

Issued February 13, 1914.

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

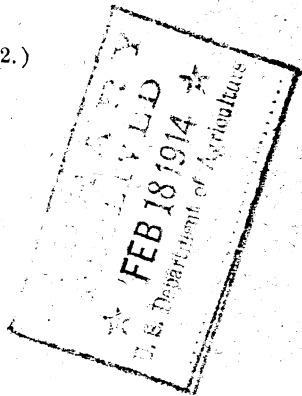
WILLIAM A. TAYLOR, *Chief of Bureau.*

INVENTORY  
OF  
SEEDS AND PLANTS IMPORTED

BY THE

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

(No. 31; Nos. 33279 to 34092.)



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# INVENTORY OF SEEDS AND PLANTS IMPORTED BY THE OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION DURING THE PERIOD FROM APRIL 1 TO JUNE 30, 1912 (NO. 31; NOS. 33279 TO 34092).

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## INTRODUCTORY STATEMENT

This is the first inventory of a new series, and the occasion furnishes an opportunity to review briefly the history of these inventories.

The first of the thirty inventories which have been published was designed by Mr. O. F. Cook, who saw the need for it during the time in which he had charge of the Section of Seed and Plant Introduction in 1899. The correctness of his foresight has been amply proved. The series of inventories has developed into a work of great value in its bearing on the rapidly developing agriculture of this country. Nowhere else, so far as known, is there an authentic record of the introduction into a country of 30,000 plant importations from various parts of the world.

The early inventories contained scarcely more than a bare record of the place of collection, the date, the name of the plant, and the collector, but this was largely due to the fact that the early introductions sent in were accompanied by very brief notes. With the arrival of the material from the Lathrop-Fairchild expedition, of Mr. W. T. Swingle's collections from the Mediterranean region, and of Mr. M. A. Carleton's material from Russia, the inventory first began to take on importance as a work on economic botany, inasmuch as the original observations of the collectors, who were termed "agricultural explorers" at Mr. Cook's suggestion, were printed in full. It is the observations fresh from the field which form one of the most valuable features of this publication.

Until 1908 the inventories were published at irregular intervals and were extremely variable in size, but since that year they have been issued quarterly, each number covering the introductions of three months. The inventories prior to No. 14, published in 1908, recorded the names of the plants or seeds received in the form in which they were given by the explorer or correspondent, but with the development in 1908 of facilities for the identification of the seeds sent in, through cooperation with the Office of Taxonomic and Range Investigations, an attempt was made to correct the nomenclature of the imported



seeds and plants so far as was possible from the fragmentary material often sent in. It was not then and is not now always possible to identify a new introduction without first growing it, and it is as impracticable to postpone the publication of its importation for months or years, awaiting its flowering and fruiting, as it is to get some of our correspondents to prepare good botanical specimens and send these in with the seeds and plants. Corrections of the preliminary identifications must be made later.

To Mr. H. C. Skeels was intrusted the task of identifying the seeds and to Mr. W. F. Wight the plants, and arrangements were made by which this was done under the general supervision of Mr. Frederick V. Coville, botanist in charge of the Office of Taxonomic and Range Investigations. To nothing, perhaps, more than to the faithful care of Miss Mary A. Austin is due the accuracy and completeness of these quarterly inventories, and her resignation from the service, which occurred at the completion of this inventory, has been a matter of keen regret to all who have been working with her on the records of the office.

Owing to the delays incident to the publication of such a technical bulletin as this inventory, it has been found necessary to issue twice a month what might be termed advance sheets of information, being a bulletin called "Plant Immigrants," announcing promptly the arrival of new plants and soliciting applications for them by reputable experimenters at the State experiment stations and elsewhere. The quarterly publication of the inventories makes it possible to have on the shelves of the experimenter the data regarding his new plants at the time he is working with them, since, with the exception of annuals, almost all species are first propagated in the various field stations of the Office of Foreign Seed and Plant Introduction and distributed the following season in the shape of plants.

It has been customary in these introductions to the printed inventories to single out some of the more interesting importations. The following importations listed in this inventory appear to the writer as worthy of special mention:

No. 33279, the Alger Navel orange, a variety originated by Dr. L. Trabut, of Algiers; No. 33281, a new sweet sorghum, apparently related to the Red Amber variety, from German East Africa; No. 33290, *Lathyrus mullkai*, from the mountain slopes of Bokhara, which Mr. Frank N. Meyer says is perennial and could be used for the creation of a perennial sweet pea; Nos. 33295 to 33301, seven varieties and species of *Trigonella* for trial in comparison with *T. foenum-graecum*, the fenugreek of Egypt and Tunis; Nos. 33303 to 33307, five species of *Hedysarum* for breeding purposes and trial in comparison with *sulla*, the great forage crop of Malta; No. 33308, *Spinacia tetrandra*, a wild spinach from central Asia, to assist in the

creation of a variety resistant to hot weather; No. 33311, *Amygdalus bucharica*, a wild almond occurring in the hot, dry mountain regions of Russian Turkestan, to be used as a drought-resistant stock, as a nut tree, as an ornamental, and for hybridizing purposes; Nos. 33317 and 33645, *Larix sibirica*, a remarkably rapid-growing species for which only 10 weeks of summer are sufficient to ripen its wood, one of the tallest trees grown in St. Petersburg, and a very promising park and lumber tree for the Northwest, as it has proved hardy in central Canada; No. 33320, a species of *Ammophila*, from the sand dunes of northern Mongolia, a grass possessing good sand-binding qualities, the seeds of which are made into coarse bread; Nos. 33321 to 33335, species of *Opuntia*, a remarkable collection of cacti, the gift of Mr. Robert Roland Gosselin, of Villafranca (Villefranche sur Mer), France, representing the famous collection of Weber, the cactus specialist; Nos. 33342 to 33345, four Indian species of *Rubus* from Utakamand, India; Nos. 33352 to 33354, three varieties of cotton from Siam which may have originated in that region; Nos. 33392 to 33403, a collection of grapes for table and wine-making purposes from Beirut, Syria; Nos. 33408 to 33417, a collection of castor bean varieties from British India; No. 33431, *Actinidia chinensis*, from Kuling, China, in the form of roots, from plants that bore large fruits and are therefore female; Nos. 33443, 33444, 33598, and 33599, *Alysicarpus*, four species of Indian legumes of probable value for grazing purposes, arranged for by Mr. C. V. Piper; No. 33445, *Chrysopogon montanus*, one of the most valued pasture grasses in India, also arranged for by Mr. Piper; No. 33447, *Iseilema laxum*, from lowlands on the plains of northern India, a grass which is both grazed and cut for hay there; Nos. 33448 to 33457, a remarkable collection of Bolivian varieties of Indian corn, including the giant-kerneled and very sweet-kerneled varieties, sent in by Minister Horace G. Knowles; Nos. 33467 and 33468, Venezuelan *Arracacia xanthorrhiza*, two varieties of what may prove a good summer vegetable in Florida; Nos. 33523 to 33539, *Vitis vinifera*, 17 varieties of Almeria table grapes; Nos. 33543 to 33550, a collection of ornamental trees and shrubs from Seharunpur, India, probably suited to the climate of Florida, secured at the request of Mr. Piper; Nos. 33551 to 33587, a collection of seeds of trees and shrubs from Lucknow, India, arranged for by Mr. Piper with Mr. H. J. Davies, of the Government Horticultural Gardens there, suitable particularly for trial in southern Florida; No. 33596, *Andropogon annulatus*, and No. 33597, *A. pertusus*, two excellent hay grasses from the Ganges Valley of British India, selected by Mr. Piper; Nos. 33601 to 33603, *Cenchrus biflorus*, a grass related to our sand bur but having grazing value, from Lucknow, Agra, and Lahore; No. 33608, *Indigofera linifolia*, one of the best pasture plants of the Ganges Valley; No. 33611,

*Pennisetum ciliare*, the best native hay grass of the Ganges Valley, growing 2½ feet high; No. 33617, *Capriola dactylon*, apparently a more vigorous grower than the ordinary crab-grass, according to Mr. Piper, who saw it growing at Alighur, India; No. 33639, the *Assil* cotton, a new Egyptian variety secured by Mr. O. F. Cook from Alexandria; No. 33643, *Bacchousia citriodora*, from Sunnybank, Queensland, which yields 4 per cent of citral, the valuable constituent of all lemon oils; Nos. 33657 to 33665, nine probably extremely hardy varieties and crosses of *Prunus fruticosa* with *P. avium*, *P. cerasus*, and *P. domestica*, presented by Mr. A. D. Voeikov, a plant breeder of central Russia; No. 33689, the *Bumulan* banana, a robust variety from Manila, which has attracted some attention in the West Indies; No. 33692, *Antheplora hermaphrodita*, a renowned grass in the dry region of the province of Ceara, Brazil, probably valuable for hay; No. 33736, a variety of red clover from Trent, Austria, called the *Giant* or *Spodone*, recently introduced from Italy, which yields 25 to 30 per cent more than ordinary clover, according to Prof. Bassi, of the provincial administration; No. 33749, okra, or gumbo, a variety originally from Egypt which is an early bearer, has thicker flesh and is more tender than other varieties, selected by Mr. E. A. McIlhenny, of Avery Island, La.; No. 33762, *Cocos yatay*, from Haedo, near Buenos Aires, Argentina, a frost-resistant palm with fruit that looks like a crab apple and tastes like a green pineapple; No. 33779, a variety of pigeon-pea from La Noria, Mazatlan, Mexico; No. 33793, *Rubus hawaiiensis*, the akala fruit from Hawaii, probably the largest fruiting raspberry known, being over 1 inch in diameter, with a sharp, rather acid but pleasant flavor; Nos. 33800 to 33911, a very remarkable collection of Chilean seeds from Mr. José D. Husbands, of Limavida, Chile, of which the following are especially noteworthy—No. 33801, *Fagelia*, a remarkable yellow-flowered fragrant ornamental; Nos. 33802 to 33806, five varieties of Chilean yams; No. 33812, a species of large yellow-flowered senecio with flowers in bunches 2 feet long; Nos. 33819 to 33822, *Alstroemeria ligtu*, the linto of Chile, which is used for producing a very valuable arrowroot for infants and sick people; No. 33833, *Acacia cavenia*, a tree for live fences in arid regions, which is considered by Mr. Husbands to be one of the most valuable trees for cultivation on a Chilean farm, and the young foliage of which is much relished by sheep; No. 33869, the Chilean muermo, a magnificent evergreen tree which whitens the forest with its blossoms; No. 33872, the maravilla, a golden-yellow flowering shrub; Nos. 33888 to 33896, nine varieties of the little-known fruiting shrub called the arrayan, the fruits of which are said to be delicious; No. 33905, the murta, considered by Mr. Husbands to be the best wild fruit in Chile; Nos. 33907 to 33909, three varieties of an undetermined species of myrtus with edible fruits—Nos. 33913

to 34038, a collection from Señor Carlos Thays, of the Botanic Garden of Buenos Aires, of seeds of ornamental trees and shrubs from Brazil and Argentina, some of which should be of great interest to southern park superintendents, for example, No. 33965, the curious canbanambi, whose fruits have an odor which causes one to sneeze; No. 33970, the chañar, a favorite fruit of the Argentinos; No. 33997, a remarkable bulb of the iris family, from a dozen bulbs of which over a thousand apricot-yellow blooms were produced. From other correspondents we find No. 34045, a remarkable yellow-fruited *Rubus* which Dr. Proschowsky reports has climbed nearly to the top of his olive trees at Nice and bears an abundance of good fruit; Nos. 34046 to 34049, four species of drought-resistant fodder grasses from New South Wales; No. 34050, seeds of the delicious ilama from Tehuantepec, a fruit resembling the cherimoya, but larger and said to be of better flavor; No. 34051, a new species of bombax from the Philippines, which will probably grow in southern Florida and is of value in furnishing what appears to be quite as good a fiber as the best Java kapok; Nos. 34056 to 34062, a collection of muskmelon seeds from the Dominican Republic which will interest growers in subtropical regions; No. 34063, the Karagatch elm of the Trans caspian territory, a more rapid grower and producing harder and better wood than the American elm, which has proved hardy at Fallon, Nev., and is one of the most beautiful avenue trees known; No. 34071, *Dammara alba*, the remarkable broad-leaved conifer of Java; No. 34078, *Talauma mutabilis*, from the island of Java, a large yellow-flowered tree related to the magnolia, introduced for breeding experiments; and No. 34092, from Senegal, West Africa, presented by the director of the Colonial Garden at Nogent sur Marne, France, a perennial rice which produces rhizomes and will probably grow in saline soils, and since the natives consider it so much better than their imported rices that they will exchange only one calabash of it for three of the imported kind it is certainly worthy of special consideration.

As heretofore, the manuscript for this inventory has been prepared by Miss Mary A. Austin, 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 of this Bureau by Mr. S. C. Stuntz, who has also had general supervision of this inventory, as of all the publications of the Office of Foreign Seed and Plant Introduction.

DAVID FAIRCHILD,  
*Agricultural Explorer in Charge.*

OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION,  
*Washington, D. C., February 8, 1913.*



# INVENTORY.

## 33279. CITRUS AURANTIUM SINENSIS L.

Orange.

From Algiers, Algeria. Presented by Dr. L. Trabut. Received April 1, 1912.

“*Alger Navel*. Fruit large, flattened, double, late. Flesh fine, juicy, with pleasant odor. Very vigorous tree. Obtained from seeds at the botanic station. (*Trabut*.)  
Seeds.

## 33281. HOLCUS SORGHUM L.

Sorghum.

(*Sorghum vulgare* Pers.)

From Mpwapwa, German East Africa. Presented by Mr. W. Sperling, Kaiserliche Bezirksamtman. Received April 4, 1912.

This plant, which has been listed in previous numbers of these inventories as *Andropogon sorghum* (L.) Brot., and is listed in the Index Kewensis as *Sorghum vulgare* Pers., has been identified as the type of the genus *Holcus* by Mr. A. S. Hitchcock, who says (Grasses of Cuba, Contributions from U. S. National Herbarium, vol. 12, pt. 6, p. 195, 1909): “*Holcus sorghum* L. must be considered the type of the genus *Holcus*, since it is the most important economic species of the genus, and, further, since, in the fifth edition of his *Genera Plantarum*, Linnæus refers to the genus *Sorghum* Mich [eli] as a synonym of *Holcus*.” It is therefore necessary to use this original Linnæan name for the sorghum.

“This seed is very interesting because it is apparently different from anything that I have had previously from this region. It is apparently a sorgho, or sweet sorghum. Its relationship can be ascertained only by growing it, but apparently it is related to the *Red Amber*.” (*Carleton R. Ball*.)

## 33282 to 33284. ZEA MAYS L.

Corn.

From Georgetown, Demerara, British Guiana. Presented by Mr. F. A. Stockdale, Assistant Director and Government Botanist, Botanic Garden, Science and Agriculture Department. Received April 3, 1912.

Seeds of the following:

33282. *Creole*. No. 1.

33283. *Creole*. No. 2.

33284. *Creole*. No. 3.

“I can not tell whether or not these are true to type, as they were obtained from a farmer here and have not been grown at our experimental stations.” (*Stockdale*.)

See No. 32490 for previous introduction.

## 33285 to 33320.

From Russia. Received through Mr. Frank N. Meyer, agricultural explorer, for this Department. Received April 2, 1912.

Seeds of the following:

33285. TRITICUM DURUM Desf.

Wheat.

From St. Petersburg, Russia.

“(No. 1746a, Feb. 11, 1912.) A variety of hard summer wheat, coming from the hot and dry Syr-Darya District, Russian Turkestan. Said to be grown

**33285 to 33320**—Continued.

without irrigation, and to give a good harvest. Locally called *Kubanka*, under which name several distinct varieties pass.

"Obtained at the seed exhibition held in St. Petersburg during the early part of February, 1912." (*Meyer.*)

**33286.** TRITICUM AESTIVUM L. **Wheat.**  
(*Triticum vulgare* Vill.)

From St. Petersburg, Russia.

"(No. 1747a, Feb. 11, 1912.) A medium-soft summer wheat of fine quality; comes from the hot and dry Syr-Darya District, Russian Turkestan, and is said to grow without irrigation. Called *Syr-Darya*. Obtained like the preceding number." (*Meyer.*)

**33287.** TRITICUM AESTIVUM L. **Wheat.**  
(*Triticum vulgare* Vill.)

From St. Petersburg, Russia.

"(No. 1748a, Feb. 11, 1912.) A very white, soft summer wheat; comes from the hot and dry Syr-Darya District, Russian Turkestan; said to be grown under slight irrigation. Locally called *Ak-Boogdai*. Obtained like No. 1746a." (*Meyer.*)

**33288.** TRITICUM AESTIVUM L. **Wheat.**  
(*Triticum vulgare* Vill.)

From St. Petersburg, Russia.

"(No. 1749a, Feb. 11, 1912.) A medium-soft summer wheat coming from the hot and dry Syr-Darya District, Russian Turkestan; said to be grown under irrigation. Called *Kubanka*. Seems to be a cross between *Triticum durum* and *T. vulgare*. Obtained like No. 1746a." (*Meyer.*)

**33289.** AVENA SATIVA L. **Oat.**

From St. Petersburg, Russia.

"(No. 1750a, Feb. 11, 1912.) A sample of a very white variety of oats coming from the mountainous Ferghana District, Russian Turkestan. Obtained like No. 1746a." (*Meyer.*)

(A slip was attached to these oats marked "Dollar oats.")

**33290.** LATHYRUS MULKAK Lipsky.

From St. Petersburg, Russia.

"(No. 1751a, Feb. 17, 1912.) A rare, perennial *Lathyrus* which occurs here and there on mountain slopes in southern Bokhara; has large reddish pink flowers which are quite fragrant. Of value as a factor in hybridization experiments in trying to create perennial sweet peas and as a possible forage plant for dry, hot regions. Obtained from the St. Petersburg Botanical Garden." (*Meyer.*)

**33291.** ONOBRYCHIS CAPUT-GALLI (L.) Lam.

From St. Petersburg, Russia.

"(No. 1752a, Feb. 17, 1912.) An annual legume which may be tested for its possible forage value. Obtained like the preceding number." (*Meyer.*)

*Distribution.*—The countries bordering on the Mediterranean from Spain eastward through Italy, Greece, and Asia Minor to Syria, and in northern Africa.

**33285 to 33320—Continued.**

**33292.** ONOBRYCHIS CRISTA-GALLI (L.) Lam. **Hérisson.**

From St. Petersburg, Russia.

"(No. 1753a, Feb. 17, 1912.) An annual legume which may be tested for its possible forage value. Obtained like No. 1751a." (Meyer.)

*Distribution.*—The countries at the eastern end of the Mediterranean from Greece through Asia Minor to Palestine, and in northern Egypt.

**33293.** ONOBRYCHIS SATIVA MONTANA (DC.) Koch. **Sainfoin.**

(*Onobrychis viciaefolia montana* Burn.)

From St. Petersburg, Russia.

"(No. 1754a, February 17, 1912.) An annual legume which may be tested for its possible forage value. Obtained like No. 1751a." (Meyer.)

*Distribution.*—Southern Europe and western Asia, extending from Spain eastward through Italy, Greece, and the Caucasus region to Asia Minor.

**33294.** ONOBRYCHIS LACONICA Orph.

From St. Petersburg, Russia.

"(No. 1755a, February 17, 1912.) An annual legume, occurring throughout Russian Turkestan. Apparently possesses value for forage purposes. Obtained like No. 1751a." (Meyer.)

*Distribution.*—The subalpine slopes of the mountains in Greece.

**33295.** TRIGONELLA CAERULEA (L.) Ser.

From St. Petersburg, Russia.

"(No. 1756a, February 17, 1912.) An annual legume occurring in the Caucasus. May be tested for its possible forage value. Obtained like No. 1751a." (Meyer.)

**33296.** TRIGONELLA CAERULEA (L.) Ser.

From St. Petersburg, Russia.

"(No. 1757a, February 17, 1912.) Variety *connata*. An annual legume which may be tested for its possible forage value. Obtained like No. 1751a." (Meyer.)

**33297.** TRIGONELLA CAERULEA (L.) Ser.

From St. Petersburg, Russia.

"(No. 1758a, February 17, 1912.) Variety *monophylla*. An annual legume which may be tested for its possible forage value. Obtained like No. 1751a." (Meyer.)

**33298.** TRIGONELLA CRETICA Boiss.

From St. Petersburg, Russia.

"(No. 1759a, February 17, 1912.) An annual legume which may be tested for its possible forage value. Obtained like No. 1751a." (Meyer.)

**33299.** TRIGONELLA FOENUM-GRAECUM L. **Fenugreek.**

From St. Petersburg, Russia.

"(No. 1760a, February 17, 1912.) A well-known annual fodder plant. To be tested along with other species of *Trigonella* for comparison. Obtained like No. 1751a." (Meyer.)

**33300.** TRIGONELLA GLADIATA Steven.

From St. Petersburg, Russia.

"(No. 1761a, February 17, 1912.) An annual legume which may be tested for its possible forage value. Obtained like No. 1751a." (Meyer.)



**33285 to 33320**—Continued.**33301.** TRIGONELLA POLYCRATA L.

From St. Petersburg, Russia.

“(No. 1762a, February 17, 1912.) Variety *dentata*. An annual legume which may be tested for its possible forage value. Obtained like No. 1751a.” (*Meyer.*)

**33302.** MEDICAGO RADIATA L.

From St. Petersburg, Russia.

“(No. 1763a, February 17, 1912.) An annual legume which may be tested for its possible forage value. Obtained like No. 1751a.” (*Meyer.*)

**33303.** HEDYSARUM ESCULENTUM Ledeb.

From St. Petersburg, Russia.

“(No. 1764a, February 17, 1912.) A perennial legume which may be tested for its possible forage value. Obtained like No. 1751a.” (*Meyer.*)

*Distribution.*—Eastern Siberia, Manchuria, and Japan.

**33304.** HEDYSARUM FLAVESCENS Regel and Schmalh.

From St. Petersburg, Russia.

“(No. 1765a, February 17, 1912.) A perennial legume which may be tested for its possible forage value. Obtained like No. 1751a.” (*Meyer.*)

*Distribution.*—On the slopes of the mountains in Turkestan at an elevation of 6,500 to 7,000 feet.

**33305.** HEDYSARUM MICROCALYX Baker.

From St. Petersburg, Russia.

“(No. 1766a, February 17, 1912.) A perennial legume which may be tested for its possible forage value. Obtained like No. 1751a.” (*Meyer.*)

*Distribution.*—Temperate slopes of the Himalayas in the province of Kashmir, in northern India.

**33306.** HEDYSARUM HEDYSAROIDES (L.) Stuntz.

(*Astragalus hedysaroides* L., *Species Plantarum*, p. 756, 1753.)

Seeds of this species were received from St. Petersburg under the name *Hedysarum obscurum* L. This name was published in 1759 by Linnæus (*Systema Naturæ*, ed. 10, p. 1171) and the species is there based on *Astragalus hedysaroides* L. As the earliest specific name, *hedysaroides* should be adopted.

From St. Petersburg, Russia.

“(No. 1767a, February 17, 1912.) A perennial legume which may be tested for its possible forage value. Obtained like No. 1751a.” (*Meyer.*)

**33307.** HEDYSARUM SONGARICUM Bongard.

From St. Petersburg, Russia.

“(No. 1768a, February 17, 1912.) A perennial legume which may be tested for its possible forage value. Obtained like No. 1751a.” (*Meyer.*)

*Distribution.*—The valley of the Sungari River in northeastern Siberia.

**33308.** SPINACIA TETRANDBRA Stev.

**Spinach.**

From St. Petersburg, Russia.

“(No. 1769a, February 17, 1912.) A wild spinach occurring in central Asia. Possibly of value in hybridization and selection work, with the object in mind of creating strains of spinach more resistant to hot weather and less quickly shooting into seed than do present varieties. Obtained like 1751a.” (*Meyer.*)

*Distribution.*—In salty clay soil from the Caucasus region of Armenia eastward through northern Persia to Turkestan and Afghanistan.

## 33285 to 33320—Continued.

**33309.** ASPARAGUS SCHOBERIOIDES Kunth.**Asparagus.**

From St. Petersburg, Russia.

“(No. 1770a, February 17, 1912.) A wild asparagus possibly of value for breeding purposes. Obtained like No. 1751a.” (Meyer.)

*Distribution.*—Dry, sandy places in the provinces of Shengking and Shantung in China, and in Chosen (Korea), and Japan.

**33310.** LILIUM DAURICUM Ker-Gawler.**Lily.**

From St. Petersburg, Russia.

“(No. 1771a, February 17, 1912.) A lily from the Amur regions, which has bright, brick-red flowers. Though not of large dimensions, this plant seems a desirable acquisition to the hardy border. Obtained like No. 1751a.” (Meyer.)

*Distribution.*—The slopes of the mountains in Dauria and eastward to Manchuria, the Amur region, the Sakhalin islands, and the island of Hokushu in Japan.

**33311.** AMYGDALUS BUCARICA Korsh.**Almond.**

From St. Petersburg, Russia.

“(No. 1772a, February 17, 1912.) A wild almond occurring in the hot and dry mountain regions of Russian Turkestan. May be experimented with for the following purposes: As a drought-resistant stock for almonds and peaches, as a possible drought-resistant nut tree, as an ornamental tree in desert regions, and as a factor in hybridizing. Obtained like No. 1751a.” (Meyer.)

**33312.** PRUNUS SPINOSISSIMA (Bunge) Franch.

From St. Petersburg, Russia.

“(No. 1773a, February 17, 1912.) A wild, shrubby almond found in stony débris in the hot and dry mountain regions of Russian Turkestan. Possibly of the same value as the preceding number, and in addition may prove of use as a hedge material in desert regions. Obtained like No. 1751a.” (Meyer.)

*Distribution.*—The trans-Caspian district of southwestern Siberia and northwestern Persia, and eastward to Turkestan.

**33313.** EXOCHORDA KOROLKOWI Lavallée.

From St. Petersburg, Russia.

“(No. 1774a, February 17, 1912.) A shrub native to the mountains of Russian Turkestan, flowering with masses of white flowers. Of value possibly as an ornamental garden shrub in rather dry regions. Obtained like No. 1751a.” (Meyer.)

**33314.** COLUTEA PERSICA BUNSEI Boiss.

From St. Petersburg, Russia.

“(No. 1775a, February 17, 1912.) A shrub native to the dry mountain regions of Russian Turkestan. Obtained from the same source as No. 1751a.” (Meyer.)

**33315.** ABELIA CORYMBOSA Regel and Schmalh.

From St. Petersburg, Russia.

“(No. 1776a, February 17, 1912.) A tall shrub growing here and there in the Alexander Mountains, eastern Russian Turkestan. Is esteemed for its hardwooded slender stems from which walking canes known by the name ‘Staffs of Moses’ are made, which are especially sought after by Mohammedan pilgrims. Obtained from the same source as No. 1751a.” (Meyer.)

**33285 to 33320—Continued.****33316. ACER TURKESTANICUM Pax.****Maple.**

From St. Petersburg, Russia.

“(No. 1777a, February 17, 1912.) A maple occurring here and there in the mountains of Russian Turkestan. Of value as a small shade tree in dry and hot regions. Obtained like No. 1751a.” (*Meyer.*)

**33317. LARIX SIBIRICA Ledeb.****Larch.**

From St. Petersburg, Russia.

“(No. 1778a, February 17, 1912.) The little-known Siberian larch. This is an excellent lumber tree, requiring only a very short season to mature, 10 weeks of summer being apparently sufficient to complete the whole process of coming into leaf and shedding again. This tree possesses also great value as an ornamental park tree in cool, uncongenial climes, as in and around St. Petersburg, where it becomes one of the tallest of all trees. It can also be clipped into pyramids and made to serve in formal gardens or along walks. May be expected to thrive especially in southern Alaska and in the coolest sections of the United States. Obtained like No. 1751a.” (*Meyer.*)

**33318. LARIX SIBIRICA Ledeb.****Larch.**

From Estate Mitino, Torzhok, Tver Government, Russia.

“(No. 1779a, February 5, 1912.) Received from Mr. D. D. Romanoff, on whose estate, ‘Mitino,’ some remarkably fine specimens of this larch are found. For further remarks see preceding number.” (*Meyer.*)

**33319. LARIX DAHURICA Turcs.****Larch.**

From Estate Mitino, Torzhok, Tver Government, Russia.

“(No. 1780a, Feb. 6, 1912.) A larch occurring in Manchuria, eastern Siberia, northern Chosen (Korea), etc., forming here and there large forests. Its lumber is of excellent quality, though apparently not ranked as high as that of *Larix sibirica*. It is also a fine ornamental tree, not growing as tall as *L. sibirica*, but is better able to withstand drought and heat. Can be clipped and pruned for use in formal gardens and seems naturally to branch out lower near the ground than *L. sibirica*. Obtained like No. 1751a.” (*Meyer.*)

**33320. AMMOPHILA sp.**

Seeds of this species were received under the name *Ammophila villosa*, but the place of publication of this name has not yet been found.

From St. Petersburg, Russia.

“(No. 1781a, Feb. 24, 1912.) A perennial tall grass found growing in sand dunes in northern Mongolia. Its seeds are collected by the Mongols and a coarse bread made from them. This grass seems to possess excellent sand-binding qualities and might be tested for this purpose in cold and dry sections of the United States. Obtained from Mr. J. W. Palibin, St. Petersburg Botanic Garden, who received these seeds from the neighborhood of Lake Ubsa, northwestern Mongolia.” (*Meyer.*)

**33321 to 33335. OPUNTIA spp.****Prickly pear.**

From Alpes Maritimes, France. Presented by Mr. Robert Roland Gosselin, Colline de la Paix par Villefranche sur Mer. Received April 4, 1912.

These are important chiefly as representatives from authentic original specimens transmitted by Dr. Weber to Mr. Robert Roland Gosselin. They will be valuable especially in enabling us better to understand the species described by Dr. Weber. Two of them may be of importance for forage, and several of them bear edible fruit.

**33321 to 33335—Continued.**

Cuttings of the following:

- 33321.** *OPUNTIA HYPTIACANTHA* Weber.
- 33322.** *OPUNTIA VULGARIS BALEARICA* Weber.
- 33323.** *OPUNTIA MYRIACANTHA* Weber.
- 33324.** *OPUNTIA PILIFERA* Weber.
- 33325.** *OPUNTIA SCHEERII* Weber.
- 33326.** *OPUNTIA GOSSELINIANA* Weber.
- 33327.** *OPUNTIA STREPTACANTHA* Lem.
- 33328.** *OPUNTIA ROBUSTA LARREYI* Weber.
- 33329.** *OPUNTIA GYMNOCARPA* Weber.
- 33330.** *OPUNTIA* sp.
- 33331.** *OPUNTIA* sp.
- 33332.** *OPUNTIA VELUTINA* Weber.
- 33333.** *OPUNTIA RASTRERA* Weber.
- 33334.** *OPUNTIA CAMUESSA* Weber.
- 33335.** *OPUNTIA SPINULIFERA* Salm-Dyck.

**33336.** *PAEONIA MLOKOSWITSCHI* Lomakin.

From Tiflis, Caucasus, Russia. Presented by Mr. A. Rolloff, Director, Botanic Garden. Received April 5, 1912.

See Nos. 27674 and 30523 for previous introductions.

Root.

**33337 and 33338.**

From Guatemala. Presented by Mrs. Lucie Potts, Livingston. Received April 5, 1912.

"The only use that is made of these grasses in this district is feed for cattle." (*Potts.*)

**33337.** *PASPALUM VAGINATUM* Swartz.

"This grows in low, wet ground. It is covered with something like sirup, and the natives gather the seeds and crack them for their sweetness." (*Potts.*)

*Distribution.*—First described from Jamaica; generally distributed in the Tropics and in the United States along the coast from Florida to Texas.

**33338.** *SCLERIA* sp.

"Grows in low, flat lands." (*Potts.*)

**33340.** *OPUNTIA CARDONA* Weber.

From Alpes Maritimes, France. Presented by Mr. Robert Roland Gosselin, Coline de la Paix par Villefranche sur Mer. Received April 4, 1912.

Cutting.

**33341.** *STRYCHNOS SPINOSA* Lam.

**Kafir orange.**

From Miami, Fla. Grown at the Subtropical Plant Introduction Field Station. Received March 20, 1912.

This fruit was picked on March 15. It was grown from S. P. I. No. 9611; see this number for description.

**33342 to 33345. RUBUS spp.**

From Utakamand, India. Presented by Mr. F. H. Butcher, Curator, Government Botanic Gardens. Received April 8, 1912.

Seeds of the following:

**33342.** RUBUS ELLIPTICUS Smith.

**33343.** RUBUS MOLUCCANUS L.

**33344.** RUBUS LASIOCARPUS Smith.

**Raspberry.**

**33345.** RUBUS RACEMOSUS Roxb.

*Distribution.*—A shrubby Rubus with large red flowers, found on the Nilgiri and Pulney Mountains in India.

**33346. (Undetermined.)**

**Palm.**

From Boca Tres Amigos, Costa Rica. Presented by Mr. W. W. Gould. Received April 8, 1912.

"A palm known locally as *Maquenge*. It sends up a tall shaft with rather few leaves at the top, which at a distance bear some resemblance to a windmill. The shell of the mature trunk is about 2 inches thick and the wood is very hard and jet black. When polished, it makes a very excellent wood for plane stocks. It is especially valuable for joiner planes. It slips better than steel, is nearly as heavy, and takes on a very glossy polish. The only objection to it is that it splits very easily.

"It is used locally to make inclosures for native houses. The body of the trunk is split into strips about 4 inches wide, the fibrous pulp is stripped away from the inner surface, and the strips are placed vertically side by side to keep out wind and rain.

"The nuts, I think, could be used as a substitute for the Yankee's wooden nutmegs." (*Gould.*)

**33347. ROSCHERIA MELANOCHAETES Wendl.**

**Palm.**

From Port Louis, Mauritius. Presented by Mr. G. Regnard. Received April 8, 1912.

"A palm 15 to 25 feet high with many aerial roots and a stem 2 to 3 inches in diameter with a ring of young spines when young below each leaf scar. Very ornamental and becoming scarce." (*Regnard.*)

*Distribution.*—In shaded forests at an elevation of 1,000 feet in the Seychelles.

**33348. LEUCAENA GLAUCA (L.) Benth.**

From Port Louis, Mauritius. Presented by Mr. G. Regnard. Received April 8, 1912.

"A very interesting shrub common in Mauritius, leaves and seeds used as fodder for cattle, the seeds being boiled and crushed for that purpose." (*Regnard.*)

**33349. MENTHA PIPERITA L.**

**Peppermint.**

From Japan. Purchased from the Yokohama Nursery Co. Received April 6, 1912.

Procured for the experiments being carried on by the Office of Drug-Plant, Poisonous-Plant, and Physiological Investigations.

