

Issued December 13, 1912.

U. S. DEPARTMENT OF AGRICULTURE.

BUREAU OF PLANT INDUSTRY—BULLETIN NO. 261.

B. T. GALLOWAY, *Chief of Bureau.*

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# SEEDS AND PLANTS IMPORTED

DURING THE PERIOD FROM OCTOBER 1  
TO DECEMBER 31, 1911:

INVENTORY No. 29; Nos. 31939 to 32368.



WASHINGTON:  
GOVERNMENT PRINTING OFFICE.

1912.

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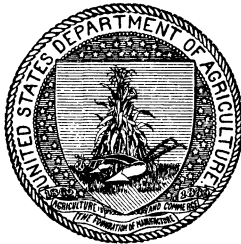
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## LETTER OF TRANSMITTAL

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U. S. DEPARTMENT OF AGRICULTURE,  
BUREAU OF PLANT INDUSTRY,  
OFFICE OF THE CHIEF,  
*Washington, D. C., June 12, 1912.*

SIR: I have the honor to transmit herewith and to recommend for publication as Bulletin No. 261 of the series of this Bureau the accompanying manuscript, entitled "Seeds and Plants Imported during the Period from October 1 to December 31, 1911: Inventory No. 29; Nos. 31939 to 32368."

This manuscript has been submitted by the Agricultural Explorer in Charge of Foreign Seed and Plant Introduction with a view to publication.

Respectfully,

B. T. GALLOWAY,  
*Chief of Bureau.*

Hon. JAMES WILSON,  
*Secretary of Agriculture.*



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## SEEDS AND PLANTS IMPORTED DURING THE PERIOD FROM OCTOBER 1 TO DECEMBER 31, 1911: INVENTORY NO. 29; NOS. 31939 TO 32368.

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### INTRODUCTORY STATEMENT.

This number of the inventories contains some of Mr. Frank N. Meyer's collections made in central Asia. They should attract the attention of experimenters whose work lies in the creation of hardier or more drought-resistant fruits, forage crops, or grains for the North and West. The difficulties of travel outside the railroad zone in Siberia and the still greater difficulty of getting the living plants he found there through to America alive give to these collections a special value. They represent only a small fraction of the interesting plants which Mr. Meyer found during his two and one-half years' absence. Some of his most interesting material will be described in later issues of the inventories.

Mr. Meyer is now in America and will spend the season studying the hundreds of plants which he secured both in China and central Asia, many of which are far enough advanced to show their adaptability to the American climate.

Mr. Meyer's new durum wheat, the Teiskaia (No. 32157), which was originated at the Bezenshook Agricultural Experiment Station in Russia, can not fail to attract the attention of the cerealists, in as much as it has proved extremely hardy at Samara, not being injured at all, while other varieties tested at the same time were killed out or at least severely injured.

The problem of studying *Medicago falcata*, the Siberian alfalfa, on the steppes of Siberia was given to Mr. Meyer with the result that he has found at least two distinct wild forms which are worthy of special attention. One is a bunchy upright form (No. 32178) from Ust Kamenogorsk, southwestern Siberia, and the other a very vigorous prostrate form (No. 32179), found on sandy, level stretches of land along the River Tom. This is suited, he thinks, for cultivation in meadows where grass is grown for hay production.

For introduction on the western ranges Mr. Meyer has secured a species of *Astragalus* (No. 32184) which is of bunchy erect habit, is eaten by cattle and horses, and which he believes may have value as a forage plant for cool semiarid climates.



His collection of four hardy Siberian relatives of the sulla (Nos. 32187 to 32189 and 32307), a remarkable forage crop of Spain and Tunis, brings up the question as to whether hardy hybrids which will grow in the South can not now be created. Sulla itself (*Hedysarum coronarium*) has never been made a success in America, owing presumably to its extreme susceptibility to frost. Mr. Swingle recently made the suggestion that the culture of sulla has probably had much to do with keeping up the fertility of the soil in the great sherry-wine region of Spain, which has produced famous wines since Shakespeare's time.

Among the 12 species of vetches (Nos. 32195 to 32206) which were found on the steppes of southwestern Siberia, some are thought by Mr. Meyer to have great promise as forage plants and should be introduced into the northwestern ranges.

Perhaps nothing which he found will create a more general interest than the Siberian cherry from the Ural district and western Siberia (No. 32224). This cherry, identified as a form of *Prunus fruticosa*, is a low bush not over 4 feet high, perfectly hardy and extremely drought resistant, so resistant in fact to extreme cold and drought that it can doubtless be grown throughout the entire Northwest. A plantation of these cherries resembles a tea plantation. The fruits are about the size of currants, are borne in great quantities, and make a most delicious preserve. Not only is this likely to prove a valuable plant as it stands, but two improved varieties have already been produced in Russia and Mr. Meyer has secured these (Nos. 32225 to 32226). The possibility of creating a race of perfectly hardy bush cherries by the use of this species is suggested by Mr. Meyer.

