January 31, 1913.

"Seeds of *Prunus brigantina* (S. P. I. No. 31954) I sent you from Tenda. Unfortunately last year I was unable to procure, in the eastern Maritime Alps, fruits for making an exact comparison, and the question whether there are two varieties or even species going under that name can only be solved next autumn. However, I send you now some seeds of the western form, exceedingly common near the springs of the Var stream, etc. If the differences quoted prove to be constant and important, this, and not the eastern form from Tenda, must be considered as the true typical *Prunus brigantina* (or *prunier des Alpes* of French foresters). I hope you will now have the two plants, whether they be different or not." (*Mader.*)

**34852. TRIFOLIUM PRATENSE L.**

**Red clover.**

From Amsterdam, Holland. Presented by Prof. Hugo de Vries, through Mr. Walter T. Swingle, of the Bureau of Plant Industry. Received January 29, 1913.

"Seeds of the 5-leaved clover." (*De Vries.*)

**34853. LEPTOSPERMUM SCOPARIUM Forster. Nicholls's manuka.**

From Long Rock, Cornwall, England. Presented by Rev. A. T. Boscawen. Received January 31, 1913.

*Nichollsii.* "The history of this species has been given by Mr. M. L. Roberts, of Christchurch, New Zealand. During the summer of 1905 Mr. M. W. Nicholls, of Belfast, New Zealand, visited the establishment of Nairn & Son, wearing in his button-hole flowers of this shrub. These horticulturists, who saw at the first glance that it

was a new plant, asked for information concerning it and inquired as to the means of procuring it. The only information that Mr. Nicholls gave them was that the plant originated in the region between Chaney's Corner and the sea. Messrs. Nairn requested cuttings, which Mr. Nicholl furnished them. These cuttings did not succeed very well at first, because they were too woody, and only one or two small plants were obtained. One shrub, however, bore seeds. On sowing these a hundred plants were produced, which, except seven, presented the same characters as the type and later yielded for the most part white flowers. But the exceptions have soft reddish foliage of a different appearance. When they flowered it was found that they had red flowers. The best of these was named *Nichollsii*, and it is this which is now received. A large number of specimens have been sent to Europe, with great success, and have succeeded well there. This new variety forms a valuable addition to horticulture. They are very much sought, however, for growing in gardens in the citrus regions and they are cultivated in the open air like *Leptospermum scoparium*, that is to say, in ground not calcareous, but in well-drained, airy locations. In less mild climates they are cultivated in the cool house. They are easily propagated by cuttings." (*Revue Horticole*, 1912, p. 577.)

**34854. XANTHOSOMA SAGITTAEFOLIUM (L.) Schott. Yautia.**

From Basse Terre, Guadeloupe. Presented by the American consul. Received February 3, 1913.

"*Malanga coloré*. Colored or wine eddo. The roots of this eddo are much esteemed. They are smaller and more nearly round than the white eddo. The color inside is pale yellow. They are mealy and dry when cooked. The young leaves of the plant are selected as the best for making 'calalou.' " (*F. T. F. Dumont*.)

Tubers.

**34855 and 34856. PERSEA AMERICANA Miller. Avocado.**

(*Persea gratissima* Gaertn. f.)

From Mexico. Collected by Mr. G. N. Collins, of the Bureau of Plant Industry. Received February 4, 1913.

Scions of the following; quoted notes by Mr. Collins:

**34855.**

"From San Pablo, Campeche, January 20, 1913. A thin-skinned fruit with small seeds; reputed to be of very superior quality."

**34856.**

"From a tree said to produce the finest and largest fruits in Merida, a place noted for its fine avocados."

**34859. VIGNA SINENSIS (Torner) Savi. Cowpea.**

From San Salvador, Salvador. Presented by Mr. Thomas Hinckley, American consul general, who procured them through the Sociedad Nacional de Agricultura, Ganadería é Industrias of Salvador. This seed was procured at the request of Mr. R. T. Ruiz. Received January 30, 1913.

"A black pole bean so prolific as to defy comparison. It is found in its best state in the department of Chalatenango. The best trait of this bean beside its splendid flavor is the fact that it is sown in the same hill with the Indian corn at the same time the latter is being sown and it matures with the corn, the stalk of the latter being its natural support." (*Ruiz*.)

**34860. CITRUS sinensis (L.) Osbeck.****Orange.**

From Florida. Presented by Mr. Goldsmith H. Williams, United Fruit Co., New York. Received February 5, 1913.

"*Melitensis sulcata*, navel orange, which I once had in Florida. It was sent to Mr. Henry G. Hubbard by Mr. William Saunders, from Washington. This variety of the navel is more prolific than the so-called Washington navel and is otherwise a little superior, in my estimation." (*Williams.*)

Cuttings.

**34861. DIOSCOREA sp.****Yam.**

From Manila, Philippine Islands. Presented by Mr. O. W. Barrett, chief, Division of Horticulture, Bureau of Agriculture. Received January 30, 1913.

"A superior sort of yam (*Dioscorea* sp.), P. I. No. 2394. I think we have never sent you this variety heretofore. It has a very distinct habit, as to the rhizomes, from other yams, somewhat resembling the old West Indian '*yampee*' in that respect." (*Barrett.*)

**34862. CUCURBITA MAXIMA Duch.****Pumpkin.**

From El Rancho, Guatemala. Presented by Mr. E. E. Knight. Received January 7, 1913.

**34863. MEDICAGO SATIVA L.****Alfalfa.**

From Paris, France. Presented by Mr. Frank H. Mason, American consul general. Received February 5, 1913.

"This seed is said to be a very hardy variety, well adapted to a dry climate and a sandy soil. It should be sown in the usual manner, about 20 to 25 pounds to the acre, preferably when spring is well advanced." (*Mason.*)

**34864. CHAENOMELES JAPONICA (Thunb.) Lindl. Japanese quince.**

(*Pyrus japonica* Thunb.)

From Nancy, France. Purchased from Lemoine & Sons. Received February 7, 1913.

"*Incendie*. Very beautiful, with double perfect flowers; petals round, perfectly imbricated; live, fiery scarlet in color." (*Revue Horticole.*)

Plants.

**34865 and 34866..**

From Argentina. Presented by Mr. W. F. Wight, of the Bureau of Plant Industry. Received February 7, 1913.

**34865. PRUNUS ARMENIACA L.****Apricot.**

"These seeds are from a seedling tree in a garden between San Juan and Alta Sierra, Province of San Juan, Argentina. The fruit was fair sized and of excellent quality. Unfortunately no more remained on the tree." (*Wight.*)

**34866. SOLANUM sp.**

"These tubers came from near Guatrache, Argentina, where there has been practically no rain since last May. It is said the Indians eat them raw, and while the taste is agreeable enough at first, I can't say that the taste later is particularly good." (*Wight.*)

Tubers.

**34872 and 34873.**

From Australia. Presented by Mr. James Pink, Wellington Point, near Brisbane, Queensland. Received February 10, 1913.

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

**34872.** GREVILLEA BANKSII R. BROWN.

**Kurrajong.**

"One of the most beautiful flowering shrubs of Australia. Evergreen shrub or tree, 12 to 20 feet, with red flowers."

**34873.** STERCVLIA QUADRIFIDA R. BROWN.

"An umbrageous tree producing its seeds in large pods, which when ripe are of a brilliant crimson color, containing black seeds, which are sometimes eaten by children. When ripe the pods burst open and their bright crimson color, contrasting with the black seeds, gives the tree a very handsome and striking appearance."

*Distribution.*—Along streams and near the coast in northern Australia and Queensland.

**34874.** ZIZIPHUS JUJUBA Miller.

**Jujube.**

(*Ziziphus sativa* Gaertn.)

From China. Presented by Dr. N. S. Hopkins, Methodist Hospital, Peking. Received February 10, 1913.

**34875.** CEIBA PENTANDRA (L.) Gaertn.

**Kapok.**

(*Eriodendron anfractuosum* DC.)

From Guam. Presented by Mr. J. B. Thompson, special agent in charge, Guam Agricultural Experiment Station, through Mr. Lyster H. Dewey, of the Bureau of Plant Industry. Received February 8, 1913.

**34876.** PIRATINERA ALICASTRUM (Swartz) Baillon. **Bread-nut tree.**

(*Brosimum alicastrum* Swartz.)

From Merida, Mexico. Collected by Mr. G. N. Collins, of the Bureau of Plant Industry. Received February 12, 1913.

"*Ramon.* Seeds from the hospital grounds. A small tree common in northern Yucatan, the branches of which are the principal fodder during the dry season. All kinds of animals seem to eat the leaves freely. The plant is strictly tropical, and I do not know that it could be grown anywhere in the United States, but it was so extensively used and seemed to afford such excellent forage in the dry regions of Merida that it might be worth while to give it a trial." (*Collins.*)

**34877 to 34884.**

From Villa Rica, Paraguay. Presented by Señor Don Carlos Mahaux. Received February 4, 1913.

**34877.** ANNONA sp.

**34878.** ARISTOCLESIA ESCULENTA (Arruda) Stuntz.

**Pacuri.**

(*Platonia insignis* Mart.)

"A very large, beautiful tree with hard wood. The leaves are coriaceous and elegantly marked with numerous parallel veins; the flowers are large, of a light-red color, solitary at the ends of the small branches. The fruit, called *pacoury uva* in Brazil, is said to be very sweet and delicious, whilst the seeds have the flavor of almonds." (*Lindley, Treasury of Botany.*)

**34879.** CAMPOMANESIA sp.

**34877 to 34884—Continued.****34880.** EUGENIA UNIFLORA L.**Pitanga.**

"A small shrubby tree of Brazil, bearing small, round, and ribbed fruit about 1 inch in diameter, rather flattened at the ends, and of a bright-red waxy appearance. These suggest small tomatoes at a distance; the pulp is edible, but to most people is too acid and perfumed to be agreeable. It is said to make good jelly, being also used in preserves. The tree thrives best at medium elevations, 1,500 to 3,000 feet. Propagated by seed." (*Macmillan, Handbook of Tropical Gardening.*)

**34881.** GARCINIA sp.

Garcinia

**34882.** GENIPA AMERICANA L.

Wild g

v. g.

**Genipap.**

"The fruit is succulent, as large as an orange, with rather thick rind, crowned by the calyx, and tapering at each end. It is known as the genipap fruit or, in Venezuela, as the marmalade box." (*Masters, in Lindley's Treasury of Botany.*)

*Distribution.*—A tree found in the northern part of South America from the province of Minas Geraes, in Brazil, northward to Venezuela, and in the West Indies.

**34883.** STEVIA REBAUDIANA (Bertoni) Hemsley.

"This Paraguayan herb is of peculiar interest because of the very large saccharine content of the leaves. A tiny fragment placed on the tongue seems as sweet as a lump of sugar of similar size. Several years ago the discovery that this plant, then called Eupatorium, contained a substance many times sweeter than sugar, was heralded by the press and excited the keen interest of sugar planters all over the world. The substance turned out to be a glycerin and the anxiety of sugar interests subsided." (*David Fairchild.*)

*Distribution.*—An herbaceous perennial belonging to the aster family. Found in the woods along the Monday River, in the southeastern part of Paraguay.

**34884.** (Undetermined.)**34885. HAEMANTHUS EETVELDEANUS Wildem. and Th. Dur.**

From Brussels, Belgium. Presented by the Ministère des Colonies. Received January 23, 1913.