**33350. DIOSCOREA sp.**

**Yam.**

From Guatemala. Presented by Mrs. Lucie Potts, Livingston. Received April 5, 1912.

"This is called the 'potato of the air' (papa del aire). The natives say it was the original potato. It grows on a vine, is produced above ground, and when boiled tastes very much like a potato." (*Potts.*)

**33351. CAPSICUM ANNUUM L.****Red pepper.**

From Barcelona, Spain. Presented by Mr. Henry H. Morgan, American consul, through Dr. H. W. Wiley, Chief, Bureau of Chemistry, U. S. Department of Agriculture. Received February, 1912. Numbered April 8, 1912.

**33352 to 33354. GOSSYPIUM spp.****Cotton.**

From Bangkok, Siam. Presented by Mr. Carl C. Hansen, American vice and deputy consul general in charge, who procured them from the Ministry of Agriculture, Siam. Received April 9, 1912.

Seeds of the following:

**33352. GOSSYPIUM sp.***Chantaburi.***33353. GOSSYPIUM HIRSUTUM L.***Krung Kao or Kroong Kow.***33354. GOSSYPIUM NANKING Meyen.***Nakon Sritamaraj or Sridhamaraj.***33355 to 33375.**

From St. Petersburg, Russia. Presented by Dr. A. Fischer von Waldheim, Director, Imperial Botanical Gardens. Received April 3, 1912.

Seeds of the following:

**33355. ACER GINNALA SEMENOVII (Reg. and Herd.) Pax.****Maple.****33356. ACER GINNALA SEMENOVII (Reg. and Herd.) Pax.****Maple.**

*Distribution.*—A small-leaved shrub, found on the slopes of the Alatau Mountains at an elevation of 3,000 to 4,000 feet in southern Siberia and in Turkestan.

**33357. AMMODENDRON ARGENTEUM (Sievers) Kuntze.***(Ammodendron sieversii Fisch.)*

*Distribution.*—On the salty desert plains in the Sungarian region of southern Siberia.

**33358. CLEMATIS ORIENTALIS L.****Clematis.**

See No. 30243 for previous introduction.

**33359. CORNUS KOENIGI Schneider.**

*Distribution.*—A shrub found in the province of Batum in the Transcaucasian region of southeastern Russia.

**33360. IRIS DREPANOPHYLLA Aitch. and Baker.****Iris.**

*Distribution.*—A yellow-flowered iris found in the northern part of Afghanistan.

**33361. MECONOPSIS CAMBRICA Viguiet.**

See Nos. 33011, 33081, and 33082 for previous introductions.

**33362. MECONOPSIS PANICULATA (Don) Prain.**

See No. 33048 for previous introduction.

**33363. MECONOPSIS RACEMOSA Maxim.**

See No. 33013 for previous introduction.

**33364. MEDICAGO HISPIDA ACULEATA Urban.**

*Distribution.*—Persia and Arabia and eastward to western India; also in Egypt, Nubia, and South Africa.

**33355 to 33375—Continued.****33365.** MELILOTUS ELEGANS Salzmänn.*Distribution.*—The countries bordering on the Mediterranean from Spain and Algeria to Palestine, and Abyssinia.

See No. 14854 for previous introduction.

**33366.** MELILOTUS MESSANENSIS (L.) All.

See Nos. 25213, 27471, and 27608 for previous introductions.

**33367.** PRUNUS PROSTRATA Labill.

See Nos. 28945 and 30564 for previous introductions.

**33368.** RIBES DIKUSCHA Fisch.**Currant.**Variety *appendiculata*.**33369.** RIBES PROCUMBENS Pallas.**Currant.**

See No. 32762 for previous introduction.

**33370.** ROSA XANTHINA Lindl.**Rose.****33371.** ROSA sp.**Rose.****33372.** ROSA sp. (1).**Rose.****33373.** ROSA sp. (2).**Rose.****33374.** SOPHORA ALOPECUROIDES L.*Distribution.*—A low shrub growing on the temperate slopes of the mountains of southwestern Asia, extending from Asia Minor eastward through Turkestan and Afghanistan to western Tibet, where it is found at an altitude of 10,000 to 12,000 feet.**33375.** TILIA RUBRA BEGONIFOLIA (Stev.) Schneider.

See No. 31070 for previous introduction.

**33376 to 33378. VITIS VINIFERA L.****Grape.**

From Almeria, Spain. Procured by Mr. James Murison, acting consular agent, at the request of Mr. Walter T. Swingle. Received April 10, 1912.

Cuttings of the following; names as given by Mr. Murison:

**33376.** "*Uva de Embarque*" (white grape).**33377.** "*Uva de Casta*" (Molinera variety).**33378.** "*Uva de Casta*" (Rosada variety).**33391. CITRUS NOBILIS Lour.****Orange.**

From Hangchow, China. Presented by Rev. J. H. Judson, Hangchow College. Received April 12, 1912.

"Seed of the large, loose-skinned orange; very sweet." (*Judson.*)**33392 to 33403. VITIS VINIFERA L.****Grape.**

From Syria. Procured by Mr. Alfred Ely Day, Syrian Protestant College, Beirut, Syria. Received April 14, 1912.

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

**33392 to 33398.** From Zahleh, 3,500 feet, east slope of Mount Lebanon, near plain of Coele-Syria.**33392.** "*Tifafihî ahmar* (meaning 'like red apples'). A large, red grape of specially fine quality."**33393.** "*Shakâifi*. A large, white grape of fine quality."

**33392 to 33403**—Continued.

**33394.** "*Suri*. A long, white grape; large clusters."

**33395.** "*Ubeidi*. A common variety used for making *arak* (spirits). About the same as *Miksâsi* from Bhamdun (S. P. I. No. 33115)."

**33396.** "*Khudud-ul-Banat* ('maidens' cheeks'). A pretty grape with a pinkish tinge."

**33397.** "*Zeini*. Like those of the same name from Bhamdun (S. P. I. No. 33117)."

**33398.** "*Mukhkh-ul-Baghl* (mule's head). A firm, red grape."

**33399 to 33403.** From Bludan, Anti-Lebanon, 5,000 to 5,500 feet altitude.

**33399.** "*Âsmi*. See same variety (S. P. I. No. 33114) from Bhamdun for note regarding this."

**33400.** "*Zeini*. See lot from Bhamdun (S. P. I. No. 33117)."

**33401.** "*Jubeili*. Large, round grape with very firm pulp, mottled red and greenish white."

**33402.** "*Kâsûfi-inti*. Same as variety by this name (S. P. I. No. 33118) sent from Bhamdun."

**33403.** "*Ubeidi*. Much the same as *Miksâsi* from Bhamdun (S. P. I. No. 33115)."

"These cuttings have each a short piece of an old branch with a longer piece of a new one. The custom here is to bury the old and most of the new, leaving only a small part of the new branch projecting from the ground."

**33404. LATHYRUS SATIVUS L.**

From Werchne dneprowsky Experiment Field, Russia. Presented by Mr. Alexander Kol, Assistant Agricultural Commissioner for the Russian Government, St. Louis, Mo. Received April 12, 1912.

"This plant proved one of the most productive grain legumes and very drought resistant in my experiments at Werchne dneprowsky Experiment Field.

"It is an annual and matures about the same time as lentils, but is about twice higher. The habit half-standing bushes, so that harvesting is not too difficult. The plant is richly supplied with 2-seeded pods that mature all at once and do not shatter very much. It can be sown quite thickly in rows, which do not need to be farther apart than 1 foot. It appreciates cultivation, but can do without it. I cultivated once or twice with a garden hoe (one wheel). It yields with me (average for three years) 1,200 pounds of grain per acre. It requires early sowing, the same as grain cereals. The straw looks a little rough, but it is nice food for stock and amounts to one and one-half or twice the grain yield." (*Kol*.)

**33405. CRYPTOSTEGIA GRANDIFLORA R. Brown.**

From western Mexico. Secured by Dr. J. N. Rose, of the United States National Museum, from a Mr. Tays. Presented through Mr. G. N. Collins, Bureau of Plant Industry. Received April 5, 1912.

"Seed of an African rubber-producing vine. The plant produces a good quality of rubber, but, so far as I know, it has never been successfully cultivated. It might be of interest to have it tried in some of our tropical islands in comparison with other rubber-producing plants." (*Collins*.)

*Distribution.*—A climbing vine with large lavender flowers, supposed to be a native of Madagascar and cultivated in various parts of India and in Egypt.



**33406 to 33422.**

From India. Presented by Mr. John D. Shanahan, Spencer Kellogg & Sons, Buffalo, N. Y., who procured them from the Allahabad Exhibition, India, unless otherwise noted. Received April 2, 1912.

The following oil seeds; quoted notes by Mr. Shanahan:

- 33406.** LINUM USITATISSIMUM L. **Linseed.**  
 "A white linseed from Government Experiment Farm, Central Provinces."
- 33407.** PAPAVER SOMNIFERUM L. **Poppy.**
- 33408 to 33417.** RICINUS COMMUNIS L. **Castor bean.**  
 "There is one feature about the castor bean which all the evidence the writer could collect seems to bear out, and that is that the smaller bean is very much more desirable for commercial use than the larger one, as it is generally given credit for producing a larger yield and better quality of oil. This, of course, is only in a general way. In India, where the greater part of the commercial castor is obtained, the product grown in the territory surrounding Cawnpore is usually very large, and in commercial contracts this bean is barred on account of its large size and insignificant yield of oil.  
 "The castor-bean plant grows very large in some sections, reaching a height of from 25 to 30 feet, and in India it is mostly grown as a hedge plant, surrounding fields and dooryards. The manufacture of castor oil is growing in this country, and it seems to the writer that the production of beans in this country should be encouraged."
- 33408.** "From Agra."  
**33409.** "From Agra."  
**33410.** "From Cawnpore."  
**33411.** "From Ghazipur."  
**33412.** "From Gondo."  
**33413.** "From Lucknow."  
**33414.** "From Manipur. (Bronze medal.)"  
**33415.** "From Government Experiment Farm."  
**33416.** "From Government Experiment Farm. (Big Kharif.)"  
**33417.** "Sample of commercial seed secured at a native mill at Calcutta, March, 1911. Said to have come from Madras and to be the best quality for yield and quantity of oil used in Calcutta."
- 33418 to 33420.** SESAMUM ORIENTALE L. **Sesame.**  
 (*Sesamum indicum* L.)  
**33418.** "From Government Experiment Farm, Central Provinces."  
 Brown seeded.  
**33419.** White seeded.  
**33420.** "From Government Experiment Farm, Native Provinces. (Native Til.)" Yellowish seeded.
- 33421.** BRASSICA sp. **Mustard.**  
 "(Sarson.)"
- 33422.** GUIZOTIA ABYSSINICA (L.) Cass. **Niger.**  
 "Niger seed from Cawnpore."

**33423. TRITICUM AESTIVUM L.****Wheat.***(Triticum vulgare* Vill.)

From Tashkend, Russian Turkestan. Presented by Dr. Richard Schroeder, Director, Chief Agricultural Experimental Station. Received April 10, 1912.

"Our best Turkestan wheat, *Ssarymaguis*; that is, 'yellow grain.' This variety belongs to the species *Triticum vulgare*, but under dry conditions gives hard kernels. It is a spring wheat, but in Turkestan it is often sown late in the fall and sprouts in the beginning or at the end of the winter. We get the bulk of our annual rainfall in winter and spring, and as our summer and fall are too dry for the sprouting of the wheat in September or October (sometimes even in November), this fall sowing is equivalent to early spring sowing and is largely practiced with spring wheats. True fall wheat is sown with us mostly on irrigated lands.

"The sample I send is taken from a farmer, one of our neighbors (District of Tashkend)." (*Schroeder*.)

**33424 to 33430.**

From Mwapwa, German East Africa. Presented by Mr. W. Sperling, Kaiserliche Bezirksamtman. Received April 1 and 3, 1912.

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

**33424 and 33425. HOLCUS SORGHUM L.****Sorghum.***(Sorghum vulgare* Pers.)

**33424.** "*Lugugu*. White, open and erect panicle, good for flour; sugar in the stalk."

**33425.** "*Hembahemba*. White, very close panicle, very productive; cane very sweet. Used for flour."

"An examination of these shows that they apparently belong in or near the group comprising Hackel's variety *roxburghii*, which is a very common sorghum in central-eastern Africa. These differ from typical material in having shorter and blunter glumes and may prove to be widely distinct when we know the plant. The fact that they are saccharine is very interesting." (*Carleton R. Ball*.)

**33426. ARACHIS HYPOGAEA L.****Peanut.***"Kalanga."***33427. ELEUSINE CORACANA (L.) Gaertn.****Ragi millet.***"Ulesi or Uwimbi."***33428. PENNISETUM GLAUCUM (L.) R. Brown.****Pearl millet.***(Panicum glaucum* L., *Species Plantarum*, p. 56, 1753.)

This species, which has been listed in previous numbers of the inventories as *Pennisetum americanum* (L.) Schum. and in *Index Kewensis* as *P. typhoidum* Rich., was first described by Linnæus (*Species Plantarum*, p. 56, 1753) as *Panicum glaucum*, based on a specimen from Ceylon. This specimen, which is still preserved in the British museum, has been identified by Trimen (*Journal Linnean Society*, vol. 24, p. 136, 1896) as the pearl millet, and it is therefore necessary to use the name *Pennisetum glaucum* for this plant.

*"Uwele."***33429 and 33430. ZEA MAYS L.****Corn.**

**33429.** "*Kipegere*. Early ripening."

**33430.** "*Mkole*."

**33431. ACTINIDIA CHINENSIS Planch. Yang-taw.**

From Kuling, China. Presented by Miss Mary M. Johnston, at the request of Rev. Hugh W. White, Yentcheng, Kiangsu, China. Received April 17, 1912.

"These roots are from plants that bore the largest specimens that I saw. The genuine yang-taw has no thorns, and the young smooth bark has whitish specks all through it." (*White.*)

**33432 to 33436.**

From Cambridge, England. Presented by Mr. R. Irwin Lynch, curator, Cambridge Botanic Garden. Received April 16, 1912.

Seed of each of the following:

**33432. ACACIA LEUCOPHLOEA (Roxb.) Willd.**

"A large, deciduous fast-growing tree. It prefers a low-lying situation, and in the Panjab [Punjab] its presence is regarded as significant of a rich soil. The bark affords a strong fiber said to be much valued for fishing nets. Ground to a powder it is sometimes eaten with *bajra* (*Pennisetum typhoides*), especially in times of scarcity. But it has obtained a considerable reputation as an astringent used in alcoholic distillation. On this account it is often called *sharab-kikikar* (spirit Acacia)." (*Extract, Watt's Commercial Products of India, p. 15.*)

*Distribution.*—Throughout India and in the islands of the Malay Archipelago.

**33433. EUCALYPTUS INCRASSATA Labill. Mallee.**

*Distribution.*—A shrub or small tree found on the scrubby undulating plains north of the Sterling Range in West Australia.

**33434. LAUROCERASUS LUSITANICA (L.) Roem. Laurel cherry.**  
(*Prunus lusitanica* L.)

*Distribution.*—A small evergreen tree found in Spain and Portugal and in the Canary Islands.

**33435. LONICERA MAACKII (Rupr.) Herd. Honeysuckle.**

See Nos. 22548 and 33053 for previous introductions.

**33436. PRUNUS DOMESTICA INSITITIA (Jusl.) Schneider. Plum.**

"This plum is a very prolific bearer. Fruits generally of medium size, used for preserves and compotes, especially in the Caucasus." (*Frank N. Meyer.*)

*Distribution.*—Throughout western and southern Europe, and in Asia Minor, Persia, and northern Africa.

**33441. PISTACIA VERA L. Pistache.**

From Bronte, Sicily. Presented by Mr. Charles Beek. Received April 22, 1912.

"Our Bronte pistachio nuts are reckoned the best in the world and always fetch the highest price. There are only one or two places in Sicily where they grow, and ours are always the best." (*Beek.*)

Cuttings.

**33442. PERSEA LINGUE (R. and P.) Nees. Lingue.**

From province of Valdivia, Chile. Procured by Mr. Jose D. Husbands, Lima-vida, via Molina. Received April 26, 1912.

See No. 24208 for description.

Seed.

**33443 to 33447.**

From Kirkee, Bombay, India. Presented by the Director, Ganeshkind Botanic Gardens, at the request of Prof. W. Burns, economic botanist, Poona; of whom they were requested by Mr. C. V. Piper, Bureau of Plant Industry. Received April 19, 1912.

Seeds of the following:

**33443. ALYSICARPUS PUBESCENS** Law.

"An erect annual legume, grows to a height of 3 to 5 feet and produces seed in abundance. The stems become somewhat woody, and its hairiness may make it less palatable than other species." (*C. V. Piper.*)

*Distribution.*—The plains of Konkan and Dekkan in India.

**33444. ALYSICARPUS RUGOSUS** (Willd.) DC.

"An erect species, growing to a height of 5 feet and producing an abundance of seed; stems somewhat woody. Stock graze on this plant greedily. As a hay plant it would probably prove rather coarse." (*C. V. Piper.*)

**33445. CHRYSOPOGON MONTANUS** Trinius.

"One of the most valued pasture grasses in India, especially in hilly lands." (*C. V. Piper.*)

**33446. INDIGOFERA GLANDULOSA** Wendl.

See Nos. 22732 and 23535 for previous introductions.

**33447. ISEILEMA LAXUM** Hackel.

"Common in the plains of northern India on low-lying land where the soil is good. In Bundelkhand this grass is abundant and largely used as fodder, and is prized above all other kinds. It is sweet scented when fresh. Mr. Coldstream says that it is very common in the Hissar bir swamps, in good land; and that where it will grow wheat will grow. It is both grazed and stacked and is much eaten by buffaloes." (*Duthie's Fodder Grasses of Northern India, p. 44.*)

*Distribution.*—The upper part of the valley of the Ganges and the plains of the Dekkan in India; also in Ceylon and Mauritius.

**33448 to 33457. ZEA MAYS** L.**Corn.**

From La Paz, Bolivia. Presented by Hon. Horace G. Knowles, American minister. Received April 20, 1912.

Seeds of the following, quoted notes by Mr. Knowles:

**33448.** "*Cuzco.* The grains of this corn are twice the size of the largest I ever saw in the United States, and its snow-white color and fine flavor make it superior to our American white corn. Another and very important advantage that it has over our American corn is that it produces on the same number and length of ears from 10 to 30 per cent more corn. Thus, its increased yield would be about one-quarter more than the average of the American variety per acre. If it is possible to successfully introduce this variety of corn in the United States, and if it will grow as well there as here, and my belief is that it will produce even better, it would have an enormous effect on the total corn production of our country. Another great advantage it has is that it thrives in a climate similar to that of our Northern States, and it may be that it can be grown in sections of our country that will not produce our American varieties. Another feature of this corn is its very fine texture; I believe it would grind as fine as wheat flour, and as corn flour it would be far superior to meal and in many respects and for many uses it would be equal to wheat flour."

**33448 to 33457**—Continued.

- 33449.** White Cuzco.  
**33450.** Yellow Cuzco.  
**33451.** Variegated red Cuzco.  
**33452.** White mottled with black.  
**33453.** Black.  
**33454.** Dark red.  
**33455.** Red.  
**33456.** Variegated red sweet corn.  
**33457.** White. "A sweet or sugar corn which is so very sweet that sugar or sirup could be made from it."

**33458. VICIA FABA L. Broad bean.**

From La Paz, Bolivia. Presented by Hon. Horace G. Knowles, American minister. Received April 20, 1912.

**33459. ZEA MAYS L. Corn.**

From Shanghai, China. Presented by Dr. Elizabeth Reifsnnyder, Margaret Williamson Hospital, Woman's Union Mission, West Gate, Shanghai. Received April 22, 1912.

White glutinous variety.

**33460 to 33464. VITIS VINIFERA L. Grape.**

From Spain. Presented by Count de San Juan, Barcelona, Spain. Received April 11 and 12, 1912.

Cuttings of the following; quoted notes by Count de San Juan:

- 33460.** "*Momagastro*' Oliver. From Aragon. A very productive variety and very early; ripens a month before the others. Fruit a brilliant red color. This variety has almost disappeared on account of the Phylloxera."  
**33461.** "*Vinatera San Juan*.' From Aragon. Excellent wine variety, 'Borgogna'."  
**33462.** "*Macabeo de Sitjes*.' From Cataluna."  
**33463.** "*Ojo de liebre (negro)*.' From Cataluna."  
**33464.** "*Sumoy (negro)*.' From Cataluna."

**33465. MEDICAGO FALCATA L.**

From Semipalatinsk, Siberia. Presented by Mr. G. T. Miroshnikoff, at the request of Mr. Frank N. Meyer, Bureau of Plant Industry. Received February 19, 1912.

**33466. PINUS LEUCODERMIS Antoine. Pine.**

From Sofia, Bulgaria. Presented by Mr. K. Baicoucheff, Chief Inspector of Waters and Forests of Bulgaria, at the request of Mr. Alaricus Delmard. Received April 2, 1912.

*Distribution.*—On the wooded slopes of the mountains in Dalmatia, Bulgaria, and Montenegro, at an elevation of 4,000 to 5,000 feet.

**33467 to 33470.**

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

The following material; quoted notes and names as given by Mr. Voetter:

**33467 and 33468.** *ARRACACIA XANTHORRHIZA* Bancr. **Arracacha.**

**33467.** "*Apio aleman.*"

Tubers.

**33468.** "*Apio amarillo.*"

Tubers.

**33469.** *MAMMEA AMERICANA* L. **Mammee.**

"*Mamey.*"

Seed.

*Distribution.*—The West Indies and in Central America and South America from Panama and Colombia to Brazil.

**33470.** *PASSIFLORA QUADRANGULARIS* L. **Passion fruit.**

"This fruit which is about 10 inches long, is known here by the name of *Parcha Granadina.*"

"Both the Mamey and Parcha are prepared by boiling the flesh with sugar to make a preserve or dulce, as well as being eaten in the natural state."

**33471 to 33491.** *SOLANUM TUBEROSUM* L. **Potato.**

From Kenty, Galicia, Austria. Purchased from Heinrich Dolkowski & Son. Received April 22, 1912.

Tubers of the following:

<b>33471.</b> <i>Ordon.</i>	<b>33482.</b> <i>Senator.</i>
<b>33472.</b> <i>Gastold.</i>	<b>33483.</b> <i>Królewics.</i>
<b>33473.</b> <i>Gryf.</i>	<b>33484.</b> <i>Soliman.</i>
<b>33474.</b> <i>Mohort.</i>	<b>33485.</b> <i>Attyk.</i>
<b>33475.</b> <i>Gracya.</i>	<b>33486.</b> <i>Zbyszek.</i>
<b>33476.</b> <i>Busola.</i>	<b>33487.</b> <i>Petronius.</i>
<b>33477.</b> <i>Switez.</i>	<b>33488.</b> <i>Aldona.</i>
<b>33478.</b> <i>Farys.</i>	<b>33489.</b> <i>Koral.</i>
<b>33479.</b> <i>Potentat.</i>	<b>33490.</b> <i>Projata.</i>
<b>33480.</b> <i>Cedon.</i>	<b>33491.</b> <i>Ursus.</i>
<b>33481.</b> <i>Gedymin.</i>	

These varieties were procured for the breeding work being done by the potato specialists of this department.

**33492 and 33493.** *FURCRAEA* spp.

From Georgetown, Demerara, British Guiana. Presented by Mr. F. A. Stockdale, Assistant Director and Government Botanist, Botanic Gardens, Science and Agriculture Department. Received April 13 and 24, 1912.

Bulbils of the following:

**33492.** *FURCRAEA FOETIDA* (L.) Haworth.  
(*Furcraea gigantea* Vent.)

See No. 10967 for previous introduction.

*Distribution.*—Widely spread in the West Indies and tropical America; also introduced in various parts of the Old World.

**33492 and 33493**—Continued.**33493.** *FURCRAEA CUBENSIS* (Jacq.) Vent.**Cajun.**

See No. 3449 for previous introduction.

*Distribution.*—Cuba and other West Indian islands; also in Brazil, where it was probably introduced.**33494.** *CUCUMIS MELO* L.**Muskmelon.**

From Valencia, Spain. Presented by Mr. Robert Frazer, jr., American consul. Received April 17, 1912.

"This belongs to the variety of 'winter melon' called '*Bronceados*' and has been carefully selected from exceptionally choice fruit." (*Frazer.*)**33495 to 33501.**

From Enfield, Middlesex, England. Purchased from Amos Perry. Received April 22, 1912.

Plants of the following; quoted notes from Perry's catalogue No. 135, 1911.

**33495.** *ARISTOTELIA CHILENSIS* (Molina) Stuntz.**Maqui.**(*Cornus chilensis* Molina, Saggio sulla Storia Naturale del Chili, p. 173, 1782.)Seeds of this small evergreen tiliaceous tree from Chile were received under the name *Aristotelia macqui* L'Herit. (*Stirpes novæ*, p. 31, pl. 16, 1784). The earliest name given to the plant, however, was *Cornus chilensis*, published by Molina in 1782. It is necessary, therefore, to make the new combination *Aristotelia chilensis*.**33496.** *BERBERIS BUXIFOLIA* Lam.**Barberry.**Variety *nana*. "Dense compact tufts, about a foot. Flowers deep yellow. For the front of the mixed border or rockery. A showy plant."**33497.** *BERBERIS HOOKERII* Lemaire.**Barberry.**

"This plant has beautiful golden-yellow flowers in early spring, succeeded by black berries."

**33498.** *BERBERIS JAPONICA BEALEI* (Fortune) Skeels.(*Berberis bealei* Fortune.)**Barberry.**

"Pretty evergreen species, dark-green, hollylike foliage, and long racemes of pale-yellow flowers. Must be grown against a south wall."

**33499.** *EUONYMUS LATIFOLIUS* Miller.Var. *albus marginatus*.

"The leaves are large, evergreen, wonderfully bright; as a small shrub, invaluable."

**33500.** *JASMINUM BEESIANUM* Forrest and Diels.**Jasmine.**

"A new Chinese novelty and remarkably free, being the only red jasmine yet known. It is a quick grower, quite hardy. Flowers very abundant, of a bright, deep cherry red."

**33501.** *COTONEASTER PYRACANTHA* (L.) Spach.(*Crataegus pyracantha* Medic.)Var. *lalandi*.

"One of the best shrubs for a north wall. Evergreen and covered all the winter with myriads of bright-scarlet berries."

**33502 to 33507.**

From Burringbar, New South Wales, Australia. Presented by Mr. B. Harrison.  
Received July 31, 1911. Numbered April 27, 1912.

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

**33502.** *CARICA PAPAYA* L. **Papaya.**

“Long pawpaw.”

**33503.** (Undetermined.) **Emu bush.**

“Edible blue-fruited emu bush or shrub.”

**33504.** *RUBUS* sp.

“Native red-berried bramble. A good fruit.”

**33505.** *RUBUS* sp. **Raspberry.**

“The Australian native raspberry.”

**33506.** *SOLANUM ACULEATISSIMUM* Jacq.

“The edible solanum. For experimental work.”

**33507.** *ASSONIA CALANTHA* (Schum.) Stuntz.

This tropical African sterculiaceous shrub was received under the name *Dombeya calantha* Schumann (Engler Monog. Afr. Pfl. vol. 5, p. 28, 1900). It has been shown, however, in Inventory 24 of this series (Bur. Pl. Ind. Bul. 223, p. 64, 1911) that *Assonia* is the correct name for this genus, and it is therefore necessary to use that name for this species.

“Currajong shrub. The bark makes a very good fiber, and is used by the natives for making fishing lines and nets. The leaves make a good fodder for stock. The flowers are white, rich in honey, and have a nice perfume.”

**33508.** *AGAVE CANTALA* (Haw.) Roxb. **Manila maguey.**

From Manila, Philippine Islands. Presented by Mr. M. M. Saleeby, fiber expert, Bureau of Agriculture, through Mr. Lyster H. Dewey, Fiber-Plant Investigations, Bureau of Plant Industry. Received April 25, 1912.

See No. 32480 for previous introduction and description.

**33509.** *PELARGONIUM MULTIBRACTEATUM* Hochst. **Geranium.**

From Kew, England. Presented by Sir David Prain, Director, Royal Botanic Garden. Received April 29, 1912.

*Distribution.*—In thickets on rocky mountain slopes in Abyssinia.  
Cuttings.

**33511.** *CUCURBITA PEPO* L. **Squash.**

From Puerto Allegro, Brazil. Presented by Mr. Willy Muller, Hortus Nucerenis, Nocera Inferiore, Naples, Italy. Received April 25, 1912.

“‘*Mogango*.’ A very fine squash, which I hope will be useful, especially for Florida, Texas, and southern California.” (*Muller.*)

**33512 to 33515.**

From Barcelona, Spain. Presented by Count de San Juan. Received April 27, 1912.

Seeds of the following; quoted notes by Count de San Juan:

**33512.** *CAPPARIS SPINOSA* L. **Caper.**

See Nos. 28126 and 28972 for previous introductions.

**33513.** *CUCUMIS MELO* L. **Muskmelon.**



**33512 to 33515**—Continued.**33514.** *ONOBRYCHIS SATIVA* Lam. **Sainfoin.***(Onobrychis viciifolia Scop.)*

"A kind of clover, good for dry land."

**33515.** *PRUNUS DOMESTICA* L. **Plum.***"Claudia."***33516.** *JUGLANS REGIA* L. **Walnut.**

From China. Procured by Mr. F. Bade, Tientsin Nursery Gardens, Tientsin, China, at the request of Mr. Samuel S. Knabenshue, American consul general. Tientsin. Received April 30, 1912.

Cuttings.

**33518 to 33520.**

From McCale Sana, Lumbwa, British East Africa. Presented by Mrs. E. L. Smith. Received April 29, 1912.

Seeds of the following; quoted notes by Mrs. Smith:

**33518.** *HOLCUS SORGHUM* L. **Sorghum.***(Sorghum vulgare Pers.)*

"Matama grain, grown by most of the different native races in this country."

"This is one of the characteristic forms of east-central Africa, apparently identical with some forms of seed from Amani, German East Africa, received by the Division of Agrostology some years ago." (*Carleton R. Ball.*)

**33519.** *VIGNA* sp.

"An indigenous creeper. A rampant grower."

**33520.** *VIGNA* sp.

"An indigenous perennial creeper. Leguminous."

**33521.** *TRIBES DIKUSCHA* Fisch. **Currant.**

From Yakutsk, Siberia. Presented by Mr. Dimitry Kaschkaroff, Soukhodol, Tusk Government, Siberia. Received March 7, 1912. Numbered May 4, 1912. These seeds were sent at the request of Mr. Frank N. Meyer, Bureau of Plant Industry.

See No. 32227 for description.

**33522.** *ZIZIPHUS* sp.

From Palm Springs, Cal. Presented by Mr. P. D. Barnhart, Pasadena, Cal., who procured them from Dr. Coffman, on whose place they grew. Received May 4, 1912.

Seeds.

**33523 to 33539.** *VITIS VINIFERA* L. **Grape.**

From Almeria, Spain. Procured by Mr. James Murison, acting consular agent, at the request of Mr. Walter T. Swingle. Received May 4, 1912.

Cuttings of the following:

**33523.** *Guadalupe.***33528.** *Leonada.***33524.** *Marquesa.***33529.** *Forralba.***33525.** *Rojo de chella.***33530.** *Bocal.***33526.** *Moscatel negro.***33531.** *Fresa.***33527.** *Bocalilla.***33532.** *Rayadao melonera.*

**33523 to 33539—Continued.**

- |                                       |                                   |
|---------------------------------------|-----------------------------------|
| <b>33533.</b> <i>Malvasia gruesa.</i> | <b>33537.</b> <i>Negrilla.</i>    |
| <b>33534.</b> <i>Albillo resado.</i>  | <b>33538.</b> <i>Polop negro.</i> |
| <b>33535.</b> <i>Moscatel comun.</i>  | <b>33539.</b> <i>Rojal.</i>       |
| <b>33536.</b> <i>Albillo.</i>         |                                   |

**33541 and 33542.**

From Basse Terre, Guadeloupe, French West Indies. Presented by Mrs. Frederick F. DuMont, American consulate. Received May 6, 1912.

Seeds of the following; quoted notes by Mrs. DuMont:

**33541. CUCURBITA PEPO L. Pumpkin.**

"Seed from a very large fruit over which all the natives were greatly excited, eagerly taking the seeds. It was 27 inches in diameter and tasted very well when cooked."

**33542. CUCUMIS MELO L. Muskmelon.**

"Seed from an especially good fruit eaten in February, 1912. Large, oblong, 9½ inches long, 6½ inches broad. Not very deeply grooved. Yellowish green outside with a deep-yellow flesh. Pulp extends well toward the center of the melon, is sweet with a special flavor."

**33543 to 33550.**

From India. Presented by A. C. Hartless, Superintendent of the Botanical Gardens, Seharunpur, India, at the request of Mr. C. V. Piper, Bureau of Plant Industry. Received April 26, 1912.

A collection of seeds of trees and shrubs, mostly ornamental. They are likely to succeed in this country only in southern Florida and southern California.

Quoted notes by Mr. Piper:

**33543. AMERIMNON LANCEOLARIUM (L. f.) Kuntze.**

(*Dalbergia lanceolaria* L. f.)

"A tall, graceful tree, fairly satisfactory for shade. It is not as good as the sissou."

*Distribution.*—On the plains of India from the western Himalayas to Ceylon.

**33544. BEAUMONTIA GRANDIFLORA (Roth) Wall. Nepal trumpet flower.**

"An evergreen climber with broad leaves and bearing throughout the summer large, pure white, odorous, trumpet-shaped flowers. A very handsome vine for porches and trellises."

*Distribution.*—The slopes of the Himalayas up to an elevation of 4,000 feet from Nepal to Sikkim in northeastern India.

**33545. BERBERIS ARISTATA DC. Barberry.**

See No. 27116 for previous introduction.

**33546. DEGUELIA TIMORIENSIS (DC.) Taubert.**

(*Derris scandens* Benth.)

"A climbing legume used for trellises and arbors."

*Distribution.*—Throughout India and eastward to China, and through the Malay Archipelago to Australia.

**33547. HETEROFRAGMA ADENOPHYLLUM (DC.) Seem.**

"A large tree with handsome leaves and large yellow flowers. Used as an avenue tree."

**33543 to 33550—Continued.**

- 33548.** *LAGERSTROEMIA SPECIOSA* (L.) Pers. **Crape myrtle.**  
(*Lagerstroemia reginae* Retz.)

"An evergreen tree growing to a height of 30 to 40 feet, with handsome foliage and large purple flowers in clusters. One of the handsomest flowering trees of the East Indies."