Fruit plants which will live in the interior of Alaska, where the temperature falls to  $-58^{\circ}$  F. and the summers are short and cool, are difficult to find. It seems probable, however, that Nos. 32227 to 32228, two varieties of a large-fruited black currant called the Aldansky Vinograd from the Aldan Mountains of the Yakutsk Province of Siberia, will grow and fruit there and help to better the living conditions of such northern regions as Alaska and Labrador.

Of material secured through correspondence the caroá (No. 32260), a remarkable fiber plant from central Brazil, is worthy of special notice. If the information we have is correct, here is a plant related to the bromelias, which occurs on the plateau back of Bahia, is subject to an extremely dry climate, is capable of cultivation, yields a fiber which is much stronger and more resistant to sea water than manila hemp, and will produce a large quantity of the fiber per acre.

Sugar canes for fodder purposes have attracted considerable attention in the South, and the introduction of the Indian cane (No. 32257) from New South Wales, where it has proved very suc-

cessful and is coming into great favor among the farmers, is likely to interest forage-crop men.

The asparagus is already such a highly developed vegetable that it may be questioned whether it can be much improved upon. However, the finding by Mr. Meyer of a form growing on dry mountain sides in the southeastern part of the Caucasus, the shoots of which have a special piquancy (No. 32091), and the introduction through Sir Percy Fitzpatrick of a wild form (No. 32271) from Table Mountain, South Africa, which he declares "is a great delicacy and to my taste better than any of the cultivated kinds," can hardly fail to arouse the interest of progressive asparagus growers.

We have scarcely begun to make the acquaintance of the cherimoya, although it is certainly a remarkable subtropical fruit, the cultivation of which in Madeira is a valuable industry. It is claimed that the annona does not bear well at sea level, but one of five varieties just introduced from Costa Rica (Nos. 32298-32301 and 32319) is reported to thrive on the coastal plain of that country.

Dr. Gustav Eisen, of the California Academy of Sciences, during his work in Italy for the Academy, has sent in from near Naples a remarkable plum called the Papagone (No. 32328), which seems not to have been previously introduced. According to Dr. Eisen it is 3 inches long, of a greenish yellow color, has a thin, slender stone, and is the finest plum he has ever eaten in any country.

As heretofore, this inventory has been prepared by Miss Mary A. Austin. For the nomenclature and the notes on the general geographical distribution of the various species Mr. H. C. Skeels is responsible, working, however, under the general direction of Mr. Frederick V. Coville, of the Office of Taxonomic and Range Investigations. The general supervision of this inventory, as of all the publications of this office, has been in the hands of Mr. S. C. Stuntz.

DAVID FAIRCHILD,  
*Agricultural Explorer in Charge.*

OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION,  
*Washington, D. C., April 29, 1912.*



# INVENTORY.

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**31939. MEDICAGO SATIVA L. Alfalfa.**

From Gilghit, Kashmir, India. Received through Mr. F. Booth Tucker, Salvation Army, Simla, India, October 2 and 4, 1911.

**31940. TRITICUM AESTIVUM L. Wheat.**

From near Cumpas, Sonora, Mexico. Presented by Mr. Alexander V. Dye, American consul, Nogales, Sonora, Mexico. Received October 4, 1911.

"This is known locally as *Sonora* wheat; it is a hard variety and the only one grown in this consular district." (*Dye.*)

**31941. CROTALARIA sp.**

From Puerto Bertoni, Paraguay. Presented by Dr. Moises S. Bertoni, Estacion Agronomica. Received October 5, 1911.

**31943 to 31945.**

From Quetta, India. Presented by Mr. A. Howard, Imperial Economic Botanist, Agricultural Research Institute. Received October 9, 1911.

Seeds of the following:

**31943 and 31944. MEDICAGO SATIVA L. Alfalfa.**

**31943. *Momqchiri.* 31944. *Qandhari.***

**31945. TRIFOLIUM SUAVEOLENS Willd. Shaftal clover.**

**31946 to 31950. MANGIFERA INDICA L. Mango.**

From Monghyr, North India. Purchased from Mr. Lalit Mohan Sinha, Lalloo Pokhar Road. Received October 9, 1911.

Cuttings of the following:

**31946. *Malda* No. 1. 31949. *Fazli* No. 1.**

**31947. *Malda* No. 2. 31950. *Fazli* No. 3.**

**31948. *Malda* No. 3.**

**31951 and 31952. CYTISUS PROLIFERUS L. f. Escobon.**

From Canary Islands. Presented by Dr. George V. Perez, Puerto Orotava, Teneriffe. Received October 9 and 11, 1911.

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

**31951.** Variety *canariae*. "This is the escobon of Grand Canary Island. It is an excellent fodder for goats and a sister plant of the tagasaste. I would suggest it being tried in the mountains of extreme southern California."