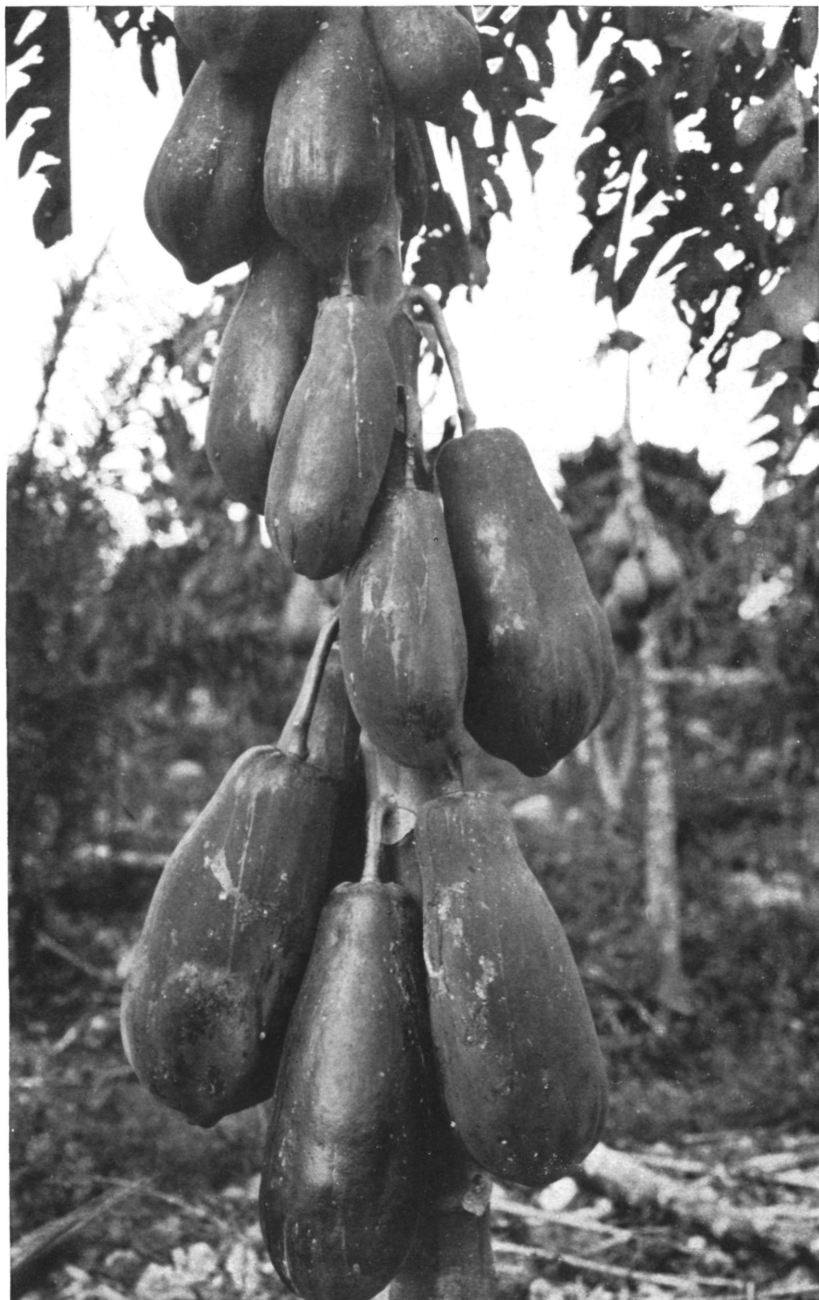
*Distribution.*—A bulbous perennial bearing large rose-colored flowers in umbels. Found in damp places in the Kongo.

Bulblets.

**34888 to 34902.**

From Merida, Mexico. Procured by Mr. G. N. Collins, of the Bureau of Plant Industry, in the market at this place. Received February 14, 1913.

**34888 and 34889.** PHASEOLUS COCCINEUS L.**Bean.****34888.** *De Santa Cruz.***34889.** *Santa Cruz.***34890 to 34900.** PHASEOLUS VULGARIS L.**Bean.****34890.** *Sa Ma.***34895.** *Ibes, or Hibes.***34891.** *Fijot San Miguel*  
*importo.***34896.** *Vera Cruzena.***34892.** *Ibes colorado del pais.***34897.** *Schol.***34893.** *Colorado del pais.***34898.** *Chol y bul.***34894.** *Ani beno.***34899.** *Honjo, or horilla.***34900.** *Gol bio.***34901 and 34902.** VIGNA SINENSIS (Torner) Savi.**34901.** *Le Carita.***34902.** *Espelon del pais.*



A LARGE-FRUITED, FINE-FLAVORED PAPAYA (*CARICA PAPAYA* L.) FROM YUCATAN.  
(S. P. I. No. 34903.)

A low-growing variety, found by G. N. Collins near Merida, producing from 15 to 20 of these enormous fruits when only 7 feet high. They have a fine flavor, although often 19 inches long. (Photographed by Mr. Collins in a Chinese garden near Merida; Crop Acclimatization No. 14945.)



AN EVERGREEN SHADE TREE (*HARPEPHYLLUM CAFFRUM* BERNH.) FOR WINDY LOCATIONS IN FLORIDA. (S. P. I. No. 34943.)

In the public square around the Government building, Cape Town, stands this row of Kafir plum trees. According to the veteran botanist Prof. MacOwan, it is the best tree yet discovered to stand the continual whipping by the wind from off Table Mountain. It grows well in Florida. (Photographed by David Fairchild, March, 1903; No. 094.)

**34903. CARICA PAPAYA L.****Papaya.**

From Merida, Mexico. Presented by Mr. G. N. Collins, of the Bureau of Plant Industry, who procured them through Señor Arturo Zavala from the Chinese Gardens. Received February 5, 1913.

"Seeds from a very large and fine-flavored fruit. The trees produce when small and are very prolific; many trees not over 7 feet in height are bearing from 15 to 20 enormous fruits and, of course, innumerable smaller ones. The Chinese gardeners about Merida are securing most remarkable results with this fruit." (*Collins.*)

For an illustration of the fruit of this papaya, see Plate I.

**34904. PERSEA AMERICANA Miller.****Avocado.**

(*Persea gratissima* Gaertn. f.)

From Merida, Mexico. Presented by Mr. G. N. Collins, of the Bureau of Plant Industry, who secured them through Señor Arturo Zavala, the alcalde of Merida. Received February 18, 1913.

"Cuttings from a very famous tree at some distance from the town." (*Collins.*)

**34907. MANGIFERA sp.****Mango.**

From San Jose, Costa Rica. Presented by Mr. J. E. van der Laat, director, Department of Agriculture, at the request of Mr. Carlos Wercklé, of the Museo Nacional. Received February 20, 1913.

"*Cazique*. From Coyolar." (*Van der Laat.*)

Cuttings.

**34911. HOLCUS SORGHUM L.****Kafir.**

(*Sorghum vulgare* Pers.)

From Chillicothe, Tex. Grown from selected seed. Received February 26, 1913.

"(F. C. I. 4201.) A dwarf kafir, selected from S. P. I. No. 22326 by Mr. A. B. Conner, Chillicothe, Tex., November, 1910. This selection closely resembles Blackhull kafir, but has grains that seem somewhat larger and whiter, making it appear similar to *feterita*. Several years' tests at Chillicothe, Tex., have demonstrated the excellent quality of this selection, especially in regard to drought resistance." (*H. N. Vinal.*)

**34912. ASPARAGUS AFRICANUS Lam.****Asparagus.**

From Cedara, Natal, Union of South Africa. Presented by Mr. E. Harrison, principal, School of Agriculture. Received February 25, 1913.

**34913. (Undetermined.)**

From Angola, Africa. Presented by Mr. Merlin W. Ennis, Boston, Mass. Received February 25, 1913.

"*Olanamba*. The wild ones are found on stony mountain slopes where the soil is sandy. This cultivated root seems to thrive on any soil and will bear well on soil too poor and sandy for potatoes. The natives eat these roots raw. We bake them, use them in soup, etc." (*Ennis.*)

Roots.

**34914. SWIETENIA MACROPHYLLA King.****Mahogany.**

From Caracas, Venezuela. Presented by Mr. H. Pittier, of the Bureau of Plant Industry. Received March 7, 1913.

"Seeds of a mahogany tree which I took at first for *Swietenia mahagoni*. Later I got flowers and I have now doubts as to whether it is really that species. If you have received the seeds, which should be tried in southernmost Florida or California, or better in Porto Rico, you may just as well refer them to my No. 5789." (*Pittier.*)



**34915. LICANIA PLATYPUS (Hemsl.) Fritsch.****Sansapote.***(Moquilea platypus Hemsl.)*

From San Jose, Costa Rica. Presented by the Department of Agriculture.

Received January 29, 1913.

"Belonging to the family Rosaceæ. It grows in the form of a tree, rather scarce on the Pacific coast of Costa Rica, but more common in other parts of Central America, where it is sometimes known as *Sunza*. The fruit is large, somewhat oblong, with a reddish gray skin; the flesh yellowish, fibrous, and rather sweet, inclosing an oval, depressed seed." (*W. E. Safford*.)

See S. P. I. No. 31686 for previous introduction.

Roots.

**34916 to 34919. KERSTINGIELLA GEOCARPA Harms.      **Kandela.****From Togoland, Africa. Presented by Dr. A. Engler, director, ~~Königliches~~ Botanisches Museum, Dahlem, Berlin, Germany. Received March 20, 1913.

"This remarkable new edible bean was first described by Dr. H. Harms, in 1909, from specimens forwarded by Dr. Kersting, of Sokode, Togoland. Since then it has been in cultivation and under observation in the botanic gardens at Dahlem and Jena, and last year Dr. Harms published a short article in which he summarized briefly what was then known about this ground bean, adding some valuable information concerning the conditions of its cultivation.

"Two years ago I called attention to an important botanical discovery by Dr. Kersting, who, in the northern territory of Sokode-Basari, Togoland, came across an especially interesting new kind of bean which matures its pods below instead of above ground. The well-known groundnut (*Arachis hypogaea*) and the peanut (*Voandzeia subterranea*) are similar instances. Kersting found that the natives of Togoland cultivated the bean, which they called *kandela*, in three varieties distinguished by their colors. I described this bean, which is not known in the wild state, as *Kerstingiella geocarpa*, the type of a new genus of Leguminosæ.

"In July, 1910, Auguste Chevalier, the indefatigable African explorer, reported the existence in Dahomey of a plant which, to judge from the description, was very similar to, if not identical with, Kersting's bean. He named it *Voandzeia poissoni*, a new species of the genus of the peanut, giving the Dahomey name as "*Doi*." (*Compt. Rend.*, vol. 151, p. 84.) The beans are sold in the market of Abomey by the natives, who grow them largely. There were also here colored varieties (white, black, and mottled). An account may be found in *Quinzaine Coloniale*, 1910, No. 16, page 590. Chevalier's description suggested at once the identity of the Dahomey and the Togo bean. M. Chevalier was, on his return from Africa, good enough to send me a specimen of his Dahomey plant whilst I supplied him with material from Togoland, and our comparisons proved that the two beans were actually identical or, in other words, that the Togo bean extended into Dahomey, and M. Chevalier has already stated (*Compt. Rend.*, vol. 151, p. 1374) that he, too, considered his species as identical with *Kerstingiella geocarpa*. He gives an important account of its distribution in Dahomey, quoting various vernacular names. The species is also said to occur in British Nigeria, but up to the present I have seen no specimens from there. In Togo, as well as in Dahomey, the plant is known only in the cultivated state, which renders Kersting's and Chevalier's discoveries the more remarkable.

"Chevalier gives analyses (*Quinzaine Coloniale*, 1910, No. 16, p. 1375) which show that the nutritive value of the beans is very considerable. They are said to equal the richest peanuts (*Voandzeia subterranea*) in nutritious matter, whilst they have at the same time a more pleasant taste, particularly for Europeans, recalling that of the finest varieties of beans. The yield, owing to the smallness of the seed (8 to 10 mm.

by 6 to 7 mm.), is not large. In Dahomey, according to the French explorer, the women are forbidden to eat the beans.

"Last year (1910), thanks to the kindness of First Lieut. Haring, of Sokode-Basari (Togo), the botanic garden at Dahlem, near Berlin, received excellent seeds of this remarkable fruit. They germinated well, and numerous plants were raised by Chief Inspector F. Ledien, not a few of them flowering in July and August. A number of seeds were sent to Inspector E. Rettig, of the botanic garden at Jena, and under his careful and intelligent treatment splendid specimens grew up, of which some even set fruit. The unfavorable, cold, and dull summer of 1910, however, prevented their maturation. The flowers are very small and papilionaceous and spring from the creeping stem close to the ground. The flowers of the variety with light or occasionally black-mottled seeds are white, those of the other varieties pale violet.

"The Hausas call it *Kouarourou*, according to Chevalier. It is also said to occur in Borgu. It is true at the first glance it might be mistaken for *Voandzeia subterranea*, and Schweinfurth actually suggests that this has been the case with certain writers (*Zeitschrift d. Gesellschaft f. Erdkunde*, 1910), but the expert will always distinguish them. Habit and leaves are similar and yet distinct, and *Voandzeia*, so long and well known to us, has above all much larger globose seeds.

"*Kerstingiella* might possibly also be grown with advantage in other parts of our colonies. Moist and hot countries do not suit it; in Togo it occurs according to Kersting in sandy, laterite loam, in a climate of low humidity, with occasional heavy showers, and a shade temperature of 18° to 34° C.'" (*Kew Bulletin*, 1912.)

**34916.** Black.

**34918.** White, with black eye.

**34917.** Buff.

**34919.** White, with brown eye.

### **34920. LANSIUM DOMESTICUM Jack.**

**Duku.**

From Buitenzorg, Java. Presented by the director, Department of Agriculture. Received March 22, 1913.