- 33549.** *PORANA PANICULATA* Roxb. **Bridal bouquet.**

"A perennial climbing vine with numerous panicles of small white flowers. It is much used as an ornamental climber in India and is one of the best vines for this purpose."

*Distribution.*—Throughout the jungles of India, rising to an elevation of 3,000 feet in the Himalayas and extending eastward to Java.

- 33550.** *PROSOPIS CHILENSIS* (Molina) Stuntz. **Algaroba.**  
(*Ceratonia chilensis* Molina, Saggio sulla Storia Naturale del Chili, p. 172, 1782.)

(*Mimosa juliflora* Swartz, Prodrumus, p. 85, 1788.)

(*Prosopis juliflora* (Swartz) D. C., Prodrumus, vol. 2, p. 447, 1825.)

Seeds of this mimosaceous tree from Chile were received under the name *Prosopis juliflora* (Swartz) DC., based on *Mimosa juliflora* Swartz. The earliest name given this plant, however, was *Ceratonia chilensis* Molina, published in 1782, which specific name it is necessary to adopt.

See Nos. 31238 and 31601 for description.

**33551 to 33587.**

From Lucknow, India. Presented by Mr. H. J. Davies, Superintendent of the Government Horticultural Gardens, Lucknow, at the request of Mr. C. V. Piper, Bureau of Plant Industry. Received April 26, 1912.

"A collection of seeds of trees and shrubs, mostly ornamental. These trees and shrubs are likely to succeed in this country only in southern Florida and southern California." (*Piper.*)

Quoted notes by Mr. Piper:

- 33551.** *ACACIA SCORPIOIDES* (L.) W. F. Wight. **Babul.**

This plant was received under the name *Acacia arabica* (Lam.) Willd., under which name it had been listed in previous numbers of these inventories. The earliest name given this plant was *Mimosa scorpioides* L. (*Species Plantarum*, p. 521, 1753), as was recognized by Mr. W. F. Wight in 1905 (*Useful Plants of Guam, Contributions from U. S. National Herbarium, vol. 9, p. 173*).

"Variety *Baboul.*"

- 33552.** *ADANSONIA DIGITATA* L. **Baobab.**

"A tree remarkable for its very thick trunk and compact, round crown. The flowers are large and white."

- 33553.** *ALBIZZIA LUCIDA* (Roxb.) Benth.

"A large spreading tree with very handsome foliage."

*Distribution.*—A large tree found in Nepal, Assam, Sylhet, and Burma, in India, and in Singapore.

- 33554.** *AMERIMNON SISSOO* (Roxb.) Kuntze. **Sissoo.**  
(*Dalbergia sissoo* Roxb.)

"A deciduous tree, growing to a height of 60 to 80 feet, of handsome form and beautiful foliage. It is moderately drought resistant. The timber is very valuable and is used for all kinds of furniture. This tree should succeed well in California."

## 33551 to 33587—Continued.

*Distribution.*—The plains of India and up to an elevation of 5,000 feet in the central Himalayas; also in Afghanistan and Baluchistan.

**33555.** ANOGEISSUS PENDULA Edgew.

“A medium-sized ornamental tree with pendulous branches.”

*Distribution.*—A bush or low tree with small leaves found in the northwestern part of India.

**33556.** ANOGEISSUS sp.

“A small deciduous tree.”

**33557.** ARGYREIA NERVOSA (Burm.) Boj. **Elephant creeper.**

*Distribution.*—The plains of India and up to an elevation of 1,000 feet; also in China and Java.

**33558.** BAUHINIA KURZII Prain.

(*Bauhinia rosea* Kurz.)

*Distribution.*—A shrubby climber found at an elevation of 5,000 feet in Tenasserim and in Burma in India.

**33559.** BAUHINIA VAHLII Wight and Arnott. **Maloo.**

“A shrub climber growing to an enormous size, having large butterfly-shaped leaves and showy cream-colored flowers.”

*Distribution.*—A climbing vine found at the base of the central and eastern Himalayas up to an elevation of 2,500 feet in northern India.

**33560.** BEAUMONTIA GRANDIFLORA (Roth) Wall. **Nepal trumpet flower.**

“A creeper.”

See No. 33544 for previous introduction.

**33561.** CALAMUS ROXBURGHII Griffith. **Rattan.**

“Cane palm. One of the most elegant of feathery-leaved palms, with light, graceful leaves armed with spines. It is useful either for pot work or for growing in the open.”

*Distribution.*—A climbing rattan palm found in Bengal and on the Coromandel Coast of India.

**33562.** CASSIA GLAUCA Lam.

“A large shrub or small tree producing an abundance of yellow flowers.”

**33563.** CERBERA THEVETIA L.

Seeds of this species were received under the name *Thevetia nereifolia* Juss. The earliest name for this plant was *Cerbera thevetia* L. (*Species Plantarum*, p. 209, 1753). The type of the genus *Cerbera*, as determined by the references in Linnaeus's *Genera Plantarum*, 1754, is *C. ahouaj* L. (*Species Plantarum*, p. 208), with which *C. thevetia* is universally regarded as congeneric. For this reason the original generic name *Cerbera* should be retained for this species as well as for *C. ahouaj*, which is generally known as *Thevetia ahouaj*.

“A large evergreen shrub with handsome foliage. The tubular yellow flowers are produced in abundance throughout the summer.”

*Distribution.*—Tropical America, extending from Vera Cruz and Acapulco in southern Mexico southward through tropical South America, and in the West Indies.

**33564.** CORYPHA ELATA Roxb. **Palm.**

*Distribution.*—A tall unarmed palm with large circular leaves, found in Bengal and Burma in India.

**33551 to 33587**—Continued.**33565.** *CRYPTOSTEGIA GRANDIFLORA* R. Brown.

See S. P. I. Nos. 19204 and 33405 for previous introductions.

**33566.** *DEGUELIA TIMORIENSIS* (DC.) Taub.

(*Derris scandens* Benth.)

"An evergreen shrub, vigorous-growing climber used to cover trellises and houses."

**33567.** *DIOSPYROS PEREGRINA* (Gaertn.) Guerke.

(*Diospyros embryopteris* Pers.)

"An evergreen tree, 25 to 30 feet high with a dense, spreading crown. The tree is slow in growth, but on account of the gorgeous green foliage, compact habit, and large, round, russet fruit, it is a very attractive tree."

See No. 32800 for previous introduction.

**33568.** *FIRMIANA COLORATA* (Roxb.) Brown.

(*Sterculia colorata* Roxb.)

"A pyramidal deciduous tree growing 30 to 40 feet high. In spring before the leaves appear it produces abundant orange-red flowers."

*Distribution.*—A large tree found in the eastern part of India and in Ceylon.

**33569.** *GARCINIA LIVINGSTONEI* T. Anderson.

"An evergreen tree of small size and yielding a small yellow fruit."

*Distribution.*—A bush or small tree found along the steep banks of the Zambesi River in East Africa. Native names *Motsauri*, *Mokononga*.

**33570.** *GUILANDINA BONDOC* L.

(*Caesalpinia bonducella* Flem., Asiatic Researches, vol. 11, p. 159, 1810.)

The name generally applied to the gray-seeded nicker nut is *Caesalpinia bonducella* Fleming. Trimen, in the Journal of the Linnean Society, v. 24, p. 141, 1887, has identified as *Caesalpinia bonducella* the specimen of Flora Zeylanica, No. 156, on which Linnæus based his *Guilandina bonduc* in Species Plantarum, p. 381, 1753. According to the present rules of botanical nomenclature, it is necessary to adopt this earlier name for the species. (See Science, vol. 37, p. 921, 1913.)

*Distribution.*—A climbing shrub, with lead-colored seeds, found generally throughout the Tropics; probably a native of India.

**33571.** *HAMELIA PATENS* Jacq.

"A very handsome evergreen shrub growing to a height of 10 to 15 feet. The sprays of tooth-shaped orange-red flowers are borne for a large part of the year."

*Distribution.*—Found in southern Florida and Mexico and southward to Peru and Brazil.

**33572.** *HETEROPHRAGMA ADENOPHYLLUM* (DC.) Seem.

See Nos. 32809 and 33547 for previous introductions.

**33573.** *HIPTAGE BENGHALENSIS* (L.) Kurz.

"A climbing shrub with yellow and white flowers."

*Distribution.*—Found in the hotter parts of India and eastward to China and Java.

**33574.** *HOLOPTELEA INTEGRIFOLIA* (Roxb.) Planchon. Indian-elm.

"The Indian-elm. A large spreading tree utilized for shade."

**33575.** *LAGERSTROEMIA SPECIOSA* (L.) Pers. Crape myrtle.

See No. 33548 for previous introduction.

**33551 to 33587—Continued.**

**33576.** *MORINGA OLEIFERA* Lam. **Horse-radish tree.**  
(*Moringa pterygosperma* Gaertn.)

"The horse-radish tree. A small deciduous tree reaching a height of 30 feet. The foliage is feathery and handsome. The roots and seeds are used as a substitute for horse-radish."

*Distribution.*—Found in the forests of the western Himalayas in northern India and generally cultivated in the tropics.

**33577.** *NYCTANTHES ARBOR-TRISTIS* L. **Hursinger.**

"A dwarf tree or large shrub producing highly scented white flowers."

See No. 32817 for previous introduction.

**33578.** *OWENIA CERASIFERA* Muell. **Queensland-plum.**

See No. 32819 for description.

**33579.** *PHYLLANTHUS EMBLICA* L. **Emblie myrobalan.**

"A large tree with fine foliage. The fruit is eaten by the natives."

**33580.** *PONGAM PINNATA* (L.) W. F. Wight.  
(*Pongamia glabra* Vent.)

"A deciduous tree with pendulous branches growing to a height of about 40 feet. The foliage is bright and handsome."

**33581.** *PUTRANJIVA ROXBURGHII* Wallich.

"A very ornamental, small evergreen tree."

*Distribution.*—Found throughout tropical India from the Himalayas in Kumaon eastward and southward to Pegu and Ceylon.

**33582.** *SAPINDUS EMARGINATA* Vahl. **Soap nut.**

*Distribution.*—Possibly only a form of *Sapindus trifoliata* L. found about villages in southern India and cultivated in Bengal.

**33583.** *SOLANUM MACRANTHUM* Dunal.

*Distribution.*—A shrubby *Solanum* from the province of Para in Brazil.

**33584.** *SOYMIDA FEBRIFUGA* (Roxb.) Juss.

"A medium-sized tree with handsome dark-green foliage."

*Distribution.*—A large tree found on the low hills in the northwestern, central, and southern parts of India and in Ceylon.

**33585.** *STIGMAPHYLLON LINGULATUM* (Poir.) Small.  
(*Stigmaphyllon periplocaefolium* (Desf.) Juss.)

"A rapidly growing climber with handsome yellow flowers."

**33586.** *TERMINALIA BELLERICA* (Gaertn.) Roxb.

"A fine, large, shapely tree reaching a height of 80 to 90 feet; foliage evergreen and handsome. The only objection to this tree is the rather unpleasant odor of the blossoms."

**33587.** *THESPESIA POPULNEA* (L.) Solander.

"A moderate-sized tree commonly cultivated throughout India. It has large yellow flowers."

**33588 to 33594.**

From India. Collected by Mr. C. V. Piper, Bureau of Plant Industry, and forwarded by the American consul general, Calcutta, India. Received April 26, 1912.

**33588 to 33594—Continued.**

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

**33588. ACER OBLONGUM** Wall.**Maple.**

"(No. 126, September 23, 1911.) A handsome maple tree with oblong leaves. Abundant on the mountain slopes at Mussoorie, India, and also cultivated at Dehra Dun."

**33589. BERBERIS** sp.**Barberry.**

"(No. 129, September 23, 1911.) From Mussoorie. A shrub growing 6 to 12 feet high, with black berries. Perhaps the same as the species collected at Newara Eliya (S. P. I. No. 32102)."

**33590. CUCUMIS MELO** L.**Muskmelon.**

"(No. 109, September 19, 1911.) Purchased in the market at Lucknow. Quality only fair."

**33591. MEIBOMIA** sp.*(Desmodium* sp.)

"(No. 130, September 23, 1911.) From Mussoorie. A shrub 6 to 12 feet high with handsome pink flowers, flowers in racemes. Decidedly ornamental."

**33592. ROSA** sp.**Rose.**

"(No. 125, September 23, 1911.) From Mussoorie. A half-climbing species growing to a height of 6 to 12 feet. Flowers not seen."

**33593. IMPATIENS** sp.

"(No. 131, September 23, 1911.) From Mussoorie. A much-branched species growing 3 to 5 feet high, with numerous purple flowers. Very abundant at Mussoorie."

**33594. IMPATIENS** sp.

"(No. 132, September 23, 1911.) From Mussoorie. A species with small stems, 1 to 2 feet high, bears yellow flowers."

**33595 to 33623.**

From India. Collected by Mr. C. V. Piper, Bureau of Plant Industry, and forwarded by the American consul general, Calcutta, India. Received April 26, 1912.

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

**33595. ANDROPOGON ANNULATUS** Forsk.

"(No. 139.) Seed from Lahore; collected September 29, 1911."

**33596. ANDROPOGON ANNULATUS** Forsk.

"(No. 107.) One of the abundant grasses of the Ganges Valley, growing to a height of from 2 to 3 feet and said to furnish an excellent quality of hay. Collected at Lucknow, September 19, 1911."

**33597. ANDROPOGON PERTUSUS** (L.) Willd.

"This seed was presented by Mr. A. C. Hartless, Superintendent of the Botanical Gardens, Seharunpur, India. One of the most abundant grasses of the Ganges Valley, growing 2½ feet high, with fine stems, and considered to furnish an excellent quality of hay."

**33598. ALYSICARPUS VAGINALIS** (L.) DC.

"(No. 118, September 26, 1911.) From Dehra Dun. A spreading legume; considered one of the best grazing plants for cattle."

**33595 to 33623—Continued.****33599.** *ALYSICARPUS BUPLEURIFOLIUS* (L.) DC.

“(No. 117, September 26, 1911.) From Dehra Dun. A similar but apparently distinct species from the preceding (S. P. I. No. 33598).”

*Distribution.*—Throughout India and eastward to China and in the Malay Archipelago and the Polynesian Islands.

**33600.** *ALYSICARPUS VAGINALIS* (L.) DC.

“(No. 116, September 25, 1911.) From Dehra Dun. Very similar to the preceding (S. P. I. No. 33599), and perhaps the same.”

**33601.** *CENCHRUS BIFLORUS* Roxb.

“(No. 106, September 20, 1911.) Collected at Lucknow.”

See No. 33602 for description.

*Distribution.*—The plains of India and westward to Baluchistan, Arabia, and northern Africa.

**33602.** *CENCHRUS BIFLORUS* Roxb.

“(October 7, 1911.) Collected at Agra. This grass is very similar to No. 105 (S. P. I. No. 33611) in all respects, but is regarded as inferior for feed.”

**33603.** *CENCHRUS BIFLORUS* Roxb.

“(No. 138, September 29, 1911.) From Lahore.”

See No. 33602 for description.

**33604.** *CROTALARIA MEDICAGINEA* Lamarck.

“(No. 123, September 13, 1911.) From Samaria Ghat. An annual erect legume growing 18 to 30 inches high, very closely resembling alfalfa in appearance. Flowers pale yellow. The leaves have a good flavor, and it looks as if it might be a good fodder plant.”

**33605.** *CROTALARIA MEDICAGINEA* Lamarck.

“(No. 124, September 15, 1911.) From Waini. The same as the above (S. P. I. No. 33604).”

*Distribution.*—From Afghanistan eastward through India and China, and through the Malay Archipelago to Australia.

**33606.** *CAPRIOLA DACTYLON* (L.) Kuntze.

(*Cynodon dactylon* Pers.)

“This is the common form as it appears in the Ganges Valley and should be tested in comparison with the form in this country. This seed was presented by Mr. A. C. Hartless, Superintendent of the Botanic Gardens, Seharunpur, India.”

**33607.** *FESTUCA GIGANTEA* (L.) Vill.

“(No. 127, September 23, 1911.) From Mussoorie. A shade grass growing to a height of 2½ to 3 feet.”

*Distribution.*—Throughout Europe and northern Asia, extending southward to the Himalayas, and in tropical Africa.

**33608.** *INDIGOFERA LINIFOLIA* (L. f.) Retz.

“(No. 120, September 22, 1911.) From Dehra Dun. A legume with fine stems and numerous small leaves, growing to a height of 6 or 8 inches. Considered one of the best pasture plants of the Ganges Valley.”

**33609.** *PANICUM ANTIDOTALE* Retz.

“(No. 108, September 20, 1911.) From Lucknow. A coarse species having much the same habit as guinea grass, growing abundantly at Lucknow.”



## 33595 to 33623—Continued.

**33610.** *CORIDOCHLOA CIMICINA* (L.) Nees.

(*Panicum cimicinum* Retz.)

"(No. 114, September 25, 1911.) From Dehra Dun. A vigorous species growing 2½ feet high. Perhaps of value for Florida range lands."

*Distribution.*—Throughout the plains and lower hills of India and eastward to China; also in the islands of the Malay Archipelago.

**33611.** *PENNISETUM CILIARE* (L.) Link.

(*Pennisetum cenchroides* Rich.)

"(No. 105, September 20, 1911.) From Lucknow. This is the best native hay grass of the Ganges Valley, growing to a height of 2½ feet and forming nearly pure growths. Much of it is cut for hay."

**33612.** *PENNISETUM CILIARE* (L.) Link.

(*Pennisetum cenchroides* Rich.)

"(No. 140, September 29, 1911.) From Lahore."

*Distribution.*—First described from South Africa; also found in tropical Africa and in southern Europe and Asia, extending from Sicily eastward to India.

**33613.** *PENNISETUM ORIENTALE* Rich.

"(No. 134, September 22, 1911.) From Mussoorie. A tall and coarse species growing to a height of 5 feet and quite ornamental."

*Distribution.*—Asia Minor and northern Africa, and eastward to India.

**33614.** *CHAETOCCHLOA INTERMEDIA* (Roem. and Schult.) Stuntz.

(*Setaria intermedia* Roem. and Schult., *Systema Vegetabilium*, vol. 2, p. 489, 1817.)

The seeds of this Indian grass were received as a species of *Setaria* and were identified as *Setaria intermedia*, which seems not to have been heretofore referred to the genus *Chaetochloa*.

"(No. 111, September 14, 1911.) From Pusa. A grass 12 to 24 inches high forming a pure thick growth in the shade of trees."

*Distribution.*—Found on the plains and lower hills of India and in Ceylon.

**33615.** *CHAETOCCHLOA LUTESCENS* (Weigel) Stuntz.

(*Panicum lutescens* Weigel, *Observationes botanicæ*, p. 20, 1772.)

Seeds of this species have been listed in previous numbers of these inventories as *Chaetochloa glauca* (L.) Scribner, based on *Panicum glaucum* L. (*Species Plantarum*, p. 56, 1753). The type of Linnæus's species has been determined as *Pennisetum glaucum* (L.) R. Br., hitherto listed in these inventories as *Pennisetum americanum* (L.) Schum. It is necessary, therefore, to adopt for the plant under discussion the earliest specific name, *lutescens*.

"(No. 122, September 22, 1911.) From Dehra Dun. A small species with small heads. May have some value as a summer pasture plant."

**33616.** *SYNTHESISMA SANGUINALIS* (L.) Dulac.

(*Panicum sanguinale* L.)

"(No. 119, September 21, 1911.) From Dehra Dun. A species closely resembling common crab-grass and of similar value."

**33617.** *CAPRIOLA DACTYLON* (L.) Kuntze.

**Bermuda grass**

(*Cynodon dactylon* Pers.)

"(No. 136, October 3, 1911.) From Alighur. A species growing in abundance at Alighur, India. Apparently is a much more vigorous grower than ordinary crab-grass."

**33595 to 33623—Continued.****33618.** (Undetermined.)

"(No. 113, September 22, 1911.) From Dehra Dun. A prostrate, leguminous vine of vigorous growth."

**33619.** *SYNTERISMA CILIARIS* (Retz.) Schrad.

(*Panicum ciliare* Retz.)

"(No. 128, September 23, 1911.) From Mussoorie. A species having much the habit of ordinary crab-grass."

**33620.** *ERIOCHLOA POLYSTACHYA* H. B. K.

"(No. 135; October 3, 1911.) From Alighur, India. A grass that will perhaps be of value for pasturage."

*Distribution.*—First described from the vicinity of Guayaquil in Ecuador and generally distributed throughout the Tropics.

**33621.** *FALCATA* sp. (?)

(*Amphicarpaea* sp.)

"(No. 137, September 29, 1911.) From Lahore. A trailing leguminous vine growing in dry soil."

**33622.** *PASPALUM ROYLEANUM* Nees.

"(No. 112, September 14, 1911.) From Pusa. A grass having somewhat the habit of crab-grass and considered to be excellent pasturage. Abundant at Pusa."

*Distribution.*—Hilly districts of India from Kashmir eastward and southward to Ceylon; also in tropical Africa.

**33623.** *ZORNIA DIPHYLLOA* (L.) Pers.

"(No. 121, September 21, 1911.) From Dehra Dun. An annual legume growing to a height of 4 to 8 inches and considered to furnish excellent pasturage."

**33624.** *LYCOPERSICON ESCULENTUM* Miller.**Tomato.**

From Burringbar, New South Wales, Australia. Presented by Mr. B. Harrison. Received July 31, 1911. Numbered May 20, 1912.

"Australian tomato. A heavy yielder and resists cold weather better than other varieties." (*Harrison.*)

**33625 to 33636.**

From Calcutta, India. Secured in the Calcutta market by Mr. C. V. Piper, Bureau of Plant Industry, and forwarded by Mr. I. H. Burkhill, office of Economic Products, Calcutta. Received April 26, 1912.

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

**33625.** *CUCUMIS MELO* L.**Muskmelon.**

"(No. A.) Cylindric, 6 to 8 inches long, 2½ inches in diameter. Skin cream color. Flesh pale orange, dry mealy, not much flavor. Splits when ripe."

**33626.** *BENINCASA HISPIDA* (Thumb.) Cogn.**Wax gourd.**

(*Benincasa cerifera* Savi.)

"(No. C.) A variety with the fruit cylindric, 8 to 10 inches long, 5 to 6 inches in diameter."

**33627.** *CITRULLUS VULGARIS* Schrad.**Watermelon.**

"(No. D.) Globose pyriform, 6 to 8 inches in diameter, marbled green and white, with 12 faint longitudinal ribs."

**33625 to 33636—Continued.****33628.** MOMORDICA sp. (?)

"(No. F.) Small green, 4 inches long, somewhat pointed at each end. Smooth. Pulp red."

**33629.** CUCUMIS MELO L.**Muskmelon.**

"(No. J.) Oval, 8 to 10 inches long, with a fine, open-surface reticulation; clear yellow, no ribs. Flesh apricot color, very sweet, not much juice, no other flavor. A fairly good melon."

**33630.** CITRULLUS VULGARIS Schrad.**Watermelon.**

"(No. K.) Small, not very good."

**33631.** CITRULLUS VULGARIS Schrad.**Watermelon.**

"*Paschimi*."

**33632.** CUCUMIS MELO L.**Muskmelon.**

"From Lahore. Good quality."

**33633.** FERONIA ELEPHANTUM Correa.**Wood-apple.**

"(No. E.) Globose; size of a baseball."

See No. 25888 for description.

**33634.** MOMORDICA sp. (?)

"(No. B.) Fruit yellow, small, pyriform, thickly tuberculate, 2½ inches long."

**33635.** SPONDIAS PINNATA (L.) Kurz.

(*Spondias mangifera* Willd.)

"(No. G.) Green, subpyriform, 2 inches long, pulp thin, acid, odor of green apples. Stone large, fibrous. Abundant in the market in September."

**33636.** SPONDIAS CYTHEREA Sonnerat.**We fruit.**

(*Spondias dulcis* Forster.)

"(No. H.) Oval, size of large egg, russet when mature. Flesh yellow, odor of pineapples. Stone fibrous. Abundant in the market in September."

**33637.** CAPSICUM ANNUM L.**Red pepper.**

From Chihuahua, Mexico. Presented by Mr. Marion Letcher, American consul. Received October 9, 1911. Numbered May 6, 1912.

"This looks like a red pepper of the type to which the Hungarian paprika belongs and is of particular interest on account of the probability of its disease resistance." (R. H. True.)

**33638.** HOLCUS SORGHUM L.**Shallu sorghum.**

(*Sorghum vulgare* Pers.)

Presented by Mr. Robert L. Luáces, Camaguey, Cuba. Received April 5, 1912. Numbered May 8, 1912.

"This seed is supposed to have come from Gran Caiman [Grand Cayman] Island." (Luáces.)

"This apparently belongs in or near the group comprising Hackel's variety *roxburghii*." (Carleton R. Ball.)

**33639.** GOSSYPIUM BARBADENSE L.**Cotton.**

From Alexandria, Egypt. Presented by J. Planta & Co. Received May 9, 1912.

*Assil*. Procured for experimental planting in this country by Mr. O. F. Cook, Bureau of Plant Industry.

**33640 to 33642.**

From Pusa, Bengal, India. Presented by Mr. A. C. Dobbs, Assistant Inspector General of Agriculture in India. Received May 9, 1912.

Seeds of the following:

**33640. ALYSICARPUS VAGINALIS NUMMULARIFOLIUS** Baker.

"A tall-growing legume, readily eaten by cattle. Where much pastured it tends to become dense and prostrate." (*C. V. Piper.*)

*Distribution.*—Found with the species, throughout the Tropics of the Old World.

**33641. AMERIMNON SISSOO** (Roxb.) Kuntze.**Sissoo.**

(*Dalbergia sissoo* Roxb.)

"This requires frequent watering for germination. In fact, the seeds germinate normally on flooded river banks, but will stand a considerable amount of heat and drought as well as slight cold." (*Dobbs.*)

**33642. INDIGOFERA LINIFOLIA** (L. f.) Retz.

See Nos. 32431 and 32782 for previous introductions.

**33643. BACKHOUSIA CITRIODORA** Mueller.

From Sunnybank, Queensland. Purchased from Mr. John Williams, Sunnybank Nursery. Received May 9, 1912.

"This is rapidly becoming extinct, owing to the wholesale destruction of timber for close settlement." (*Williams.*)

"A shrub or small tree native to southern Queensland, Australia, allied to *Eucalyptus*. The leaves yield 4 per cent of fragrant volatile oil, appearing to consist almost entirely of citral, the valuable constituent of all lemon oils. Appears promising for commercial culture." (*W. Van Fleet.*)

*Distribution.*—A tall shrub or small tree, found in the vicinity of Moreton Bay, in Queensland, Australia.

**33644. AVENA SATIVA** L.**Oat.**

From Hamilton East, New Zealand. Presented by Mr. P. McConnell, manager Runakura Experimental Farm, at the direction of the Director of Fields and Experiment Farms, Department of Agriculture, Commerce, and Tourists. Received May 8, 1912.

"*Rustproof oat.* This oat is a selection from the '*Argentina*' oat. Its gray color rather spoils its appearance, but should it remain rustproof it will be a great acquisition." (*McConnell.*)

**33645. LARIX SIBIRICA** Ledeb.**Larch.**

Collected in the southern Ural, Russia. Presented by Landrath Max von Sivers, Roemershof, Russia. Received May 7, 1912.

See Nos. 33317 and 33318 for previous introduction.

**33646. CUMINUM CYMINUM** L.**Cumin.**

From Valetta, Malta. Presented by Mr. James Oliver Laing, American consul. Received May 7, 1912.

"The seed of the cumin plant is raised in Malta, and most of the crop is exported. It has various uses. It forms the flavoring basis of several drinks, among them kummel. Cumin seed is also used in the Netherlands and several places as a flavoring for cheese. In Syria and Egypt and probably in other Mohammedan countries it is used as a condiment.

**33646**—Continued.

“Cumin is of the parsley family and has fennel-like leaves. It is a cultivated crop in Malta, but I have seen it growing wild in Egypt and the hills of the Palestine hinterland.

“Altitude seems to affect the growth of the plant very little. In Malta it is grown a few feet above the sea and within a stone’s throw of it, and it also grows wild in the highland valleys of Hindustan, 7,000 feet above the sea, and inland.

“The Malta cumin plant grows about 1 foot or a little less in height.

“Cumin is planted in Malta in January or February, and the crop is ready for the harvest in June or July. Weather conditions (rain and temperature) make a few weeks’ difference occasionally in the times for planting and reaping. One crop a year is raised, and it must be planted each year. No attempt is made at cultivation while the crop is growing.

“When ready to be harvested the whole plant is pulled up by the roots by hand. This is easy, as the roots are readily broken and the soil is very porous and light. After pulling the plants from the ground they are beaten against a board or bar to knock the seeds loose.

“Seeds are winnowed by hand to clean them of chaff and dirt. They are then stored in sacks or simply piled in a dry place on a floor.

“The aromatic odor in one of these storehouses is so strong that it is almost impossible to enter when the door is first opened.

“Cumin seed will keep more than a year, but buyers always prefer the new crop because the fresh seeds are more aromatic.

“In the trade here the middleman system prevails. A contract is made by the farmer that the seeds are 97 per cent pure; that is, that they contain not more than 3 per cent of foreign matter.

“The commission merchant pays about \$9 per 175 pounds.” (*Laing.*)

**33647. CICER ARIETINUM L.****Chick-pea.**

From Guadalajara, Mexico. Presented by Mr. Samuel E. Magill, American consul. Received April 27, 1912.

“*Garbanzo prieto* or *chico*. This is used only as food for animals. It is soaked for about 24 hours and softened for cattle, while hogs eat it whole.” (*Magill.*)

See No. 31308 for notes regarding the growing of this crop.

**33648 to 33654.**

Seeds collected by Dr. B. T. Galloway, Chief, Bureau of Plant Industry, of this Department. Numbered May 10, 1912. Quoted notes by Dr. Galloway:

**33648. CLEOME sp.**

From Soekaboemi, Java.

“An herbaceous plant. Beautiful pink, geraniumlike flowers.”

**33649. SPOROBOLUS INDICUS (L.) R. Brown.**

From Soekaboemi, Java.

“A good agricultural grass.”

*Distribution.*—Throughout India, ascending to an elevation of 5,000 feet in the Himalayas, and generally distributed in warm countries.

**33650. PINUS sp.****Pine.****33651. ALLAMANDA sp.**

From Selabatoe, Soekaboemi, Java.

“A large yellow-flowered shrub, resembling evening primrose.”

**33648 to 33654**—Continued.**33652.** ACACIA sp.

From Algeria.

“(March 15, 1911.) A bush with long, straight, slender, flexible branches, covered with formidable thorns. Used as street-tree protectors, branches being bound to tree trunks with wire. Also used as a hedge.”

**33653.** CRATAEGUS sp.**Hawthorn.**

From Algeria. “(March, 1911.) A small semievergreen tree covered with bright-red fruit.”

**33654.** AMPELODESMA BICOLOR (Poir.) Kunth.

From Hammam Rirha, Algeria.

“(March 15, 1911.) A grass very abundant on poor soil. Grows in bunches and has long tough leaves. May be the grass extensively gathered in this country for paper making.”

*Distribution.*—The countries at the west end of the Mediterranean from Spain and Italy through the islands of Sardinia, Corsica, and Sicily to Morocco and Algiers.

**33655.** TERMINALIA CATAPPA L. (?)**Katappa.**

From Burringbar, New South Wales, Australia. Presented by Mr. B. Harrison.

Received July 13, 1911. Numbered May 20, 1912.

Plants.

**33657 to 33665.** PRUNUS spp.**Cherry.**

From Station Novospaska, Syzran-Riazan R. R., Simbirsk Government, Russia.

Presented by Mr. A. D. Voeikov. Received May 8 and 11, 1912.

Cuttings of the following; quoted names by Mr. Voeikov:

**33657.** PRUNUS FRUTICOSA × AVIUM.

(*Prunus chamaecerasus* Jacq.)

“*Kniazna Severa* (Princess of the North).”

**33658.** PRUNUS FRUTICOSA × CERASUS.

(*Prunus chamaecerasus* Jacq.)

“*Antonovka*.”

**33659.** PRUNUS FRUTICOSA Pallas.

(*Prunus chamaecerasus* Jacq.)

“*Kislakovka*.”

**33660.** PRUNUS FRUTICOSA × DOMESTICA (?)

(*Prunus chamaecerasus* Jacq.)

“*Dolgonsha*.”

**33661.** PRUNUS FRUTICOSA × CERASUS.

(*Prunus chamaecerasus* Jacq.)

“*Belotelaja*.”

**33662.** PRUNUS FRUTICOSA × CERASUS.

(*Prunus chamaecerasus* Jacq.)

“*Visloucha*.”

**33663.** PRUNUS FRUTICOSA Pallas.

(*Prunus chamaecerasus* Jacq.)

“*Steklarka*.”

**33657 to 33665—Continued.****33664.** PRUNUS FRUTICOSA × CERASUS.*(Prunus chamaecerasus Jacq.)*"Seedling of *Steclarka*, No. 1."**33665.** PRUNUS FRUTICOSA Pallas.*(Prunus chamaecerasus Jacq.)*"Seedling of *Steclarka*, No. 2."**33666.** ONOBRYCHIS CRISTATA Pomel.**Esparsette.**

From Erivan Government, Russia. Procured at Tiflis, Caucasus, in 1910, by Mr. Frank N. Meyer, agricultural explorer, for this Department. Received May 9, 1912.

Seeds.

*Distribution.*—The vicinity of Miliana in the northern part of Algeria.**33667.** CHUSQUEA QUILA Kunth.**Quila.**

From Chile. Presented by Mr. D. S. Bullock, Lapeer, Mich., R. F. D. No. 5. Received May 11, 1912.

Root.

**33668.** FURCRAEA TUBEROSA (Miller) Aiton.**Cabulla.**

From Georgetown, Demerara, British Guiana. Presented by Mr. F. A. Stockdale, Assistant Director and Governor Botanist, Botanic Gardens, Science and Agriculture Department. Received May 13, 1912.

A fiber plant generally cultivated in Bolivia, Venezuela, and Brazil; native country not known.

**33669 and 33670.** HOLCUS SORGHUM L.**Sorghum.***(Sorghum vulgare Pers.)*

From David, Panama. Presented by Mr. J. R. Lastra. Received May 9, 1912.

Seeds of the following:

**33669.** "This short, compact head is Guinea kafir. It is grown rather commonly in the West Indies and sparingly in Central America. In the English West Indies it is known as 'Guinea corn,' in the French West Indies as 'petit millet,' and in Honduras as 'Maysillo.'" (*Carleton R. Ball.*)

**33670.** "The lax panicle represents the variety *roxburghii* Hack., which grows in India and central Africa. Our shallu, with straw-colored glumes, is a native of India. Forms like the present, with brown or black glumes, are common in equatorial Africa, whence this doubtless came." (*Carleton R. Ball.*)

**33671.** NICOTIANA TABACUM L.**Tobacco.**

From Bagdad, Turkey. Presented by Mr. Emil Sauer, American consul. Received May 16, 1912.