**31952.** "A tall shrub that grows here at from 4,000 to 6,000 feet above the level of the sea. Sometimes it is spoken of as variety *angustifolia*. Goats eat it, but the tagasaste (No. 28827) is better, also the variety from Grand Canary Island (No. 31951). However, the Teneriffe escobon, which is, as it were, the type plant, has many uses. Cartwrights use it for wheels in preference to any other timber. Its height is 20 to 25 feet, and the diameter of the trunk 1 foot."

**31953. SPATHODEA CAMPANULATA Beauv.**

From Java. Received through Dr. B. T. Galloway, Chief of the Bureau of Plant Industry, United States Department of Agriculture, October 10, 1911.

*Distribution.*—A tree bearing racemes of scarlet or crimson flowers, found in the countries along the western coast of Africa, from Sierra Leone southward to Angola in Portuguese West Africa. Cultivated as a street tree in Java.

**31954 to 31956.**

Presented by Dr. F. Mader, Nice, Alpes Maritimes, France. Received October 5, 1911.

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

**31954. PRUNUS BRIGANTINA Villars.**

“Seed collected from a little group growing between the hazel (*Corylus avellana*) in the Miniera Valley, 1,200 meters [3,930 feet] above sea level; and with a climate like that of your Alleghenies. Of course, the species, found here up to 2,000 meters [6,560 feet], is very hardy, as the Barcelonnette Valley, where it especially abounds, has an almost Siberian climate, frequently  $-25^{\circ}$  C. ( $-13^{\circ}$  F.) and lower in the winter, and up to  $35^{\circ}$  C. ( $95^{\circ}$  F.) in the summer. It is the true Briançon plum of French foresters, being now extensively planted in the high valleys, also on the Italian side, and has proved to be excellent for sheltering river banks, roadsides, stony ravines, or avalanche beds. The wood, which is very scarce, seems very much like that of *Prunus (Cerasus) mahaleb*. The fruit is free from sweetness and nearly insipid, but would be suitable for marmalades, etc. The seeds yield an oil used by poor mountaineers for cooking purposes, under the name ‘huile de marmotte.’ The species is not uncommon in the high valleys of the dry western part of the Maritime and Cottian Alps, from the Var to Briançon; in the more rainy eastern valleys it is much rarer, there being only scattered plants or little patches on shady rocks or other places.”

**31955. MEDICAGO SATIVA L.****Alfalfa.****31956. MEDICAGO FALCATA L.****31957 to 31975. PELARGONIUM spp.****Geranium.**

From Kew, England. Presented by Dr. David Prain, director, Royal Botanic Gardens. Received October 12, 1911.

Cuttings of the following, procured for purposes of breeding with the varieties commonly cultivated, with a view to adding to their bedding qualities:

**31957. PELARGONIUM CAPITATUM (L.) L'Herit.**

*Distribution.*—A trailing, partly shrubby plant with rosy-purple flowers in dense heads, found in the vicinity of Table Mountain and on the flats around Cape Town, South Africa.

**31958. PELARGONIUM QUERCIFOLIUM (L. f.) L'Herit.**

*Distribution.*—A hairy, much-branched shrub, found in South Africa, and well known in cultivation as the “oak-leaf geranium.”

**31959. PELARGONIUM VIOLAREUM Jacq.**

*Distribution.*—A diffuse shrub with the two upper petals dark red and the three lower ones white, growing on the slopes of the mountains in South Africa.

**31960. PELARGONIUM RAPACEUM (L.) Jacq.**

*Distribution.*—On dry stony mountain sides in the vicinity of Cape Town and in the Stellenbosch and Swellendam districts of South Africa.

## 31957 to 31975—Continued.

**31961.** × *PELARGONIUM TRICUSPIDATUM* L'Herit.

Apparently a hybrid of obscure origin.

**31962.** *PELARGONIUM CORDIFOLIUM* (Cav.) Curtis.

*Distribution.*—A shrub found on the slopes of the mountains from the valley of the Olifant's Vlei River southward to the Cape, in South Africa.

**31963.** × *PELARGONIUM BLANDFORDIANUM* (Andr.) Sweet.

Apparently a garden hybrid of unknown origin.

**31964.** *PELARGONIUM QUERCIFOLIUM* (L. f.) L'Herit.

Variety *major*.

**31965.** *PELARGONIUM RADULA* (Cav.) L'Herit.

Variety *major*.

*Distribution.*—A large, densely branched bush found on the mountain sides in the Tulbagh, Uitenhage, and Albany districts of South Africa.

**31966.** *PELARGONIUM RADULA* (Cav.) L'Herit.

**31967.** *PELARGONIUM UNICOLORUM* Willd. (?)

These were received under the name *Pelargonium unique aurora*, which may be a varietal name, but the possibility of error between that name and *unicolorum* is very suggestive. *P. unicolorum* is apparently a hybrid of garden origin.

**31968.** *PELARGONIUM MALVAEFOLIUM* Jacq. f.

*Distribution.*—Described from cultivated plants and is probably a garden hybrid.