For previous introductions see S. P. I. Nos. 24431 and 34074.

### **34921 to 34923.**

From Marseille, France. Presented by Dr. E. Heckel, director, Colonial Museum. Received March 22, 1913.

**34921.** *SOLANUM COMMERSONII* Dunal.

**Potato.**

**34922.** *SOLANUM COMMERSONII* Dunal.

**Potato.**

**34923.** *SOLANUM CHACOENSE* Bitter.

**Potato.**

*Distribution.*—A tuberous species found in sandy places near the margins of woods in the province of Villeta, in Paraguay.

### **34927 and 34928.**

From Poona, India. Presented by Mr. W. Burns, economic botanist, Agricultural College. Received February 26, 1913.

Roots of the following; quoted notes by Mr. Burns:

**34927.** *ANDROPOGON ODORATUS* Lisboa.

"The authors of the *Pharmacographia Indica* (III, pp. 570 and 571) observe: 'We have distilled the grass and obtained from it an essential oil, having at first an odor recalling that of cassia and rosemary, but afterwards a strong persistent odor of oil of cassia. Messrs. Schimmel & Co. noticed the odor of pine-needle oil in this sample and found the specific gravity to be 0.945.' It grows in the Deccan and some parts of Konkan in more or less mooroomy soil. There is no literature available regarding its culture."

**34927 and 34928—Continued.**

**34928.** *VETIVERIA ZIZANIOIDES* (L.) Nash.  
(*Andropogon squarrosus* L. f.)

**Vetiver.**

“The root of *Khas-khas* is extensively made into the aromatic-scented mats [tatties] which are hung in the doorways and kept wet to cool the atmosphere during the hot season. The raw material is exported to Europe, chiefly from Madras ports. Gildemeister and Hoffman (*Volatile Oils*, p. 289) say “the root is of a reddish color and often contaminated with red sand; a half distilled root is often found in commerce and can be recognized by its light color.” It seems more than probable that much of the so-called half-distilled root is in reality the roots that have been used in tatties for a season and are bought back by traders to be exported. The constant application of water and exposure to the fierce sun might easily exhaust a large proportion of the oil and bleach the roots. The roots when distilled with water yield a fragrant oil known in European trade as vetiver, which is used as a perfume and for flavoring sherbet. It commands a high price in Europe, being employed in many favorite scents. It is the most viscid of essential oils, and hence its sparing volatility is taken advantage of in fixing other perfumes. The oil is hardly, if ever, exported from India, European supplies being either locally made from Indian roots or derived from Reunion. According to Piesse the yield is about 10 ounces per hundredweight. Other observers have found it to vary from 0.2 to 3.5 per cent. In medicine the root has been regarded by European physicians as a diaphoretic and as a preservative against cholera (Pereira, *Mat. Med.*, II, pt. 1, p. 132). The grass (leaves, etc.) is suitable for paper making and it is said that 60,000 to 70,000 maunds are annually available in the Hissar district of the Punjab alone. When young the grass affords good fodder.” (*Watt's Commercial Products of India*.)

“It grows on the banks of rivers and marshes throughout the plains and lower hills of India, Burma, and Ceylon, ascending to 4,000 feet. No literature regarding its culture is available.”

**34931 to 34939.**

From Poona, India. Presented by Mr. W. Burns, economic botanist, Agricultural College, through Mr. C. V. Piper, of the Bureau of Plant Industry. Received February 28, 1913.

**34931.** *ALYSICARPUS LONGIFOLIUS* (Rottl.) Wight and Arn.

**34932.** *ALYSICARPUS PUBESCENS* Law.

**34933.** *ALYSICARPUS RUGOSUS* (Willd.) DC.

Related species of the above species of legumes are considered among the best Indian grazing plants.

**34934.** *ANDROPOGON ANNULATUS* Forsk.

**34935.** *CHRYSOPOGON MONTANUS* Trinius.

**34936.** *INDIGOPERA GLANDULOSA* Wendl.

**34937.** *INDIGOPERA LINIFOLIA* (L. f.) Retz.

**34938.** *INDIGOPERA TRIFOLIATA* Torner.

*Distribution.*—From the Himalayas, in northern India, where it ascends to an elevation of 4,000 feet, eastward and southward through China and the Malay Archipelago, to northern Australia.

**34939.** *DACTYLOCTENIUM AEGYPTIUM* (L.) Willd.  
(*Eleusine aegyptiaca* Desf.)

**34940. VIGNA SINENSIS (Torner) Savi.****Cowpea.**

From Augusta, Ga. Purchased from the N. L. Willet Seed Co. Received February 27, 1913.

"Whippoorwill."

**34941. PISUM SATIVUM L.****Field pea.**

From Madison, Wis. Purchased from the L. L. Olds Seed Co. Received February 26, 1913.

"Golden vine."

**34942. OCHNA PULCHRA Hook.**

From South Africa. Presented by Mr. J. Burt Davy, government agrostologist and botanist, Union of South Africa, Department of Agriculture, Pretoria. Received February 18, 1913.

"A small ornamental tree; seeds yield oil. Frostless localities." (Davy.)

*Distribution*.—A shrub or small tree with pendulous racemes of orange-red berries found in the vicinity of Johannesburg, in the Transvaal region of South Africa.

**34943. HARPEPHYLLUM CAFFRUM Bernh.****Kafir plum.**

From Cape Town, Union of South Africa. Presented by the chief conservator of forests. Received February 28, 1913.

"One of the prettiest evergreen shade trees to be seen in the gardens of Cape Town. Suitable for very windy situations and forms a very dense shade. The timber is said to resemble mahogany and is used for wagon making. The red, showy drupes have a pleasant acid taste, but little pulp, and are suitable for making preserves. The tree will stand some drought and is suitable for frost-free regions; has done well in California and particularly well in southern Florida, where trees introduced in 1902 are now 20 feet high." (David Fairchild.)

For previous introductions and description, see S. P. I. Nos. 9616 and 21706.

For an illustration of the *Harpephyllum caffrum* tree, as grown at Cape Town, Africa, see Plate II.

**34944. BASANACANTHA SPINOSA (Jacq.) Schum.**

(*Basanacantha armata* Hook. f.)

From San Jose, Costa Rica. Presented by Mr. Ad. Tonduz, botanist, National Museum. Received February 28, 1913.

"An indigenous rubiaceous tree or shrub occurring scattered on the banks of all the rivers, commonly loaded at all times with fruits the size of an apple. I have never seen this fruit soften. It is always hard; nevertheless, it is figured in some lists of edible fruits." (Tonduz.)

**34948 to 34969. PHASEOLUS ANGULARIS (Willd.) W. F. Wight.****Adzuki bean.**

From Sapporo, Japan. Presented by Mr. Y. Takahashi, botanist and vegetable pathologist, Hokkaido Agricultural Experiment Station. Received March 6, 1913.

Seeds of the following:

**34948.** (No. 1.) Red.

**34951.** (No. 4.) Red.

**34949.** (No. 2.) Red.

**34952.** (No. 5.) Red.

**34950.** (No. 3.) Red.

**34953.** (No. 6.) Yellow.

**34948 to 34969—Continued.**

- |  |   |
|--|---|
| <b>34954.</b> (No. 7.) Brown.          | <b>34963.</b> (No. 16.) Red and white.  |
| <b>34955.</b> (No. 8.) Brown.          | <b>34964.</b> (No. 17.) Black mottled.  |
| <b>34956.</b> (No. 9.) Brown.          | <b>34965.</b> (No. 18.) Gray.           |
| <b>34957.</b> (No. 10.) Light green.   | <b>34966.</b> (No. 20.) Yellow and red. |
| <b>34958.</b> (No. 11.) Dark brown.    | <b>34967.</b> (No. 21.) Red.            |
| <b>34959.</b> (No. 12.) Dark brown.    | <b>34968.</b> (No. 22.) Red.            |
| <b>34960.</b> (No. 13.) Black.         | <b>34969.</b> (No. 23.) Red.            |
| <b>34961.</b> (No. 14.) Black.         |   |
| <b>34962.</b> (No. 15.) Black mottled. |   |

**34970 to 34972. DIOSPYROS KAKI L. f.****Persimmon.**

From Okitsu, Japan. Presented by Mr. T. Tanikawa, in charge, Horticultural Experiment Station, Government of Japan. Received March 6, 1913.

Cuttings of the following; quoted notes by Mr. Tanikawa:

**34970.**

"*Mishirazū* (*Aizū*). Fruit medium size, average weight one-half pound; shape round, flattened, the point sunken, with four shallow furrows; skin smooth, more or less tough; orange yellow in color; bloom white. The flesh is firm, not very juicy; of very good quality when the astringency is removed by processing."

**34971.**

"*Mishirazū* (*Sakūshū*). Fruit medium large, average weight two-thirds pound; more or less oblate, slightly tapering at the apex; skin thin, smooth, orange-yellow; flesh fine, juicy, of a very good quality when the astringency is removed by artificial processing."

**34972.**

"*Fuji*, our famous mountain's name. Fruit large, average weight 1 pound or more, more or less conical in form; skin thin, very smooth, bright orange, red, or crimson; flesh fine, tender, very juicy, light yellowish brown, more or less astringent at first, but very sweet when they become soft. This fruit is of very good quality, and suited for dried fruit and for processing."

**34973. DIOSPYROS KAKI L. f.****Persimmon.**

From Hiroshima, Japan. Presented by Rev. H. Loomis, American Bible Society, Yokohama. Received March 6, 1913.

"*Giombo*. This is the variety that produces the best dried persimmons in Japan." (*Loomis*.)

**34974. CYPHOMANDRA BETACEA (Cav.) Sendt.****Tree tomato.**

From Buenos Aires, Argentina. Presented by Dr. Carlos Thays, director, Jardín Botánico. Received March 10, 1913.

"An evergreen semiwoody shrub, native of Peru. The egg-shaped and smooth-skinned fruit, produced in great abundance and in hanging clusters at the ends of the branches, is in season almost throughout the year, but chiefly from March to May (in Ceylon). At first greenish purple, it changes in ripening to reddish yellow. Some varieties are of a deep-purple color. The subacid succulent fruits are refreshing and agreeable when eaten raw, but their chief use is for stewing; they may also

be made into jam or preserves. The tree is a quick grower and commences to bear when two or three years old, remaining productive for several years." (*Macmillan, Handbook of Tropical Gardening.*)

"Mr. L. H. Bailey found that this shrub would bear the second or third year from seed when grown under glass in Michigan, and the experiment is worth repeating." (*Fairchild.*)

**34975. ASPARAGUS sp.**

**Asparagus.**

From La Mortola, Ventimiglia, Italy. Presented by Prof. Alwin Berger, director, Botanic Gardens. Received March 7, 1913.

**34976. LANSIUM DOMESTICUM Jack.**

**Duku.**

From Buitenzorg, Java. Presented by the director, Department of Agriculture. Received March 7, 1913.

For previous introduction, see S. P. I. No. 24431.

**34977. SOJA MAX (L.) Piper.**

**Soy bean.**

(*Glycine hispida* Maxim.)

From London, England. Presented by Mr. Stuart R. Cope. Received February 20, 1913.

**34978 to 34981.**

From San Jose, Costa Rica. Presented by Mr. Ad. Tonduz, botanist, National Museum. Received March 5, 1913.

Quoted notes by Mr. Tonduz.

**34978. ABUTILON sp.**

"A shrub 1½ to 2 meters high, with heart-shaped leaves and yellow flowers, found in San Jose and Carbreñas."

**34979. BOMAREA sp.**

"Fruits found in the vicinity of San Jose. An ornamental with edible tubers."

**34980. CALYPTRANTHES TONDUZII Donnell Smith.**

"A myrtaceous fruit called *Guayabillo*, which yields a hard, fine wood. These trees, scattered throughout the praderas (country covered with meadows), are literally covered with yellow fruits, which have no use except that they may be eaten."

**34981. NECTANDRA SANGUINEA Roland.**

"Fruits of a large tree, from the banks of the river Virilla, which in the fresh state furnish a passably good reddish color."

**34982. COCCOLOBIS sp.**

From San Jose, Costa Rica. Presented by Mr. J. E. van der Laat, director, Department of Agriculture. Received February 20, 1913.

"Jarra. Fruit tree, hot climate." (*Van der Laat.*)

**34983 and 34984. CUCUMIS MELO L.**

**Muskmelon.**

From Afghanistan. Presented by Mr. Albert C. Jewett, through Mr. Edward J. Norton, American consul, Bombay, India. Received March 7, 1913.

**34983 and 34984.** "Two varieties of the Kabul melon."

**34985 and 34986. HOLCUS SORGHUM L. Sorghum.**  
*(Sorghum vulgare Pers.)*

Received from Mr. H. N. Vinall, of the Bureau of Plant Industry, March 10, 1913.