*Shiraz.***33672.** ZEA MAYS L.**Corn.**

From Rockville, Md. Grown by Mr. J. M. Rankin, assistant farm superintendent, Yarrow Plant Introduction Field Station. Received May 16, 1912.

"Grown from S. P. I. No. 26958. This corn seems to me to be a very promising one for a locality where it has a longer growing season than it can get here near Washington, D. C. We matured only one ear, and that in 170 days.

"I would suggest that this corn be tested in Texas or California as a stock food and also as a table corn." (*Rankin.*)

**33673. ERYTHRINA POEPPIGIANA (Walp.) O. F. Cook. Bucare.***(Erythrina micropteryx Poepp.)*

From Porto Rico. Presented by Prof. S. M. Tracy, special agent of this Department at Biloxi, Miss. Received May 16, 1912.

"This is also known as 'palo de boyo.' A leguminous tree of 15 to 20 meters, beset with short conical spines; flowers red. Cultivated as a shade tree for coffee and reported from numerous localities in Porto Rico. It is a native of the lower Andes of Peru." (*Cook and Collins, Economic Plants of Porto Rico, 1903, p. 139.*)

**33674 to 33688.**

From Svalof, Sweden. Presented by the General Swedish Seed Co. Received May 13, 1912.

Seeds of the following:

**33674 to 33681. BETA VULGARIS L. Mangold.**

**33674.** *Yellow Eckendorfer A.*

**33675.** *Red Eckendorfer A.*

**33676.** *Barres Halj Long A.*

**33677.** *Barres Halj Long A.*

NOTE.—One of the two last-named varieties was designated in the list as "new stem," but there was nothing on the tags to show which one it was.

**33678.** *Barres Oval.*

**33379.** *Alfa.* Half sugar. Forage sugar beet.

**33380.** *Rubra.*

**33681.** *Golden Tankard.*

**33682 to 33684. BRASSICA RAPA L. Turnip.**

**33682.** *Bortfelder.*

**33683.** *Yellow Tankard.*

**33684.** *Ostersundom.*

**33685 to 33687. BRASSICA CAMPESTRIS L. Swedish turnip.**

**33685.** *Yellow Swedish Swede A.*

**33686.** *Yellow Swedish Swede A, new stem.*

**33687.** *Bangholm.*

**33688. DAUCUS CAROTA L. Carrot.**

*Champion.*

**33689. MUSA sp. Banana.**

From Manila, Philippine Islands. Presented by Mr. William S. Lyon. Received May 16, 1912.

*Bumulan.* "This is rated our second best in quality and by many accorded equal rank in quality with *Lacatan* and is in all respects a better carrier. I can vouch for it being a robust, healthy grower and, so far as I have observed, free from disease. The fruit is borne 100 to 120 to the bunch and is yellow, with streaks of green. It is not, however, a very attractive market fruit." (*Lyon.*)

**33690 and 33691.**

From Taochow, Kansu, western China, altitude 8,000 to 9,000 feet. Collected by Mr. W. Purdom. Presented by Prof. C. S. Sargent, Jamaica Plain, Mass. Received May 20, 1912.



**33690 and 33691—Continued.**

Seeds of the following:

**33690.** AVENA NUDA Hoejer.**Oat.**

Huskless.

**33691.** HORDEUM sp.**Barley.****33692.** ANTHEPHORA HERMAPHRODITA (L.) Kuntze.*(Antheophora elegans Schreb.)*

From Quixada, Ceara, Brazil. Presented by Mr. Alberto Löfgren, Botanical Chief of the Inspectorate of Irrigation Works. Received May 21, 1912.

"One of the most renowned species in the dry region of Ceara. It does not stand the drought, but appears everywhere by the first rains and will probably produce a very good hay. The popular name is '*Capim mimoso*.'" (*Löfgren.*)

**33693.** STATICE MACROPHYLLA Willd.

From Puerto Orotava, Teneriffe. Presented by Dr. George V. Perez. Received May 21, 1912.

*Distribution.*—A partly woody perennial with flowers having a blue calyx and a white corolla, found in the Canary Islands.

**33695 to 33709.**

From Chile. Received through Mr. José D. Husbands, Limavida, via Molina, Chile, June, 1911. Numbered May 20, 1912.

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

**33695.** (Undetermined.)

"(No. 1167.) From Huaquen. Crimson mixed."

**33696.** (Undetermined.)

"(Nos. 1001 and 1002.)" Bulbs sent under S. P. I. No. 31570; see this number for remarks.

**33697.** LITHREA CAUSTICA (Mol.) Hook. and Arn.*(Lithrea venenosa Miers.)*

"(No. 904.) An edible fruit, small, sweet, and good for unfermented chicha or cider. Although the tree is poisonous, the fruit is not.

**33698.** LITHREA CAUSTICA (Mol.) Hook. and Arn.*(Lithrea venenosa Miers.)*

"(No. 920.) The country people esteem this fruit and make quantities of chicha in the same way as maqui (S. P. I. No. 26306), is used. It is healthful and agreeably refreshing. The foxes are fond of the fruit and sow the same when cast away with their dung; trappers look for the dung containing seeds in order to set their traps for this game."

**33699.** BERBERIS sp.**Barberry.**

"(No. 1290.) Those were sent me as '*Michae*.' I think they are of a hardy class of Berberis."

**33700.** (Undetermined.)

"(No. 978.) From the River Itata. A dwarf, ornamental tree. Leaves small. Bears an abundance of small seed fruit."

**33701.** (Undetermined.)

"(No. 864.) *Pθe*, the Indian name of an edible fruit of the Bromelia family, another sort of '*Chupon*.' Grows on the sides of ravines, embankments, old trees, etc. Needs moisture."

## 33695 to 33709—Continued.

## 33702. GREIGIA sp.

"(No. 997.) The first I have seen growing in central Chile. Found very near the seacoast. Is a new variety."

## 33703. CUCUMIS MELO L.

## Muskmelon.

"(No. 1185.) By Chilean custom, irrigated fields are rented to the dry farmers in lots of 1 cuadra (4 acres) to each renter for their 'chacra.' The rental price is a contracted number of sacks of beans. In these chacras are planted beans, potatoes, corn, squashes, aji, muskmelons, and watermelons. As squashes and melons have the natural faculties of aerohybridization these notes refer to this phenomena and give my opinion of the causes of the excellence created in Chilean melons.

"A hundred or more tenants have adjoining lands in which to sow and plant their food crops. No attention is given to the seeds planted, except squashes and melons, and such care as may be given is unknown to the persons themselves. When a squash is cooked or a melon eaten, if they are exceptionally good as to sweetness, flavor, productiveness, etc., the seeds are saved and are generally put into a bag hung for this purpose. This is repeated until sufficient mixed seed is accumulated. In this manner a large variety of all good selected seeds are sown the next year. Each tenant does the same thing, only with a different assortment. Therefore, each field is yearly sown with a hundred or more different collections of seeds, selected especially by taste and not by sight. Atoms of pollen are distributed great distances, and as no two melon patches are a greater distance than 60 meters apart, the aerial hybridizing commences and ends with the bloom. In this way every melon ripens with its seeds crossed by some other or others of equal, but perhaps different, merits. Every year new kinds of melons are created and these ignorant people are selectors by taste instead of scientific attainments. There are no people better able to judge of melon quality than these, as they live upon them during the season. As this breeding process of continually crossing improved varieties takes place year after year, it is not surprising that Chilean melons have reached a high degree of excellence.

"The seed sent was a production of this year, having flavor, quantity, and character of its own and was firm enough to be a good shipper. If its merits can be reproduced it is extra good, but as they are already crossed there is no security."

## 33704. LYCOPERSICON ESCULENTUM Miller.

## Tomato.

"(No. 1188.) A smooth yellow variety from Germany, grown in Chile for many years. Medium size, mild and fine flavored, prolific. By mild I mean it has little acid or of an agreeable kind."

## 33705. EUGENIA TEMU Hook. and Arn.

"(No. 1189.) '*Temu*.' This is the first *temu* I have found bearing fruit, and I consider this an extra valuable find. The fruit is perfectly round, black, glossy, with a good quantity of juicy, wine-colored flesh. The flavor is aromatic and agreeable, something like wintergreen berries. It has no sort of repugnance. Its size for each tree is the same, that is, all the fruit on a tree is exactly alike, no large and no small ones. Some trees bear fruit a trifle larger than others; the smallest size is three-eighths of an inch in diameter, the largest half an inch. Each berry has but one seed, which readily separates from the flesh. It is prolific to excess, the tree being black with fruit.

"The glossy leaves are fragrant and evergreen; they fall, but not until after the new ones are formed. In bloom the tree is charmingly white with a mass of delightfully fragrant flowers which perfume the adjacent air for some dis-

**33695 to 33709**—Continued.

tance. The natural tree growth and form leaves nothing to be desired. Without any kind of improvement this may be added to your list of cultivated fruits. For breeding purposes it has great possibilities crossed with the large fruiting *Myrtus* of Japan and China.

"A clean, beautiful tree for adornment. It is white, with delightfully fragrant bloom. The wood and branches are extra-hard and durable in the ground and in constructions. The bark and leaves are very astringent and balsamic. Infusion of bark cures diarrhea, etc. It is also used externally to cure wounds on animals; the powdered leaves are also used for the same with good results. The bark, leaves, or wood are used for liver, kidneys, colds, internal pains, swellings, etc.—a standard remedy."

*Distribution*.—The vicinity of Valparaiso in Chile.

**33706. SOLANUM** sp.**Nightshade.**

"(No. 1190.) '*Tomatillo*.' This is an annual found only in the 'chacras' where beans, potatoes, corn, squashes, and melons are planted. It grows about 2 feet high and from 3 to 4 feet wide. The fruit grows in bunches under the leaves, which are of good size and dark green. The plant is fleshy, juicy, and broken easily. The fruit is green in color until it is fully mature, when it turns black. It is not edible. Apart from the plant growth, it is exactly like Burbank's wonderberry in every particular of appearance.

"It is a bush with vine habits, about 2 or 3 meters [ $6\frac{1}{2}$  to 10 feet] high, loving the shade of the fences that it covers with large clusters of bloom—all shades of lilac and blue purple. The clusters are about 4 or 5 inches in diameter, very beautiful but scentless. The entire plant is medicinal and is a worthy substitute for quinia and quinine. It is employed with excellent results in typhoid and other malignant fevers, sickness caused by colds, chills, ague, etc. It is a powerful tonic and extremely bitter: a small bit of a green branch placed in a tumbler of water for but half a minute makes it very bitter. This is the way it is taken as medicine: Pieces of wood placed in the water which fowls or animals are to drink invigorate them and prevent disease. This plant should be carefully studied, as there is more in it than is known at present. Grows in dry poor soil or in the moist south in good soil."

**33707. NICOTIANA TABACUM** L.**Tobacco.**

"(No. 1193.)"

**33708 and 33709. NICOTIANA LONGIFLORA** Cavauilles.

"(No. 1194.) While this plant is cultivated for its flowers, it may have an industrial use for its gum. It is hairy; at the end of each is a tiny drop of oil or gum. This belongs to a class of hairy plants in Chile, from which exudes a liquid gum or sticky substance."

**33708.** "White, yellowish flowers."

**33709.** "Pink flowers."

*Distribution*.—A perennial, or in northern countries an annual, found in Chile and Argentine.

**33711 and 33712. MEDICAGO** spp.

From Chile. Received through Mr. José D. Husbands, Limavida, via Molina, Chile, June, 1911. Numbered May 20, 1912.

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

**33711. MEDICAGO HISPIDA RETICULATA** (Berth.) Urb.

"(No. 1180.) A dwarf bur clover which is late and new to me. This beardless variety spreads along the ground, and the stems are so interwoven with each

**33711 and 33712—Continued.**

other as to completely cover it with a dense growth of animal food especially suitable for sheep. The leaves rise above the ground from 2 to 3 inches. Feeding upon this will not destroy the plant like it does the larger varieties, as it does not die when the leaves are removed, but sprouts anew. The larger varieties dry up after seeding, more or less like peas. They are not climbers, but lean against some support and then support each other, rising from a height of from 20 inches to 4 feet, according to the kind. They grow quickly from self-sown seed in any poor soil; in fertile, moist land they thrive wonderfully."

**33712.** *MEDICAGO HISPIDA DENTICULATA* (Willd.) Urban.

"(No. 1182.) Plant dwarf, bearded with soft hairs. The description for the preceding will serve for this also."

**33713. RUELLIA TUBEROSA L.**

From Barbados. Presented by Mr. Patrick O'Mara, New York, N. Y. Received May 23, 1912.

"These seeds were received from one of our customers in Barbados. She does not give any botanical names; merely says that it is commonly called 'many roots' and that it bears beautiful mauve flowers. She further states that the roots are a cure for indigestion. Steep two roots or tubers in a small cup of boiling water for a few minutes, pour off and drink with a little salt, twice daily." (O'Mara.)

*Distribution.*—In the ravines in Texas and southward through Mexico and Central America to Peru and Guiana, and in the West Indies.

**33714. TRIFOLIUM sp.****Clover.**

From near Helenendorf, Caucasus, Russia. Received through Mr. Frank N. Meyer, agricultural explorer, May 3, 1910. Numbered May 24, 1912.

"(No. 760, April 5, 1910.) A species of clover, apparently perennial, growing along banks and on dry places." (Meyer.)

**33715. ASPARAGUS FILICINUS Hamilton.****Asparagus.**

From the Kong Tong Mountains, China. Presented by Mr. Philip Nelson, Camas, Wash. Received May 20, 1912.

Seed.

**33716. PIMENTA ACRIS (Swartz) Kostel.****Bayberry.**

From Port Louis, Mauritius. Presented by Mr. G. Regnard. Received May 25, 1912.

"A myrtaceous tree 45 to 50 feet high, the straight, rather long trunk 15 to 24 inches in diameter. Furnishes a moderately hard and heavy wood, fine and compact in texture. The sapwood is very light red with darker lines, while the heart is brownish red, brown, or on account of the knots, almost black. It is susceptible of a very high polish. Specific gravity, 0.909. It is one of the best and most valued woods of these countries, very strong and durable, suitable for carpenters and cabinetwork, and it is exported to some extent. The bark is rough and ash colored and peels after the manner of the sycamore.

"From the dried leaves of this tree is obtained by distillation with water an essential oil, called 'bay oil' or 'oil of bay', the most important ingredient of bay rum. Only a pint and a half of oil is said to be required for the medication of 100 gallons of rum. The latter should be of good quality and strength. If below 18 or 19 proof, it will not properly incorporate the oil. Large quantities of dried leaves of this species are imported from the West Indies, notably from the island of Dominica. They are

**33716—Continued,**

generally put up in bales of about 200 pounds weight. It is not known that any leaves have been shipped from Porto Rico, but in 1895, 95 gallons of bay oil, valued at \$1,390, and 12,544 gallons of bay rum, valued at \$6,414, were exported. The trees occur in all parts of the island and are said to be abundant in some districts on the south side.

“In the fresh condition the leaves of this tree have the taste and odor of lemon, whence the propriety of the name ‘limoncillo,’ or little lemon. Although more common in Porto Rico as a shrub, this species is said to grow to a height of 35 or 40 feet and to attain a diameter of a foot or more; the wood is light-colored, mottled, very hard, and heavy.” (*Cook and Collins, Economic Plants of Porto Rico, 1903, pp. 74 and 75.*)

**33718. MYRTUS sp. (?)**

From Burringbar, New South Wales, Australia. Presented by Mr. B. Harrison.  
Received July 31, 1911. Numbered June 10, 1912.

“Blackfellow’s ‘lollies’ or ‘sweets.’ Fruit small, mottled; flavor sweet, spicy.” (*Harrison.*)

**33719. GALEGA OFFICINALIS L.****Goat’s-rue.**

From Paris, France. Purchased from Vilmorin Andrieux & Co. Received June 28, 1912.

See No. 25481 for previous introduction.

**33721 to 33735. ASPARAGUS spp.****Asparagus.**

From Kew, England. Presented by Mr. Arthur W. Hill, Royal Botanic Gardens.  
Received May 28, 1912.

Seeds of the following:

**33721. ASPARAGUS SARMENTOSUS L.**

*Distribution.*—A woody climber found in South Africa from the Kalahari region southward to the Cape.

**33722. ASPARAGUS UMBELLATUS Link.**

*Distribution.*—Found in the Canary Islands.

Plants of the following:

**33723. ASPARAGUS AFRICANUS Lam.****33724. ASPARAGUS DREPANOPHYLLUS Welw.****33725. ASPARAGUS FALCATUS L.****33726. ASPARAGUS MADAGASCARIENSIS Baker.****33727. ASPARAGUS MYRIOCLADUS Baker.**

*Distribution.*—A suberect, slightly woody perennial found in the vicinity of Inanda in Natal, South Africa.

**33728. ASPARAGUS PLUMOSUS Baker.****33729. ASPARAGUS PLUMOSUS Baker.**

Variety *tenuissimus*.

**33730. ASPARAGUS RACEMOSUS Willd.**

*Distribution.*—Throughout tropical and subtropical India, ascending to an elevation of 4,000 feet in the Himalayas, and in tropical Africa and Australia.

**33731. ASPARAGUS RETROFRACTUS L.**

Variety *arboreus*.

*Distribution.*—The central and coast regions of South Africa.

**33721 to 33735—Continued.****33732.** ASPARAGUS SARMENTOSUS L.**33733.** ASPARAGUS TRICHOPHYLLUS Bunge.*Distribution.*—The Provinces of Chihli and Shantung in China and in central Siberia.**33734.** ASPARAGUS UMBELLATUS Link.**33735.** ASPARAGUS sp.

"No. 350-99."

**33736.** TRIFOLIUM PRATENSE L.**Red clover.**

From Trent, Austria. Presented by Prof. Edward F. Bassi, Consiglio Provinciale d' Agricoltura. Received May 31, 1912.

"Seed of a very valuable variety of clover, the so-called *Giant* or *Spodone*, which has been introduced of late from Italy and is very highly spoken of by all the farmers who have made experiments with it. I have had it tried myself as chief of the department for the improvement of crops in our Province and can safely say it wonderfully realized our most sanguine expectations, although grown in the most widely different conditions of soil and climate. Its yield may be put down at 25 to 30 per cent more than any other variety." (*Bassi.*)

**33737 and 33738.** GOSSYPIUM spp.**Cotton.**

From Coimbatore, India. Presented by Dr. C. A. Barber, Madras Government Botanist, Agricultural College. Received May 25, 1912.

Seeds of the following:

**33737.** *Karunganni.* From Koilpatti.**33738.** *Tellapatti.* From Nandyal.**33739.** HOLCUS SORGHUM L.**Sorghum.***(Sorghum vulgare Pers.)*

From Sennaar Province, Sudan Government. Presented by Mr. R. Hewison, Assistant Director of Agriculture, Department of Agriculture and Forests, Khartum. Received May 29, 1912.

"Seed obtained from wild plants."

**33740 and 33741.** BUNCHOSIA COSTARICENSIS Rose.

From San Jose, Costa Rica. Presented by Mr. Carlos Wrecklé, Museo Nacional. Received June 3, 1912.

"Cuttings of a small tree, bearing very good fruit and large pubescent leaves; prolific. Grows from cuttings, but root cuttings are said to be best." (*Wrecklé.*)

**33740.** White.**33741.** Red.**33743 and 33744.** CASTILLA GUATEMALENSIS Pittier.**Central American rubber.**

From Guatemala. Presented by Mr. Edward Reed, American consular agent; Livingston. Received May 31, 1912.

**33743 and 33744—Continued.**

Seeds of the following:

**33743.**

**33744.** "These seeds I obtained from near Panzos, 100 miles from here; they are from a very large tree, which is an exceptionally copious bleeder."  
(*Reed.*)

*Distribution.*—The Provinces of Yucatan and Tabasco in southern Mexico, and in Guatemala.

**33745 to 33748. ANNONA spp.**

From Colima, Colima, about 150 miles south of Guadalajara, Mexico. Presented by Mr. Samuel E. Magill, American consul, Guadalajara. Received June 1, 1912.

Seeds of the following:

**33745. ANNONA RETICULATA L. Custard-apple.**

"Anona de Colima."

**33746. ANNONA SQUAMOSA L. Sweetsop.**

**33747 and 33748. ANNONA RETICULATA L. Custard-apple.**

**33749. ABELMOSCHUS ESCULENTUS (L.) Moench. Okra.**

(*Hibiscus esculentus* L.)

From Avery Island, La. Presented by Mr. E. A. McIlhenny. Received May 31, 1912.

"These seeds are from a species of okra a friend of ours sent us from Egypt six or seven years ago. By careful selection we have produced a variety of okra which is unexcelled for table purposes. It is an early bearer and has a thicker flesh and is more tender than any of the commercial okra which we have tried." (*McIlhenny.*)

**33750. AMPELODESMA BICOLOR (Poir.) Kunth.**

From Algiers, Algeria. Presented by Dr. L. Trabut. Received June 5, 1912.

See No. 33654 for previous introduction.

Seed.

**33751. PISTACIA VERA L. Pistache.**

From Bronte, Sicily. Presented by Mr. Charles Beek. Received June 5, 1912.

See No. 33441 for previous introduction.

Seed.

**33752. TRITICUM AESTIVUM L. Wheat.**

(*Triticum vulgare* Vill.)

From Florence, Italy. Procured by Mr. Leo J. Kenna, American consul. Received June 11, 1912.

*Pistoria.* "This appears to be very similar to the Galgalos, a wheat which is rather commonly grown in the Panhandle of Texas and adjacent territory." (*Carleton R. Ball.*)

**33753. DIOSPYROS KAKI L. f. Persimmon.**

From Guo Iong, Kutien, Fukien, China. Presented by Dr. Thomas H. Coole, Superintendent, Wiley General Hospital of the Methodist Episcopal Church, Kutien. Received June 6, 1912.

"Square persimmon." (*Coole.*)

**33754 to 33759.**

From Albano, Stockholm, Sweden. Presented by Dr. Veit Wittrock, Director, Botanic Garden. Received May 31, 1912.

Seeds of the following:

**33754.** ASPERUGO PROCUMBENS L.

*Distribution.*—An annual herb found throughout Europe and northern Asia, and in northern Africa.

**33755.** CARAGANA ARBORESCENS Lam. Siberian pea tree  
Variety *pendula*.

**33756.** CARAGANA PYGMAEA (L.) DC.

*Distribution.*—A low undershrub with reddish-yellow flowers, found in central Asia from Afghanistan eastward to Tibet and Dauria.

**33757.** BERBERIS CRETICA L. Barberry.

**33758.** BERBERIS SERRATA Koehne. Barberry.

**33759.** BERBERIS THUNBERGII DC. Barberry.  
Variety *maximowiczii*.

**33760.** MEDICAGO SATIVA L. Alfalfa.

From Tangier, Morocco, Africa. Presented by Mr. Maxwell Blake, American consul general. Received May 31, 1912.

**33761.** CITRUS LIMONUM Risso. Lemon.

From Malta, Maltese Islands. Presented by Mr. James Oliver Laing, American consul, through the kindness of the Secretary of the Malta Horticultural Society. Received June 8, 1912.

"This new fruit is the result of experiments undertaken by the government expert here in the gardens of San Antonio and is called the San Antonio lemon.

"The specimen sent and the lemon from which the seeds were taken were chosen as exhibition fruits to be shown at the yearly fair of the Malta Horticultural Society and are therefore not only a new variety but the best specimens of it.

"The new fruit was labeled as follows at the fair: 'A seedling from a flat-shaped variety at San Antonio gardens and exhibited now for the first time.'" (*Laing.*)

**33762.** COCOS YATAY Martius. Yatay.

From Haedo, a suburb of Buenos Aires, Argentina. Presented by Mr. C. F. Mead, Buenos Aires. Received June 8, 1912.

"Found in southern Brazil, Paraguay, and northern Argentina, but these seeds are from a tree grown by Vicente Peluffo & Co., at their proving grounds near Haedo, which speaks well for its frost-resisting qualities. This coco grows to a height of about 5 meters and is very similar in looks and fruit to the date palm. Fruit in looks is similar to a small crab apple, except that it lacks luster; comestible and tastes something like a green pineapple." (*Mead.*)

**33763 to 33776.**

From Edinburgh, Scotland. Presented by Dr. Isaac Bayley Balfour, Director, Royal Botanic Garden. Received June 8, 1912.

Seed of the following:

**33763.** ARISTOLOCHIA ROTUNDA L. Birthwort.

*Distribution.*—Southern Europe, extending from southern Switzerland and northern Italy eastward to the vicinity of Trieste in Austria.



## 33763 to 33776—Continued.

33764. *CARISSA BISPINOSA* (L.) Desf. Carissa.  
(*Carissa arduina* Lam.)

33765. *CLEMATIS GREWIAEFLORA* DC. Clematis.

*Distribution.*—A woody climber found on the slopes of the Himalayas at an altitude of 3,000 to 5,000 feet, from Kumaon to Bhutan in northern India.

33766. *CLEMATIS MICROPHYLLA* DC. Clematis.

*Distribution.*—On river banks and along the coasts of Queensland, New South Wales, Victoria, and South Australia, and in Tasmania.

33767. *CLERODENDRUM FALLAX* Lindl.

*Distribution.*—Considered to be a native of Java.

33768. *CLERODENDRUM THOMSONÆ* Balf. f.

*Distribution.*—A climbing shrub with cymes of white flowers found in the delta of the Niger River in Upper Guinea, Africa.

33769. *CORNUS CAPITATA* Wall.

*Distribution.*—A small tree found at an altitude of 4,000 to 7,000 feet on the lower Himalayas from Kumaon to Bhutan in northern India.

33770. *ELAEAGNUS UMBELLATA* Thunb.

*Distribution.*—Southern Asia, extending from Afghanistan eastward through northern India and northern China to Japan.

33771. *ELAEODENDRON AUSTRALE* Vent. Couraivo.

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

33772. *ENKIANTHUS HIMALAICUS* Hook. f. and Thomson.

*Distribution.*—A tall shrub or small tree with orange-red flowers in umbels found at an altitude of 8,000 to 11,000 feet on the slopes of the Himalayas in Nepal, Sikkim, and Bhutan in northern India.

33773. *EUONYMUS YEDOENSIS* Koehne.

Described from cultivated plants and apparently only known in cultivation, but considered to be of Japanese origin.

33774. *SPIRAEA CHAMAEDRYFOLIA* L.

*Distribution.*—Southern Europe and central Asia, extending from Hungary eastward through southern Siberia to the Amur region.

33775. × *SPIRAEA FOXII* Zabel.

Considered to be a hybrid between *S. japonica* and *S. corymbosa*.

33776. *VIBURNUM BUREJAETICUM* Regel and Herd.

*Distribution.*—A tall shrub found in Manchuria and the western part of the Province of Hupeh in China.

33777. *CARYOPHYLLUS JAMBOS* (L.) Stokes. Rose-apple.  
(*Eugenia jambos* L.)

From Puerto Plata, Dominican Republic. Presented by Mr. Charles M. Hathaway, jr., American consul. Received June 13, 1912.

“A fruit known as ‘*pomarosa*’ (called by the English-speaking people ‘rose-apple’).”  
(*Hathaway*.)

Seed.

See No. 27571 for previous introduction.

**33778. ERIOBOTRYA JAPONICA (Thunb.) Lindl. Loquat.**

From Naples, Italy. Presented by Dr. Gustav Eisen, (California Academy of Science, San Francisco, Cal. Received June 13, 1912.

"The large loquat. Pear shaped, about 2 inches long." (*Eisen.*)

**33779. CAJAN INDICUM Spreng. Pigeon-pea.**

From La Noria, Mazatlan, Sinaloa, Mexico. Presented by Don Nat. O. y Osuna. Received June 10, 1912.

"Tree bean,' which gives good yearly crops. This bean can be sown one seed for each plant at 6 or 8 feet apart." (*Osuna.*)

**33780. ASPARAGUS ALBUS L. Asparagus.**

From near Byamor, Teneriffe. Presented by Dr. George V. Perez, Puerto Orotava. Received June 3, 1912.

See No. 33143 for previous introduction.

**33781 and 33782. CASSIA GRANDIS L. f.**

From Cuba. Presented by Roberto L. Luáces, agricultural engineer, Camaguey, Cuba. Received June 15, 1912.

"The '*Cauandongá*' tree. The fruits are much used through the province of Oriente (Santiago de Cuba) as food and for the making of something like chocolate. The smell of the fruit is bad, very bad, but the taste is not. The local varietal names are misnomers, for the translations are 'with bone' and 'without bone'; this last is the best. The tree is pretty and could be grown as a shade tree in the South, and some application may be found for the fruit. I do not know the botanical name and only that the *Con Hueso* class (S. P. I. No. 33781) is called in the other parts of this island '*Cana-fistula.*'" (*Luáces.*)

"A small wing-leaved tree of the bean family, producing abundance of yellow flowers, native of the East Indies, and now common in most tropical countries. It produces a smooth cylindrical pod twice the thickness of the finger and sometimes 2 feet in length. The interior is divided into numerous transverse portions, each containing a seed embedded in pulp of a sweet taste, which forms an important laxative medicine. The leaves, as also those of *Cassia alata*, are used as a cure for ringworm." (*John Smith, Dictionary of Popular Names of Economic Plants, 1882.*)

**33781.** Variety *Con Hueso* (with bone).

**33782.** Variety *Sin Hueso* (without bone).

**33783. OLEA FOVEOLATA E. Meyer. Olive.**

From East London, Cape Colony. Presented by Mr. Charles P. Lounsbury, Chief, Division of Entomology of the Department of Agriculture of the Union of South Africa, Pretoria. Received June 15, 1912.

See No. 25846 for previous introduction.

**33784 and 33785.**

From Costa Rica. Presented by Mr. Carlos Wercklé, National Museum, San Jose. Received June 17, 1912.

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

**33784.** *CASTILLA NICOYENSIS* O. F. Cook. **Central American rubber.**

"Variety from Río Grande, El Coyolar."

*Distribution.*—A tree found in the Nicoya Peninsula on the western coast of Costa Rica.

**33784 and 33785—Continued.****33785.** *PASSIFLORA* sp.**Passion fruit.**

"A species which has all the aspect of smilax."

**33786 and 33787. CYMBOPOGON spp.**

From Trivandrum, Travancore, southern India. Presented by Mr. N. Kunjan Pillai, Director of Agriculture, Travancore, southern India. Received April 1, 1912. Numbered June 20, 1912.

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

**33786.** *CYMBOPOGON CITRATUS* (DC.) Stapf.**Citronella grass.***(Andropogon citratus DC.)*

This species and the next have been listed in previous numbers of these inventories as *Andropogon citratus* and *A. nardus*, respectively, but recent students of grasses, and especially Stapf, who has published a monograph of the oil grasses, recognize the two as belonging to the distinct genus *Cymbopogon*.

"A grass yielding oil in a fairly large quantity. It is locally known as *Sambarapulla*, being used for flavoring buttermilk. This grass is more common in Ceylon and along the east coast. In the interior of Travancore it occurs not in abundance. There is reason to believe that the grass came from Ceylon, because near Cape Comorin and up to a place called Arakkanikulam the grass occurs in abundance. Another peculiarity is that, while I have never seen this grass in flower in Ceylon either under cultivation or in a native condition, it flowers freely amidst the bowlders of Arakkanikulam on either side of the main road and also near the cape in Maruthuvamala. This I think is due to its transport into a hotter locality. The bowlders get heated and the grass lying between gets 'forced,' as plants are in the hothouses in other countries. When I saw the grass the last time it was getting a disease corresponding to the black rust of cholam (maize). The pest was just beginning. The plants which I have selected are free. This grass is mixed with other andropogons and distilled. The industry is in the hands of the uneducated and no sorting of varieties is done, because knowledge is absent."

**33787.** *CYMBOPOGON NARDUS* (L.) Rendle.**Citronella grass.***(Andropogon nardus L.)*

"A grass very common all over Travancore, except at great elevations and very near the seacoast. In soft alluvial loam and under careful cultivation this grass grows to a height of 6 or 8 feet. This grass can be very easily identified by a light magenta tinge from the bottom upward. The spikes are short and the leaves are narrow. It is locally known as *Chukku-Nari-Pullu* (the grass smelling like *Zinziber officinale*).

"In Travancore I do not know of many places where this grass is taken up for cultivation. It is collected from the jungle by women getting between 4 and 5 chuckrums (2 to 3 annas) a day. A monster vessel of copper is installed as a primitive vat. In one day 1½ bottles of oil could be obtained. The prices vary from 3 to 6 rupees for a bottle of 24 ounces.

"Mr. A. F. Sanderson, the then Deputy Conservator of Forests, and Mr. Miller, a manager of the Vellnad Plumbago Mines, made an attempt to open an estate of oil-grass. They went on for some time unmindful of the outside talk and collected a fair quantity of oil, but the business was dropped because it was taken up only as a side industry of test. Other beginnings were made which were but short-lived. One hundredweight of leaves is said to yield about 3 ounces of oil. The pure oil is thin, colorless, and strong, with a citronlike flavor.

**33786 and 33787—Continued.**

"The average exportation of citronella from Colombo is about 40,000 pounds, valued at £8,000, or about 4 shillings and 1 penny per pound. It is largely used to give the peculiar flavor to what is known as 'honey soap' and in the making of perfumes. In Travancore the propagation of this grass is left to nature, no care of any kind whatever being given. It is treated purely as a natural product of the jungle. It is even looked down upon as a glutton upon soil food, deserving, if possible, extermination and cremation. In Ceylon the citronella grass is raised from seed and planted like guinea grass and will give two or three crops a year. When fit to cut, the grass is carried to a large boiler and the oil is distilled. It is estimated to give about three dozen bottles to the acre, but the demand is limited and the price fluctuates from 2 shillings and 6 pence a bottle to 4 shillings and 6 pence. At the latter price it pays handsomely, while at the former it little more than covers the expenditures. A still capable of turning out a dozen bottles a day costs £300.

"A decoction of the leaves is used, it is said, to purify blood. It is also given in cases of cough and used in steam baths for colds. Externally, it is applied to remove rheumatic pains, in which case it is said to equal the oil of the famous *Samadera indica* of the sandy regions of North Travancore. The oil is said to be good for cholera. For children it is a good tonic. It is also a stimulant and diaphoretic."

**33788. CITRUS AURANTIUM SINENSIS L.****Orange.**

From the Atlas Mountains, Algeria. Presented by Dr. L. Trabut, Algiers. Received June 20, 1912.

"A late orange from the Atlas Mountains. Cultivated in the valleys of the mountains. Fruit excellent; grown from seed by the natives." (*Trabut.*)

**33789 and 33790. PRUNUS sp.**

From St. Petersburg, Russia. Received through Mr. Frank N. Meyer, agricultural explorer, for this Department, April 2, 1912.