**31969.** *PELARGONIUM CRISPUM* (Bergius) L'Herit.

*Distribution.*—A slender shrub with strongly scented leaves found on shrubby mountain slopes in South Africa.

**31970.** *PELARGONIUM DENTICULATUM* Jacq.

Variety *major*.

*Distribution.*—A tall weak-stemmed plant found on the mountain slopes in the southern part of South Africa.

**31971.** *PELARGONIUM VISCOSISSIMUM* Sweet.

*Distribution.*—Described from garden plants grown from seed received from the Cape.

**31972.** *PELARGONIUM ZONALE* (L.) L'Herit.

*Distribution.*—A large shrub found on hillsides in the western districts of South Africa.

**31973.** *PELARGONIUM BALBISIANUM* Spin.

*Distribution.*—Probably a garden hybrid.

**31974.** *PELARGONIUM CORDIFOLIUM* (Cav.) Curtis.

**31975.** *PELARGONIUM GRANDIFLORUM* Willd.

*Distribution.*—A shrubby plant with leaves palmately lobed and coarsely toothed, bearing large white flowers, found in the vicinity of Giftberg, in South Africa.

**31976. COFFEA LIBERICA** Bull.**Coffee.**

From Liberia, West Africa. Presented by Mr. Henry O. Stewart, Monrovia, Liberia. Received October 14, 1911.

*Distribution.*—Liberia and Sierra Leone in Upper Guinea and in the Angola district of Portuguese West Africa in Lower Guinea, on the west coast of tropical Africa.

**31977. PHORMIUM TENAX Forst. New Zealand flax.**

From California. Presented by Mr. P. D. Barnhart, Los Angeles. Received October 9, 1911.

Variegated variety.

Seeds.

**31978. ANNONA MURICATA L. Soursop.**

From Cuba. Presented by Mr. Robert L. Luáces, agricultural engineer, Camaguey, Cuba. Received October 9, 1911.

"Seed of a wild variety little known even here in Cuba. It is a beautiful tree, growing as much as 30 feet high on the banks of streams and ponds. The fruit is more rounded in shape than the cultivated, and although acid in taste can be eaten. This I believe will make a good stock for *Annona squamosa*." (*Luáces*.)

**31979. MEDICAGO SATIVA VARIA (Mart.) Urban. Sand lucern.**

From Schoeningen, near Colbitzow, Pomerania, Prussia, Germany. Grown on the farm of Mr. Ernest Schlange. Presented by Mr. Joseph E. Wing, Mechanicsburg, Ohio. Received October, 1911.

"This wild yellow alfalfa was found growing on waste sandy ground near a field of cultivated lucern." (*Wing*.)

**-31980. PETASITES LAEVIGATUS (Willd.) Reichenb.**

From near Sminogorsk, southwestern Siberia. Received through Mr. Frank N. Meyer, agricultural explorer, Bureau of Plant Industry, October 11, 1911.

"(No. 988.) An interesting hardy aquatic perennial, growing on the banks of swift-flowing, shallow streamlets, extending often for several yards in the water, but not occurring in places over 2 feet in depth. Of value as a decorative plant along watercourses in parks in the cooler sections of the United States." (*Meyer*.)

Rhizomes.

*Distribution*.—In Bohemia and the southwestern part of Siberia.

**31981. CITRUS sp. Sour citron.**

From Nagpur, Central Provinces, India. Procured by Mr. R. S. Woglum, Bureau of Entomology, United States Department of Agriculture. Received October 14, 1911.

"*Zamburi*, sour citron. The chief stock used for budding in the Central Provinces, India. The fruit is sour like a lemon, and has a yellow-covered rind. In appearance, color, taste, and character of flesh it is very similar to a California Eureka lemon allowed to overmature on the tree." (*Woglum*.)

Seeds.

**31982. BRYOPHYLLUM PINNATUM (L. f.) Kurz.**

From Paraguay. Presented by Mr. C. F. Mead, Villa Encarnacion, Paraguay. Received October 14, 1911.

"This is called locally *La Milagra* (the miracle). A curiosity even for these parts. A low-growing shrub with waxlike leaves of which snails, etc., are very fond. Leaves dropping off from the plant reproduce themselves around the outer edges, or if you pin a leaf on a wall or other place it will start growing." (*Mead*.)

*Distribution*.—Probably a native of tropical Africa and generally cultivated throughout the Tropics.

**31983. CASTILLA sp. Central American rubber.**

From Costa Rica. Presented by Mr. Carlos Wercklé, San Jose. Received October 20, 1911.

Seeds.

**31984. PERSEA AMERICANA Miller. Avocado.**

Presented by Mr. C. F. Mead, Villa Encarnacion, Paraguay. Received October 23, 1911.

"*Abogado*, otherwise called *abagate*, *paqua pauta*, *abaji*, *aguacate*, *ahuaca*, or alligator pear. Seeds from fruit found in the market at Buenos Aires. Fruit small, pear shaped, and dark red in color. Sold in market under the name of 'red Chilian abacate,' or 'red abacate from Chile.'" (Mead.)