**34985.** "McLean sorghum. Received from the Office of Sugar-Plant Investigations. To be grown for the purpose of classification and determination of forage value." (*Vinall.*)

**34986.** "Colman sorghum. Open-head type. Received from the Office of Sugar-Plant Investigations. To be grown for the purpose of classification and determination of forage value." (*Vinall.*)

**34988 to 34990.**

From Kew, England. Presented by Sir. David Prain, director, Royal Botanic Gardens. Received February 26, 1913.

Seeds of the following:

**34988.** ACER HELDREICHII Orphan.

*Distribution.*—A maple found on the slopes of Mount Parnassus, in Greece.

**34989.** CARAGANA DECORTICANS Hemsl.

An Afghan shrub or small tree discovered by Dr. Aitchison in the Kurrum Valley.

"The bark is said to be employed by the Afghans in the form of rings to slip over and hold the sheaths of their long knives in position, in lieu of brasswork; the surface takes a good polish, and when new resembles bronzed leather." (*Aitchison.*)

**34990.** CRATAEGUS PECKII Sarg.

**Hawthorn.**

**34991. CANAVALI ENSIFORME (L.) DC. Jack bean.**

From Greenwood, Miss. Purchased from Mr. H. D. Kerr. Received March 8, 1913.

"The jack bean is a native of the West Indies and the adjacent mainland. In Jamaica, whence it first became well known, it is called the horse bean or the overlook bean. The horse bean of Europe is a very different plant. In Antigua it has been called the Babricou bean, and in this country has been designated the Pearson bean, and recently the wonder bean.

"The jack bean is a bushy, semierect annual plant, growing to a height of 2 to 4 feet. Its stems are rather coarse and become woody toward the base. The rather thickish leaves have a decidedly bitter taste. The flowers are purple, at least in all varieties so far introduced. The first blossoms are borne near the base of the stem, so that many of the pods hang low. When mature, the pods are hard and firm, 9 to 14 inches long, each containing 10 to 14 seeds. These are pure white, with a brown hilum. Ordinarily the roots are well tubercled, and the plant will withstand much drought. It is remarkably free from insects and fungous disease and but slightly affected by root-knot." (*C. V. Piper.*)

For further information, see separate from Circular 110 of the Bureau of Plant Industry, entitled "The Jack Bean and the Sword Bean," by C. V. Piper.

**34992. ASTRAGALUS FALCATUS Lam.**

From Paris, France. Presented by Vilmorin-Andrieux & Cie. Received February 26, 1913.

"This is a perennial, bunching legume, with fair seed habits; somewhat leafy; may be of value as a leguminous hay and forage crop in sections where clover and alfalfa do not succeed. Somewhat drought resistant." (*J. M. Westgate.*)

**34993 to 35033.**

From Chile. Collected by Mr. W. F. Wight, of the Bureau of Plant Industry.  
Received February 27, 1913.

The following material; quoted notes by Mr. Wight:

**34993. ZEPHYRANTHES sp.**

"(20a.) A bulbous plant with yellow flowers, growing in the sand near the seashore about 6 miles north of Vina del Mar."

Bulbs.

**34994. PERSEA AMERICANA Miller.**

**Avocado.**

(*Persea gratissima* Gaertn. f.)

"(21) *Palta*. The fruits from which these seeds were taken are sold in Valparaiso. They are purple skinned, rather small, and of very fair quality."

**34995. ALSTROEMERIA sp.**

"(19) Probably tubers of No. 18 (S. P. I. No. 34996), but without flowers; I can not be sure. They were found about 5 miles north of Vina del Mar."

**34996. ALSTROEMERIA sp.**

"(18) Seeds of a tuberous-rooted plant with attractive pink flowers. Very few seeds were found mature, but Dr. Söhrens promised to send seeds of this later; also, a still more handsome species, with red flowers. The latter I have seen only at 1,200 to 1,500 meters altitude above Santiago. The pink-flowered one occurs above Los Andes, above Santiago, and apparently the same in the hills above Valparaiso, where these seeds were gathered. The tubers of a white-flowered form are said to be edible and are sold in the market at Concepcion."

**34997. AMYGDALUS PERSICA NECTARINA Aiton.**

**Nectarine.**

"(12) Nectarines with yellow flesh are very common in the markets of both Santiago and Valparaiso. These came from Santiago."

**34998. CEREUS QUISCO Gay.**

**Quisco.**

"(17) Seeds of a cactus with reddish fruits, growing on the huge sand dunes about 6 miles north of Vina del Mar."

**34999. CEREUS sp.**

"(23) Seeds of a cactus gathered in the mountains at about 1,550 meters altitude, near Quebrada San Ramon, above Santiago. January 12, I saw fruits of probably the same species for sale at the railway station Llai Llai as I passed through."

**35000. CUCUMIS MELO L.**

**Muskmelon.**

"(37) A large melon 12 inches or more long and of fair quality."

**35001. CUCUMIS MELO L.**

**Muskmelon.**

"(39) A round melon, very good."

**35002. CUCUMIS MELO L.**

**Muskmelon.**

"(40) Melon shaped like the fruit of an eggplant, but not of very good quality. It is impossible always to be sure of the quality of either fruit or melons, for they are often picked so green that the quality is ruined."

**35003. CUCURBITA sp.**

**Squash.**

"(38) Seeds of a large squash I found in the market."

**35004. CYTISUS sp.**

"(15) On the hills above Valparaiso in very dry situations; possibly introduced, but growing among other plants certainly native."



**34993 to 35033—Continued.****35005. FRAGARIA VESCA L.****Strawberry.**

“(22) Seeds of a wild Chilean strawberry sold in the market at Santiago. They are of very good quality and remarkably large for wild berries, many of them being over an inch long; also much more conical in shape than the wild berry of the eastern United States.”

**35006. JUGLANS REGIA L.****Walnut.**

“(36) Walnuts.”

**35007. LATHYRUS sp.**

“(8) San Ramon, above Santiago, at 1,500 meters altitude. Said to have a very handsome flower.”

**35008. LOASA sp.**

“(6) Herbaceous plant with attractive yellow flowers at San Ramon, above Santiago, at 1,500 meters altitude.”

**35009. OENOTHERA ODORATA Jacq.****Evening primrose.**

“(14) On the dry hills above Valparaiso. The flower is yellowish orange, and the species may be useful as an ornamental.”

**35010. OENOTHERA MOLLISSIMA L.****Evening primrose.**

“(16) Flowers similar to No. 14 (S. P. I. No. 35009), but this one grows very near the seashore, almost within reach of the spray.”

**35011. OPUNTIA sp.****Prickly pear.**

“(41) Seeds of the tuna cactus, fruits of which are very common both in the market and at the small shops in Valparaiso and Santiago. These came from Valparaiso.”

**35012 to 35016. PHASEOLUS VULGARIS L.****French bean.**

“All the varieties of beans I could find in Valparaiso.”

**35012. (31.)****35015. (34.)****35013. (32.)****35016. (35.)****35014. (33.)****35017. SOLANUM PSEUDOCAPSICUM L.**

“(3) Fruits of Jerusalem cherry, which is fairly common along a roadside just outside Buenos Aires, Argentina.”

**35018. PISUM SATIVUM L.****Pea.**

“(29) Peas from a market woman, who saves her own seed. She said they were the best kind she knew.”

**35019. PRUNUS ARMENIACA L.****Apricot.**

“(10) Apricot seeds bought in the market at Santiago. The fruit was most excellent, and I am told a surprising number of seedling trees yield very good fruit. Seedling trees of peaches, plums, and apricots are very common.

**35020. PRUNUS sp.****Plum.**

“(11) Seeds of a small yellow plum sold in the Santiago market. Not of excellent quality.”

**35021. SALVIA sp.**

“(15a) On the hills above Valparaiso.”

**35022. SISYRINCHIUM sp.**

“(9) Flowers of this not seen, but it may prove of interest. San Ramon, above Santiago, at 1,500 meters altitude.”

**34993 to 35033—Continued.****35023. SOLANUM sp.**

"(13) Collected by the side of the Quebrada San Ramon. Very little seed was found and no tubers. It is probable, however, that the species, under other conditions, might produce tubers. Snow falls in winter at this altitude, 1,500 meters, yet the plants evidently pass the winter by thick underground rootstocks."

**35024 to 35028. SOLANUM TUBEROSUM L.****Potato.****35024.** (24) "*Papa amarilla*, with white skin."**35025.** (25) "*Papa blanca*."**35026.** (26) "*Papa amarilla*, with red skin."**35027 and 35028.**

"Potatoes from the market at Santiago. The two numbers are said to come from different localities."

**35027.** "(27.)"**35028.** "(28.)"

Tubers.

**35029. (Undetermined.)**

"(4) Seeds of a shrub at Quebrada San Ramon, at 1,500 meters altitude."

**35030. (Undetermined.)**

"(5.)" See S. P. I. No. 35029 for description.

**35031. (Undetermined.)**

"(7) A very attractive vine with fairly large flowers. I have never seen it in cultivation. From San Ramon, at 1,500 meters altitude."

**35032. ZEPHYRANTHES sp.**

"(20) Seeds of a bulbous plant with yellow flowers, growing in the sand near the seashore, about 6 miles north of Vina del Mar."

**35033. ALLIUM CEPA L.****Onion.**

"The kind they grow in Chile."

Bulbs.

**35034 to 35037.**

From Los Banos, P. I. Presented by Mr. C. F. Baker, University of the Philippines, College of Agriculture. Received February 19, 1913.

**35034. PAHUDIA RHOMBOIDEA (Bl.) Prain.****Tindalo.**

(*Afzelia rhomboidea* Vidal.)

See S. P. I. Nos. 31586 and 32283 for previous introductions and description.

**35035. PARKIA TIMORIANA (DC.) Merrill.****Cupang.**

(*Parkia roxburghii* Don.)

See S. P. I. Nos. 32284 and 34094 for previous introductions and description.

**35036. ALBIZZIA ACLE (Bl.) Merrill.****Acle.**

(*Mimosa acle* Blanco.)

See S. P. I. Nos. 22793 and 32285 for previous introductions and description.

**35037. PSYCHOTRIA LUÇONIENSIS (Cham. and Schl.) Vill.**

(*Psychotria luzoniensis* Vill.)

"Fine small tree." (*Baker.*)

**35039. CYMBOPETALUM PENDULIFLORUM (Dun.) Baillon.****Sacred ear flower.**

From Guatemala, Guatemala. Presented by Mr. George A. Bucklin, American consul general. Received March 13, 1913.

"*Orejuela*." A very interesting annonaceous plant, the flowers of which when dried were used by the Aztecs to flavor their chocolate, and the identity of which has but recently been discovered by Mr. W. E. Safford, of the Bureau of Plant Industry. For a full account, see the annual report of the Smithsonian Institution for 1910, pages 427 to 431.

**35040. BORASSUS FLABELLIFER L.****Palmyra palm.**

From Madras, India. Presented by Mr. H. E. Houghton, superintendent, Agricultural Society of Madras, through Mr. José de Olivares, American consul. Received March 14, 1913.

"An erect palm, 60 to 70 feet high, with a stout trunk and fan-shaped leaves, indigenous to the dry region of Ceylon, India, and Africa. It is naturally suited to a rather dry climate; is extensively cultivated for the fruit and leaves. The large black fruits are borne in a cluster at the base of the leaves. The nut contains a refreshing sap much relished as a cooling drink. The kernels or young seeds are much used as an article of food, being sold in large quantities in the bazaars during the months of April and May. The sap obtained from the flower spathes is collected in large quantities and either fermented and made into '*toddy*' or '*arrack*' (an intoxicating drink) or boiled down for making sugar or jaggery. The leaf blades are used for making fans, baskets, buckets, etc., while the leafstalks and midribs furnish an excellent brush fiber, which forms an article of export. To obtain the latter, the trees are stripped of all but three leaves once in two years. The trunk yields a hard and most durable timber and the husks are in demand for fuel. Among palms in the East the Palmyra ranks next in importance to the coconut, and the area under cultivation in Ceylon is estimated at approximately 40,000 acres, while that in Tinnevely is said to be about 60,000 acres. It is propagated from seed, which is sown in situ in holes made in sandy soil. In about 10 years from sowing the palms should be in flower, when they may be used for drawing toddy and making sugar. When grown for fruit, an average return of about 3,500 nuts per acre may be obtained." (*Macmillan, Handbook of Tropical Gardening*.)

*Distribution*.—A tall palm often 70 feet high, cultivated throughout India and eastward through the Malay Archipelago; also in tropical Africa.