These seeds were picked out of S. P. I. No. 33312. See this number for remarks.

**33791. CHRYSOBALANUS ICACO L.****Icaco.**

From San Jose, Costa Rica. Presented by Mr. Carlos Wercklé, National Museum. Received June 19, 1912.

"A much improved, superior variety; black." (*Wercklé.*)

See No. 32402 for previous introduction.

**33792. PANAX QUINQUEFOLIUM L.****Ginseng.**

(*Aralia quinquefolia* Decne. and Planch.)

From Seoul, Chosen (Korea). Presented by Miss Katherine Wambold, care of Severance Hospital. Received April 25, 1912. Numbered June 10, 1912.

*Distribution.*—Throughout the eastern part of the United States from Canada southward to the mountains of Georgia, and in Manchuria, Chosen (Korea), and Japan.

**33793. RUBUS HAWAIIENSIS A. Gray.****Akala.**

From the Kau District, Island of Hawaii. Presented by Mr. Ralph S. Hosmer, Superintendent of Forestry, Honolulu. Received June 24, 1912.

"The native raspberry, akala. This species is quite generally distributed through this Territory between the elevations of 3,500 and 5,000 feet. It is a tall-growing

**33793—Continued.**

shrub, the canes frequently reaching a height of 12 to 15 or more feet. The fruit is large, from an inch to an inch and a half in length and about an inch in diameter. The flavor is a rather sharp, but to me a pleasant acid. It has always seemed to me that this raspberry might with advantage be crossed with some cultivated variety." (*Hosmer.*)

**33794 and 33795.**

From Seychelles Islands. Presented by Mr. P. Rivaly Dupont, curator, Botanical Station. Received June 7, 1912.

Seeds of the following:

**33794.** MUCUNA GIGANTEA (Willd.) DC.

**33795.** VIGNA LUTEA (Swartz) A. Gray.  
(*Vigna retusa* Walp.)

**33796. (Undetermined.)**

From Montevideo, Uruguay. Presented by Mr. Frederic W. Goding, American consul. Received June 25, 1912.

"Red quebracho, the wood of which forms a most valuable timber and also furnishes tannin in large quantities."

**33797 to 33799. GOSSYPIUM spp.****Cotton.**

From China. Presented by Rev. Hugh W. White, American Presbyterian Mission, Yentcheng, Kiangsu, China. Received June 20, 1912.

Seeds of the following; quoted notes by Rev. Mr. White:

This is seed from last year's crop. All three varieties are grown as field crops. The Chinese cotton is generally recognized as being inferior to American. Whether they may have some superiority in the matter of adaptability to poorer soils, I am unable to say. My friends here say they do not raise cotton on land that will bring anything else. So far as I know, these are native varieties. The fiber is used for spinning in the hand fashion. The native cloth is all woven of this cotton. The plants on good soil are said to grow hip high, but what I have seen is usually not much over the knees. The Hsuchoufu varieties have yellow and white flowers mixed. The Yentcheng variety is said to be only white. Both have the purple center."

**33797.** GOSSYPIUM HIRSUTUM L.

From Yentcheng.

**33798.** GOSSYPIUM NANKING Meyen.

From Hsuchoufu. "Long staple."

**33799.** GOSSYPIUM NANKING Meyen.

From Hsuchoufu. "Short staple."

**33800 to 33911.**

From Chile. Received through Mr. José D. Husbands, Limavida, Chile. Received 1911. Numbered June 25, 1912.

Seeds of the following; quoted notes by Mr. Husbands unless otherwise noted:

**33800.** ASTERISCIUM CHILENSE Cham. and Schlecht.

"(No. 709.) '*Anisillo.*' '*Muchu.*' Refreshing febrifuge for debility of the stomach, fragrantly aromatic. Plant gives a great quantity of seeds and might give an industrial oil, extract, or essence."

*Distribution.*—In dry, sandy places in the vicinity of Talcahuano, central Chile.

**33800 to 33911**—Continued.

**33801.** *FAGELIA* sp.  
(*Calceolaria* sp.)

“(No. 698.) This is a perennial variety with a large plant growth, all of which is fragrant and extra sticky. It may be valuable for extracting a fragrant gum or oil useful for perfumers. It is covered by a mass of lemon-yellow flowers. These plants seek the sides of ravines, embankments, cuts, perpendicular rocks, ditches, dry canals, rockeries, anywhere where conditions seem unfavorable and moisture scarce. Growing in a few atoms of dry earth or drooping from the sides of perpendicular or solid rocks it is a charming sight. Seed sown in the sides of the western canyons would decorate them beyond belief.”

**33802 to 33806.** *DIOSCOREA* spp.

**Yam.**

“‘*Huanque.*’ Decorative vines whose tubers are edible. There is a great variety of these in Chile. Some are very dainty; others have large bunches of seed pods that glisten like gold and silver.”

**33802.** “(No. 621.) Mixed. A dainty vine, good for table or window decoration.”

**33803.** “(No. 622.) Dainty vine.”

**33804.** “(No. 623.)”

**33805.** “(No. 980.) From Volcano Antuco.”

**33806.** “(No. 1088.) From the seacoast of Aconcagua. ‘Seeds are differently distinct.’”

**33807.** *LINUM* sp.

“(No. 768.) ‘*Retamilla.*’ Indian name ‘*Nancolahuen.*’ A small beautiful plant, with straight, upright stems, growing 6 to 8 inches high; bears an abundance of beautiful, bright-yellow flowers. Is suitable for a border or bedding; needs no trimming. It grows dry in the uplands in any dry, arid soil. Is astringent and much used for indigestion, flatulence, and diseases of the stomach.”

**33808.** *ECCREMOCARPUS SCABER* Ruiz and Pavon.

“(No. 632.) A beautiful perennial vine, with crimson and yellow flowers shaped like a gunstock. Called commonly ‘*Sultana.*’”

*Distribution.*—A half-shrubby climber common along fences and in fields in Chile.

**33809.** *EUPATORIUM SALVIA* Colla.

“(No. 654.) ‘*Salvia.*’ A perennial bush with a profusion of lavender flowers that perfume the air to a great distance. About 5 feet high; evergreen. Early bloomer; worth cultivation.”

*Distribution.*—In the woods in the vicinity of Valparaiso in Chile.

**33810.** *GNAPHALIUM* sp.

“(No. 828.) ‘*Vira-vira.*’ ‘*Yerba de la vide.*’ Has a volatile oil. Is sudorific, febrifuge, expectorant, etc. Applied with good results in catarrh, bronchitis, and injections to cure wounds, etc.”

**33811.** *PHYSALIS PUBESCENS* L.

**Ground-cherry.**

“(No. 650.) ‘*Capuchinos.*’ ‘*Capuli.*’ ‘*Tomate de cascara.*’ Biennial and perennial without frost; flowers, light canary yellow; center, lavender and brown. Fruits all the season until frost, when the leaves fall, but the plant survives for the next season. An edible and healthful fruit. Plant is ornamental and might produce a perennial tomato by hybridization.”

*Distribution.*—In sandy soil from Pennsylvania to California and southward through Central America and South America to Chile; also in India.

## 33800 to 33911—Continued.

33812. *SENECIO* sp.

“(No. 669.) ‘*Siete camisas*’ (seven shirts). A big-leaved, hollow, quick-growing, showy, and extremely ornamental small tree with immense bunches of yellow aromatic flowers about 2 feet long by 15 inches wide, making it visible from one mountain to another. It is a beautiful tree for lawn, park, or garden decoration. The leaves and flowers of this plant are tonic, emmenagogue, etc. The plant pounded or the juice mixed with oil or grease cures wounds and allays inflammation caused by broken bones, etc.”

33813. *PASSIFLORA PINNATISTIPULA* Cavanilles.

Passion fruit.

(*Tacsonia pinnatistipula* Juss.)

“(No. 1300.) ‘*Tumbo*.’ ‘*Granadilla de Chile*.’”

*Distribution*.—The vicinity of Valparaiso in Chile.

33814. *PASSIFLORA PINNATISTIPULA* Cavanilles.

Passion fruit.

(*Tacsonia pinnatistipula* Juss.)

“(No. 1080.) ‘*Granadilla de Chile*,’ ‘*Tumbo*.’ From Aconcagua seacoast. The wild fruiting variety of Chile. An elegant vine with pink flowers and long stems to which the light-yellow fruit hangs. Is somewhat smaller than the Peruvian *pasionaria*, but is of the same flavor. Fruit, 2 to 2½ inches in diameter. Will not stand frost.”

33815. *TREVOA TRINERVIA* Gill. and Hook.

“(No. 758.) ‘*Trevu*.’ ‘*Trebu*.’ A good treelet for live fences if it is cut back when young and large wood growth prevented. It makes a mass of thorns on small wood so dense that nothing can pass it. In the roads where carts and traffic have pruned the plants they become a splendid fence that defies destruction by any class of rough usage, soil, extreme drought, or perpetual dry conditions. The wood is very hard and fibrous and never grows larger than one’s wrist. It makes extra-good fuel. The clusters of fragrant white flowers and the leaves are used as soap for washing clothes, etc.”

*Distribution*.—Slopes of the mountains in Chile at an elevation of 2,000 to 2,500 feet.

33816. *TREVOA TRINERVIA* Gill. and Hook.

“(No. 1163.) ‘*Trevu*.’ From the province of Valparaiso.”

“A branching shrub with horizontal spines and compressed branches. A decoction of the wood is used for wounds and ulcers.” (*W. E. Safford*.)

## 33817 and 33818. (Undetermined.)

“A curious lemon-colored lily with brown striping; flowers about ½ inch in diameter. Each plant is distinctly different, but the flowers are the same. I think it is perennial.”

33817. “(No. 624.)”

33818. “(No. 625.)”

33819 to 33822. *ALSTROEMERIA LIGTU* Falck.

“A large assortment of colors; in fact, no two plants are exactly alike in color combination.”

*Distribution*.—Along streams in the vicinity of Concepcion in Chile.

33819. “(No. 660.) This may be called the large variety. The plant is about 24 to 36 inches in height and has an immense bunch of bloom on each stem all in flower at the same time.”

**33800 to 33911**—Continued.**33819 to 33822**—Continued.

**33820.** “(No. 661.) This may be called the dwarf variety. The plants grow from 6 to 15 inches high, flowers the same kind and size as No. 660 (S. P. I. No. 33819), but somewhat less in number and of different colors.”

**33821.** “(No. 876.) *Linto*. A different strain from Nos. 660 and 661 (S. P. I. Nos. 33819 and 33820). The tubers of all *Linto* are very valuable for making the famous Chuno or arrowroot, a valuable food for infants, the sick, and convalescing. It is an especially good food for sufferers with inflammation of the stomach or digestive canals.”

**33822.** “(No. 1136.) *Linto*. From the seacoast near Illoca, province of Curico. Bears a pale-lemon and dark-yellow flower; extra handsome.”

**33823.** *SCHINUS HUIGAN* Molina.

(*Schinus dependens* Ortega.)

“(No. 705.) A treelet actually black with seed fruit; ornamental.”

See No. 25798 for previous introduction.

**33824 to 33827.** *CEREUS QUISCO* Gay.**Quisco.**

**33824.** “(No. 1073.) A tiny, round, dwarf variety about 2 inches in diameter, round as a ball; bears large crimson flowers and small fruit. Comes from the seacoast.”

**33825.** “(No. 1074.) From inland central Chile, near the river Mataquito. A very tall variety with few stalks that grow perfectly straight. Bears an immense semidouble, white, fragrant flower. Fruit, edible.”

**33826.** “(No. 1075.) From Cordillera Maritima, central Chile. A fruiting class with large pink flowers.”

**33827.** “(No. 1076.) From the ‘Quebrada de los Perros’ (Ravine of the Dogs), central Chile.”

**33828.** *MAIHUENIA PÖEPPIGII* (Otto) Philippi.**Maihuen.**

(*Pereskia poeppigii* Salm-Dyck.)

“(No. 986.) ‘*Maihuen*,’ ‘*Herba del Gunaco*.’ From the Volcans Antuco.”

**33829 to 33832.** *CEREUS QUISCO* Gay.**Quisco.**

“Different dwarf classes which grow in the crevices of the rocks in the summits of hills and mountains below the snow line. Have pink, red, and crimson flowers. Pot-bellied, melon shaped.”

**33829.** “(No. 656.) Echinocactus. Dwarf, melon-shaped. Dark pink flowers.”

**33830.** “(No. 657.) Echinocactus. Dwarf; crimson-flowered paula. Like a pot-bellied melon.”

**33831.** “(No. 658.) Dwarf. Flowers not seen. May be mixed.”

**33832.** “(No. 659.) Dwarf quisco. An extra-rare variety with beautiful cream-colored flowers with pink tips.”

**33833.** *ACACIA CAVENIA* (Mol.) Bert.**“Espino.”**

“(No. 1011.) From the ‘Quebrada de los Perros’ (Ravine of the Dogs). This tree has a compact growth, with no part of the limbs naked of foliage. The spines are shorter and more generally distributed. When green they are not soft like some, but as sharp and hard as steel. Getting these seeds with care, I cut my hands in many places. This also has somewhat less growth than others.



**33800 to 33911**—Continued.

Having studied the subject of live fences, I have concluded that this tree will serve admirably and be extremely valuable, for the following reasons in part:

"The tree is long lived and grows quickly. If cut back it forms a dense mass that light will not pass. The wood is extremely hard and elastic when alive; no person or animal can break through. The thorns are so sharp that they are used to extract slivers in preference to a needle. Is extremely ornamental. Grows in any dry soil or sand. A seedling plant a very few weeks old, 6 inches high, has a taproot growth of 18 inches or more. It seeks the moisture at any depth and having reached it the first season is quite independent of surface conditions. If soaked until sprouted, it will grow anywhere in any dry, poor, arid clay or sandy soil, especially if sown in the late fall and the winter rains are allowed to force the root growth. In the spring the taproot has then reached permanent moisture. Sheep are very fond of the seed and new growth; goats and horned cattle also, although the latter do not eat the seeds (it is the pod they eat). The seeds are undigested and being soaked in the stomach readily sprout; in this manner they are naturally sown. When a field has been plowed and cleared of brush for sowing wheat, etc., the espinos sprout anew very quickly.

"Sheep and goats will leave a field having ample pasture and by preference occupy these bare plowed lands solely to eat the new growth of this tree; sheep stand upon their hind legs and stretch their necks to reach the branches of this tree, while goats jump into them or mount upon the backs of their fellows to reach new growth. This feeding from the tree does no damage in any way; it makes the tree more beautiful and increases the food growth. This is the most valuable tree on a Chile farm. A branch can be used to stop up a fox or hog hole or break in the fence; it also serves for lasting fence posts. Branches tied together are used as drags to sow surface seeds, such as alfalfa; this pulverizes the land and covers the seed properly. For charcoal fuel it is the best.

"If pruned as a seedling it forms a most beautiful, round, ornamental, thorned tree. The flowers appear before the leaves; all the branch wood is covered with a dark yellow bloom which perfumes the surrounding air and gives the appearance of a tree covered with yellow snow. The taproot of a plant a month old will be from 12 to 18 inches long. It thrives in the dry lowlands and its taproot finds the moisture, no matter how deep. Its charcoal is the most durable and hottest fuel known and leaves an abundance of long-lasting coals.

"The wood is extra hard, flexible, and nonrotting in the air or in the ground. It is used for fence posts, spokes of the heaviest carts and coaches, teeth of mill cogwheels, and is extra useful for weaving into three wires for a fence that nothing can pass. The new growth is very flexible and easily bent into wires; when dry it is rigid. This fence lasts about five years, then the wood is removed for fuel and new wood again placed. The old way, when the wood is abundant, is not to employ wire but to pile the wood and branches against each other; as the small branches dry and break off new ones are added on top. The heart never rots. If an adult tree is headed back it grows in a beautiful, dense ball and always retains this shape; if cut it quickly sprouts again. Its inner bark is useful to tie up anything. The bark, quintral, and moss are valuable dyes. If cut it grows again before it is wanted. The bark boiled in water is used to cure bruises and ulcers. The seeds are a digestive and a stimulant."

**33834.** ACACIA CAVENTIA (Mol.) Bert.

"Espino."

"(No. 1162.) '*Espino*.' From the Province of Valparaiso."

See S. P. I. No. 33833 for description.

**33800 to 33911**—Continued.**33835.** AZARA GILLIESII Hook. and Arn.“(No. 1083.) ‘*Lilen.*’ From the seacoast, Aconcagua.”**33836.** EPILOBIUM sp.“(No. 1105.) ‘*Chinchin.*’ From Chiloe.”**33837.** AZARA SERRATA Ruiz and Pavon.“(No. 946.) ‘*Corcoleu.*’”

“This is a superb tree of moderate growth, has dark extra-glossy leaves and white-seeded berries. When in flower it is rarely beautiful; the entire tree is covered with lacelike flowers, orange yellow and very fragrant. The seeds seem to play no part with the flowers, which are fastened to the wood, while the seeds are in drooping clusters.”

**33838 to 33840.** ACACIA spp.

“*Aromo.*’ Three different varieties, of merit as ornamental trees of great beauty.”

**33838.** ACACIA LONGIFOLIA (Andr.) Willd.

“(No. 947.)”

**33839.** ACACIA sp.

“(No. 948.)”

**33840.** ACACIA MELANOXYLON R. Brown.

“(No. 949.)”

*Distribution.*—A large tree with very hard black wood, found in New South Wales, Victoria, and South Australia, and in Tasmania.

**33841.** AZARA sp.

“(No. 1004.) ‘*Aromo.*’ From Concepcion. Yellow flowered; a handsome ornamental.”

**33842.** BACCHARIS CONFERTIFOLIA Colla.

(Baccharis chilquilla DC.)

“(No. 912.) ‘*Chilquilla.*’”

*Distribution.*—An erect shrub found in copses and woods in the vicinity of Valparaiso, Chile.

**33843.** BERBERIS CHILENSIS Gill.**Barberry.**

“(No. 1053.) ‘*Michay.*’ From the vicinity of the Antuco Volcano. A small variety with numerous leaves, and spines about three-fourths of an inch long upon all sides. Grows about 4 feet high.”

**33844 to 33848.** BERBERIS spp.**Barberry.**

**33844.** “(No. 1054.) ‘*Michay.*’ From the River ‘Paugue,’ central Chile. A distinct class about 6 feet high, bearing an abundance of large fruits which hang in large bunches.”

**33845.** “(No. 1055.) ‘*Michay.*’ From dry, central Chile. Grows about 2 feet high.”

**33846.** “(No. 1056.) ‘*Michay.*’ From central Chile. Grows about 2 feet high.”

**33847.** “(No. 951.) ‘*Michay.*’ From near the seacoast.”

**33848.** “(No. 844.) ‘*Michay.*’ Has an edible fruit.”

**33849.** BERBERIS CHILENSIS Gill.**Barberry.**

“(No. 856.) ‘*Calafate,*’ also called ‘*michay*’ or ‘*michai,*’ as all Berberis are known by these common names. Seeds taken from plants from Chiloe and Llanquihue.”

## 33800 to 33911—Continued.

**33850.** BERBERIS CHILENSIS Gill.

**Barberry.**

"(No. 1330.) '*Calafate.*' A new strain having blue fruit that is extra-sweet."

**33851.** BOQUILA TRIFOLIATA (DC.) Decaisne.

"(No. 1331.) '*Pilpil voqui.*' A rare variety."

See No. 26309 for description.

**33852.** EMBOTHRIMUM COCCINEUM Forst.

**Notra.**

"(No. 1291.) '*Tiaca.*' '*Quiaca.*' A beautiful bush with white flowers; famous for its flexibility."

**33853.** CALDCLUVIA PANICULATA (Cav.) Don.

"(No. 1336.) '*Tiaca.*' A flexible wood very much like hickory; different from No. 1291 (S. P. I. No. 33852)."

**33854.** HELENIUM GLAUCUM (Cav.) Stuntz.

(*Cephalophora glauca* Cavanilles, Icones, vol. 6, p. 80, pl. 599, 1801.)

Seeds of this asteraceous plant from Chile were received under the name *Cephalophora glauca* Cav. Since *Cephalophora* is now considered merely a section of the genus *Helenium*, it is necessary to use the name *Helenium glaucum*, which seems never to have been published.

"(No. 914.) '*Poquil.*'"

"Used medicinally and for dyeing." (*W. E. Safford.*)

**33855.** COLLETIA SPINOSISSIMA J. F. Gmelin.

(*Colletia spinosa* Lam.)

"(No. 1067.) '*Junco blanco.*' From near the River Itata. A valuable plant for fences and for honey, of which it makes a most delicious kind of its own, unequaled. It also has the advantage of growing dry in loose and drifting sands that will not maintain any other plant. It might make a desert productive."

**33856.** COLLETIA SPINOSISSIMA J. F. Gmelin.

(*Colletia spinosa* Lam.)

"(No. 1068.) '*Junco blanco.*' From the Antuco."

See No. 33855 for description.

**33857 to 33859.** SOPHORA MACROCARPA Smith.

**33857.** "(No. 1016.) '*Mayu.*' From the Volcano Antuco."

**33858.** "(No. 1017.) '*Mayu.*' From near the Volcano Antuco."

**33859.** "(No. 916.) '*Mayu.*' Blooms in the spring, the flowers hanging like earrings in drooping bunches."

**33860.** (Undetermined.)

"(No. 1282.) '*Mayu del Monte.*' A most beautiful flowering bush; equal to any of its class or character in cultivation. Flowers face upright in big clusters like a giant hydrangea. Blooms in the fall."

**33861 to 33863.** SOPHORA TETRAPTERA J. Miller.

**33861.** "(No. 1019.) '*Pelu.*' From the cordilleras of the Volcano Antuco."

**33862.** "(No. 1020.) '*Pelu.*' Another variety that grows farther north on the seacoast."

**33863.** "(No. 838.) '*Pelu.*'"

## 33800 to 33911—Continued.

33864. *EMBOTHRIUM COCCINEUM* Forst.

Notra.

"(No. 853.) '*Ciruelilla*.' '*Notra*.' An elegant, crimson-flowered, ornamental tree."

"A beautiful tree, 30 feet high. Wood used for furniture." (*W. E. Safford*.)

33865. *ENARGEA RADICANS* (R. and P.) Mueller.(*Luzuriaga radicans* R. and P.)

"(No. 1332.) '*Esparto*.' '*Quilinejo*.' Fruit called '*Coral*.' A delightfully ornamental vine that clings closely to the bark of trees, stumps, and logs and adorns them with a dainty grace without hiding their natural forms. The light-green leaves, white or crimson flowers, with crimson or yellow fruit at the same time, gives a floral decoration of rare elegance. The vine is used by the Indians for making ropes, brooms, brushes, and baskets, some of which are of great beauty. This plant is worth consideration as an industrial and ornamental plant of value."

33866. *ENARGEA RADICANS* (R. and P.) Mueller.(*Luzuriaga radicans* R. and P.)

"(No. 851.) '*Quilinejo*.' '*Esparto*.' Fruit is called '*Coral*' and '*Coral del monte*.'"

See No. 33865 for description.

33867. *HEPETIS* sp.

"(No. 911.) '*Cardoncillo*.'"

33868. *ERYNGIUM ROSTRATUM* Cavanilles.

"(No. 908.) '*Cardilla*.'"

"A glabrous plant with thick roots found in the province of Valparaiso to Concepcion and Malleco; also Polynesia and Australia. Used as an antidote for the bite of the very poisonous spider, *Latrodectus formidabilis*." (*W. E. Safford*.)

33869. *EUCRYPHIA CORDIFOLIA* Cav.

Muermo.

"(No. 1333.) '*Ulmo*.' '*Muermo*.' From the interior altitude of the cordillera."

"A magnificent evergreen tree which whitens the forest with its blossoms. The flowers yield an abundance of honey. The wood is excellent and withstands moisture. Perfectly hardy." (*W. E. Safford*.)

33870. *EUCRYPHIA CORDIFOLIA* Cav.

Muermo.

"(No. 1292.) '*Ulma*.' '*Muermo*.' From the coast lowlands of Chiloe."

See No. 33869 for description.

33871. *FLAVERIA BIDENTIS* (L.) Robinson.(*Ethulia bidentis* L., Mantissa, p. 110, 1767.)(*Milleria contrayerba* Cav., Icones, vol. 1, p. 2, 1791.)(*Flaveria contrayerba* (Cav.) Persoon, Synopsis, vol. 2, p. 489, 1807.)

Seeds of this asteraceous biennial from Chile were received under the name *Flaveria contrayerba* (Cav.) Persoon. The earliest name to be applied to the plant, however, is *Ethulia bidentis* L., as shown by Robinson (Proc. Amer. Acad., vol. 43, p. 42, 1907).

"(No. 1006.) '*Contra Yerba*.'"

*Distribution*.—Along roads and in cultivated fields in Peru and Chile.

33872. *FLOURENSIA THURIFERA* (Mol.) DC.

Maravilla

(*Helianthus thurifer* Molina.)

"(No. 1135.) '*Maravilla del Campo*.' From the Aconcagua seacoast."

**33800 to 33911—Continued.**

"A shrub with more or less deciduous foliage, abounding in an aromatic resin, which in early times was used for incense. Flowers bright golden yellow, in the month of October lighting up the hills of the provinces of Aconcagua, Valparaiso, and Santiago." (*W. E. Safford.*)

*Distribution.*—A shrubby perennial found in sterile soil in the vicinities of Coquimbo and Valparaiso in Chile.

**33873.** GALIUM CHILENSE Hook. f.

(*Galium chonoense* Hook. f.)

"(No. 892.) '*Relbun.*' From the interior of the province of Valdivia. A red-dye plant."

**33874.** GOCHNATIA RIGIDA Don.

"(No. 1089.) '*Mira.*' From the seacoast of Aconcagua."

*Distribution.*—A stiff shrub found on the slopes of the Andes in the vicinity of Valparaiso in Chile, and in the province of Mendoza in Argentina.

**33875.** GREIGIA LANDBECKI (Lechl.) Philippi.

"(No. 1334.) '*Chupones.*' '*Nochas.*' This is the spineless variety whose fibrous leaves are used for making ropes, baskets, etc."

**33876.** GREIGIA LANDBECKI (Lechl.) Philippi.

"(No. 852.) '*Chupon.*' '*Nocha.*' This is from Llanquihue, south of Chiloe, and may not be the seedless Valdivia variety."

**33877.** LARDIZABALA BITERNATA Ruiz and Pavon.

"(No. 894.) '*Coquil.*'"

"A climber, with long, tough stems suitable for cordage." (*W. E. Safford.*)

"A beautiful vine with edible fruit; the flowers are not large but strange in form and of rare color. The vine is very useful and serves when wet to tie bales, etc. That of central Chile only reaches a thickness of about half an inch, as they are cut frequently; in the south I have seen them several inches in diameter."

**33878.** LAURELIA SEMPERVIRENS (Ruiz and Pav.) Tul.

(*Laurelia aromatica* Juss.)

"(No. 846.) '*Laurel.*' Medicinal."

"A handsome tree of southern Chile belonging to the Monimiaceæ. The wood is durable and is never bored by insects. Much used for flooring. It would be fine for planting on our northwest coast." (*W. E. Safford.*)

**33879.** LAURELIA SEMPERVIRENS (Ruiz and Pav.) Tul.

(*Laurelia aromatica* Juss.)

"(No. 1134.) '*Laurel.*' From the Antuco Volcano."

See No. 33878 for description.

**33880.** LITHREA CAUSTICA (Mol.) Hook. and Arn.

(*Lithrea venenosa* Miers.)

"(No. 1000.) '*Litre.*' From near the seacoast, Maule. A new dwarf, round-growing, ornamental evergreen; grows beehive shaped. The covering of these seeds contains grease or wax."

**33881.** LITHREA CAUSTICA (Mol.) Hook. and Arn.

(*Lithrea venenosa* Miers.)

"(No. 1085.) '*Molle.*' From the seacoast of Aconcagua."

See No. 33698 for description.

**33800 to 33911**—Continued.**33882.** (Undetermined.)“(No. 862.) ‘*Romecillo.*’ ‘*Romerillo.*’ From Chiloe.”**33883.** *TRICONDYLUS FERRUGINEUS* (Cav.) Salisb.( *Lomatia ferruginea* R. Brown.)“(No. 1296.) ‘*Huinque.*’ Has few leaves, but these are large and elegant. Bears large bunches of yellow flowers. The plant needs moisture. A decoction made from it is used for Lepidias.”*Distribution.*—A shrub found on inundated flats along the coast of Chile.**33884.** *MADIA SATIVA* Molina.**Madia.**“(No. 1005.) ‘*Melosa.*’”“An annual. Seeds oily, edible. The ancient Chileans, according to Molina, derived oil from the seeds, probably very much like that from the seeds of *Helianthus.*” ( *W. E. Safford.* )**33885.** *MAYTENUS BOARIA* Molina.“(No. 1010.) ‘*Maiten.*’ From the River Itata.” See S. P. I. Nos. 3394 and 26322 for description.**33886.** (Undetermined.)“(No. 885.) ‘*Yerba negra.*’ ‘*Dichillo.*’ From the interior of the province of Valdivia. A bush with yellow flowers like chrysanthemums.**33887.** *MYRCEUGENIA FERNANDEZIANA* (Hook. and Arn.) Johow.( *Myrtus fernandeziana* Hook. and Arn.)“(No. 837.) ‘*Luma.*’ Wood is extra hard, elastic, and everlasting.”**33888 to 33896.** *MYRTUS* spp.

“Different varieties; you will find plants showing some distinct and separate characteristic in almost each separate locality of the Cordilleras.”

**33888.** “(No. 1036.) ‘*Arrayan.*’ From Antuco Volcano. A special class growing 15 feet high and bearing enormous quantities of fruit.”**33889.** “(No. 1037.) ‘*Arrayan.*’ From near Antuco.”**33890.** “(No. 1039.) ‘*Arrayan.*’ From near Antuco Volcano. A large, fine-flavored variety.”**33891.** “(No. 1040.) ‘*Arrayan.*’ From near Antuco.”**33892.** “(No. 1041.) ‘*Arrayan.*’ From near Antuco.”**33893.** “(No. 1038.) ‘*Arrayan.*’ From the Itata River. A small treelet with an abundance of extra-large fruit, fine flavored. This is a distinct plant and the only one of its kind seen.”**33894.** “(No. 1168.) ‘*Arrayan.*’ From the province of Valparaiso. Fine flavored, large fruit.”**33895.** “(No. 1170.) ‘*Arrayan.*’ From Llanquihue. Has no fruit. Seeds like *Myrtus temu.*”**33896.** “(No. 1042.) ‘*Arrayan.*’ From central Chile.”**33897.** *MYRTUS MELI* Philippi.

“(No. 1169.) This has all the merits of No. 837 (S. P. I. No. 33887), but grows larger, up to 18 or 20 meters high. It commands double the price of other timbers for industrial purposes. I do not know whether or not the fruit is edible. The plant is uncommon.”

*Distribution.*—A tree found in the dense woods in the province of Valdivia in southern Chile.

**33800 to 33911—Continued.****33898. PANICUM URVILLIANUM** Kunth.

"(No. 1009.) From Quivolgo. A pasture grass that animals eat. Grows in the sands on the seashore."

**33899. RIBES** sp.

"(No. 933.) '*Parrilla.*' An edible fruit of the gooseberry type." 1

**33900. PROSOPIS STROMBULIFERA** (Lam.) Benth.

"(No. 1281.) '*Retorton.*' Grows in the altitude of the innermost Cordilleras near the Argentine line, from the province of Talca to the southern part of Atacama. It is a legume of the Mimosa family, unusual, as it is the only one of its kind having tight, spiral, cylindrical seed pods which when unwound show the seeds held in a fibrous trough. This specimen is from the province of Coquimbo. Sometimes it is called '*Espino chico.*' It is a white-wooded treelet, growing from 4 to 6 feet high, with stiff but flexible branches, and with leaves very much like the espino (S. P. I. No. 33833), but smaller. At the base of each leaf are two small thorns. It is very ornamental and often cultivated in gardens."

**33901. PUYA CHILENSIS** Molina.

"(No. 983.) '*Chagual.*' From Antuco Volcano. A dwarf shrub growing about 3½ feet high, with a stem 1½ inches thick. Bears lilac flowers."

**33902. PUYA CHILENSIS** Molina.

"(No. 1084.) '*Chanqual.*' From the seacoast, Aconcagua. A good variety. Dwarf. Flowers not seen. Young shoots excellent, refreshing food and good for making candied sweets."

**33903. PUYA CHILENSIS** Molina.

"(No. 897.) '*Cordon.*' This plant is highly medicinal. The flower stems are used for stopping bottles; it does not cork them, as the air passes through the porous wood. It is fine for razor strops, but is quickly worm-eaten."

**33904. SOPHORA TETRAPTERA** J. Miller.

Pelu.

"(No. 1328.) '*Pilo.*' This is not the bush '*Pilopilo,*' but a tree whose wood is hard and tough. When matured it is excellent for spokes."

**33905. UGNI MOLINAE** (Barn.) Turcz.

(*Myrtus molinae* Barn.)

"(No. 842.) '*Murta.*' The best wild fruit in Chile."

"Fruit delicious. Sometimes called Chilean guava. Will grow in Oregon." (W. E. Safford.)

**33906. UGNI MOLINAE** (Barn.) Turcz.

(*Myrtus molinae* Barn.)

"(No. 1286.) '*Murta.*' From Chiloe and Llanquihue. A fine edible fruit that grows upon handsome bushes. Fruit claret colored, hardy, ripens very late in the fall."

**33907 to 33909. MYRTUS** spp.

"These are from the interior of Llanquihue in the Indian country."

**33907.** "(No. 1287.) Color of this fruit is pink; hardy; very prolific; rare."

**33908.** "(No. 1288.) The same generally speaking as No. 1287 (S. P. I. No. 33907). Fruit is dark red; very prolific and hardy; rare."

**33909.** "(No. 1289.) The same, generally speaking, as Nos. 1287 and 1288 (S. P. I. Nos. 33907 and 33908). This bush is much smaller than the others; it is hardy and rare. The fruit is white."

**33800 to 33911**—Continued.**33910.** RIBES sp.

“(No. 890.) Wild black currant.”

**33911.** LATHYRUS sp.“(No. 881.) ‘*Alcoeryilla*.’ From Valdivia. Wild flowering peas.”**33912. MACADAMIA TERNIFOLIA F. Mueller. Queensland nut.**

From Brisbane, Australia. Purchased from Mr. Thomas H. Wood. Received at the Plant Introduction Field Station, Chico, Cal., July 2, 1912.

See No. 18382 for description.

Seed.