**31985 to 31998. IPOMOEA BATATAS (L.) Poir. Sweet potato.**

From Peru. Presented by Mr. Antonio Graña, Huando, Chancay, Peru. Received October 10, 1911.

Tubers of the following; quoted notes by Mr. Graña:

"These sweet potatoes bear different names by which they are known by the people of the country without indicating thereby any scientific classification. Neither are they grown as distinct varieties, as they are produced mixed together."

**31985.** "*Vapor*. Produces in four months."

**31986.** "*Huamino*. Produces in five months."

**31987.** "*Cochino*. Produces in six months."

**31988.** "*Azadura de vaca*. Produces in five months."

**31989.** "*Romero*. Produces in five months."

**31990.** "*Supano blanco* (white). Produces in five months."

**31991.** "*Supano prieto* (black). Produces in five months."

**31992.** "*Papa*. Produces in four months."

**31993.** "*Limeño*. Produces in five months."

**31994.** "*Plaza*. Produces in four months."

**31995.** "*Niño*. Produces in five months."

**31996.** "*Cambrax*. Produces in five months."

**31997.** "*Tabardio*. Produces in five months."

**31998.** "*Yemade huevo*. Produces in five months."

**31999 to 32001. CROTALARIA spp.**

From Buitenzorg, Java. Sent in by the Java Department of Agriculture, at the request of Mr. C. V. Piper, Bureau of Plant Industry. Received October 5, 1911.

Seeds of the following; under trial at the Buitenzorg garden as green-manure crops and will be tested here for the same purpose.

**31999.** *CROTALARIA ALATA* Hamilton.

*Distribution.*—From the mountains in the Province of Assam in northeastern India southeastward to Java.

**32000.** *CROTALARIA LEIOLOBA* Bartl.

*Distribution.*—On the lower mountain slopes in northern India from Nepal to Assam, and eastward through the Malay Archipelago as far north as the Philippines.

**32001.** *CROTALARIA SALTIANA* Andrews.



**32002 and 32003.**

From Guatemala. Presented by Mr. S. Billow, Guatemala, Central America.  
Received October 12, 1911.

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

**32002.** *CEREUS* sp.

**Pitaya.**

"This fruit is produced about 30 miles from Guatemala City, and I understand that it is closely allied to the cactus family. It is red colored and is very delicious. The blossom of the plant, as well as the fruit, is eaten."

**32003.** *PASSIFLORA LIGULARIS* Juss.

**Passion fruit.**

"This is about the size of a large egg and the seeds are surrounded with a gelatinous substance. When ripe the seeds and this jellylike substance are eaten; when green the whole fruit is stewed in sugared water and eaten, and the seeds and jelly substance are thrown away. It grows on a vine and is largely consumed."

**32004.** *PHYTOLACCA ACINOSA* Roxb.

From Yokohama, Japan. Purchased from the Yokohama Nursery Co. Received October 17, 1911.

Variety *kaempferi*.

Seeds.

See No. 29133 for distribution of this species.

**32005.** *SOLANUM HAEMATOCADUM* Dunal.

From Brussels, Belgium. Obtained by Prof. William R. Lazenby, of the Ohio State University, Columbus, Ohio. Received October 18, 1911.

"This is a vigorous growing, red-fruited species." (*Lazenby.*)

*Distribution.*—Not known except from Bolivia.

**32006.** *DIMOCARPUS LONGAN* Loureiro.

**Longan.**

The seeds of this Chinese sapindaceous tree were received under the name *Euphoria longana*, which was published by Lamarck (*Encyclopédie Méthodique Botanique*, vol. 3, p. 574) in 1791. The generic name *Euphoria* was used by Jussieu (*Genera Plantarum*, p. 247) in 1789, who characterized the genus and mentioned the plants known by the Chinese names litchi and longan as belonging to it. If the litchi is regarded as the type of the genus *Euphoria*, the name *Euphoria* becomes a synonym of *Litchi*, the generic name of the litchi tree. If the longan be regarded as the type species of *Euphoria* the name *Euphoria* can not be maintained because the longan had not at this time received a binomial name, and as Jussieu does not describe it nor give it a binomial name he can not be said, according to present rules of botanical nomenclature, to have published the generic name *Euphoria*. The first generic name published for the longan is *Dimocarpus*, published in 1790 by Loureiro (*Flora Cochinchinensis*, vol. 1, p. 233) and Loureiro's name for this species is here used.

From Kiayingchow, China. Presented by Mr. George Campbell. Received October 19, 1911.

"Seeds from some particularly large and fine fruit." (*Campbell.*)

The tree is handsome and may be used as a shade tree, also as a stock on which to bud the litchi.

*Distribution.*—Found in India, where it is probably native, and eastward to China and through the Malay Archipelago.

**32008. OCIMUM VIRIDIFLORUM Roth. Mosquito plant.**

From Southern Nigeria, West Africa. Presented by Mr. W. H. Johnson, director, Agricultural Department, Ibadan, Southern Nigeria. Received October 20, 1911.