**35041. LANSIUM DOMESTICUM Jack.****Duku.**

From Buitenzorg, Java. Presented by the director, Botanic Garden. Received March 14, 1913.

For previous introduction, see S. P. I. No. 34976.

**35042. MAMMEA AMERICANA L.****Mammee.**

From Santa Fe, Isle of Pines. Presented by Mrs. E. A. Haines. Received March 5, 1913.

**35043. XIMENIA CAFFRA Sond.**

From South Africa. Presented by Mr. J. Burt Davy, government agrostologist and botanist, Union of South Africa, Department of Agriculture, Pretoria. Received March 15, 1913.

"*Zuur pruim*. An edible fruit useful for jellies. It grows in semiarid, subtropical localities, such as the Transvaal bush veld." (*Davy*.)

See S. P. I. No. 27015 for previous introduction.

**35044 and 35045.**

From Chile. Collected by Mr. W. F. Wight, of the Bureau of Plant Industry.  
Received February 27, 1913.

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

**35044.** *VICIA FABA* L.

**Broad bean.**

"(30) Beans that look very ordinary to me, but the market woman says they are extra fine and much prized by the English and Germans."

**35045.** *SOLANUM* sp.

"An attractive ornamental shrub, on the way from Mendoza to Los Andes, Chilean side, at probably 6,000 feet altitude. No more seed available."

**35046. PRUNUS BRIGANTINA** Villars.

From Algiers, Algeria. Presented by Dr. L. Trabut. Received March 17, 1913.  
See S. P. I. No. 34851 for previous introduction.  
Scions.

**35049 to 35057.**

From St. Petersburg, Russia. Presented by Mr. Basil Benzin, Department of Agriculture. Received February 3-15, 1913.

"Most of the samples are from Semiryetchensk Government, northeastern part of Turkestan, with high plateau and moderate climate." (*Benzin.*)

Seeds of the following:

**35049 and 35050.** *CHAETOCHELOA ITALICA* (L.) Scribner. **Siberian millet.**  
(*Setaria italica* Beauv.)

"(26 and 27) Red Kursk millet."

"These appear to be fairly good samples of the orange-seeded foxtail millet, such as is ordinarily grown by the farmers of Russia." (*H. N. Vinall.*)

**35051.** *HORDEUM DISTICHON NUTANS* Schubl.

**Barley.**

"(18) Two-row Kirghizian barley, from Tchimbkent, Syr-Daria Government."

**35052.** *HORDEUM VULGARE* L.

**Barley.**

"(19) A 6-row barley from Turbat, Syr-Daria Government."

**35053.** *HORDEUM DISTICHON NUTANS* Schubl.

**Barley.**

"(100) Barley, unirrigated, from Pishpek District, Semiryetchensk Government."

**35054 to 35056.** *PANICUM MILIACEUM* L.

**Proso.**

**35054.** "(23) Black proso from Merke, Syr-Daria Government."

**35055.** "(24) Black Turkestan proso from Pishpek District, Semiryetchensk Government."

**35056.** "(25) Red proso from Aulie-ata, Syr-Daria Government."

**35037.** *LINUM USITATISSIMUM* L.

**Flax.**

"(133) Flax, irrigated, from Tashkend, Syr-Daria Government."

**35058 to 35074.**

From Erfurt, Germany. Purchased from Haage & Schmidt, through Mr. C. V. Piper, of the Bureau of Plant Industry. Received March 20, 1913.

Seeds of the following:

**35058.** *CHLORIS DISTICHOPHYLLA* Lagasca.

(6974.)

**35058 to 35074—Continued.**

- 35059.** CHLORIS GRACILIS Durand.  
(6975.)
- 35060.** CHLORIS DISTICHOPHYLLA Lagasca.  
(6976.)
- 35061.** VICIA ERVILIA (L.) Willd.  
(1663.) Var. *abyssinica*.
- 35062.** ECHINOCHLOA CRUSGALLI (L.) Beauv.  
(*Panicum crusgalli* L.)  
(7041.)
- 35063.** CHAETOCHLOA ITALICA (L.) Scribner.  
(*Setaria italica* Beauv.)  
(7047.)
- 35064.** TRICHOLAENA ROSEA Nees.  
(*Panicum teneriffae* R. Br.)  
(7052.)
- 35065.** PANICUM MILIACEUM L.  
(7053.)
- 35066.** PASPALUM STOLONIFERUM Bosc.  
(7055.)
- 35067.** PASPALUM NOTATUM Fluegge.  
(*Paspalum distichum* L.)  
(1602.)
- 35068.** PASPALUM DILATATUM Poir.  
(1603.)
- 35069.** POLYPOGON sp.  
(7070.)
- 35070.** POLYPOGON sp.  
(7072.)
- 35071.** CHAETOCHLOA ITALICA (L.) Scribner.  
(*Setaria italica* Beauv.)  
(7079.)
- 35072.** TRICHOLAENA ROSEA Nees.  
(*Panicum teneriffae* R. Br.)  
(7089.)
- 35073.** OSTERDAMIA MATRELLA (L.) Kuntze.  
(*Zoysia pungens* Willd.)  
(7110.)
- 35074.** CHLORIS ELEGANS H. B. K.  
(6973.)

**35075 to 35077. ELEUSINE CORACANA (L.) Gaertn.****Ragi.**

From Bangalore, Mysore, India. Presented by Mr. H. V. Krishanayya, Acting Officer in Charge of the Agricultural Department. Received March 26, 1913.  
Seeds of the following; see S. P. I. No. 34768 for description:

- 35075.** "Dodda Ragi."

**35075 to 35077—Continued.****35076.** "*Goodubile*" or "*Jenumuddle Ragi*."**35077.** "*Majjige Ragi*."

"This variety is not grown except in a few lines in large fields here and there. It is not held in such high estimation as the other varieties." (*Krishanayya*.)

**35078 to 35082. NICOTIANA RUSTICA L.****Tobacco.**

From St. Petersburg, Russia. Presented by Mr. Basil Benzin, Department of Agriculture. Received March 25, 1913.

**35078.** "*Makhorka lokvikha*."**35079.** "*Bakun sasnitznî*."**35080.** "*Tshvitzent kremenetzki*."**35081.** "*Bakun menski*."**35082.** "*Kok tumbeki tashkentsky*."**35083. PHOENIX DACTYLIFERA L.****Date.**

From Tunis, Africa. Purchased from Mr. A. Martel, Deggache, through Mr. T. H. Kearney. Received February 13, 1913.

*"Menakher."*

"These dates were imported to secure seeds for distribution to date breeders in the Salton Basin, in southeastern California. At least one promising Menakher seedling fruited in 1913, and a few enthusiastic breeders are specializing in this celebrated variety." (*Walter T. Swingle*.)

See S. P. I. 29391 for previous introduction.

For an illustration of the Menakher date palm, as grown in Tunis, see Plate III.

**35084. DIOSPYROS MONTANA Roxburgh.**

From Colombo, Ceylon. Presented by Dr. C. Drieberg, secretary, Ceylon Agricultural Society. Received March 27, 1913.

See S. P. I. Nos. 31644 and 32799 for previous introductions.

**35085 to 35087. MEDICAGO SATIVA L.****Alfalfa.**

From Novospassko, Syzran-Riazan R. R., Russia. Purchased from Mr. A. Woeikoff by Mr. Frank N. Meyer, of the Bureau of Plant Industry. Received March 26, 1913.

**35085.** (No. 1.)**35087.** (No. 3.)**35086.** (No. 2.)**35088 to 35115.**

From La Mortola, Ventimiglia, Italy. Presented by Mr. Alwin Berger, director, Botanic Gardens. Received February 27, 1913.

Seeds of the following:

**35088. ACACIA PYCNANTHA Bentham.****Golden wattle.**

"Except in very dry localities, this species is common to nearly all districts of South Australia north of Encounter Bay and is occasionally to be met with along the coast from Kingston to the Glenelg River. Its principal habitat, however, and the one where the thoroughly tropical form and the largest trees of the species are found, is in the Adelaide hills and plains from Encounter Bay to Clare. For propagation purposes seeds should be obtained, if possible,"

**35088 to 35115—Continued.**

from trees grown within these limits. This is the "broad-leaved wattle," sometimes called "golden, black, or green wattle," and is one of the richest tanning barks in the world, and analysis shows it to contain 46.47 per cent tannic acid. The powder from the bark of the limb is generally of a lighter color than that obtained from the butt of the tree. The average height of this tree runs from 20 to 25 feet, with diameters from 6 to 10 inches." (*J. H. Maiden, Wattles and Wattle Barks.*)

**35089.** ASPARAGUS COOPERI Baker.

**Asparagus.**

"This asparagus has nothing particularly striking about it, either from a botanical or horticultural point of view. The flowers are very small and not abundantly produced, the firm, twining, wirelike main stem sending out very copious slender branches at right angles, and these, again, still more slender, spreading, threadlike ultimate branchlets, from which the numerous minute needlelike cladodes spring in dense close clusters. This asparagus was found by Mr. MacOwan in the woods on the slope of Mount Boschberg at an elevation of 4,000 feet above the sea level. This asparagus climbs to a height of 10 to 12 feet and has a shrubby terete stem  $1\frac{1}{2}$  to 2 inches in thickness at the base." (*Gardeners' Chronicle, June 27, 1874.*)

Introduced for the asparagus-breeding collection.

**35090.** BESCHORNERIA sp.

This was received as *Beschorneria roseana*, a name for which no place of publication has yet been found.

**35091.** BESCHORNERIA YUCCOIDES C. Koch.

**35092.** BETULA sp.

**Birch.**

(Wilson No. 71. China.)

**35093.** BUDDLEIA NIVEA Duthie.

"A new species from central China and of doubtful promise. The flowers are not so striking as some of the species recently introduced; but this defect is compensated for by the great beauty of the foliage, the whole undersurface of which is, together with the young wood and leaves, covered with a dense white woolly tomentum. The flowers in tail-like panicles at the end of the branch are rose purple in color, individually small, but in a mass conspicuous." (*Hortus Veitchii.*)

**35094.** CLERODENDRUM sp.

(Wilson No. 216.)

**35095.** × CRATAEGUS CARRIERI W. J. Bean.

**Hawthorn.**

"This small tree is of doubtful origin, all the individuals having been obtained from single seedlings, which appeared spontaneously several years ago in the nursery of the Jardin des Plantes, in Paris. In some ways it resembles some Mexican species; and it might be Mexican but for the fact of its hardiness, which would seem to indicate a colder home than Mexico. The fact that the seedlings are identical with the parent seems to preclude the idea of hybrid origin; but whatever this may have been, *C. carrieri* is an ornamental plant of the first class. It is covered with thick, pointed, lustrous leaves which, when turning from green to the slightest yellow tinge, set off to advantage the large light orange-red oblong fruits, which are produced in great abundance." (*Bulletin No. 12, Arnold Arboretum.*)

**35096.** CYPHOMANDRA FRAGRANS (Hook.) Sendt.

**Tree tomato.**

*Distribution.*—A tall shrub with very fragrant flowers found in South America from Argentina to Guiana.



FRUITING TREE OF THE MENAKHER DATE PALM. (S. P. I. No. 35083.)

One of the rarest varieties of Tunis, known only in the Jerid Oasis, where it has become rare. A very large date of excellent flavor and adapted to cultivation in the Southwest. An Arab is leaning against the Menakher palm. (Photographed by T. H. Kearney Nov. 2, 1904; No. 2274.)





A NEW PALMETTO (INODES EXUL O. F. COOK), DISCOVERED BY MR. COOK AT VICTORIA, TEX. (S. P. I. No. 35116.)

The two tall palms on the left are *Washingtonia filifera*, while the two on the right are of the new species, probably of Mexican origin. This Victoria palmetto may find a place in the front rank of ornamental palms. (Photographed by O. F. Cook and C. B. Doyle.)

**35088 to 35115—Continued.****35097. ECHIMUM WILDPRETII** Pearson.

"This seed made its debut in Kew in 1899. It was raised from seed sent in by Mr. Wildpret, Curator of the Botanic Gardens, Orotava, Teneriffe. This Echium is very attractive, even before the flower spikes open; their leaves, covered with silky hairs, after the manner of the silver fir, form a handsome rosette 18 inches high and through. The flower spike adds another 2 feet to this height, and when the purplish-pink flowers are all open, the plant is singularly handsome. The altitude at which it grows wild at Teneriffe has not yet been recorded, but is probably some distance above sea level, and therefore the plant ought to be a good one for open-air gardening, if protected from the frosts." (*Gardeners' Chronicle*, October 26, 1912.)