**33913 to 34038.**

From Buenos Aires, Argentina. Presented by Señor Carlos Thays, Director, Botanic Garden. Received May 18, 1912.

Seeds of the following:

**33913.** ACACIA MONILIFORMIS Grisebach.

Tusca.

*Distribution.*—A low, bushy, yellow-flowered shrub found in the vicinity of Tucuman in Argentina. The young pods are used as fodder for cattle.**33914.** ADOLIA BUXIFOLIA (Reiss.) Kuntze.(*Scutia buxifolia* Reiss.)*Distribution.*—A spiny shrub belonging to the buckthorn family found in central Brazil and northern Argentina.**33915.** AESCHYNOMENE HISTRIX Poir.*Distribution.*—An herbaceous perennial legume found in the vicinity of Cayenne in Guiana.**33916.** ALLOPHYLUS EDULIS (St. Hil.) Radlk.(*Schmidelia edulis* St. Hil.)*Distribution.*—A small tree or tall shrub found in the woods in the vicinities of Santa Cruz and Corumba in Brazil.**33917.** AMERIMNON NIGRUM (Vell.) Kuntze.

Rosewood.

(*Dalbergia nigra* Allem.)*Distribution.*—A large tree, probably the source of rosewood, found in the province of Minas Geraes in Brazil.**33918.** ANNESLIA PARVIFLORA (Hook. and Arn.) Britton.(*Calliandra bicolor* Benth.)*Distribution.*—A leguminous shrub or low tree found in Uruguay.**33919.** ANNESLIA TWEEDII (Benth.) Lindm.(*Calliandra tweedii* Benth.)*Distribution.*—A leguminous shrub or small tree with very hard wood found in the mountains of Uruguay. The flowers furnish reddish and black dyes.**33920.** ARAUJIA SERICIFERA Brot.**33921.** ARGYREIA MEGAPOTAMICA Grisebach.*Distribution.*—A large-flowered climber belonging to the morning-glory family, found in the southern part of Brazil and in Uruguay and Argentina.**33922.** ASTRONIUM BALANSAE Engler.*Distribution.*—A tree with hard wood, which is much used in northern Argentina and Paraguay.



## 33913 to 34038—Continued.

33923. *ATRIPLEX CRISTATA* H. B. K.

*Distribution.*—An annual herb belonging to the pigweed family found in tropical America and naturalized on the sandy coasts of Florida.

33924. *BARYXYLUM DUBIUM* (Spreng.) Pierre.

(*Peltophorum vogelianum* Walp.)

*Distribution.*—A large forest tree belonging to the Cæsalpiniaceæ found in the province of Rio de Janeiro and Minas Geraes in Brazil.

33925. *BELOPERONE PLUMBAGINIFOLIA* (Jacq.) Nees.

*Distribution.*—A shrubby vine belonging to the Acanthaceæ found in deep woods on the slopes of the mountains in Brazil.

33926. *BERBERIS RUSCIFOLIA* Persoon.

**Barberry.**

*Distribution.*—A yellow-flowered, spiny-leaved shrub found in the vicinity of Buenos Aires in Argentina.

33927. *BIXA ORELLANA* L.

**Arnotto.**

*Distribution.*—A small evergreen tree which furnishes the arnotto dye; generally cultivated in the Tropics.

33928. *SALOA HIERONYMI* (Urban) Stuntz.

(*Blumenbachia hieronymi* Urban, Jahrbuch K. Botanisches Garten, Berlin, vol. 3, p. 249, 1884.)

Seeds of this loasaceous plant from Argentina were received under the name *Blumenbachia hieronymi*. The generic name *Blumenbachia* was first used by Koeler in 1802 (*Descriptio graminum*, p. 28) for a genus of grasses, based on *Holeus halepensis*, thus invalidating its use in 1825 by Schrader (*Commentationes K. Gesellschaft Wissenschaft Gottingen*, vol. 6, p. 92) for the present loasaceous genus. As no other name has been given to this genus, the name *Salua*, anagram of *Loasa*, to which the plant was formerly assigned, is here adopted as the generic name, the type being *Salua insignis* (*Blumenbachia insignis* Schrad.)

33929. *BRADBURYA BRASILIANA* (L.) Kuntze.

(*Centrosema brasilianum* Benth.)

*Distribution.*—An herbaceous leguminous vine found in the provinces of Para and Bahia in Brazil.

33930. *BROMELIA* sp.

Seeds of this plant were received under the name *Bromelia caraguata*, but as yet the place of publication of this species has not been found.

The fiber plant from whose fiber is made the celebrated ñandutí lace.

33931. *BRUNSFELSIA MUTABILIS* Poiteau.

*Distribution.*—A solanaceous shrub or small tree, only known under cultivation.

33932. *BYTTNERIA CORDATA* Lamarck.

(*Buettneria cordata* Lam.)

*Distribution.*—A shrub belonging to the Sterculiaceæ, found in the vicinity of Lima in Peru.

33933. *CAESALPINIA MELANOCARPA* Grisebach.

A stout, bushy-topped, leguminous tree. The fruits contain considerable tannin, and the hard, almost black, wood is used for building wagons and for framing houses.

*Distribution.*—Found in the woods in the vicinity of Tucuman in Argentina.

**33913 to 34038**—Continued.**33934.** CAMPOMANESIA sp.

Seeds of this species were received under the name *Campomanesia sellowiana*, but so far the place of publication of this species has not been found.

**33935.** CASSIA BICAPSULARIS L.

*Distribution.*—A shrub or small tree, with light, soft wood and medicinal bark, found from San Luis Potosi in Mexico southward through Central and South America to southern Brazil and Chile.

**33936.** CASSIA CORYMBOSA Lamarck.

*Distribution.*—The vicinity of Buenos Aires in Argentina.

**33937.** CASSIA OCCIDENTALIS L.

See No. 3059 for description.

**33938.** CELTIS TALA Gill.

*Distribution.*—A tall, thorny shrub or small tree, suitable for hedges and street planting, found in the lower part of the valley of the La Plata in Argentina and Uruguay.

**33939.** CERBERA THEVETIA L.

(*Thevetia nereifolia* Juss.)

See No. 33563 for previous introduction.

**33940.** CHAMISSOMNEIA LUZULAEFOLIA (Less.) Kuntze.

(*Schlechtendalia luzulaefolia* Less.)

*Distribution.*—A handsome erect perennial composite found in central Brazil and in the vicinity of Montevideo in Uruguay.

**33941.** CHORISIA INSIGNIS H. B. K.

Samohú.

*Distribution.*—A tree with a swollen trunk found along the banks of the Amazon in Brazil. It has large white, yellowish, or reddish, lily-shaped flowers, and like other plants of the Bombacaceæ, abundant fiber on the seeds.

**33942.** CHORISIA SPECIOSA St. Hil.

Arvore de paina.

*Distribution.*—A tree whose seeds have only a short fiber; found in the provinces of Minas Geraes and Sao Paulo in southern Brazil.

**33943.** CITHAREXYLUM BARBINERVE Cham.

*Distribution.*—A low tree, belonging to the verbena family, found in the valley of the La Plata in Brazil.

**33944.** COCOS CAMPESTRIS Martius.

Palm.

*Distribution.*—An edible-fruited palm found in the provinces of Minas Geraes and Sao Paulo in Brazil.

**33945.** COLLIGUAJA INTEGERRIMA Gillies and Hooker.

*Distribution.*—A low, euphorbiaceous shrub found in the valleys of the Andes in the province of Mendoza in Argentina and in Chile.

**33946.** COMBRETUM FRUTICOSUM (Loefling) Stuntz.

(*Gaura fruticosa* Loefling, *Iter Hispanicum*, p. 248, 1758.)

(*Combretum laxum* Loefling, *Reise*, p. 320, 1766.)

(*C. micropetalum* DC., *Prodromus*, vol. 3, p. 19, 1828.)

(*C. loeflingii* Eichler, in *Martius, Flora Brasiliensis*, vol. 14, pt. 2, p. 110, 1867.)

Seeds of this South American shrub were received under the name *Combretum micropetalum* DC. Eichler, however, in 1867 in his revision of the Brazilian species of the genus *Combretum* gives the plant the name *C. loeflingii*, based on the *C. laxum* of the 1766 edition of Loefling's travels, not of Jacquin

**33913 to 34038**—Continued.

(Enumeratio Plantarum Caribæum, p. 19, 1760), quite disregarding the fact that Loeffling had previously published the name *Gaura fruticosa* for this species. In accordance with nomenclatorial usage it is necessary to adopt the earliest specific name, *fruticosa*.

*Distribution*.—An ornamental climbing shrub with orange and green flowers; found in Brazil.

**33947. CONYZA AGERATOIDES DC.**

*Distribution*.—A composite herb found in meadows and cultivated fields in the island of Madagascar.

**33948. CONYZA CHILENSIS Spreng.**

*Distribution*.—A biennial yellow-flowered herb belonging to the aster family; found in Chile.

**33949. CORDIA CORYMBOSA (L.) G. Don.**

(*Cordia monosperma* R. and S.)

*Distribution*.—A shrub found in the West Indies and in tropical South America.

**33950. CRINODENDRON PATAGUA Molina.****Chequehue.**

(*Tricuspidaria dependens* R. and P.)

See No. 25489 for description.

**33951. CUPANIA VERNALIS St. Hil.**

*Distribution*.—A large timber tree found in the province of Rio Grande do Sul in southern Brazil.

**33952. DIOSCOREA BONARIENSIS Tenore.**

*Distribution*.—A climbing vine found in the vicinity of Buenos Aires in Argentina.

**33953. DOLICHANDRA CYNANCHOIDES Cham.**

(*Macfaydenia dolichandra* Benth.)

*Distribution*.—A shrubby vine with trumpet-shaped, reddish purple flowers found in the extratropical forests of Brazil.

**33954. ECHINODORUS GRANDIFLORUS (C. and S.) Micheli.**

(*Echinodorus floribundus* Seub.)

*Distribution*.—An herbaceous perennial found in stagnant and slow-moving waters along the coast of South America from Rio de Janeiro to Uruguay.

**33955. ENTEROLOBIUM CONTORTISILIQUM (Vell.) Morong.**

(*Enterolobium timbouva* Mart.)

*Distribution*.—A large leguminous timber tree found in Paraguay. It is often planted as a street tree, the wood is much used in carpentry, and the fruits, called "orejás de negro," are used to remove spots from linen.

**33956. ERYTHRINA CRISTA-GALLI L.**

See No. 32051 for previous introduction.

**33957. ERYTHRINA sp.****33958. EUGENIA MATO Grisebach.**

*Distribution*.—A tree with edible fruits, forming the principal part of the forests in the vicinity of Tucuman in Argentina.

**33959. EUGENIA PUNGENS Berg.**

*Distribution*.—An edible-fruited tree with hard wood found in the province of Sao Paulo in Brazil.

## 33913 to 34038—Continued.

**33960.** EXCOECARIA MARGINATA (Klotsch) Grisebach.

*Distribution.*—A shrub or small tree found on hill slopes and along streams in the province of Goyas in Brazil.

**33961.** EXOGONIUM PURGA (Wendr.) Bentham.

Jalap.

(*Ipomoea purga* Hayne.)

“A Mexican climbing plant, with salver-shaped purplish flowers, which furnishes the true jalap tubers of commerce. These are roundish, of variable size, the largest being about as large as an orange, and of a dark color. They owe their well-known purgative properties to their resinous ingredients, and hence worm-eaten tubers are more valued than sound ones, as the insects eat the farinaceous and woody portions of the tuber and leave the resin.” (*M. T. Masters, in Treasury of Botany.*)

*Distribution.*—Found in the mountains of Mexico and southward to Peru.

**33962.** FAGARA HYEMALIS (St. Hil.) Engler.

(*Zanthoxylum hyemale* St. Hil.)

*Distribution.*—A small tree whose timber is suitable for furniture; found in the southern provinces of Brazil and in Paraguay and Argentina.

**33963.** FICUS SUBTRIPLINERVIS Martius.

*Distribution.*—The woods in the vicinity of Cuyaba in the province of Matto Grosso in Brazil.

**33964.** FLOURENSIA CAMPESTRIS Grisebach.

*Distribution.*—On the plains in the province of Cordoba in Argentina.

**33965.** GLEDITSIA AMORPHOIDES (Griseb.) Taub.

(*Garugandra amorphoides* Griseb.)

A spiny tree with reddish, somewhat hard wood, much used for building. The ripe fruit, called “*Canbanambi*” in the Chaco, gives off an odor which causes sneezing, due to the presence of saponin.

**33966.** GOMPHRENA ROSEA Grisebach.

*Distribution.*—An herbaceous perennial belonging to the amaranth family; found on rocky hillsides in the province of Cordoba in Argentina.

**33967.** GOTHOFREDA COERULEA (Don) Kuntze.

(*Oxypetalum coeruleum* Decne.)

*Distribution.*—A blue-flowered climbing shrub belonging to the milkweed family, found in Argentina.

**33968.** GOTHOFREDA SOLANOIDES (Hook. and Arn.) Kuntze.

(*Oxypetalum solanoides* Hook. and Arn.)

*Distribution.*—A climbing shrub found on the plains in the province of Buenos Aires in Argentina.

**33969.** GOUANIA CORYLIFOLIA Raddi.

*Distribution.*—A climbing shrub belonging to the buckthorn family; found in the province of Rio de Janeiro in Brazil.

**33970.** GOURLIEA DECORTICANS Gillies.

Chañar.

A shrubby legume, often forming a small tree, having fleshy pods with a single seed and a small, yellow, pealike flower. The pulp of the fleshy pods is used to flavor wines in Buenos Aires and is a favorite fruit of the Argentinos.

*Distribution.*—Found in the provinces of Cordoba and Mendoza in Argentina.

**33971.** GUETTARDA URUGUENSIS Cham. and Schlecht.

*Distribution.*—A tall shrub belonging to the Rubiaceæ; found in copses and forests along river banks in the central provinces of Brazil.

## 33913 to 34038—Continued.

**33972.** HETEROPTERIS UMBELLATA St. Hilaire.

*Distribution.*—A shrubby climber belonging to the Malpighiaceæ; found in moist soil in the province of Entre Rios in Brazil.

**33973.** JACOBINIA COCCINEA (Aubl.) Hiern.

*Distribution.*—A shrubby perennial with scarlet flowers found along streams in the mountains in French Guiana and in northern Brazil.

**33974.** JODINA RHOMBIFOLIA Hooker and Arnott.

(*Iodina rhombifolia* Hook. and Arn.)

*Distribution.*—A shrub or low tree belonging to the sandalwood family; found in the southern provinces of Brazil and in Uruguay.

**33975.** JUGLANS AUSTRALIS Grisebach.

Walnut.

*Distribution.*—A large tree whose timber is much used for furniture; found on the slopes of the Andes in the vicinity of Oran in northern Argentina.

**33976.** JACOBINIA SUBERECTA Andre.

**33977.** JUSTICIA VENTRICOSA Wallich.

*Distribution.*—An evergreen shrub with scarlet flowers found in the province of Kwangtung in China, and in Pegu and Tenasserim in India.

**33978.** LASS HASTATA (Cav.) Kuntze.

(*Pavonia hastata* Cav.)

*Distribution.*—A shrubby plant belonging to the mallow family; found in the province of Cordoba in Argentina.

**33979.** LATHYRUS MAGELLANICUS Lamarck.

*Distribution.*—An herbaceous perennial legume with bluish-purple flowers found at the Straits of Magellan.

**33980.** LEUCAENA GLAUCA (L.) Benth.

**33981.** LITHREA MOLLEOIDES (Vell.) Engler.

(*Lithrea arocirinha* March.)

The juice of the fruit when fermented gives a drink like the Indian chicha made from maize.

*Distribution.*—A shrub found on the edges of forests and along streams in the provinces of Minas Geraes and Sao Paulo in Brazil, and in Bolivia.

**33982.** ALEGRIA DIVARICATA (Martius) Stuntz.

(*Lühea divaricata* Martius, Nova Genera et Species, vol. 1, p. 101, 1824.)

Seeds of this tiliaceous tree from Guiana were received under the name *Lühea divaricata* Mart. The generic name *Lühea* was first used in 1793, by F. W. Schmidt (Neue und Seltene Pflanzen, p. 23), for a verbenaceous genus, thus invalidating the Willdenovian tiliaceous *Luehea*, published in 1801 (Neue Schriften Ges. Naturf. Freunde Berlin, vol. 3, p. 410). The next name given the genus is *Alegria*, published in 1824 by De Candolle (Prodromus, vol. 1, p. 516) with a single species, *A. candida*. This is recognized as congeneric with the present plant, and the generic name *Alegria* is therefore adopted.

A tree belonging to the linden family, with very light, close-grained, white wood, used for musket stocks and wooden shoes.

*Distribution.*—Found in the province of Sao Paulo in Brazil.

**33983.** MABA sp.

Seeds of this plant were received under the name *Maba argentinensis*, but the place of publication of this species has not as yet been found.

**33913 to 34038**—Continued.**33984.** MANDEVILLA SUAVEOLENS Lindl.

*Distribution.*—A climbing shrub with large white flowers found in the vicinity of Buenos Aires in Argentina.

**33985.** MENODORA INTEGRIFOLIA (Cham. and Schlecht.) Steudel.

*Distribution.*—A shrub found on dry sterile hills and plains in the valley of the La Plata in Argentina.

**33986.** MIMOSA ADPRESSA Hook. and Arn.

*Distribution.*—A leguminous shrub found in the province of Entre Rios in Argentina.

**33987.** MIMOSA SEPIARIA Bentham.

*Distribution.*—Common in hedges in southern Brazil and northward to Bahia and Pernambuco.

**33988.** MORRENIA ODORATA (Hook. and Arn.) Lindl.

*Distribution.*—A twining vine with greenish, sweet-smelling flowers belonging to the milkweed family; found in the vicinity of Buenos Aires in Argentina.

**33989.** MYROXYLON SALZMANNI (Clos) Kuntze.

(*Xylosma salzmanni* Eichl.)

*Distribution.*—A tree found in the provinces of Bahia and Sao Paulo in Brazil.

**33990.** NAGEIA ANDINA (Poepp.) Mueller.

(*Podocarpus andina* Poepp.)

*Distribution.*—A small tree belonging to the yew family; found on the slopes of the Andes in southern Chile.

**33991.** HEIMIA SALICIFOLIA Link and Otto.

(*Nesaea salicifolia* H. B. K.)

A bushy shrub with willowlike leaves and yellow flowers in the axils of the leaves. The twigs are strewn on the floors to drive away flies, and a decoction of the leaves is used as a sudorific.

*Distribution.*—Steep mountain slopes from San Luis Potosi in northern Mexico southward through Mexico, Central America, and South America to Uruguay.

**33992.** NIEREMBERGIA FRUTESCENS Bur.

*Distribution.*—A decumbent herbaceous perennial with blue and white flowers; found in Chile; often cultivated in greenhouses.

**33993.** PARKINSONIA ACULEATA L.

See No. 32820 for previous introduction.

**33994.** PATAGONULA AMERICANA L.

*Distribution.*—A shrub belonging to the borage family; found in southern Argentina and southward to the Straits of Magellan.

**33995.** PFAFFIA GLAUCA (H. B. K.) Spreng.**33996.** PHALOCALLIS GRACILIS (Klatt) Kuntze.

(*Cypella gracilis* Baker.)

*Distribution.*—An herbaceous perennial belonging to the iris family and having yellow, lilac-tinged flowers; found in central Brazil and in Paraguay.

**33997.** PHALOCALLIS HERBERTI (Herbert) Kuntze.

(*Cypella herberti* Herbert.)

“This pretty little Buenos Airean iris may with me claim to have been the most satisfactory flower of the year in the garden. Its first blossom opened

**33913 to 34038—Continued.**

on the last day of June, and the last withered on October 24. Not a single day since the commencement of its flowering, a period of nearly four months, has it been without expanded blooms, sometimes 20 to 30, sometimes but a bare half dozen. As in the case with its relatives, the Tigridias, the blossoms only retain their beauty for a day, but they are produced in such rapid succession that their speedy decease is unremarked. How many hundred of flowers my dozen or so bulbs have produced this year I have no idea, but the number has probably exceeded a thousand. The 3-petaled, apricot-yellow blossoms, with the narrow black band bisecting each petal, and the beautiful modeled center, are quite charming; and the knowledge that every day there will be fresh flowers to admire gave the plant an increased value. They made particularly vigorous growth, their flower stems just exceeding 3 feet in height. They are growing in a narrow, raised border facing southwest and backed by a wall. The soil is a mixture of peat, leaf mold, a little loam, and a large proportion of coarse grit." (*S. W. Fitzherbert, Gardeners' Chronicle, December 3, 1904.*)

*Distribution.*—A bulbous-rooted perennial of the iris family, having yellow flowers; found in southern Brazil, Uruguay, and Argentina.

**33998. PHILIBERTELLA RIPARIA (Decaisne) Stuntz.**

(*Sarcostemma riparium* Decaisne, in De Candolle, *Prodromus*, vol. 8, p. 540, 1844.)

Seeds of this asclepiadaceous climber from Brazil were received under the name *Philibertia riparia* (Decaisne) Malme (*Bulletin de l'Herbier Boissier*, ser. 2, vol. 3, p. 63, 1902). Miss Anna Murray Vail has shown (*Bulletin, Torrey Botanical Club*, vol. 24, p. 305, 1897) that the generic name *Philibertia* as applied here must be replaced by *Philibertella*. The plant in question was originally described by Decaisne as *Sarcostemma riparium*, which is here made the basis of the new combination, *Philibertella riparia*.

**33999. PHYTOLACCA DIOICA L.**

See No. 31482 for description.

**34000. PIPTADENIA CEBIL Grisebach.**

**Cebil colorado**

*Distribution.*—A leguminous tree, constituting most of the forest in the vicinity of La Cruz in the province of Tucuman in Argentina.

**34001. PIPTADENIA RIGIDA Benth.**

**Cebil blanco.**

Furnishes angico gum, similar to gum arabic. Very rich in tannin, the bark sometimes running 40 per cent.

*Distribution.*—An unarmed shrub or tree found in Brazil.

**34002. PITHECOCTENIUM SQUALUS (Vell.) DC.**

*Distribution.*—A bignoniaceous, shrubby climber with yellow flowers found along streams in Brazil.

**34003. PLAZIA ARGENTEA (Don) Kuntze.**

(*Ilyalis argentea* D. Don.)

*Distribution.*—A shrubby perennial composite growing in large patches on the plains in southern Argentina.

**34004. PLUMBAGO SCANDENS L.**

**Devil's-herb.**

A most energetic blistering agent when fresh. Native of the Dominican Republic.

*Distribution.*—A shrubby climber found in the warmer parts of America from San Luis Potosi, in Mexico, southward to Brazil and Chile; also in southern Florida and the West Indies.

**33913 to 34038**—Continued.**34005.** POLYMNIA SONCHIFOLIA Poepp. and Endl.*Distribution.*—A composite found in Peru.**34006.** MARTYNIA LUTEA Lindley.*Distribution.*—A yellow-flowered herbaceous plant found in southern Brazil and Uruguay.**34007.** PROSOPIS CHILENSIS (Molina) Stuntz.**Algaroba.**

See No. 31238 for description.

**34008.** PROSOPIS NIGRA Hieron.**Black algaroba.***Distribution.*—A tree found on the slopes of the mountains in western Argentina from the province of Cordoba southward.**34009.** PTEROGYNE NITENS Tulasne.*Distribution.*—A leguminous tree with hard wood found in the province of Bahia in Brazil.**34010.** RIVINA HUMILIS L.*Distribution.*—A partly shrubby perennial found from Arkansas to Florida and Texas and throughout tropical and subtropical America; also introduced in the Old World Tropics.**34011.** ROLLINIA PARVIFLORA St. Hil.*Distribution.*—A tall shrub or small tree belonging to the Annona family, found in the primeval forests of southern Brazil.**34012.** RUELLIA LORENTZIANA Griseb.*Distribution.*—An herbaceous perennial found in the province of Tucuman in Argentina.**34013.** RUPRECHTIA FAGIFOLIA Meisner.*Distribution.*—A shrub or small tree belonging to the buckwheat family and having yellow flowers with a rosy tinge on opening; found in the province of Bahia in Brazil.**34014.** SALIX CHILENSIS Mol.**Willow.**This tree has been listed in previous numbers of these inventories as *Salix humboldtiana* Willd. The earliest name given to the species, however, was *Salix chilensis*, given by Molina (*Saggio sulla Storia Naturale del Chili*, p. 137, 1782).

See No. 28710 for description.

**34015.** SALPICHROA RHOMBOIDEA (Gillies and Hook.) Miers.*Distribution.*—An herbaceous perennial belonging to the potato family and having edible fruits; found in hedges in the vicinity of Buenos Aires in Argentina.**34016.** SCHINOPSIS LORENTZII (Griseb.) Engler.**Quebracho colorado.***(Quebrachia lorentzii Griseb.)*This produces less quebracho than *Schinopsis balansae*, but of better quality.*Distribution.*—The provinces of Tucuman and Santiago del Estero in Argentina.**34017.** SCHINUS TEREBINTHIFOLIUS AROIERA (Vell.) March.**Molle.***Distribution.*—A shrub or small tree resembling the California pepper tree; found in dry woods in the vicinity of Rio de Janeiro in Brazil.**34018.** SERJANIA EXARATA Radlk.*Distribution.*—A climbing shrub belonging to the Sapindaceae; found in deep woods along the banks of the upper Amazon in Brazil.



**33913 to 34038**—Continued.**34019.** *SESBAN PAULENSIS* Barb. Rodr.*Description.*—A legume found in the province of Sao Paulo in Brazil.**34020.** *DAUBENTONIA TRIPETHI* Poiteau.

The genus *Daubentonia* is generally considered as a subgenus of *Sesban*, but examination of the seeds and pods shows sufficient differences to warrant us in following Dr. John K. Small in retaining it as a distinct genus.

*Distribution.*—A shrub with evenly pinnate leaves and yellow flowers found in Argentina.**34021.** *SIDA BONARIENSIS* Willd.*Distribution.*—A shrubby plant belonging to the mallow family; found in the vicinity of Buenos Aires in Argentina.**34022.** *SOLANUM BONARIENSE* L.*Distribution.*—An unarmed, solanaceous, shrubby perennial found in cultivated fields in the region of Buenos Aires in Argentina.**34023.** *STENOLOBIUM STANS* (L.) Seemann.*(Tecoma stans* Juss.)*Distribution.*—A partly shrubby perennial belonging to the Bignoniaceæ; found in sandy soil from Florida and southern Texas southward through Mexico and Central America.**34024.** *STENOLOBIUM STANS* (L.) Seemann.*(Tecoma stans* Juss.)**34025.** *STROPHOPAPPUS SPECIOSUS* (Less.) Stuntz.*(Vernonia speciosa* Less., *Linnaea*, vol. 4, p. 290, 1829.)*(Stilpnopappus speciosus* (Less.) Baker, in Martius, *Flora Brasiliensis*, vol. 6, pt. 2, p. 138, 1876.)

Seeds of this asteraceous Brazilian species have been received under the name *Stilpnopappus speciosus* (Less.) Baker. The genus *Stilpnopappus* was published by Martius in *De Candolle* (*Prodromus*, vol. 5, p. 75, 1836), but the genus *Strophopappus* was published on the same page above the *Stilpnopappus* publication. Inasmuch as the two are recognized as congeneric, the earlier name should be used.

*Distribution.*—A shrubby composite found on dry hill slopes in the provinces of Matto Grosso, Minas Geraes, and Sao Paulo in Brazil.**34026.** *STIGMAPHYLLON JATROPHAEPOLIUM* Juss.*Distribution.*—A yellow-flowered shrubby climber found along the rocky banks of the Uruguay River in the province of Rio Grande do Sul.**34027.** *STIGMAPHYLLON LITTORALE* Juss.*Distribution.*—A climbing shrub found along the La Plata in Brazil.**34028.** *TAGETES MINUTA* L.*Distribution.*—An annual composite found in waste places in the vicinity of Valparaiso in Chile, at Buenos Aires in Argentina, and in central Brazil.**34029.** *TERMINALIA TRIFOLIATA* Spreng.*Distribution.*—A tree or tall shrub with 3-parted leaves and flattened, winged fruits, found in Brazil.**34030.** *TIPUANA TIPU* (Bentham) Lillo.*(Machaerium (Tipuana) tipu* Benth., *Hook. Journal, Botany*, vol. 5, p. 267, 1853.)

Seeds of this Bolivian mimosaceous tree were received under the name *Tipuana speciosa* Benth. (*Journal, Linnean Society of Botany*, vol. 4, Supple-

**33913 to 34038**—Continued.

ment, p. 72, 1860), with the citation of Bentham's own *Machaerium* (*Tipuana*) *tipu*. That this earlier name should be adopted under the rules of nomenclature was recognized in 1910 by Lillo (in Venturi and Lillo, *Contribución al Conocimiento de los Arboles de la Argentina*, p. 58), who used the name *Tipuana tipa* without full citation or adequate description.

**34031.** *TOURNEFORTIA ELEGANS* Cham.

*Distribution.*—A shrub belonging to the Borage family and bearing panicles of flowers with laciniate corollas, found in central Brazil.

**34032.** *VALLESIA GLABRA* (Cav.) Link.

(*Vallesia cymbaeifolia* Ortega.)

*Distribution.*—An erect shrub with white flowers growing in waste places in Peru.

**34033.** *VANILLOSMOPSIS POLYCEPHALA* (DC.) Schult.-Bip.

*Distribution.*—A shrubby composite found on the plains in the province of Minas Geraes in Brazil.

**34034.** *VERBESINA ARNOTTI* Baker.

*Distribution.*—In fields and on plains in the province of Entre Rios in Argentina and in Paraguay.

**34035.** *VERNONIA NITIDULA* Less.

*Distribution.*—A partly shrubby composite found in fields along streams in central Brazil.

**34036.** *VERNONIA SQUAMULOSA* Hook. and Arn.

*Distribution.*—A shrubby composite found in the woods in the province of Tucuman in Argentina.

**34037.** *VITEX MONTEVIDENSIS* Cham.

*Distribution.*—A verbenaceous tree with valuable hardwood found in the southern provinces of Brazil and in Paraguay.

**34038.** (Undetermined.)**34039.** *ASPARAGUS DREPANOPHYLLUS* Welw.**Asparagus.**

From St. Andre lez Lille, France. Purchased from Mr. Ch. Maillard. Received June 29, 1912.

See No. 13319 for previous introduction.

Plants.

**34040 and 34041.** *CITRUS* spp.

From Saigon, Cochin China. Presented by Mr. P. Morange, local director of the Agricultural and Commercial Service of Cochin China. Received June 29, 1912.

Seeds of the following:

**34040.** *CITRUS NOBILIS* Lour.**Orange.**

“*Caibé*.”

**34041.** *CITRUS* sp.

“*Citron Moí*.”

“These two varieties reproduce themselves well from seed.” (*Morange*.)

**34042 to 34045.**

From Nice, Alpes Maritimes, France. Presented by Dr. A. Robertson Proschowsky, Chemin des Grottes, St. Helene. Received June 20, 1912.

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

**34042.** BERBERIS NAPAULENSIS (DC.) Spreng. **Barberry.**

"A strikingly beautiful evergreen, large and bushy. Producing abundantly its berries, which can be used in different ways; for instance, the juice, easily pressed out, may be boiled with sugar."

**34043.** EUPATORIUM ATRORUBENS (Lemaire) Beddome.

**34044.** MIMOSA GLOMERATA Forskål.

**34045.** RUBUS sp.

"This is a plant whose origin is unknown to me. I receive seeds from many places, and sometimes the ants carry them to different parts of my garden, where they germinate in such a way that I can not trace their origin. Three years ago a seedling came up which was easily seen to be Rubus. I planted it out the following year and it is now a large climber, reaching nearly to the top of an olive tree. The plant has beautiful evergreen leaves, rose-colored flowers, and produces an abundance (several kilos) of yellow, very good and juicy fruits. I suppose that the plant may possibly be new or rare in culture."

**34046 to 34049.**

From Australia. Presented by Mr. E. Breakwell, economic botanist, Department of Agriculture, Sydney, New South Wales. Received June 19, 1912.

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

**34046.** ANDROPOGON PERTUSUS (L.) Willd. **Pitted bluegrass.**

"A grass similar to *Andropogon sericeus* in habitat. Yields abundant and nutritious feed and, like its congeners, endures drought and frost splendidly."

**34047.** ANDROPOGON SERICEUS R. Brown. **Queensland bluegrass.**

"Very widely distributed in Australia. A most palatable grass to stock. Grows over 3 feet high on good soil and never less than 1 foot on the worst of soils. Keeps green all the year round and is with difficulty affected by drought or frost."

**34048.** PANICUM DIVARICATISSIMUM R. Brown. **Spider grass.**

"New South Wales has for two years been suffering from a most severe drought, about 1 inch of rain having fallen in six months, in some places in the interior. This grass, in spite of the droughty conditions, remained green when other vegetation was completely dried up. As it is a most palatable and nutritious fodder it is of great promise."

*Distribution.*—A low grass found in South Australia, Queensland, and New South Wales.

**34049.** PANICUM EFFUSUM R. Brown.

"Widely distributed. Very nutritious and palatable; drought resisting."

*Distribution.*—A grass found in Queensland and New South Wales in Australia.

**34050. ANNONA PURPUREA Moç. and Sessé. Ilama.**

From Tehuantepec, Mexico. Presented by Mr. W. W. Miller, Los Angeles, Cal. Received June 15 and July 6, 1912.

"These seeds came from an extremely large ilama fruit, probably 8 inches in diameter. The fruit grows on a tree more like a mulberry than any other tree I know of

**34050—Continued.**

grown in the North. I have never known the fruit to grow north of the south end of the State of Vera Cruz or Oaxaca. It grows in a very warm, moist climate.

"The fruit is something like a cherimoya, but is of a more delicate flavor. The trees are not prolific bearers; perhaps a dozen fruits on one tree is as many as I have ever seen growing at one time. The seeds came from a fruit I brought from Mexico last September." (W. W. Miller.)

**34051. BOMBAX sp.**

From Philippine Islands. Presented by Mr. E. D. Merrill, botanist, Department of the Interior, Bureau of Science, Manila. Received June 17, 1912.

"Seeds and floss of an apparently undescribed bombacaceous plant, possibly Bombax. It was recently collected on Camaguin Island, near the active volcano.

"It strikes me that the floss is both softer and lighter than is that of the commercial kapok (*Eriodendron ceiba*) [*Ceiba pentandra*]. I thought it possible that the species, whatever it may prove to be, might be grown in southern Florida, certainly in Porto Rico, and that it may prove to have some commercial value. Here in the Philippines it is quite unknown save for the single collection of Camaguin Island." (Merrill.)