"This is the West African mosquito plant. This plant is known locally to possess valuable qualities as an insectifuge, but I think its use is really not much practiced by the natives. The foliage is usually hung up in dwelling houses in the green state to keep away mosquitoes. The dried plant is also burned and the resulting smoke therefrom is considered to be useful for the same purpose." (*J. W. Henderson, acting director.*)

*Distribution.*—A herbaceous perennial found along the western coast of Africa from Sierra Leone southward to Angola.

**32009 to 32011. HIBISCUS spp.**

From Gold Coast, West Africa. Presented by Mr. A. R. Gould, curator, Botanic Garden, Aburi. Received October 20, 1911.

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

**32009. HIBISCUS CANNABINUS L. Ambari.**

"White, large leafed."

*Distribution.*—Naturalized or cultivated throughout the Tropics; probably wild in India.

**32010 and 32011. HIBISCUS SABDARIFFA L. Roselle.**

**32010.** "Red-stalked variety." **32011.** "White-stalked variety."

"Interesting indigenous fiber plants cultivated by the natives in the interior."

**32012 to 32013. CHRYSANTHEMUM CINERARIAEFOLIUM (Trev.) Vis. Pyrethrum.**

From Dalmatia, Austria-Hungary. Presented by Mr. K. Portele, Imperial Ministry of Agriculture, Vienna, Austria-Hungary. Received October 20, 1911.

Seeds of the following:

**32012.** From Cattaro. **32013.** From Ragusa.

"This species grows wild here in Dalmatia and is also cultivated."

**32014. CRATAEGUS COCCINEA L. Hawthorn.**

From Seattle, Wash. Collected by Messrs. P. H. Dorsett and Peter Bisset, of the Bureau of Plant Industry. Received October 25, 1911.

"A large-fruited Crataegus collected in Woodland Park, Seattle." (*Bisset.*)

**32015 and 32016. PHOENIX DACTYLIFERA L. Date.**

Grown at the Cooperative Date Garden, Tempe, Ariz., Mr. F. H. Simmons in charge. Received in the spring of 1911. Numbered October 25, 1911.

Seeds of the following:

**32015.** *Rhars.* **32016.** *Deglet Noor.*

**32017. PRUNUS sp. Plum.**

From Pietermaritzburg, Natal, South Africa. Presented by Mr. T. R. Sim. Received October 28 and November 3, 1911.

*Methley.* See No. 31652 for description.

**32018. ANNONA SQUAMOSA L.****Sweetsop.**

From Cuba. Presented by Mr. Roberto L. Luáces, Camaguey, Cuba. Received October 24, 1911.

Seeds.

**32019. BOSWELLIA sp.****Frankincense.**

From the island of Socotra. Procured by Mr. Charles K. Moser, American consul, Aden, Arabia. Received November 17, 1911.

Mr. Moser made a special expedition from Aden to the island of Socotra at the mouth of the Red Sea at the request of the Office of Foreign Seed and Plant Introduction, and secured two trees of this so-called incense tree. He was enabled to do this through the assistance of the British Resident at Aden, who invited Mr. Moser to accompany him as a guest on a British Government vessel upon which he himself made a special trip to the island of Socotra for the British Government. Two trees were obtained by Mr. Moser during a 26-hour wait of the vessel, being dug out of the soil by native Socotran boys, at an elevation of 2,500 feet above the sea. These were packed in kerosene cases filled with Socotran soil and were taken by caravan to the boat and transported to Aden. They remained in these tins until October 7, 1911, when they were sent to the Department. The following report is taken from Mr. Moser's letter of April 29, 1911:

"We went into the mountains directly south of Tamarida Bay to a place called Adho Dimellus in the Haghier Range. We first saw the tree about 9 miles in a direct line from the sea at an altitude of about 2,800 feet. The trees were apparently in full flower, with immature fruits intermingled. There were no signs of old seeds, and the Socotrans pretended never to have seen any seeds, but they could be easily gathered, and I have made arrangements to procure some during the summer. The soil was very rocky, a red, rich-looking, easily disintegrated granite, out of which, higher up, arose limestone escarpments. The temperature during the night was about 65° F., but at noon it was nearly 90° F. All the trees we saw were nearly the same size, and I was astonished to find in an area of several miles no small shoots or saplings.