**35098. ENTELEA PALMATA** Lindl.**35099. HYPERICUM HOOKERIANUM** Wight and Arn. **St. John's-wort.**

"(Wilson No. 1355.) A native of northern India, Nepal, and the Himalayas, at an elevation of 6,000 to 12,000 feet, found on the hills about Mufflong, Assam, by Thomas Lobb, through whom it was introduced. It forms a neat bush, with evergreen leaves and large rich-yellow flowers, unfortunately not perfectly hardy in all localities." (*Hortus Veitchii*, p. 400.)

**35100. INDIGOFERA AMBLYANTHA** Craib.

(Wilson No. 786. China.)

"From Ichang, western Hupeh, at altitudes of 300 to 1,000 meters, December, 1907." (*Sargent, Plantae Wilsonianae*, vol. 2, p. 99.)

**35101. JASMINUM FLORIDUM** Bunge.**Jasmine.**

(Wilson No. 789.) "The flowers are yellow, one-half an inch in diameter, in lax cymes; calyx teeth long, subulate, leaves alternate, pinnately trifoliate. It is from China and Japan, and is considered a hardy ornamental shrub in England." (*Nicholson, Dictionary of Gardening*.)

**35102. NEPHELIUM TOMENTOSUM** F. Mueller.

*Distribution*.—A small tree found along streams in Queensland and New South Wales, in Australia.

**35103. PASSIFLORA ALBA** Link and Otto.**Passion fruit.**

"A charming species from New Grenada, with pure white flowers. The leaves are glabrous, glaucescent beneath, somewhat cordate at the base, 5 nerved, trilobed; lobes oval, somewhat glandularly serrated at the base; petioles biglandular in the middle. This Passiflora is a native of Brazil. The name *P. atomaria* was given by Planchon to a form of this species, in which the petals were speckled with small purplish spots." (*Gardeners' Chronicle*, 1883.)

**35104. PASSIFLORA BANKSII** Benth.**Passion fruit.**

"It is an evergreen climber and has scarlet flowers. This Passiflora comes from New South Wales and Queensland." (*Guilfoyle, Australian Plants*, p. 277.)

**35105. PHOENIX** sp.**Palm.**

This date palm, apparently a hybrid of *Phoenix canariensis*, perhaps with *P. dactylifera*, was received as *Phoenix rivieri* Hort. Mort., a name used in Berger's Hortus Mortolensis, but not published.

**35106. PILOCARPUS PENNATIFOLIUS** Lemaire.**Jaborandi.**

*Distribution*.—A shrub with long spikes of red flowers, found in the vicinity of Cujaba, in the province of Matto Grosso, in Brazil.

**35088 to 35115—Continued.****35107. PINUS PYRENAICA** Lapeyr.**Pine.**

"The geographical range of *Pinus pyrenaica* may be stated in general terms to extend through the Mediterranean region from the Pyrenees to the Levant and Asia Minor, whence it spreads eastward through northern Persia into Afghanistan as far as Herat. It occurs on many of the mountain ranges throughout this region at altitudes of 2,000 to 6,000 feet; in the more densely inhabited parts of the Mediterranean littoral it is seen only in groups, separated by a considerable interval from each other; on the lower slopes of the Cilician Taurus it forms extensive forests, for the most part unmixed with other trees. The economic value of this pine is considerable in those districts where it is still abundant, as in Cilicia and the adjacent parts of Asia Minor. To the inhabitants of this region it supplies the best timber for building and many other constructive purposes, but as the forests are under no kind of supervision or control by the government of the country, the trees are felled in a most reckless manner and with a most deplorable waste of material. Still greater destruction is caused by the turpentine collectors, who mutilate and render useless every tree they attack." (*Veitch's Manual of Coniferæ*.)

**35108. PITTOSPORUM PHILLYRAEOIDES** DC.**Butter bush.**

"This tree is sometimes called butter bush, native willow, and poison berry, and is said to yield a gum somewhat similar to gum arabic, and even superior to it. The seeds are very bitter to the taste, yet the aborigines in the interior were in the habit of pounding them into flour for use as food. It is found in all the colonies of Australia, with the exception of Tasmania." (*Maiden, Useful Native Plants of Australia*, pp. 53 and 220.)

**35109. RHUS PUNJABENSIS SINICA** (Diels) Rehder and Wilson.

(Wilson No. 275. China.)

"From woodlands south of Ichang, western Hupeh, at altitudes of 1,000 to 1,600 meters, September, 1907. A small tree 5 to 8 meters tall, with whitish flowers and crimson fruit." (*Sargent, Plantæ Wilsonianæ*, vol. 2, p. 176.)

**35110. ROSA** sp.**Rose.**

(Wilson No. 619. China.)

**35111. ROSA** sp.**Rose.**

(Wilson No. 666. China.)

**35112. ROSA** sp.**Rose.**

(Wilson No. 666-A. China.)

**35113. PASSIFLORA MANICATA** (Juss.) Persoon.**Passion fruit.**(*Tacsonia manicata* Juss.)

*Distribution.*—A climbing vine with red flowers found in the vicinity of Loja, Ecuador, and in Peru and Colombia.

**35114. PSEDERA HENRYANA** (Hemsl.) Schneider.(*Vitis henryana* Hemsl.)

"The habit of this plant is that of the common Virginia creeper, but the color is more gorgeous. The young foliage is a rich scarlet; the older foliage has a bronzy tint, like that of *Leea amabilis*. The leaf lobes, both in the young scarlet stage and in the adult form, have a silvery band along the midrib and side branches. The plant is a native of Hupeh and Ichang, central China, where it was discovered by Dr. Henry. It is quite hardy." (*Gardeners' Chronicle*, p. 309.)

**35115. AMPELOPSIS DELAVAYANA** Planchon.

See S. P. I. No. 34592 for previous introduction.

**35116. INODES EXUL O. F. Cook.****Palmetto.**

From Victoria, Tex. Presented by Mr. O. F. Cook, of the Bureau of Plant Industry. Received March 26, 1913.

"This is a new palmetto occurring in cultivation in some portions of Texas, and especially at Victoria, whence this material was received. It is described as being related to some of the other Mexican forms of this genus, which suggests that it probably originated in Mexico. Some of the palmettos of this new species are really magnificent, with their stately crowns of large vivid-green leaves, firmly supported on massive petioles, also of living green. Even the trunk appears green, for the sheathing leaf bases retain their color.

"The crown is more ample than most palms, because of the firm texture and persistent vitality of the leaves. This lends an impression of extreme vigor and luxuriance and adds greatly to the decorative effect. In short, it seems not unlikely that the Victoria palmetto may find a place in the front rank of ornamental species.

"This species is distinguished from related species by its large size, the deep-green foliage, the thickened branchlets of the inflorescence, the solitary fruit, and the large seed, not wrinkled above nor hollowed out below.

"At Victoria these cultivated palmettos have passed, without any damage to the leaves, through freezes that killed many of the wild *Acacia farnesiana*. Though certain other palms are able to survive such temperatures and are worthy of being planted for special purposes, the mutilation of the leaves means a loss of decorative value for several months. Frost-proof foliage is especially desirable in an ornamental species." (*Abstract from O. F. Cook's article, "A New Ornamental Palmetto in Southern Texas," Circular 113, Bureau of Plant Industry.*)

For an illustration of this new species of palmetto, as grown in Texas, see Plate IV.

**35117 to 35120. DIOSPYROS KAKI L. f.****Persimmon.**

From Wakamatsu, Japan. Presented by Rev. Christopher Noss, D. D., at the request of Rev. H. Loomis, Yokohama, Japan. Received March 30, 1913.

**35117.** "*Gosho*. Medium, nonastringent."

**35118.** "*Kōshu maru*. Late, nonastringent."

**35119.** "*Myōdō*. Late, nonastringent."

**35120.** "*Ōhassaku*. Early, nonastringent."

**35121. PERSEA AMERICANA Miller.****Avocado.**

(*Persea gratissima* Gaertn. f.)

From Caracas, Venezuela. Presented by Mr. H. Pittier, of the Bureau of Plant Industry. Received March 31, 1913.

"This aguacate is called *Veranero* on account of the crop coming at the end of the dry season, while the high time for the other varieties growing about Caracas is August. It is smaller than the common varieties coming from the tierra caliente, which can also be obtained now in the market. Besides, its outer color is characteristically yellow and it has a special very fine flavor. As it grows here up to above 1,400 meters, it should do well in southern California and in other parts of the South where the rain is somewhat scarce." (*Pittier.*)

For an illustration of the fruit of the *Veranero* variety of avocado, as grown in Venezuela, see Plate V.

**35122. MEDICAGO SATIVA L.****Alfalfa.**

From Algiers, Algeria. Presented by Dr. L. Trabut. Received March 24, 1913.

**35126 to 35131.**

From Glasnevin, Dublin, Ireland. Presented by the Royal Botanic Gardens.  
Received March 24, 1913.

Seeds of the following:

**35126. ACONITUM SCAPOSUM PYRAMIDALIS Franch.****Monkshood.**

"A strong-growing hardy herbaceous perennial with foliage typical of the genus and pyramidal spikes of dark-blue flowers crowded on the upper two-thirds of a scape 2 to 2½ feet in height. The flowers consist of a long blue spur with little or no hood, and the small petals are whitish tipped with green. It is a native of central China." (*Hortus Veitchii*, p. 413.)

**35127. CLEMATIS HERACLEAEFOLIA DC.****Clematis.**

"This is a distinct and curious species. The plant is sarmentose, but not climbing; its branches, 4½ to 6 feet long, hang from the rocks or creep over the soil. The leaves are large, 9 inches long and 8 inches broad, composed of 5 leaflets, the terminal being much larger than the other. They are dentate and of a deep-green tint, somewhat shiny. The flowers are very numerous, borne in large panicles, rather small, of the same form and size of those of *C. vitalba*, but of a light-blue color. They seed rarely, but the species may be easily increased by grafting. The profusion of the little bluish flowers in immense racemes from August till November makes the plant a very decorative one. It grows in shady or sunny positions and in any good soil." (*Gardeners' Chronicle*, January 22, 1898.)

**35128. COTONEASTER SIMONSI Baker.**

"This Himalayan shrub is certainly a fine one and should encourage lovers of trees and shrubs to plant the species more frequently in positions where the individual character of the tree will be seen to advantage when it attains something like its full growth. When trained against a wall, the branches of this species often reach heights of from 10 to 12 feet. It is sometimes used, however, as an edging to garden paths where it gets neither support nor shelter. *C. simonsi*, though not exactly erect, is self-supporting, and when so grown is about 6 feet high and 4 feet through. It fruits freely, but unfortunately it is not perfectly evergreen, although it withstands the milder winters. It is sometimes so thickly covered with bright red berries that it becomes scarcely possible to place one's finger between them." (*Gardeners' Chronicle*, April 16, 1910.)

**35129. DELPHINIUM DUHMBERGI E. Huth.****Larkspur.**

*Distribution.*—An herbaceous perennial found in central Russia, the Altai region of Siberia, and in Turkestan.

**35130. EREMURUS TURKESTANICUS Regel.**

"This species of *Eremurus* is not a very handsome one. It has a loose spike with white flowers greenish on the outside; short purple-black filaments; long red anthers. The pedicels are erect and very stout at the top. The capsule is glabrous, pyriform. The seeds are gray and larger than the brown seeds of *E. altaicus*." (*Gardeners' Chronicle*, January 10, 1905.)