"I have examined this fiber under the microscope and also have made measurements of the length. In most respects it is very similar to Japara kapok, which is the best grade of kapok imported from Java. The seeds, however, indicate clearly that it is not the same species as *Ceiba pentandra* (*Eriodendron anfractuosum*) cultivated in Java." (Lyster H. Dewey.)

**34052. PISTACIA ATLANTICA Desf.****Betoom.**

From Algiers, Algeria. Presented by Dr. L. Trabut. Received June 29, 1912.

See Nos. 9325 and 30611 for previous introduction.

**34053 and 34054.**

From Peking, China. Presented by Dr. Yamei Kin, Pei-Yang Woman's Medical School and Hospital, East Gate, suburb, Tientsin, China. Received June 26, 1912.

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

**34053. ZEA MAYS L.****Corn.**

"This seems to be a true 'mi pang tze,' that is, the waxy kind.

"One ear has some white kernels which, I am told, show that it is a hybrid and these seeds will not always come true, though in this particular case they seem to be of the waxy kind also, as the little farinaceous center indicates."

**34054. ZIZYPHUS JUJUBA Miller.****Jujube.**

(*Zizyphus sativa* Gaertner.)

"Ordinary northern tsoa, which forms the main staple product. Selected for size from baskets exposed for sale in the markets at Peking."

**34055. SOLANUM sp.**

From San Jose, Costa Rica. Presented by Mr. Carlos Wercklé, National Museum. Received June 10, 1912.

Tubers of this species were received under the name *Solanum turniferum*, but the place of publication of this name has not yet been found.

"Of the group *Solanum columbianum*." (Wercklé.)

**34056 to 34062. CUCUMIS MELO L.****Muskmelon.**

From Puerto Plata, Dominican Republic. Presented by Mr. Charles M. Hathaway, jr., American consul. Received June 13, 1912.

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

**34056.** Mixed seed.

**34057.** Mixed seed.

The above seed will be grown for determination and selection.

**34058.** "Ellipsoid, 16 by 27½ inches, flesh pinkish orange colored, much less hard than the following (S. P. I. No. 34059), outside yellow without network, fine flavor."

**34059.** "Same as the following (S. P. I. No. 34060), 18½ by 25 inches, exceptionally sweet and fine flavored."

**34060.** "Nearly round, 22½ by 26 inches, flattened like the earth, yellow, marking like *Rockyford*, flesh very hard, deep orange except near rind."

**34061.** "Exterior marked like *Rockyford* but yellow, 19 by 21 inches, otherwise same as the following (S. P. I. No. 34062)."

**34062.** "Nearly round, 19 by 21½ inches, yellowish outside, partially covered with a fine green network resembling a *Rockyford* cantaloupe in this and in shape; flesh very solid, green at rim, deep orange inside. This melon was a trifle underripe."

**34063. ULMUS sp.****Karagatch elm.**

From Fallon, Nev. Presented by Mr. F. B. Headley, Superintendent, Truckee-Carson Experiment Farm, Office of Western Agricultural Extension, United States Department of Agriculture. Received at the Plant Introduction Field Station, Chico, Cal., in spring of 1912. Numbered June 29, 1912.

"Plants of an elm grown from seed which was sent to this station by Mr. A. P. Davis, of the Reclamation Service, from Byram Ali, Turkestan, Transcaspian Province, Russia. Mr. Davis describes this elm as follows:

"I am sending you in this mail a small package of seed of *Karagatch*, a species of elm that thrives in this place and which I think will thrive in the Carson Valley. It is a rapid grower and a much harder and better wood than the American elm, while it is as good or better for windbreak and shade."

"These elms made a growth last year of 4 to 8 inches from seeds planted in May." (Headley.)

Plants.

**34064 and 34065. CARICA PAPAYA L.****Papaya.**

From Kingston, Jamaica, British West Indies. Presented by the Tangle Fruit Co. Received June 28, 1912.

"Fruits from trees the original seed of which was received from Hawaii." (*Tangle Fruit Co.*)

**34064.** "These seeds were taken from two fruits of medium size and exceptionally fine quality." (*David Fairchild.*)

**34065.** "The fruit from which these seeds were taken was of medium size and had a little of the sprightly flavor of a good mango. Those who tasted it pronounced it the best papaya they had eaten." (*R. A. Young.*)

**34066 and 34067.**

From Lucknow, India. Presented by Mr. H. J. Davies, Superintendent Government Botanical Gardens. Received June 4, 1912.

Seeds of the following:

- 34066.** *CAPRIOLA DACTYLON* (L.) Kuntze. **Bermuda grass.**  
**34067.** *STIZOLOBIUM* sp.

**34068 to 34078.**

From Buitenzorg, Java. Presented by Dr. J. C. Koningsberger, Director Botanic Gardens, Department of Agriculture. Received May 21, 1912.

Plants of the following:

- 34068 and 34069.** *CITRUS DECUMANA* (L.) Murray. **Pomelo.**  
**34068.** Variety *djerock delima*.  
**34069.** Variety *pandan*.  
**34070.** *CONGEA VELUTINA* Wight.  
*Distribution.*—A climbing shrub found in Tenasserim in India and in the islands of the Malay Archipelago.  
**34071.** *DAMMARA ALBA* Rumph.  
(*Agathis loranthifolia* Salisb.)  
See No. 33093 for previous introduction.  
**34072 and 34073.** *DURIO ZIBETHINUS* Murray.  
**34072.** Forma *ochroleuca*.  
**34073.** Forma *lutea*.  
**34074.** *LANSIUM DOMESTICUM* Jack. **Doekoe.**  
See Nos. 21823, 22385, and 24431 for previous introductions.  
**34075.** *LITCHI CHINENSIS* Sonnerat. **Litchi.**  
(*Nephelium litchi* Cambess.)  
**34076.** *MANGIFERA INDICA* L. **Mango.**  
Variety *mangga madoe*.  
**34077.** *NEPHELIUM LAPPACEUM* L. **Rambutan.**  
Variety *atjeh*.  
**34078.** *TALAUMA MUTABILIS* Blume.  
Variety *splendens*.

**34079 to 34084.****Palm.**

From Seychelles Islands. Presented by Mr. P. Rivaly Dupont, Curator Botanical Station. Received June 7, 1912.

Seeds of the following:

- 34079.** *DECKENIA NOBILIS* Wendl.  
*Distribution.*—A tall palm, often 120 feet in height, found in the Seychelles Islands.  
**34080.** *NEPHROSPERMA VANHOUTTEANA* (Wendl.) Balf. f.  
*Distribution.*—A palm, often 35 feet in height, found in open places and along streams in the Seychelles Islands.

**34079 to 34084—Continued.****34081.** PHOENICOPHORUM BORSIGIANUM (Koch) Stuntz.*(Astrocaryum borsigianum* C. Koch, *Wochenschrift*, p. 401, 1859.)*(Stevensonia grandifolia* Duncan, *Flore des Serres*, vol. 15, p. 177, 1865.)

Seeds of this spiny-stemmed palm from the Seychelles Islands were received under the name *Phoenicophorium sechellarum* Wendl. (Illustration Horticole, vol. 12, Miscel., p. 5, 1865). The earliest name given this species, however, was *Astrocaryum borsigianum* Koch, which specific name is here adopted. The name *Stevensonia grandifolia* Duncan used in the Index Kewensis, although there cited as appearing in 1862-63, really appeared in April, 1865, as shown in the text, and Wendl's name is cited in the synonymy under this name.

*Distribution.*—A palm with spiny stem and orange-red fruits, common in the Seychelles Islands.

**34082.** ROSCHERIA MELANOCHAETES Wendl.

See No. 33347 for previous introduction.

**34083.** VERSCHAFFELTIA SPLENDIDA Wendl.

*Distribution.*—A tall palm with large leaves, found in rocky places in the Seychelles Islands.

**34084.** (Undetermined.)**34085 to 34092.**

From Nogent sur Marne, Seine, France. Presented by the Director of the Colonial Garden. Received June 3, 1912.

Plants of the following:

**34085.** CYMBOPOGON CITRATUS (DC.) Stapf. **Citronella grass.***(Andropogon citratus* DC.)**34086.** ANNONA CHERIMOLA Miller. **Cherimoya.****34087.** CURCUMA LONGA L. **Turmeric.**

*Distribution.*—An herbaceous plant cultivated and probably native in India; generally cultivated in the Tropics.

**34088.** PASSIFLORA LAURIFOLIA L. **Passion fruit.**

See No. 23879 for previous introduction.

**34089.** PIPER NIGRUM L. **Pepper.**

See No. 29467 for previous introduction.

**34090.** TABERNANTHE IBOGA Baillon. **Iboga.**

This shrub, which is cultivated around dwellings in the Kongo because of the use of its seeds in native medicine, furnishes an alkaloid, ibogain, of considerable interest, which is being investigated for its possible value.

*Distribution.*—A shrub or small tree found in the Gabon district of French Kongo in western Africa.

**34091.** XANTHOSOMA SAGITTAEFOLIA (L.) Schott.

"In small plants the blades stand nearly horizontal. The petioles are green, with a whitish bloom, and there is a marginal line of maroon on the sinus wing." (*R. A. Young*.)

**34092.** ORYZA sp. **Perennial rice.**

This is a perennial rice from Senegal, West Africa.

"In the Richard Toll region in North Senegal, Mr. Paul Ammann has discovered a rice that differs from all other African rices in that it has rhizomes and

**34085 to 34092**—Continued.

multiplies thus without depending on seed. This rice is considered so superior to other rice that at Saint Louis, Senegal, the natives exchange one calabash of it for three of imported rice. The stalks of perennial rice, especially when green, constitute a forage of excellent quality. It grows in rather light soils, rich in potash and nitrogen but poor in phosphoric acid and lime. These soils contain also about 0.1 per cent of sodium chloride, so that this rice would probably grow in saline soils and might be cultivated where the soil is too salt for other crops or in those soils from which it is desirable to remove the salt in order to grow cotton or other plants." (*Ammann, Bulletin des Séances de la Société Nationale d'Agriculture de France, vol. 70, pp. 893-900, 1910.*)

## BOTANICAL NOTES AND PUBLICATION OF NEW NAMES.

Under this heading all notes on changes in the nomenclature of plants introduced by the Office of Foreign Seed and Plant Introduction, as well as notes on the use of scientific names in a different sense from the one ordinarily accepted, will be brought together, so that those interested in such matters may see at a glance what changes have been found necessary in this inventory without referring to the body of the publication.

In this inventory the practice has been adopted for the first time of giving in parenthesis, after the name of each introduction, the name recognized in the Index Kewensis where that differs in any way from the name adopted. It is hoped that this will be of considerable assistance by connecting the names of introductions which have been changed under the American Code of Botanical Nomenclature with the names under which the plants are known in the foreign literature.

## NOTES ON INTRODUCTIONS APPEARING IN PREVIOUS INVENTORIES.

**23032.** SYRINGA MEYERI C. K. Schneider.

This North Chinese species of lilac, received from Mr. Frank N. Meyer, June, 1908, and collected by him at Fengtai, near Peking, Chihli, China, has been recently described as a new species under the name *Syringa meyeri* C. K. Schneider (*Plantæ Wilsonianæ*, pt. 2, p. 201, 1912.)

**23283-4.** MEDICAGO ARABICA INERMIS P. L. Ricker.

Seeds of these bur clovers were listed in Inventory No. 15 as *Medicago arabica* (L.) All. Mr. P. L. Ricker, who is making a special study of the Medicagos with a view to monographing the various genera of which the aggregate genus is composed, has determined these numbers as a new subspecies, *Medicago arabica inermis* Ricker, and has published a description and plate thereof in Bulletin No. 267, Bureau of Plant Industry, on Non-perennial Medicagos, p. 33, pl. 12, fig. 1, lower row, 1913.

**24591, 25089.** CHAETOSPERMUM GLUTINOSUM (Blanco) Swingle.

Seeds of this Philippine tree were listed under the name *Belou glutinosa* (Blanco) Skeels, in Inventory No. 18 of this series. As a result of his recent studies of the citrus fruits and their wild relatives, Mr. Walter T. Swingle has decided that this species is entitled to rank as a genus distinct from *Belou* and has published the new combination *Chaetospermum glutinosum* (Blanco) Swingle (*Journal of the Washington Academy of Sciences*, vol. 3, p. 102, 1913.)



**28799 to 28800. FERONIELLA LUCIDA (Scheff.) Swingle.**

Seeds of this plant were listed in Inventory No. 24, as *Feronia lucida* Scheff. Mr. Walter T. Swingle, however, in Bulletin de la Société botanique de France, vol. 59, p. 781, 1912) has recognized this plant as belonging to a genus distinct from *Feronia* and has included it in *Feroniella*.

**29341. FERONIELLA OBLATA Swingle.**

Seeds of this plant were received under the name *Feronia elephantum* from Mr. P. Morange, director of the Agricultural and Commercial Service, Saigon, Cochinchina. In a recent publication (Bulletin de la Société botanique de France, vol. 59, p. 779, 1912) Mr. Walter T. Swingle has made this plant the type of a new genus, *Feroniella*, distinct from *Feronia*, and has named it *Feroniella oblata*.

**31872. ARISTOCLESIA ESCULENTA (Arruda) Stuntz.**

In a recent letter Mr. C. F. Mead, who presented the seed on which this number is based, called our attention to the fact that the quoted description applied rather to No. 34309, sent in by him later, and gives the following description of the pacuri:

"The pacuri is a large forest tree, growing to a height of 20 meters in some instances. The fruit is a bright-yellow color, about the size of a hen's egg, very similar in looks to the ordinary lime, but of a deeper yellow color."

**NOTES ON INTRODUCTIONS APPEARING IN THE PRESENT  
INVENTORY.**

The following names are either first published here or are used in a sense different from the accepted one.

**33281. HOLCUS SORGHUM L.**

(*Sorghum vulgare* Pers.)

This plant, which has been listed in previous numbers of these inventories as *Andropogon sorghum* (L.) Brot., and is listed in the Index Kewensis as *Sorghum vulgare* Pers., has been identified as the type of the genus *Holcus* by Mr. A. S. Hitchcock, Bureau of Plant Industry, who says (Grasses of Cuba, Contributions from U. S. National Herbarium, vol. 12, pt. 6, p. 195, 1909): "*Holcus sorghum* L. must be considered the type of the genus *Holcus*, since it is the most important economic species of the genus, and, further, since, in the fifth edition of his Genera Plantarum, Linnæus refers to the genus *Sorghum* Mich [eli] as a synonym of *Holcus*." It is therefore necessary to use this original Linnæan name for the sorghum.

**33306. HEDYSARUM HEDYSAROIDES (L.) Stuntz.**

(*Astragalus hedysaroides* L., Species Plantarum, p. 756, 1753.)

Seeds of this species were received from St. Petersburg under the name *Hedysarum obscurum* L. This name was published in 1759 by Linnæus (Systema Naturæ, ed. 10, p. 1171) and the species is there based on *Astragalus hedysaroides* L. As the earliest specific name, *hedysaroides* should be adopted.

**33428. PENNISETUM GLAUCUM (L.) R. Brown.**

(*Panicum glaucum* L., Species Plantarum, p. 56, 1753.)

This species, which has been listed in previous numbers of the inventories as *Pennisetum americanum* (L.) Schum. and in the Index Kewensis as *P. typhoideum* Rich., was first described by Linnæus (Species Plantarum, p. 56, 1753) as *Panicum glaucum*, based on a specimen from Ceylon. This specimen, which is still preserved in the British Museum, has been identified by Trimen (Journal Linnean Society, vol. 24, p. 136, 1896) as the pearl millet, and it is therefore necessary to use the name *Pennisetum glaucum* for this plant.

**33495. ARISTOTELIA CHILENSIS (Molina) Stuntz.**

(*Cornus chilensis* Molina, Saggio sulla Storia Naturale del Chili, p. 173, 1782.)

Seeds of this small evergreen tiliaceous tree from Chile were received under the name *Aristotelia macqui* L'Herit. (*Stirpes novae*, p. 31, pl. 16, 1784). The earliest name given to the plant, however, was *Cornus chilensis*, published by Molina in 1782. It is necessary, therefore, to make the new combination, *Aristotelia chilensis*.

**33507. ASSONIA CALANTHA (Schum.) Stuntz.**

This tropical African sterculiaceous shrub was received under the name *Dombeya calantha* Schumann (Engler Monog. Afr. Pfl. vol. 5, p. 28, 1900). It has been shown, however, in Inventory 24 of this series (Bur. Pl. Ind. Bul. 223, p. 64, 1911) that *Assonia* is the correct name for this genus, and it is therefore necessary to use that name for this species.

**33550. PROSOPIS CHILENSIS (Molina) Stuntz.**

(*Ceratonia chilensis* Molina, Saggio sulla Storia Naturale del Chili, p. 172, 1782.)

(*Mimosa juliflora* Swartz, Prodrumus, p. 85, 1788.)

(*Prosopis juliflora* (Swartz) DC., Prodrumus, vol. 2, p. 447, 1825.)

Seeds of this mimosaceous tree from Chile were received under the name *Prosopis juliflora* (Swartz) DC., based on *Mimosa juliflora* Swartz. The earliest name given this plant, however, was *Ceratonia chilensis* Molina, published in 1782, which specific name it is necessary to adopt.

**33551. ACACIA SCORPIOIDES (L.) W. F. Wight.**

This plant was received under the name *Acacia arabica* (Lam.) Willd., under which name it had been listed in previous numbers of these inventories. The earliest name given this plant was *Mimosa scorpioides* L. (*Species Plantarum*, p. 521, 1753), as was recognized by Mr. W. F. Wight in 1905 (*Useful Plants of Guam, Contributions from U. S. National Herbarium*, vol. 9, p. 173).

**33563. CERBERA THEVETIA L.**

Seeds of this species were received under the name *Thevetia nereifolia* Juss. The earliest name for this plant was *Cerbera thevetia* L. (*Species Plantarum*, p. 209, 1753). The type of the genus *Cerbera*, as determined by the references in Linnæus's *Genera plantarum*, 1754, is *C. ahouaj* L. (*Species Plantarum*, p. 208), with which *C. thevetia* is universally regarded as congeneric. For this reason the original generic name *Cerbera* should be retained for this species as well as for *C. ahouaj*, which is generally known as *Thevetia ahouaj*.

**33570. GUILANDINA BONDOC L.**

(*Caesalpinia bonducella* Flem., Asiatic Researches, vol. 11, p. 159, 1810.)

The name generally applied to the gray-seeded nicker nut is *Caesalpinia bonducella* Fleming. Trimen, in the *Journal of the Linnean Society*, vol. 24, p. 141, 1887, has identified as *Caesalpinia bonducella* the specimen of *Flora Zeylanica*, No. 156, on which Linnæus based his *Guilandina bonduc* in *Species Plantarum*, p. 381, 1753. According to the present rules of botanical nomenclature, it is necessary to adopt this earlier name for this species. (See *Science*, vol. 37, p. 921, 1913.)

**33614. CHAETOCHELOA INTERMEDIA (Roem. and Schult.) Stuntz.**

(*Setaria intermedia* Roem. and Schult., *Systema Vegetabilium*, vol. 2, p. 489, 1817.)

The seeds of this Indian grass were received as a species of *Setaria* and were identified as *Setaria intermedia*, which seems not to have been heretofore transferred to the genus *Chaetochloa*.

**33615. CHAETOCLOA LUTESCENS (Weigel) Stuntz.**

(*Panicum lutescens* Weigel, *Observationes botanicæ*, p. 20, 1772.)

Seeds of this species have been listed in previous numbers of these inventories as *Chaetochloa glauca* (L.) Scribner, based on *Panicum glaucum* L. (*Species Plantarum*, p. 56, 1753). The type of Linnæus's species has been determined as *Pennisetum glaucum* (L.) R. Br., hitherto listed in these inventories as *Pennisetum americanum* (L.) Schum. It is necessary, therefore, to adopt for the plant under discussion the earliest specific name, *lutescens*.

**33786. CYMBOPOGON CITRATUS (DC.) Stapf.**

(*Andropogon citratus* DC.)

This species and the next (No. 33787) have been listed in previous numbers of these inventories as *Andropogon citratus* and *A. nardus*, respectively, but recent students of grasses, and especially Stapf, who has published a monograph of the oil grasses, recognize the two as belonging to the distinct genus *Cymbopogon*.

**33854. HELENIUM GLAUCUM (Cav.) Stuntz.**

(*Cephalophora glauca* Cavanilles, *Icones*, vol. 6, p. 80, pl. 599, 1801.)

Seeds of this asteraceous plant from Chile were received under the name *Cephalophora glauca* Cav. Since *Cephalophora* is now considered merely a section of the genus *Helenium*, it is necessary to use the name *Helenium glaucum*, which seems never to have been published.

**33871. FLAVERIA BIDENTIS (L.) Robinson.**

(*Ethulia bidentis* L., *Mantissa*, p. 110, 1767.)

(*Milleria contrayerba* Cav., *Icones*, vol. 1, p. 2, 1791.)

(*Flaveria contrayerba* (Cav.) Persoon, *Synopsis*, vol. 2, p. 489, 1807.)

Seeds of this astefaceous biennial from Chile were received under the name *Flaveria contrayerba* (Cav.) Persoon. The earliest name to be applied to the plant, however, is *Ethulia bidentis* L., as shown by Robinson (*Proc. Amer. Acad.*, vol. 43, p. 42, 1907.)

**33928. SALOA HIERONYMI (Urban) Stuntz.**

(*Blumenbachia hieronymi* Urban, *Jahrbuch K. Botanisches Garten*, Berlin, vol. 3, p. 249, 1884.)

Seeds of this loasaceous plant from Argentina were received under the name *Blumenbachia hieronymi*. The generic name *Blumenbachia* was first used by Koeler in 1802 (*Descriptio graminum*, p. 28) for a genus of grasses, based on *Holcus halepensis*, thus invalidating its use in 1825 by Schrader (*Commentationes K. Gesellschaft Wissenschaft Gottingen*, vol. 6, p. 92) for the present loasaceous genus. As no other name has been given to this genus, the name *Saloa*, anagram of *Loasa*, to which the plant was formerly assigned, is here adopted as the generic name, the type being *Saloa insignis* (*Blumenbachia insignis* Schrad.)

**33946. COMBRETUM FRUTICOSUM (Loefling) Stuntz.**

(*Gaura fruticosa* Loefling, *Iter Hispanicum*, p. 248, 1758.)

(*Combretum laxum* Loefling, *Reise*, p. 320, 1766.)

(*C. micropetalum* DC., *Prodromus*, vol. 3, p. 19, 1828.)

(*C. loeflingii* Eichler, in *Martius, Flora Brasiliensis*, vol. 14, pt. 2, p. 110, 1867.)

Seeds of this South American shrub were received under the name *Combretum micropetalum* DC. Eichler, however, in 1867, in his revision of the Brazilian species of the genus *Combretum* gives the plant the name *C. loeflingii*, based on the *C. laxum* of the 1766 edition of Loefling's travels, not of Jacquin (*Enumeratio Plantarum*

**33946—Continued.**

Caribæum, p. 19, 1760), quite disregarding the fact that Loeffling had previously published the name *Gaura fruticosa* for this species. In accordance with nomenclatorial usage, it is necessary to adopt the earliest specific name, *fruticosa*.

**33982. ALEGRIA DIVARICATA (Martius) Stuntz.**

(*Lühea divaricata* Martius, Nova Genera et Species, vol. 1, p. 101, 1824.)

Seeds of this tiliaceous tree from Guiana were received under the name *Lühea divaricata* Mart. The generic name *Lühea* was first used in 1793 by F. W. Schmidt (Neue und Seltene Pflanzen, p. 23), for a verbenaceous genus, thus invalidating the Willdenovian tiliaceous *Luehea*, published in 1801 (Neue Schriften Gesellschaft Naturforschende Freunde Berlin, vol. 3, p. 410). The next name given the genus is *Alegria*, published in 1824 by De Candolle (Prodromus, vol. 1, p. 516) with a single species, *A. candida*. This is recognized as congeneric with the present plant and the generic name *Alegria* is therefore adopted.

**33998. PHILIBERTELLA RIPARIA (Decaisne) Stuntz.**

(*Sarcostemma riparium* Decaisne, in De Candolle, Prodromus, vol. 8, p. 540, 1844.)

Seeds of this asclepiadaceous climber from Brazil were received under the name *Philibertia riparia* (Decaisne) Malme (Bulletin de l'Herbier Boissier, ser. 2, vol. 3, p. 63, 1902). Miss Anna Murray Vail has shown (Bulletin, Torrey Botanical Club, vol. 24, p. 305, 1897) that the generic name *Philibertia* as applied here must be replaced by *Philibertella*. The plant in question was originally described by Decaisne as *Sarcostemma riparium*, which is here made the basis of the new combination, *Philibertella riparia*.

**34014. SALIX CHILENSIS Mol.**

This tree has been listed in previous numbers of these inventories as *Salix humboldtiana* Willd. The earliest name given to the species, however, was *Salix chilensis* given by Molina (Saggio sulla Storia Naturale del Chili, p. 137, 1782).

**34020. DAUBENTONIA TRIPETII Poiteau.**

The genus *Daubentonia* is generally considered as a subgenus of *Sesban*, but an examination of the seeds and pods shows sufficient differences to warrant us in following Dr. John K. Small in retaining it as a distinct genus.

**34025. STROPHOPAPPUS SPECIOSUS (Less.) Stuntz.**

(*Vernonia speciosa* Less., Linnæa, vol. 4, p. 290, 1829.)

(*Stilpnopappus speciosus* (Less.) Baker, in Martius, Flora Brasiliensis, vol. 6, pt. 2, p. 138, 1876.)

Seeds of this asteraceous Brazilian species have been received under the name *Stilpnopappus speciosus* (Less.) Baker. The genus *Stilpnopappus* was published by Martius in De Candolle (Prodromus, vol. 5, p. 75, 1836), but the genus *Strophopappus* was published on the same page above the *Stilpnopappus* publication. Inasmuch as the two are recognized as congeneric, the earlier name should be used.

**34030. TIPUANA TIPU (Bentham) Lillo.**

(*Machaerium (Tipuana) tipu* Benth., Hook. Journal, Botany, vol. 5, p. 267, 1853.)

Seeds of this Bolivian mimosaceous tree were received under the name *Tipuana speciosa* Benth. (Journal, Linnean Society of Botany, vol. 4, Supplement, p. 72, 1860), with the citation of Bentham's own *Machaerium (Tipuana) tipu*. That this earlier

**34030**—Continued.

name should be adopted under the rules of nomenclature was recognized in 1910 by Lillo (in Venturi and Lillo, *Contribución al Conocimiento de los Arboles de la Argentina*, p. 58), who used the name *Tipuana tipa* without full citation or adequate description.

**34081.** PHOENICOPHORUM BORSIGIANUM (Koch) Stuntz.

(*Astrocaryum borsigianum* C. Koch, *Wochenschrift*, p. 401, 1859.)

(*Stevensonia grandifolia* Duncan, *Flore des Serres*, vol. 15, p. 177, 1865.)

Seeds of this spiny-stemmed palm from the Seychelles Islands were received under the name *Phoenicophorium sechellarum* Wendl. (*Illustration Horticole*, vol. 12, *Miscel.*, p. 5, 1865). The earliest name given this species, however, was *Astrocaryum borsigianum* Koch, which specific name is here adopted. The name *Stevensonia grandifolia* Duncan used in the *Index Kewensis*, although there cited as appearing in *Flore des Serres*, volume 15, page 177, 1862-63, really appeared in April, 1865, as shown in the text, and Wendland's name is cited in the synonymy under this name.

## INDEX OF COMMON AND SCIENTIFIC NAMES.

- Abelia corymbosa*, 33315.  
*Abelmoschus esculentus*, 33749.  
*Acacia* spp., 33652, 33839.  
     *arabica*. See *A. scorpioides*.  
     *cavenia*, 33833, 33834.  
     *leucophloea*, 33432.  
     *longifolia*, 33838.  
     *melanoxydon*, 33840.  
     *moniliformis*, 33913.  
     *scorpioides*, 33551.  
*Acer ginnala semenovii*, 33355, 33356.  
     *oblongum*, 33588.  
     *turkestanicum*, 33316.  
*Actinidia chinensis*, 33431.  
*Adansonia digitata*, 33552.  
*Adolia buxifolia*, 33914.  
*Aeschynomene histrix*, 33915.  
*Agathis loranthifolia*. See *Danmara alba*.  
*Agave cantala*, 33508.  
 Akala. See *Rubus hawaiiensis*.  
*Albizzia lucida*, 33553.  
*Alegria divaricata*, 33982.  
 Alfalfa (Africa), 33760.  
     (Chile), 33711, 33712.  
     See also *Medicago* spp.  
 Algaroba. See *Prosopis chilensis*.  
     black. See *Prosopis nigra*.  
*Allamanda* sp., 33651.  
*Allophylus edulis*, 33916.  
 Almond, wild (Russia), 33311, 33312.  
*Alstroemeria ligtu*, 33819 to 33822.  
*Alysicarpus bupleurifolius*, 33599.  
     *pubescens*, 33443.  
     *rugosus*, 33444.  
     *vaginalis*, 33598, 33600.  
         *nummularifolius*,  
             33640.  
*Amerimnon lanceolarium*, 33543.  
     *nigrum*, 33917.  
     *sissoo*, 33554, 33641.  
*Anmodendron argenteum*, 33357.  
     *sieversii*. See *A. argenteum*.  
*Ammophila villosa*, 33320.  
*Ampelodesma bicolor*, 33654, 33750.  
*Amphicarpaea* sp. See *Falcata* sp.  
*Amygdalus bucharica*, 33311.
- Andropogon annulatus*, 33595, 33596.  
     *citratu*s. See *Cymbopogon*  
         *citratu*s.  
     *nardu*s. See *Cymbopogon*  
         *nardu*s.  
     *pertusus*, 33597, 34046.  
     *sericeus*, 34047.  
     *sorghum*. See *Holcus sor-*  
         *ghum*.  
*Annesia parviflora*, 33918.  
     *tweedii*, 33919.  
*Annona cherimola*, 34086.  
     *purpurea*, 34050.  
     *reticulata*, 33745, 33747, 33748.  
     *squamosa*, 33746.  
*Anogeissus* sp., 33556.  
     *pendula*, 33555.  
*Anthephora elegans*. See *A. hermaphro-*  
     *dita*.  
     *hermaphrodita*, 33692.  
*Arachis hypogaea*, 33426.  
*Aralia quinquefolia*. See *Panax quinque-*  
     *folium*.  
*Araujia sericifera*, 33920.  
*Argyrea megapotamica*, 33921.  
     *nervosa*, 33557.  
*Aristoclesia esculenta*, 31872, p. 84.  
*Aristolochia rotunda*, 33763.  
*Aristotelia chilensis*, 33495.  
     *macqui*. See *A. chilensis*.  
 Arnatto. See *Bixa orellana*.  
 Arracacha. See *Arracacia xanthorrhiza*.  
*Arracacia xanthorrhiza*, 33467, 33468.  
 Arvore de paina. See *Chorisia speciosa*.  
 Asparagus (England), 33721 to 33735.  
     (France), 34039.  
     (Russia), 33309.  
     (Teneriffe), 33780.  
*Asparagus* sp., 33735.  
     *africanus*, 33723.  
     *albus*, 33780.  
     *drepanophyllus*, 33724, 34039.  
     *falcatus*, 33725.  
     *filicinus*, 33715.  
     *madagascariensis*, 33726.  
     *myriocladus*, 33727.

- Asparagus plumosus*, 33728, 33729.  
*racemosus*, 33730.  
*retrofractus*, 33731.  
*sarmentosus*, 33721, 33732.  
*schoberioides*, 33309.  
*trichophyllus*, 33733.  
*umbellatus*, 33722, 33734.
- Asperugo procumbens*, 33754.
- Assonia calantha*, 33507.
- Asteriscium chilense*, 33800.
- Astragalus hedysaroides*. See *Hedysarum hedysaroides*.
- Astrocarpum borsigianum*. See *Phoenicophorium borsigianum*.
- Astronium balansae*, 33922.
- Atriplex cristata*, 33923.
- Avena nuda*, 33690.
- sativa*, 33289, 33644.
- Azara* sp., 33841.
- gilliesii*, 33835.
- serrata*, 33837.
- Babul. See *Acacia scorpioides*.
- Baccharis chilquilla*. See *B. confertifolia confertifolia*, 33842.
- Backhousia citriodora*, 33643.
- Banana, Bumulan, 33689.
- Baobab. See *Adansonia digitata*.
- Barberry (Chile), 33699, 33843 to 33850.
- (France), 34042.
- (India), 33589.
- (Sweden), 33757 to 33759.
- See also *Berberis* spp.
- Barley (China), 33691.
- Baryxylum dubium*, 33924.
- Bauhinia kurzii*, 33558.
- rosea*. See *B. kurzii*.
- vahlüi*, 33559.
- Bayberry. See *Pimenta acris*.
- Bean, broad. See Broad bean.
- Beaumontia grandiflora*, 33544, 33560.
- Beet (Sweden), 33674 to 33681.
- Beloperone plumbaginifolia*, 33925.
- Benincasa cerifera*. See *B. hispida hispida*, 33626.
- Berberis* spp., 33589, 33699, 33844 to 33848.
- aristata*, 33545.
- bealei*. See *B. japonica bealei*.
- buxifolia*, 33496.
- chilensis*, 33843, 33849, 33850.
- cretica*, 33757.
- hookeri*, 33497.
- japonica bealei*, 33498.
- napaulensis*, 34042.
- Berberis ruscifolia*, 33926.
- serrata*, 33758.
- thunbergii*, 33759.
- Beta vulgaris*, 33674 to 33681.
- Betoom. See *Pistacia atlantica*.
- Birthwort. See *Aristolochia rotunda*.
- Bixa orellana*, 33927.
- Bluegrass, Queensland, 34047.
- Blumenbachia hieronymi*. See *Saloa hieronymi*.
- Bombax* sp., 34051.
- Boquila trifoliata*, 33851.
- Bradburya brasiliiana*, 33929.
- Brassica* sp., 33421.
- campestris*, 33685 to 33687.
- rapa*, 33682 to 33684.
- Bridal bouquet. See *Porana paniculata*.
- Broad bean (Bolivia), 33458.
- Bromelia* sp., 33930.
- Brunfelsia mutabilis*, 33931.
- Bucare. See *Erythrina poeppigiana*.
- Buettneria cordata*. See *Byttneria cordata*.
- Bunchosia costaricensis*, 33740, 33741.
- Byttneria cordata*, 33932.
- Cabulla. See *Furcraea tuberosa*.
- Caesalpinia bonducella*. See *Guilandina bonduc*.
- melanocarpa*, 33933.
- Cajan indicum*, 33779.
- Cajun. See *Furcraea cubensis*.
- Calamus roxburghii*, 33561.
- Calceolaria* sp. See *Fagelia* sp.
- Caldcluvia paniculata*, 33853.
- Calliandra bicolor*. See *Anneslia parviflora*.
- tweedii*. See *Anneslia tweedii*.
- Campomanesia* sp., 33934.
- Caper. See *Capparis spinosa*.
- Capparis spinosa*, 33512.
- Capriola dactylon*, 33606, 33617, 34066.
- Capsicum annuum*, 33351, 33637.
- Caragana arborecens*, 33755.
- pygmaea*, 33756.
- Carica papaya*, 33502, 34064, 34065.
- Carissa arduina*. See *C. bispinosa bispinosa*, 33764.
- Carrot (Sweden), 33688.
- Caryophyllus jambos*, 33777.
- Cassia bicapsularis*, 33935.
- corymbosa*, 33936.
- glauca*, 33562.
- grandis*, 33781, 33782.
- occidentalis*, 33937.