"The natives call the frankincense tree *tee-lah-ah* (spelled phonetically) and its product *lu-ban*. From the samples which I saw and from the reputation it bears in the Aden market, it seems certain that the quality of Socotran *lu-ban* is distinctly inferior to that of Somali and the Hadramaut, and the produce per tree is much smaller. The trees we saw were from 20 to 30 feet in height and from 8 to 10 inches in diameter, with scraggly, swollen branches, which scarcely tapered and ended in tufts of sumac-like leaves of a general yellowish color clotted with autumnal reds. The leaves were multifoliate, 7 to 11 leaflets, 1½ to 2½ inches long, elliptic, regularly crenated, and medium ovate. The flowers are very thickly clustered on thick stalks, 5 to 8 inches long, with nearly a uniform diameter of five-eighths to three-fourths of an inch; in color the flowers were a deep pink or bright magenta, much resembling a thick cluster of double geraniums. The immature fruits among them were one-half to five-eighths of an inch long and pear shaped. The bole and branches were of a livid greenish, almost translucent hue, smooth and covered with blotches, resembling gangrenous human flesh; the outer bark sheds in thin, yellowish white, papery strips or peels. When cut, even with the thumb-nail, the bole, the boughs, and the stalks yield a clear, sticky, viscous fluid with a rich aromatic odor. This exudation usually remains clear until and after it hardens, but I saw some trees with clear 'tears' and on others brownish or amber-colored ones. Every day I have cut my two specimens with the thumb-nail, and with but two exceptions the exudation has been clear and colorless; on those two occasions the wound was followed by a milky drop, but I have been unable to discover why.

"The Socotra *olibanum* flowers in April and the gum is collected any time after May, which is the beginning of the wet season. It is usually collected, however, during June, July, and August. The Socotran merely goes among the wild trees, giving each about a dozen deep, oblique slashes, 2 or 3 inches long, which he tears open into a kind of pocket at the lower end with a wrench of his knife. The tree is then left to deposit its sap in these pockets for three weeks or a month, at the end of which time the collector comes with his knife and basket and cuts the collected nodules 'or tears' away with pieces of bark. He then either makes new cuts or deepens the old ones and again awaits the harvest in another three or four weeks. The process is repeated until September. The *lu-ban*, which overflows the wound and runs down the tree, is regarded as of less value than that which remains in the pockets. A Socotran average tree is said to yield from 1 to 5 pounds of *lu-ban* per season, while the yield in Somali is much larger. Its value in the island is simply anything which the collector, who has little use for money, can persuade the Arab trader to give him for it in rice, goats, or cotton shirting. In Aden it is worth from 6 to 12 cents per pound, according to quality, while the Somali *lu-ban* is worth from 10 to 24 cents per pound.

"I must add that we found the *olibanum* growing only on the inside, protected slopes of the mountain, that its range seemed to be from 2,000 to 4,000 feet, and that while we only saw it in a red granite soil, we were told that it grew equally well out of fissures in the limestone heights above us. The climate of Socotra is, of course, very dry and not so hot as Arabia. We found the earth exceedingly dry, and were informed that rain never falls in the Haghier Hills except during the rainy months from May to August or September.

"There is no cleaning of the collected *lu-ban*, but as soon as it hardens a little after being cut from the trees it is ready for market." (*Moser*.)

"The frankincense tree is supposed to have been the tree which furnished the frankincense of the ancients, and the hardened drops of gum are now used very extensively in Roman Catholic churches as incense, being burned in the censers. The tree will probably thrive only in the dry, almost frostless, areas of the Southwest." (*Fairchild*.)

### 32020. CITRUS LIMETTA Risso.

**Lime.**

From Burringbar, New South Wales, Australia. Presented by Mr. B. Harrison, Burringbar. Received July 31, 1911. Numbered October 15, 1911.

Seeds.

### 32021. STIZOLOBIUM CINEREUM Piper and Tracy.

From Amani, German East Africa. Presented by Dr. A. Zimmermann, director, Biologisch Landwirtschaftliches Institut, Amani. Received October 25, 1911.

### 32022 to 32025. STATICE spp.

From Canary Islands. Presented by Dr. George V. Perez, Puerto Orotava, Tenerife. Received October 5, 1911.

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

#### 32022. STATICE ARBOREA Brouss.

Variety *frutescens*. "Native of Teneriffe. Botanically this is a dwarf form of *arborea*."

#### 32023. STATICE MACROPTERA Webb and Berth.

"Native of the island of Hierro."

#### 32024. STATICE PEREZII Stapf.

"Native of Teneriffe. Newly discovered species."

#### 32025. STATICE PUBERULA Webb.

"Gathered wild at Famara, Lanzarote. This seed keeps 2 or 3 years."

**32026 and 32027.**

From near Ust Kamenogorsk, southwestern Siberia. Received through Mr. Frank N. Meyer, agricultural explorer, Bureau of Plant Industry, October 30, 1911.

Roots of the following:

**32026. HEDYSARUM SPLENDENS** Fisch.

"(No. 989, October 2, 1911.) A rare and interesting legume occurring on stony mountain slopes here and there along the Irtysh River. May possess value as a forage plant in semiarid regions where irrigation is not practicable and where the soil is stony and sterile." (*Meyer.*)

**32027. ASTRAGALUS** sp.

"(No. 990, October 2, 1911.) A small Astragalus, quite common on rocky and sterile places. Is eagerly browsed by horses and cattle. Of value like the preceding number." (*Meyer.*)

**32028 to 32032.**

Presented by Dr. A. Robertson Proschowsky, Nice, France. Received October 30, 1911.