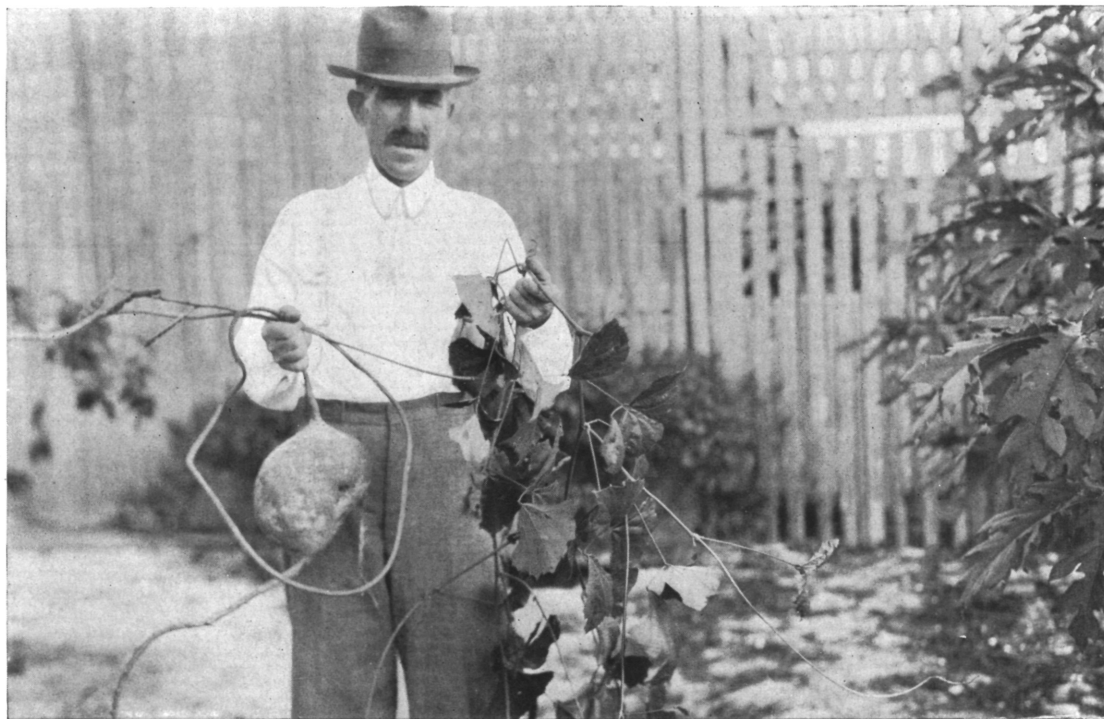
**35131. VIOLA CORNUTA L.****Horned violet.**

"*Alba*. Among the foremost of our useful bedding plants this one holds an honorable position. The constitution of the plant is good, and it appears capable of withstanding alike both dashing wind and pelting rain, and neither tropical sunshine nor long-continued drought affect it." (*Gardeners' Chronicle*, October 7, 1871.)



THE VERANERO AVOCADO (*PERSEA AMERICANA* MILL.) FROM CARACAS, VENEZUELA.  
(S. P. I. No. 35121.)

A variety ripening its crops in March, at the end of the dry season; smaller than the August-ripening varieties, but of a characteristic yellow color and of a special, very fine flavor; grows at 1,400 meters altitude. Introduced through H. Pittier. (Photographed by Mr. Pittier, Crop Acclimatization No. 15536.)



ROOT AND VINE OF THE YAM BEAN (*CACARA EROSA* (L.) KUNTZE, FORMERLY KNOWN AS *PACHYRHIZUS ANGULATUS* RICH.). (S. P. I. No. 35135.)

A rampant, luxuriously growing vine, which produces underground starchy roots of great size. William Harris, of Jamaica, proposes it as a rival for the manihot or cassava as a commercial starch producer. Its pods are also edible, and its production of foliage and quickly decaying vines has suggested its use as a cover crop in Florida. (Photographed by David Fairchild, at the Miami Garden, Fla., Feb. 2, 1913; No. 10522.)

**35132. CYMBOPOGON JWARANCUSA (Roxb.) Schultes. Ginger grass.**  
(*Andropogon jwarancusa* Roxb.)

From Dehra Dun, India. Presented by Mr. R. S. Hole, forest botanist, Forest Research Institute and College. Received March 26, 1913.

"It is believed that *Cymbopogon schoenanthus* Spreng. (*C. laniger*) is merely an edaphic variety of this species, the commercial oil yielded by both being the same" (Hole.)

**35133. ACTINIDIA CHINENSIS Planchon. Yangtaw.**

From Chelsea, London, England. Purchased from James Veitch & Sons. Received March 29, 1913.

These are cuttings from the female plant which ripened fruit in England in 1911 and are the first known female plants of this promising fruit-producing species to be introduced into this country. The male flowers and the general appearance of this plant were illustrated in Circular No. 110 of the Bureau of Plant Industry.

**35134. CACARA EROSA (L.) Kuntze. Yam bean.**  
(*Pachyrhizus angulatus* Rich.)

From Jamaica. Presented by Rev. C. N. Field, Boston, Mass. Received March 31, 1913.

"Yam beans from Jamaica." (Field.)

See S. P. I. No. 33258 for previous introduction and description.

**35135. CACARA EROSA (L.) Kuntze. Yam bean.**  
(*Pachyrhizus angulatus* Rich.)

From San Jose, Costa Rica. Presented by Mr. Rafael Arias C., through Mr. J. E. van der Laat, Director of the Department of Agriculture. Received March 27, 1913.

"*Jicama* of San Salvador. This is a leguminous plant with edible roots, sweet taste, of the size of a child's head." (Van der Laat.)

See S. P. I. Nos. 33258 and 35134 for previous introductions.

For an illustration of the root and vine of *Cacara erosa*, see Plate VI.



## BOTANICAL NOTE AND PUBLICATION OF A NEW NAME.

---

### PLANT LISTED IN THIS INVENTORY.

**34817. CHAETOCCHLOA LINDENBERGIANA (Nees) Hitchc.**

(*Panicum lindenbergianum* Nees, Flor. Afr. Austral., p. 47, 1841.)

(*Setaria lindenbergiana* (Nees) Stapf, Flora Capensis, vol. 7, p. 422, 1899.)

Seeds of this South African grass were received under the name *Setaria lindenbergiana* Stapf. The generic name *Chaetochloa* is now used for this genus. *Chaetochloa lindenbergiana* seems never to have been published, and it is necessary to adopt it here. (*A. S. Hitchcock.*)

## INDEX OF COMMON AND SCIENTIFIC NAMES.

---

- Abutilon* sp., 34978.  
*Acacia elata*, 34837.  
     *pycnantha*, 35088.  
     *spectabilis*, 34838.  
*Acanthopanax ricinifolium*, 34783.  
*Acanthosicyos horrida*, 34734.  
*Acer ginnala semenovii*, 34784.  
     *heldreichii*, 34988.  
Acle. See *Albizzia acle*.  
*Aconitum scaposum pyramidalis*, 35126.  
*Acrocomia totai*, 34735.  
*Actinidia chinensis*, 35133.  
*Afzelia rhomboidea*. See *Pahudia rhomboidea*.  
*Albizzia acle*, 35036.  
Alfalfa. See *Medicago sativa*.  
*Allium cepa*, 35033.  
*Alstroemeria* spp., 34995, 34996.  
*Alysicarpus longifolius*, 34931.  
     *pubescens*, 34932.  
     *rugosus*, 34933.  
*Ampelopsis delavayana*, 35115.  
*Amygdalus persica nectarina*, 34997.  
*Anacardium* sp., 34736.  
*Ananas sativus*, 34828.  
*Andropogon annulatus*, 34934.  
     *citratum*. See *Cymbopogon citratus*.  
     *jwarancusa*. See *Cymbopogon jwarancusa*.  
     *nardus*. See *Cymbopogon nardus*.  
     *odoratus*, 34927.  
     *sorghum*. See *Holcus sorghum*.  
     *squarrosus*. See *Vetiveria zizanioides*.  
*Annona* sp., 34877.  
Apricot. See *Prunus armeniaca*.  
*Arenga saccharifera*. See *Saguerus pin-natus*.  
*Aristollesia esculenta*, 34878.  
*Aristotelia chilensis*, 34778.  
     *macqui*. See *Aristotelia chilensis*.  
*Asparagus* sp., 34975.  
     *africanus*, 34912.  
     *cooperi*, 35089.  
*Astragalus falcatus*, 34992.  
Avocado (Mexico), 34855, 34856, 34904.  
     Palta, 34994.  
     (Pincio), 34831.  
     Veranero, 35121.  
Barley. See *Hordeum* spp.  
*Basanacantha armata*. See *Basanacantha spinosa*.  
     *spinosa*, 34944.  
Bean. See *Phaseolus vulgaris* and *Phaseolus coccineus*.  
     adzuki. See *Phaseolus angularis*.  
     broad. See *Vicia faba*.  
     jack. See *Canavali ensiforme*.  
     mung. See *Phaseolus aureus*.  
     soy. See *Soja maz*.  
     sword. See *Canavali gladiatum*.  
     yam. See *Cacara erosa*.  
*Beschorneria* sp. 35090.  
     *roseana*. See *Beschorneria* sp.  
     *yuccoides*, 35091.  
*Betula* sp., 35092.  
Birch. See *Betula* sp.  
*Bomarea* sp., 34979.  
Bonga de China. See *Normanbya merillii*.  
*Borassus flabellifer*, 35040.  
*Boronia pinnata*, 34839.  
*Brachychiton acerifolium*, 34840.  
Bread-nut tree. See *Piratinera alicastrum*.  
*Bromus unioloides*, 34806.  
*Brosimum alicastrum*. See *Piratinera alicastrum*.  
*Buddleia nivea*, 35093.  
Butter bush. See *Pittosporum phillyraeoides*.  
*Cacara erosa*, 35134, 35135.  
*Calodendrum capensis*. See *Pallasia capensis*.

- Calyptanthes tonduzii*, 34980.  
*Camellia thea*. See *Thea sinensis*.  
*Campomanesia* sp., 34879.  
*Canavali ensiforme*, 34824, 34991.  
     *gladiatum*, 34825.  
*Caragana decorticans*, 34989.  
*Carica papaya*, 34774, 34777, 34903.  
*Caryota sobolifera*, 34739.  
Cashew. See *Anacardium* sp.  
*Cassia obovata*, 34809.  
     *occidentalis*, 34810.  
Castor bean. See *Ricinus communis*.  
*Ceiba pentandra*, 34875.  
*Cereus* sp., 34999.  
     *quisco*, 34998.  
*Chaenomeles japonica*, 34864.  
*Chaetochloa italica*, 34771, 35049, 35050,  
     35063, 35071.  
     *lindenbergiana*, 34817.  
*Chenopodium quinoa*, 34823.  
Cherry, bush. See *Prunus prostrata*.  
*Chloris distichophylla*, 35058, 35060.  
     *elegans*, 35074.  
     *gracilis*, 35059.  
*Chrysopogon montanus*, 34935.  
Citronella. See *Cymbopogon nardus*.  
*Citrullus vulgaris*, 34737.  
*Citrus* spp., 34755, 34756, 34775.  
     *limonia*  $\times$  *grandis*, 34830.  
     *sinensis*, 34860.  
*Clematis heracleafolia*, 35127.  
*Clerodendrum* sp., 35094.  
Clover, red. See *Trifolium pratense*.  
     yellow sweet. See *Melilotus officinalis*.  
*Coccolobis* sp., 34982.  
*Cocos romanzoffiana*, 34757.  
*Colletia cruciata*, 34758.  
*Cordyline baueri*, 34850.  
     *terminalis*, 34849.  
Corn. See *Zea mays*.  
*Corylus avellana*, 34785.  
*Cotoneaster ignava*, 34786.  
     *simonsi*, 35128.  
Cotton. See *Gossypium hirsutum*.  
Cowpea. See *Vigna sinensis*.  
*Crataegus arnoldiana*, 34782.  
      *$\times$ carrierei*, 35095.  
     *peckii*, 34990.  
*Crotalaria grantiana*, 34740.  
*Cucumis melo*, 34983, 34984, 35000 to  
     35002.  
*Cucurbita maxima*, 34862.  
     sp., 35003.  
Cupang. See *Parkia timoriana*.  
*Curcuma longa*, 34773.  
*Cymbopetalum penduliflorum*, 35039.  
*Cymbopogon citratus*, 34728.  
     *jwarancusa*, 35132.  
     *nardus*, 34729.  
*Cyphomandra betacea*, 34974.  
     *fragrans*, 35096.  
Cypress vine. See *Ipomoea quamoclit*.  
*Cytisus* sp., 35004.  
*Dactyloctenium aegyptium*, 34939.  
Date. See *Phoenix dactylifera*.  
*Deckenia nobilis*, 34832.  
*Delphinium dukhbergi*, 35129.  
*Dillwynia ericifolia*, 34841.  
*Dioscorea* sp., 34861.  
*Diospyros kaki*, 34970 to 34973, 35117 to  
     35120.  
     *montana*, 35084.  
Dotalu. See *Loxococcus rupicola*.  
Duku. See *Lansium domesticum*.  
*Echinochloa crusgalli*, 35062.  
*Echium wildpretii*, 35097.  
*Elaeis guineensis*, 34741.  
*Eleusine aegyptiaca*. See *Dactyloctenium aegyptium*.  
     *coracana*, 34768, 35075 to 35077.  
*Elichrysum orientale*, 34819.  
Elm. See *Ulmus glabra suberosa*.  
*Entelea palmata*, 35098.  
*Eragrostis superba*, 34818.  
*Eremurus turkestanicus*, 35130.  
*Eriodendron anfractuosum*. See *Ceiba pentandra*.  
*Eugenia uniflora*, 34880.  
Evening primrose. See *Oenothera* spp.  
*Feroniella oblata*, 34835.  
Field pea. See *Pisum sativum*.  
Filbert. See *Corylus avellana*.  
Flame tree. See *Brachychiton acerifolium*.  
Flax. See *Linum usitatissimum*.  
*Fragaria vesca*, 35005.  
*Garcinia* sp., 34881.  
*Genipa americana*, 34882.  
*Genipap*. See *Genipa americana*.  
*Glycine hispida*. See *Soja max*.  
*Gossypium hirsutum*, 34826, 34827.  
Grass, ginger. See *Cymbopogon jwarancusa*.  
     lemon. See *Cymbopogon citratus*.  
*Grevillea banksii*, 34872.  
Guava. See *Psidium guajava*.