- Castilla guatemalensis*, 33743, 33744.  
*nicoyensis*, 33784.
- Castor bean. See *Ricinus communis*.
- Cebil blanco. See *Piptadenia rigida*.  
 colorado. See *Piptadenia cebil*.
- Celtis tala*, 33938.
- Cenchrus biflorus*, 33601 to 33603.
- Centrosema brasilianum*. See *Bradburya brasiliense*.
- Cephalophora glauca*. See *Helenium glaucum*.
- Ceratonia chilensis*. See *Prosopis chilensis*.
- Cerbera thevetia*, 33563, 33939.
- Cereus quisco*, 33824 to 33827, 33829 to 33832.
- Chaetochloa intermedia*, 33614.  
*lutescens*, 33615.
- Chaetospermum glutinosum*, 24591, 25089, p. 83.
- Chamissoa luculifolia*, 33940.
- Chafiar. See *Gourliea decorticans*.
- Chequehue. See *Crinodendron patagium*.
- Cherimoya. See *Annona cherimola*.
- Cherry, Antonovka, 33658.  
 Belotelaja, 33661.  
 Dolgonsha, 33660.  
 Kniazna Severa, 33657.  
 Kislakovka, 33659.  
 laurel. See *Laurocerasus lusitana*.  
 (Russia), 33657 to 33665.  
 Steclarka, 33663.  
 seedlings, 33664, 33665.  
 Visloucha, 33662.
- Chick-pea (Mexico), 33647.
- Chorisia insignis*, 33941.  
*speciosa*, 33942.
- Chrysobalanus icaco*, 33791.
- Chrysopogon montanus*, 33445.
- Chusquea quila*, 33667.
- Cicer arietinum*, 33647.
- Citharexylum barbinerve*, 33943.
- Citronella grass. See *Cymbopogon* spp.
- Citrullus vulgaris*, 33627, 33630, 33631.
- Citrus* sp., 34041.  
*aurantium sinensis*, 33279, 33788.  
*decumana*, 34068, 34069.  
*limonum*, 33761.  
*nobilis*, 33391, 34040.
- Clematis. See *Clematis* spp.
- Clematis grevillaeiflora*, 33765.  
*microphylla*, 33766.  
*orientalis*, 33358.
- Cleome* sp., 33648.
- Clerodendrum fallax*, 33767.  
*thomsonae*, 33768.
- Clover (Russia), 33714.  
 red, giant (Austria), 33736.
- Cocos campestris*, 33944.  
*yatai*, 33762.
- Colletia spinosa*. See *C. spinosissima*.  
*spinosissima*, 33855, 33856.
- Colliguaja integerrima*, 33945.
- Colutea persica buhsei*, 33314.
- Combretum fruticosum*, 33946.  
*laxum*. See *C. fruticosum*.  
*loeflingii*. See *C. fruticosum*.  
*micropetalum*. See *C. fruticosum*.
- Congea velutina*, 34070.
- Conyza ageratoides*, 33947.  
*chilensis*, 33948.
- Cordia corymbosa*, 33949.  
*monosperma*. See *C. corymbosa*.
- Coridochloa cimicina*, 33610.
- Corn (Bolivia), 33448 to 33457.  
 (British Guiana), 33282 to 33284.  
 (China), 33459, 34053.  
 Creole, 33282 to 33284.  
 Cuzco, 33448 to 33451.  
 (German East Africa), 33429, 33430  
 (Maryland), 33672.
- Cornus capitata*, 33769.  
*koenigi*, 33359.
- Corypha elata*, 33564.
- Cotoneaster pyracantha*, 33501.
- Cotton, Assil, 33639.  
 Chantaburi, 33352.  
 (China), 33797 to 33799.  
 Karunganni, 33737.  
 Krung Kao or Kroong Kow, 33353.  
 Nakon Sritamaraj or Sridhamaraj, 33354.  
 (Siam), 33352 to 33354.  
 Tellapatti, 33738.
- Couraivo. See *Elaeodendron australe*.
- Crape myrtle. See *Lagerstroemia speciosa*.
- Crataegus* sp., 33653.  
*pyracantha*. See *Cotoneaster pyracantha*.
- Crinodendron patagium*, 33950.
- Crotalaria medicaginea*, 33604, 33605.
- Cryptostegia grandiflora*, 33405, 33565.
- Cucumis melo*, 33494, 33513, 33542, 33590, 33625, 33629, 33632, 33703, 34053 to 34062.
- Cucurbita pepo*, 33511, 33541.



- Cumin. See *Cuminum cyminum*.  
*Cuminum cyminum*, 35646.  
*Cupania vernalis*, 33951.  
*Curcuma longa*, 34087.  
 Currajong shrub, 33507.  
 Currant, black (Chile), 33910.  
     (Siberia), 33521.  
     See also *Ribes* spp.  
 Custard-apple. See *Annona reticulata*.  
*Cymbopogon citratus*, 33786, 34085.  
     *nardus*, 33787.  
*Cynodon dactylon*. See *Capriola dactylon*.  
*Cypella gracilis*. See *Phalocallis gracilis*.  
     *herberti*. See *Phalocallis herberti*.  
*Dalbergia lanceolaria*. See *Amerinnon lanceolarium*.  
     *nigra*. See *Amerinnon nigrum*.  
     *sissoo*. See *Amerinnon sissoo*.  
*Dammara alba*, 34071.  
*Daubentonia tripetii*, 34020.  
*Daucus carota*, 33688.  
*Deckenia nobilis*, 34079.  
*Deguelia timoriensis*, 33546, 33566.  
*Derris scandens*. See *Deguelia timoriensis*.  
*Desmodium* sp. See *Meibomia* sp.  
 Devil's-herb. See *Plumbago scandens*.  
*Dioscorea* spp., 33350, 33802 to 33806.  
     *bonariensis*, 33952.  
*Diospyros kaki*, 33753.  
     *embryopteris*. See *D. peregrina*.  
     *peregrina*, 33567.  
 Doekoe. See *Lansium domesticum*.  
*Dolichandra cynanchoides*, 33953.  
*Dombeya calantha*. See *Assonia calantha*.  
*Durio zibethinus*, 34072, 34073.  
*Eccremocarpus scaber*, 33808.  
*Echinodorus floribundus*. See *E. grandiflorus*.  
     *grandiflorus*, 33954.  
*Elaeagnus umbellata*, 33770.  
*Elaeodendron australe*, 33771.  
 Elephant creeper. See *Argyrea nervosa*.  
*Eleusine coracana*, 33427.  
 Elm, Karagatch, 34063.  
 Emblic myrobalan. See *Phyllanthus emblica*.  
*Embothrium coccineum*, 33852, 33864.  
 Emu bush, 33503.  
*Enargea radicans*, 33865, 33866.  
*Enkianthus himalaicus*, 33772.  
*Enterolobium contortisiliquum*, 33955.  
     *timbouva*. See *E. contortisiliquum*.  
*Epilobium* sp., 33836.  
*Eriobotrya japonica*, 33778.  
*Eriochloa polystachya*, 33620.  
*Eryngium rostratum*, 33868.  
*Erythrina* sp., 33957.  
     *crista-galli*, 33956.  
     *micropteryx*. See *E. poeppigiana*.  
     *poeppigiana*, 33673.  
 "Espino." See *Acacia cavenia*.  
 Esparsette. See *Onobrychis cristata*.  
*Ethulia bidentis*. See *Flaveria bidentis*.  
*Eucalyptus incrassata*, 33433.  
*Eucryphia cordifolia*, 33869, 33870.  
*Eugenia jambos*. See *Caryophyllus jambos*.  
     *nato*, 33958.  
     *pungens*, 33959.  
     *temu*, 33705.  
*Euonymus latifolius*, 33499.  
     *yedoensis*, 33773.  
*Eupatorium atrorubens*, 34043.  
     *salvia*, 33809.  
*Excoccaria marginata*, 33960.  
*Exochorda korolkowi*, 33313.  
*Exogonium purga*, 33961.  
*Fagara hyemalis*, 33962.  
*Fagelia* sp., 33801.  
*Falcata* sp., 33621.  
 Fenugreek. See *Trigonella foenum-graecum*.  
*Feronia elephantum*, 33633.  
*Feroniella lucida*, 28799, 28800, p. 84.  
     *oblata*, 29341, p. 84.  
*Festuca gigantea*, 33607.  
*Ficus subtriplinervis*, 33963.  
*Firmiana colorata*, 33568.  
*Flaveria bidentis*, 33871.  
     *contrayerba*. See *F. bidentis*.  
*Flourensia campestris*, 33964.  
     *thurifera*, 33872.  
*Furcraea cubensis*, 33493.  
     *foetida*, 33492.  
     *gigantea*. See *F. foetida*.  
     *tuberosa*, 33668.  
*Galega officinalis*, 33719.  
*Galium chilense*, 33873.  
     *chonoense*. See *G. chilense*.  
*Garcinia livingstonei*, 33569.  
*Garugandra amorphoides*. See *Gleditsia amorphoides*.  
*Gaura fruticosa*. See *Combretum fruticosum*.

- Geranium (England), 33509.  
 Ginseng. See *Panax quinquefolium*.  
*Gleditsia amorphoides*, 33965.  
*Gnaphalium* sp., 33810.  
 Goat's-rue, 33719.  
*Gochnatia rigida*, 33874.  
*Gomphrena rosea*, 33966.  
*Gossypium* spp., 33352, 33737, 33738.  
     *barbadense*, 33639.  
     *hirsutum*, 33353, 33797.  
     *nanking*, 33354, 33798, 33799.  
*Gothofreda coerulea*, 33967.  
     *solanoides*, 33968.  
*Gouania corylifolia*, 33969.  
 Gourd, wax. See *Benincasa hispida*.  
*Gourliea decorticans*, 33970.  
 Grape, Albillo, 33536.  
     resado, 33534.  
     Âsmi, 33399.  
     Bocal, 33530.  
     Bocalilla, 33527.  
     Ferralba, 33529.  
     Fresa, 33531.  
     Guadalupe, 33523.  
     Jubeili, 33401.  
     Kâsâfi-inti, 33402.  
     Khudud-ul-Banat, 33396.  
     Leonada, 33528.  
     Macabeo de Sitjes, 33462.  
     Malvasia gruesa, 33533.  
     Marquesa, 33524.  
     Momagastro, 33460.  
     Moscatel comun, 33535.  
         negro, 33526.  
     Mukhkh-ul-Bagh1, 33398.  
     Negrilla, 33537.  
     Ojo de liebre (negro), 33463.  
     Polop negro, 33538.  
     Rayadao Melonera, 33532.  
     Rojal, 33539.  
     Rojo de chella, 33525.  
     Shakaifi, 33393.  
     (Spain), 33376 to 33378, 33460 to  
         33464, 33523 to 33539.  
     Sumoy (negro), 33464.  
     Suri, 33394.  
     (Syria), 33392 to 33403.  
     Tifafihi ahmar, 33392.  
     Ubeidi, 33395, 33403.  
     Uva de Casta, 33377, 33378.  
         Embarque, 33376.  
     Vinatera San Juan, 33461.  
     Zeini, 33397, 33400.
- Grass, Bermuda. See *Capriola dactylon*.  
     blue, pitted. See *Andropogon per-  
         tusus*.  
     citronella. See *Cymbopogon* spp.  
     Queensland blue. See *Andropogon  
         sericeus*.  
     spider. See *Panicum divaricatissi-  
         mum*.  
*Greigia* sp., 33702.  
     *landbecki*, 33875, 33876.  
 Ground-cherry. See *Physalis pubescens*.  
*Guettarda uruguensis*, 33971.  
*Guilandina bonduc*, 33570.  
*Guizotia abyssinica*, 33422.
- Hamelia patens*, 33571.  
 Hawthorn. See *Crataegus* sp.  
*Hedysarum esculentum*, 33303.  
     *flavescens*, 33304.  
     *hedysaroides*, 33306.  
     *microcalyx*, 33305.  
     *obscurum*. See *H. hedysa-  
         roides*.  
     *songaricum*, 33307.  
*Heimia salicifolia*, 33991.  
*Helenium glaucum*, 33854.  
*Helianthus thurifer*. See *Flourensia thu-  
         rifera*.  
*Hepetis* sp., 33867.  
 Hérisson. See *Onobrychis crista-galli*.  
*Heterophragma adenophyllum*, 33547, 33572.  
*Heteropteris umbellata*, 33972.  
*Hibiscus esculentus*. See *Abelmoschus es-  
         culentus*.  
*Hiptage benghalensis*, 33573.  
*Holcus sorghum*, 33281, 33424, 33425, 33518,  
     33638, 33669, 33670, 33739.  
*Holoptelea integrifolia*, 33574.  
 Honeysuckle. See *Lonicera maackii*.  
*Hordeum* sp., 33691.  
 Horse-radish tree. See *Moringa oleifera*.  
 Hursinger. See *Nyctanthes arbor-tristis*.  
*Ilyalis argentea*. See *Plazia argentea*.
- Iboga. See *Tabernanthe iboga*.  
 Icaço. See *Chrysobalanus icaco*.  
 Ilama. See *Annona purpurea*.  
*Impatiens* spp., 33593, 33594.  
 Indian-elm. See *Holoptelea integrifolia*.  
*Indigoferu glandulosa*, 33446.  
     *linifolia*, 33608, 33642.  
*Iodina rhombifolia*. See *Jodina rhombi-  
         folia*.  
*Ipomoea purga*. See *Exogonium purga*.

- Iris drepanophylla*, 33360.  
*Iscilema laxum*, 33447.  
*Jacobinia coccinea*, 33973.  
     *suberecta*, 33976.  
 Jalap. See *Ecogonium purga*.  
 Jasmine. See *Jasminum beesianum*.  
*Jasminum beesianum*, 33500.  
*Jodina rhombifolia*, 33974.  
*Juglans australis*, 33975.  
     *regia*, 33516.  
 Jujube. See *Ziziphus jujuba*.  
*Justicia ventricosa*, 33977.  
 Kafir orange. See *Strychnos spinosa*.  
 Karagatch elm. See *Ulmus* sp.  
 Katappa. See *Terminalia catappa*.  
*Lagerstroemia reginae*. See *L. speciosa*.  
     *speciosa*, 33548, 33575.  
*Lansium domesticum*, 34074.  
 Larch (Russia), 33317 to 33319, 33645.  
*Lardizabala biternata*, 33877.  
*Larix dahurica*, 33319.  
     *sibirica*, 33317, 33318, 33645.  
*Lass hastata*, 33978.  
*Lathyrus* sp., 33911.  
     *magellanicus*, 33979.  
     *mulkak*, 33290.  
     *sativus*, 33404.  
 Laurel cherry. See *Laurocerasus lusitanica*.  
*Laurelia aromatica*. See *L. sempervirens*.  
     *sempervirens*, 33878, 33879.  
*Laurocerasus lusitanica*, 33434.  
 Lemon, Malta, 33761.  
*Leucaena glauca*, 33348, 33980.  
*Lilium dauricum*, 33310.  
 Lily (Russia), 33310.  
 Lingue. See *Persea lingue*.  
*Linum* sp., 33807.  
     *usitatissimum*, 33406.  
 Linseed. See *Linum* spp.  
*Litchi chinensis*, 34075.  
*Lithrea aroeirinha*. See *L. molleoides*.  
     *caustica*, 33697, 33698, 33880, 33881.  
     *molleoides*, 33981.  
     *venenosa*. See *L. caustica*.  
*Lomatia ferruginea*. See *Tricondylus ferrugineus*.  
*Lonicera maackii*, 33435.  
 Loquat (Italy), 33778.  
*Lühea divaricata*. See *Alegria divaricata*.  
*Luzuriaga radicans*. See *Enargea radicans*.  
*Lycopersicon esculentum*, 33624, 33704.  
*Maba* sp., 33983.  
*Macadamia ternifolia*, 33912.  
*Macfadyenia dolichandra*. See *Dolichandra cynanchoides*.  
*Madia sativa*, 33884.  
 Maguey, Manila. See *Agave cantala*.  
 Maihuen. See *Maihuenia poeppigii*.  
*Maihuenia poeppigii*, 33828.  
 Mallee. See *Eucalyptus incrassata*.  
 Maloo. See *Bauhinia vahlii*.  
*Mammea americana*, 33469.  
 Mammee. See *Mammea americana*.  
*Mandevilla suaveolens*, 33984.  
*Mangifera indica*, 34076.  
 Mango. See *Mangifera indica*.  
 Mangold, 33674 to 33681.  
 Maple (India), 33588.  
     (Russia), 33316.  
     See also *Acer* spp.  
 Maqui. See *Aristotelia chilensis*.  
 Maravilla. See *Flourensia thurifera*.  
*Martynia lutea*, 34006.  
*Maytenus boaria*, 33885.  
*Meconopsis cambrica*, 33361.  
     *paniculata*, 33362.  
     *racemosa*, 33363.  
*Medicago arabica inermis*, 23283, 23284,  
     p. 83.  
     *falcata*, 33465.  
     *hispidula aculeata*, 33364.  
     *denticulata*, 33712.  
     *reticulata*, 33711.  
     *radiata*, 33302.  
     *sativa*, 33760.  
*Meibomia* sp., 33591.  
*Melilotus elegans*, 33365.  
     *messanensis*, 33366.  
*Menodora integrifolia*, 33985.  
*Mentha piperita*, 33349.  
*Milleria contrayerba*. See *Flaveria bidentis*.  
 Millet, pearl. See *Pennisetum glaucum*.  
     *ragi*. See *Eleusine coracana*.  
*Mimosa adpressa*, 33986.  
     *glomerata*, 34044.  
     *juliflora*. See *Prosopis chilensis*.  
     *sepiaria*, 33987.  
 Molle. See *Schinus terebinthifolius aroiera*.  
*Momordica* spp., 33628, 33634.  
*Moringa oleifera*, 33576.  
     *pterygosperma*. See *M. oleifera*.  
*Morrenia odorata*, 33988.  
*Mucuna gigantea*, 33794.  
 Muermo. See *Eucryphia cordifolia*.  
*Musa* sp., 33689.

- Muskmelon, Bronceado, 33494.  
 (Chile), 33703.  
 (Dominican Republic), 34056  
 to 34062.  
 (Guadeloupe), 33542.  
 (India), 33590, 33625, 33629,  
 33632.  
 (Spain), 33494, 33513.
- Mustard (India), 33421.
- Myrceugenia fernandeziana*, 33887.
- Myrobalan, emblic. See *Phyllanthus emblica*.
- Myroxylon salzmanni*, 33989.
- Myrtus* spp., 33718, 33888 to 33896, 33907  
 to 33909.  
*fernandeziana*. See *Myrceugenia fernandeziana*.  
*meli*, 33897.  
*molinae*. See *Ugni molinae*.
- Nageia andina*, 33990.
- Nepal trumpet flower. See *Beaumontia grandiflora*.
- Nephelium litchi*. See *Litchi chinensis*.  
*lappaceum*, 34077.
- Nephrosperma rauhoutleana*, 34080.
- Nesaea salicifolia*. See *Heimia salicifolia*.
- Nicotiana longiflora*, 33708, 33709.  
*tabacum*, 33671, 33707.
- Nierembergia frutescens*, 33992.
- Niger seed. See *Guizotia abyssinica*.
- Nightshade. See *Solanum* spp.
- Notra. See *Embothrium coccineum*.
- Nut, Queensland. See *Macadamia ternifolia*.  
 soap. See *Sapindus emarginata*.
- Nyctanthes arbor-tristis*, 33577.
- Oat, huskless (China), 33690.  
 (Russia), 33289.  
 rustproof (New Zealand), 33644.
- Okra. See *Abelmoschus esculentus*.
- Olea foveolata*, 33783.
- Olive. See *Olea foveolata*.
- Onobrychis caput-galli*, 33291.  
*crista-galli*, 33292.  
*cristata*, 33666.  
*laconica*, 33294.  
*sativa*, 33514.  
*montana*, 33293.  
*viciaefolia*. See *O. sativa*.
- Opuntia* spp., 33321 to 33335.  
*canuessa*, 33334.  
*cardona*, 33340.  
 (France), 33321 to 33335, 33340.
- Opuntia gosseliniana*, 33326.  
*gymnocarpa*, 33329.  
*hyptiacantha*, 33321.  
*myriacantha*, 33323.  
*pilifera*, 33324.  
*rastrera*, 33333.  
*robusta larreyi*, 33328.  
*scheerii*, 33325.  
*spinulifera*, 33335.  
*streptacantha*, 33327.  
*velutina*, 33332.  
*vulgaris balearica*, 33322.
- Orange (Algeria), 33279, 33788.  
 Caibé, 34040.  
 (China), 33391.
- Oryza* sp., 34092.
- Owenia cerasifera*, 33578.
- Oxyptalum coeruleum*. See *Gothofreda coerulea*.  
*solanoides*. See *Gothofreda solanoides*.
- Paconia mlokosewitschi*, 33336.
- Palm (Argentina), 33944.  
 (India), 33564.  
 Maquenge, 33346.  
 (Mauritius), 33347.  
 (Seychelles Islands), 34079 to 34084.
- Panax quinquefolium*, 33792.
- Panicum antidotale*, 33609.  
*ciliare*. See *Syntherisma ciliaris*.  
*cimicinum*. See *Coridochloa cimicina*.  
*divaricatissimum*, 34048.  
*effusum*, 34049.  
*glaucum*. See *Pennisetum glaucum*.  
*lutescens*. See *Chaetochloa lutescens*.  
*sanguinale*. See *Syntherisma sanguinalis*.  
*urvillianum*, 33898.
- Papaver somniferum*, 33407.
- Papaya. See *Carica papaya*.
- Parkinsonia aculeata*, 33993.
- Paspalum royleanum*, 33622.  
*vaginatum*, 33337.
- Passiflora* sp., 33785.  
*laurifolia*, 34088.  
*pinnatistipula*, 33813, 33814.  
*quadrangularis*, 33470.
- Passion fruit. See *Passiflora* spp.
- Patagonula americana*, 33994.
- Pavonia hastata*. See *Lass hastata*.

- Pea, chick. See Chick-pea.  
pigeon. See *Cajan indicum*.  
tree, Siberian. See *Caragana arbore-  
scens*.
- Peanut (German East Africa), 33426.  
*Pelargonium multibracteatum*, 33509.  
*Peltophorum vogelianum*. See *Baryx-  
lum dubium*.
- Pelu. See *Sophora tetraptera*.
- Pennisetum americanum*. See *P. glau-  
cum*.  
*cenchroides*. See *P. ciliare*.  
*ciliare*, 33611, 33612.  
*glaucum*, 33428.  
*orientale*, 33613.  
*typhoideum*. See *P. glaucum*.
- Peony (Russia), 33336.
- Pepper (France), 34089.  
red (Mexico), 33637.  
(Spain), 33351.
- Peppermint. See *Mentha piperita*.
- Pereskia poeppigii*. See *Maihuenia poep-  
pigii*.
- Persea lingue*, 33442.
- Persimmon (China), 33753.
- Pfaffia glauca*, 33995.
- Phalocallis gracilis*, 33996.  
*herberti*, 33997.
- Philibertella riparia*, 33998.
- Phoenicophorium borsigianum*, 34081.  
*sechellarum*. See *P. bor-  
sigianum*.
- Phyllanthus emblica*, 33579.
- Physalis pubescens*, 33811.
- Phytolacca dioica*, 33999.
- Pigeon-pea. See *Cajan indicum*.
- Pimenta acris*, 33716.
- Pine. See *Pinus* sp.  
*Pinus* sp., 33650.  
*leucodermis*, 33466.
- Piper nigrum*, 34089.
- Piptadenia cebil*, 34000.  
*rigida*, 34001.
- Pistache, Bronte, 33441, 33751.
- Pistacia atlantica*, 34052.  
*vera*, 33441, 33751.
- Pithecoctenium squalus*, 34002.
- Plazia argentea*, 34003.
- Plum, Claudia, 33515.  
See also *Prunus* sp.
- Plumbago scandens*, 34004.
- Podocarpus andina*. See *Nageia andina*.
- Polymnia sonchifolia*, 34005.
- Pomelo. See *Citrus decumana*.
- Pongam pinnata*, 33580.
- Pongamia glabra*. See *Pongam pinnata*.
- Poppy. See *Papaver somniferum*.
- Porana paniculata*, 33549.
- Potato (Austria), 33471 to 33491.  
of the air, 33350.
- Prickly pear. See *Opuntia* spp.
- Prosopis chilensis*, 33550, 34007.  
*juliflora*. See *P. chilensis*.  
*nigra*, 34008.  
*strombulifera*, 33900.
- Prunus* sp., 33789 and 33790.  
*chamaecerasus*. See *P. fruticosa*.  
*domestica*, 33515.  
*insititia*, 33436.  
*fruticosa*, 33659, 33663, 33665.  
×*avium*, 33657.  
×*cerasus*, 33658, 33661,  
33662, 33664.  
×*domestica*, 33660.  
*lusitanica*. See *Laurocerasus lusi-  
tanica*.  
*prostrata*, 33367.  
*spinosissima*, 33312.
- Pterogyne nitens*, 34009.
- Pumpkin (Guadeloupe), 33541.
- Putranjiva roxburghii*, 33581.
- Puya chilensis*, 33901 to 33903.
- Queensland nut. See *Macadamia terni-  
folia*.  
plum. See *Owenia cerasifera*.
- Quebrachia lorentzii*. See *Schinopsis lo-  
rentzii*.
- Quebracho, colorado. See *Schinopsis lo-  
rentzii*.  
red, 33796.
- Quila. See *Chusquea quila*.
- Quisco. See *Cereus quisco*.
- Rambutan. See *Nephelium lappaceum*.
- Raspberry (Australia), 33505.  
(India), 33344.
- Rattan. See *Calamus roxburghii*.
- Ribes* sp., 33899, 33910.  
*dikuscha*, 33368, 33521.  
*procumbens*, 33369.
- Rice, perennial, 34092.
- Ricinus communis*, 33408 to 33417.
- Rivina humilis*, 34010.
- Rollinia parviflora*, 34011.
- Rosa* spp., 33371 to 33373, 33592.  
*xanthina*, 33370.

- Roscheria melanochaetes*, 33347, 34082.  
 Rose (India), 33592.  
 See also *Rosa* spp.  
 Rose-apple. See *Caryophyllus jambos*.  
 Rosewood. See *Amerimnon nigrum*.  
 Rubber, African, 33405.  
     Central American. See *Castilla*  
     spp.  
     (Costa Rica), 33784.  
     (Guatemala), 33743, 33744.  
*Rubus* spp., 33504, 33505, 34045.  
     *ellipticus*, 33342.  
     *hawaiensis*, 33793.  
     *lasiocarpus*, 33344.  
     *moluccanus*, 33343.  
     *racemosus*, 33345.  
*Ruellia lorentziana*, 34012.  
     *tuberosa*, 33713.  
*Ruprechtia fagifolia*, 34013.  
  
 Sainfoin. See *Onobrychis sativa*.  
*Salix chilensis*, 34014.  
     *humboldtiana*. See *S. chilensis*.  
*Saloa hieronymi*, 33928.  
*Salpichroa rhomboidea*, 34015.  
 Samohú. See *Chorisia insignis*.  
*Sapindus emarginata*, 33582.  
*Sarcostemma riparium*. See *Philibertella*  
     *riparia*.  
*Schinopsis lorentzii*, 34016.  
*Schinus dependens*. See *S. huigan*.  
     *huigan*, 33823.  
     *terebinthifolius aroiera*, 34017.  
*Schlechtendalia luzulaefolia*. See *Chamis-*  
     *somneia luzulaefolia*.  
*Schmidelia edulis*. See *Allophylus edulis*.  
*Scleria* sp., 33338.  
*Scutia buxifolia*. See *Adolia buxifolia*.  
*Senecio* sp., 33812.  
*Serjania exarata*, 34018.  
 Sesame. See *Sesamum orientale*.  
*Sesuvium indicum*. See *S. orientale*.  
     *orientale*, 33418 to 33420.  
*Sesban paulensis*, 34019.  
*Setaria intermedia*. See *Chaetochloa inter-*  
     *media*.  
 Siberian pea tree. See *Caragana arbores-*  
     *cens*.  
*Sida bonariensis*, 34021.  
 Sissoo. See *Amerimnon sissoo*.  
 Soap nut. See *Sapindus emarginata*.  
*Solanum* spp., 33706, 34055.  
     *aculeatissimum*, 33506.  
     *bonariense*, 34022.  
     *macranthum*, 33583.  
     *tuberosum*, 33471 to 33491.  
*Sophora alopecuroides*, 33374.  
     *macrocarpa*, 33857 to 33859.  
     *tetraptera*, 33861 to 33863, 33904.  
 Sorghum (British East Africa), 33518.  
     (German East Africa), 33281,  
     33424, 33425.  
     (Panama), 33669, 33670.  
     shallu, 33638.  
     (Sudan), 33739.  
*Sorghum vulgare*. See *Holcus sorghum*.  
*Soymida febrifuga*, 33584.  
 Spinach, wild (Russia), 33308.  
*Spinacia tetrandra*, 33308.  
*Spiraea chamaedryfolia*, 33774.  
     *foxii*, 33775.  
*Spondias cytherea*, 33636.  
     *dulcis*. See *S. cytherea*.  
     *mangifera*. See *S. pinnata*.  
     *pinnata*, 33635.  
*Sporobolus indicus*, 33649.  
 Squash, "Mogango" (Brazil), 33511.  
*Statice macrophylla*, 33693.  
*Stenolobium stans*, 34023, 34024.  
*Sterculia colorata*. See *Firmiana colorata*.  
*Stevensonia grandifolia*. See *Phoenico-*  
     *phorium borsigianum*.  
*Stigmaphyllon jatrophaeifolium*, 34026.  
     *lingulatum*, 33585.  
     *littorale*, 34027.  
     *periplocaefolium*. See *S.*  
     *lingulatum*.  
*Stilpnopappus speciosus*. See *Stropho-*  
     *pappus speciosus*.  
*Stizolobium* sp., 34067.  
*Strophopappus speciosus*, 34025.  
*Strychnos spinosa*, 33341.  
 Sweetsop. See *Annona squamosa*.  
*Syntherisma ciliaris*, 33619.  
     *sanguinalis*, 33616.  
*Syringa meyeri*, 23032, p. 83.  
  
*Tabernanthe iboga*, 34090.  
*Tacsonia pinnatistipula*. See *Passiflora*  
     *pinnatistipula*.  
*Tagetes minuta*, 34028.  
*Talauma mutabilis*, 34078.  
 Tavola nut. See *Terminalia catappa*.  
*Tecoma stans*. See *Stenolobium stans*.  
*Terminalia bellerica*, 33586.  
     *catappa*, 33655.  
     *trifoliata*, 34029.  
*Thespesia populnea*, 33587.

- Thevetia nereifolia*. See *Cerbera thevetia*.  
*Tilia rubra begoniifolia*, 33375.  
*Tipuana speciosa*. See *T. tipu*.  
*tipu*, 34030.  
Tobacco (Chile), 33707 to 33709.  
Shiraz, 33671.  
Tomato (Australia), 33624.  
(Chile), 33704.  
*Tournefortia elegans*, 34031.  
*Trevoa trinervia*, 33815, 33816.  
*Tricondylus ferrugineus*, 33883.  
*Tricuspidaria dependens*. See *Crinodendron patagua*.  
*Trifolium* sp., 33714.  
*pratense*, 33736.  
*Trigonella caerulea*, 33295 to 33297.  
*cretica*, 33298.  
*foenum-graecum*, 33299.  
*gladiata*, 33300.  
*polycerata*, 33301.  
*Triticum aestivum*, 33286 to 33288, 33423, 33752.  
*durum*, 33285.  
*vulgare*. See *T. aestivum*.  
Trumpet flower, Nepal. See *Beaumontia grandiflora*.  
Turmeric. See *Curcuma longa*.  
Turnip (Sweden), 33682 to 33687.  
Swedish. See *Brassica campestris*.  
Tusca. See *Acacia moniliformis*.  
*Ugni molinae*, 33905, 33906.  
*Ulmus* sp., 34063.  
Undetermined, 33346, 33503, 33618, 33695, 33696, 33700, 33701, 33796, 33817, 33818, 33860, 33882, 33886, 34038, 34084.  
*Vallesia cymbaefolia*. See *V. glabra*.  
*glabra*, 34032.  
*Vanillosmopsis polycephala*, 34033.  
*Verbesina ornottii*, 34034.  
*Vernonia nitidula*, 34035.  
*speciosa*. See *Strophopappus speciosus*.  
*squamulosa*, 34036.  
*Verschaffeltia splendida*, 34083.  
*Viburnum burejaeticum*, 33776.  
*Vicia faba*, 33458.  
*Vigna* spp., 33519, 33520.  
*lutea*, 33795.  
*retusa*. See *V. lutea*.  
*Vitex montevidensis*, 34037.  
*Vitis vinifera*, 33376 to 33378, 33392 to 33403, 33460 to 33461, 33523 to 33539.  
Walnut (Argentina), 33975.  
(China), 33516.  
Watermelon (India), 33627, 33630, 33631.  
Wax gourd. See *Benincasa hispida*.  
We fruit. See *Spondias cytherea*.  
Wheat, Pistoria, 33752.  
(Russia), 33285 to 33288.  
(Russian Turkestan), 33423.  
Willow (Argentina), 34014.  
Wood-apple. See *Feronia elephantum*.  
*Xanthosoma sagittaeifolia*, 34091.  
*Xylosma salzmanni*. See *Myroxylon salzmanni*.  
Yam (Chile), 33802 to 33806.  
(Guatemala), 33350.  
Yang-taw. See *Actinidia chinensis*.  
Yatay. See *Cocos yatay*.  
*Zanthoxylum hyemale*. See *Fagara hyemalis*.  
*Zea mays*, 33282 to 33284, 33429, 33430, 33448 to 33457, 33459, 33672, 34053.  
*Ziziphus* sp., 33522.  
*jujuba*, 34054.  
*sativa*. See *Ziziphus jujuba*.  
*Zornia diphylla*, 33623.