- Haemanthus eetveldeanus*, 34885.  
*Halimodendron argenteum*. See *Halimodendron halodendron*.  
*halodendron*, 34787.  
*Harpephyllum caffrum*, 34943.  
Hawthorn. See *Crataegus* spp.  
*Holcus sorghum*, 34911, 34985, 34986.  
Holly. See *Ilex corallina*.  
Honeysuckle. See *Lonicera floribunda*.  
*Hordeum distichon nutans*, 35051, 35053.  
*vulgare*, 35052.  
*Hypericum hookerianum*, 35099.  
*Ilex corallina*, 34836.  
Immortelle. See *Elichrysium orientale*.  
*Indigofera amblyantha*, 35100.  
*glandulosa*, 34936.  
*linifolia*, 34937.  
*trifoliata*, 34938.  
*Inodes exul*, 35116.  
*Ipomoea quamoclit*, 34767.  
Jaborandi. See *Pilocarpus pennatifolius*.  
Jasmine. See *Jasminum floridum*.  
*Jasminum floridum*, 35101.  
*Juglans regia*, 35006.  
Jujube. See *Ziziphus jujuba*.  
Kafir, dwarf. See *Holcus sorghum*.  
Kafir plum. See *Harpephyllum caffrum*.  
Kandela. See *Kerstingiella geocarpa*.  
Kapok. See *Ceiba pentandra*.  
*Kennedya rubicunda*, 34842.  
*Kerstingiella geocarpa*, 34916 to 34919.  
Kurrajong. See *Grevillea banksii*.  
*Lagunaria patersonii*, 34843.  
*Lansium domesticum*, 34920, 34976, 35041.  
*Lathyrus* sp., 35007.  
Larkspur. See *Delphinium duhmbergi*.  
*Leptospermum flavescens*, 34844.  
*scoparium*, 34853.  
*Licania platypus*, 34915.  
*Licuala peltata*, 34742.  
Lily, palm. See *Cordyline terminalis*.  
*Linum usitatissimum*, 35057.  
*Loasa* sp., 35008.  
*Lonicera floribunda*, 34788.  
*Loxococcus rupicola*, 34743.  
*Lucuma nerifolia*. See *Pouteria nerifolia*.  
Mahogany. See *Swietenia macrophylla*.  
*Mammea americana*, 35042.  
Mammee. See *Mammea americana*.  
*Mangifera* sp., 34907.  
Mango. See *Mangifera* sp.  
Manuka, Nicholls's. See *Leptospermum scoparium*.  
Maple. See *Acer ginnala semenovii*.  
Maqui. See *Aristotelia chilensis*.  
*Medicago carstiensis*, 34772.  
*sativa*, 34863, 35085 to 35087, 35122.  
*Melilotus officinalis*, 34822.  
Millet. See *Chaetochloa italica*.  
*Mimosa acle*. See *Albizzia acle*.  
Monkshood. See *Aconitum scaposum pyramidalis*.  
*Moquilea platypus*. See *Licania platypus*.  
Muskmelon. See *Cucumis melo*.  
*Myrtus* spp., 34760, 34761.  
Narras. See *Acanthosicyos horrida*.  
*Nectandra sanguinea*, 34981.  
Nectarine. See *Amygdalus persica nectarina*.  
*Nephelium tomentosum*, 35102.  
*Nicotiana rustica*, 34752 to 34754, 34820, 35078 to 35082.  
*tabacum*, 34821.  
*Normanbya merrillii*, 34732.  
*Ochna pulchra*, 34942.  
*Oenothera mollissima*, 35010.  
*odorata*, 35009.  
*Oncosperma filamentosum*, 34744.  
Onion. See *Allium cepa*.  
*Opuntia* sp., 35011.  
Orange (China), 34775.  
(Florida), 34860.  
*Oreodoxa regia*. See *Roystonea regia*.  
*Osterdamia matrella*, 35073.  
*Pachyrhizus angulatus*. See *Cacara erosa*.  
Pacuri. See *Aristoclesia esculenta*.  
*Pahudia rhomboidea*, 35034.  
*Pallasia capensis*, 34845.  
Palm, African oil, 34741.  
Alexandra, 34738.  
date, 35083.  
(Italy), 35105.  
(Java), 34735, 34738, 34739, 34742, 34744, 34745, 34747, 34748, 34757, (Mauritius), 34832, 34833.  
Nibung, 34744.  
Palmyra, 35040.  
royal, 34747.  
Palmetto. See *Inodes exul*.  
*Panax elegans*. See *Polyscias elegans*.

- Panicum crusgalli*. See *Echinochloa crus-galli*.  
*lindenbergianum*. See *Chaetochloa lindenbergiana*.  
*miliaceum*, 35054 to 35056, 35065.  
*teneriffae*. See *Tricholaena rosea*.  
Papaya. See *Carica papaya*.  
*Parkia roxburghii*. See *Parkia timoriana*.  
*timoriana*, 35035.  
*Paspalum dilatatum*, 35068.  
*distichum*. See *Paspalum notatum*.  
*notatum*, 35067.  
*stoloniferum*, 35066.  
*Passiflora alba*, 35103.  
*banksii*, 35104.  
*manicata*, 35113.  
Passion fruit. See *Passiflora* spp.  
Pea. See *Pisum sativum*.  
*Perilla arguta*. See *Perilla nankinensis*.  
*nankinensis*, 34829.  
*Persea americana*, 34831, 34855, 34856, 34904, 34994, 35121.  
*gratissima*. See *Persea americana*.  
Persimmon, Fugi, 34972.  
Giombo, 34973.  
Gosho, 35117.  
(Japan), 34970 to 34973, 35117 to 35120.  
Koshu maru, 35118.  
Mishirazū (Aizū), 34970.  
(Sakushu), 34971.  
Myodo, 35119.  
Ohassakū, 35120.  
*Phaseolus aureus*, 34776.  
*angularis*, 34812 to 34816, 34948 to 34969.  
*coccineus*, 34888, 34889.  
*vulgaris*, 34731, 34890 to 34900, 35012 to 35016.  
*Philodendron robustum*, 34762.  
*Phoenix dactylifera*, 35083.  
sp., 35105.  
*Pilocarpus pennatifolius*, 35106.  
Pine. See *Pinus pyrenaica*.  
Pineapple. See *Ananas sativus*.  
*Pinus pyrenaica*, 35107.  
*Piratinera alicastrum*, 34876.  
*Pisum sativum*, 34941, 35018.  
Pitanga. See *Eugenia uniflora*.  
*Pithecolobium pruinosa*, 34846.  
*Pittosporum phillyraeoides*, 35108.  
*revolutum*, 34847.  
*Platonia insignis*. See *Aristoclesia esculenta*.  
Plum. See *Prunus* spp.  
*Poa pallens*, 34807.  
*Polypogon* spp., 35069, 35070.  
*Polyscias elegans*, 34848.  
Poplar. See *Populus* spp.  
*Populus alba*, 34789.  
*balsamifera*, 34791.  
× *berolinensis*, 34792.  
*candicans*, 34794.  
*deltoidea*, 34790, 34793.  
*laurifolia*, 34797.  
*nigra*, 34795, 34796.  
*petrowskiana*, 34801.  
*simonii*, 34779, 34798.  
*suaveolens*, 34799.  
*tremula*, 34800.  
Potato (Chile), 35024 to 35028.  
(France), 34921 to 34923.  
*Pouteria nerifolia*, 34759.  
Prickly pear. See *Opuntia* sp.  
Primrose, evening. See *Oenothera* spp.  
Proso. See *Panicum miliaceum*.  
*Prunus* sp., 35020.  
*armeniaca*, 34865, 35019.  
*brigantina*, 34851, 35046.  
*maximowiczii*, 34802.  
*prostrata*, 34803.  
*Psedera henryana*, 35114.  
*Psidium guajava*, 34763.  
*Psychotria luzoniensis*, 35037.  
*luzoniensis*. See *Psychotria luzoniensis*.  
*Ptychosperma gracilis*, 34738.  
Pumpkin. See *Cucurbita maxima*.  
*Pyrus japonica*. See *Chaenomeles japonica*.  
Queensland pyramid tree. See *Lagunaria patersonii*.  
Quince, Japanese. See *Chaenomeles japonica*.  
Quinoa. See *Chenopodium quinoa*.  
Quisco. See *Cereus quisco*.  
Ragi. See *Eleusine coracana*.  
*Rhapis flabelliformis*, 34745.  
*Rhus punjabensis sinica*, 35109.  
*Ricinus communis*, 34746.  
*Rollinia* sp., 34764.

- Rosa* sp., 35110 to 35112.  
*leschenaultiana*, 34834.  
*Roscheria melanochaetes*, 34833.  
Rose (Italy), 35110 to 35112.  
(England), 34834.  
*Roystonea regia*, 34747.  
Sacred ear flower. See *Cymbopetalum penduliflorum*.  
*Saguerus pinnatus*, 34748.  
St. John's-wort. See *Hypericum hookerianum*.  
*Salvia* sp., 35021.  
Sansapote. See *Licania platypus*.  
*Sapindus* sp., 34769.  
*Setaria italica*. See *Chaetochloa italica*.  
*lindenbergiana*. See *Chaetochloa lindenbergiana*.  
*Sisyrinchium* sp., 35022.  
Soapberry. See *Sapindus* sp.  
*Soja max*, 34977.  
*Solanum* spp., 34866, 35023, 35045.  
*chacoense*, 34923.  
*commersonii*, 34921, 34922.  
*tuberosum*, 35024 to 35028.  
*Sorghum vulgare*. See *Holcus sorghum*.  
Soy bean. See *Soja max*.  
Squash. See *Cucurbita* sp.  
*Sterculia acerifolia*. See *Brachychiton acerifolium*.  
*quadrifida*, 34873.  
*Stevia rebaudiana*, 34883.  
Strawberry. See *Fragaria vesca*.  
*Swietenia macrophylla*, 34914.  
*Tacsonia manicata*. See *Passiflora manicata*.  
Tamarisk. See *Tamarix* spp.  
*Tamarix kashgarica*, 34780.  
*pentandra*, 34804.  
Tantoon. See *Lepospermum flavescens*.  
Tea. See *Thea sinensis*.  
*Thea sinensis*, 34749, 34770.  
*Thunbergia alata*, 34765.  
Tindalo. See *Pahudia rhomboidea*.  
Tobacco (Italy), 34752 to 34754.  
(Russia), 34820, 34821, 35078 to 35082.  
Tomato, tree, 34974, 35096.  
*Tricholaena rosea*, 35064, 35072.  
*Trifolium pratense*, 34852.  
Turmeric. See *Curcuma longa*.  
*Ulmus glabra suberosa*, 34805.  
Undetermined, 34750, 34751, 34766, 34884, 34913, 35029 to 35031.  
Vetiver. See *Vetiveria zizanioides*.  
*Vetiveria zizanioides*, 34730, 34928.  
*Vicia ervilia*, 35061.  
*faba*, 35044.  
*Vigna sinensis*, 34811, 34859, 34901, 34902, 34940.  
*Viola cornuta*, 35131.  
Violet, horned. See *Viola cornuta*.  
*Vitis henryana*. See *Psedera henryana*.  
Walnut. See *Juglans regia*.  
Watermelon. See *Citrullus vulgaris*.  
Wattle, cedar. See *Acacia elata*.  
golden. See *Acacia pycnantha*.  
mudgee. See *Acacia spectabilis*.  
*Xanthosoma sagittaeifolium*, 34854.  
*Ximenia caffra*, 35043.  
Yam. See *Dioscorea* sp.  
bean. See *Cacara erosa*.  
Yangtaw. See *Actinidia chinensis*.  
Yautia. See *Xanthosoma sagittaeifolium*.  
*Zea mays*, 34733.  
*Zephyranthes* sp., 34993, 35032.  
*Ziziphus jujuba*, 34874.  
*sativa*. See *Ziziphus jujuba*.  
*Zoysia pungens*. See *Osterdamia matrella*.