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

**32028. OXYTENANTHERA ABYSSINICA** (Rich.) Munro.

From Abyssinia.

"The following plants from Nice, France, are exceedingly drought resistant and are liked by herbivorous animals."

**32029. CORONILLA VALENTINA** L.

*Distribution.*—The countries bordering on the western part of the Mediterranean from Spain to Italy, Corsica and Sardinia, and in northern Africa.

**32030. LOTUS ORNITHOPODIODES** L.

See No. 7730 for description.

*Distribution.*—The countries bordering on the Mediterranean from Spain to Syria and in northern Africa.

**32031. MEDICAGO SATIVA** L.

**Alfalfa.**

"Seeds of the wild-growing form."

**32032. MEDICAGO ORBICULARIS MARGINATA** (Willd.) Benth.**32033 and 32034. ANNONA CHERIMOLA** Miller. **Cherimoya.**

From Costa Rica. Presented by Mr. Carlos Wercklé, San Jose. Received October 27, 1911.

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

**32033.** "From Don Buenaventura Corrales."**32034.** "First-class Annona from Vindas, in San Pedro del Mojon."**32035. PHASEOLUS** sp.

From South Sea Islands (Oceania). Presented by Rev. C. N. Field, 33 Bowdoin Street, Boston, Mass. Received November 3, 1911.

"I have never tasted a variety as delicious as this one. The seeds were given to me by a man who had traveled around the world. They thrived much better than ordinary scarlet-runner beans; on very poor soil near Boston they grew 10 feet high and were remarkably productive. They are eaten baked after removing the pods and found especially sweet. They have a very pretty purple flower." (*Field.*)

**32036 and 32037. LANGUAS GALANGA (L.) Stuntz. Galangale.**

Roots of this plant were received under the name *Alpinia galanga* (L.) Willd. The genus *Alpinia*, however, was based on a single species, *Alpinia racemosa* L. (Species Plantarum, vol. 1, 1753, p. 2). This is not now considered congeneric with the present plant, which was first published as *Maranta galanga* L. (Species Plantarum, ed. 2, vol. 1, 1762, p. 3). As the type of the genus *Maranta* is *Maranta arundinacea*, also not congeneric with the galangale under discussion, it is necessary to adopt for this plant the next later generic name, *Languas*, published in 1783 by Koenig in Retzius, *Observationes*, vol. 3, p. 64.

From Buitenzorg, Java. Presented by the Director of Agriculture at the request of Mr. C. V. Piper. Received November 2, 1911.

*Distribution.*—Throughout India from the foot of the Himalayas to Ceylon and Malakka; generally cultivated in the Tropics.

Roots.

**32038 to 32042.**

From Chinese Turkestan. Received through Mr. Frank N. Meyer, agricultural explorer, Bureau of Plant Industry, November 3, 1911.

Seeds of the following:

**32038. TRITICUM AESTIVUM L. Wheat.**

From Kizil Bulak, Tien Shan Mountains, Chinese Turkestan. Altitude, 6,650 feet.

“(No. 1583a, March 4, 1911.) A summer wheat of a very dark color, called *Kara boogdai*, meaning black wheat. Sown in early April and grown under irrigation. Of value probably for sections of the United States where the summers are not only short but hot and dry.” (Meyer.)

**32039. TRITICUM AESTIVUM L. Wheat.**

From Kara Tugai, Tekes Valley, Tien Shan Mountains, Chinese Turkestan. Altitude, 3,900 feet.

“(No. 1584a, March 6, 1911.) A rare local variety of summer wheat of great excellence. Grains large, of a pale-yellow color, ears very long. The flour made from this wheat makes a fine quality of substantial bread. Sown in April and raised under slight irrigation. To be tested in the western sections of the United States.” (Meyer.)

**32040. ORYZA SATIVA L. Rice.**

From Aksu, Chinese Turkestan.

“(No. 1585a, February 27, 1911.) A local variety of wet-land rice, called *Kara kiltrick*. The variety absorbs a large quantity of water in cooking; the grains always remain separate, are of a snow-white color, and a very large size. Although expensive in comparison to the lower grades, yet it is considered economical, as only one-third to one-half the quantity is needed to fill the same cooking vessel. If a specially fine quality of rice is wanted, the plants are set out by hand, with the result that the rice treated in this manner is larger, of finer quality, and greater in yield. However, as the labor connected with such practice is too expensive to justify the returns, this variety is usually sown broadcast, like all rices in this part of the world.

“As the soil around Aksu is decidedly alkaline, this rice will be able to stand a fair amount of alkali. Otherwise it can be tested in the same way as Nos. 1571a to 1580a, inclusive (S. P. I. Nos. 31823 to 31832).” (Meyer.)

**32038 to 32042—Continued.****32041. ORYZA SATIVA L.****Rice.**

From Aksu, Chinese Turkestan.

"(No. 1586a, February 27, 1911.) A local variety of wet-land rice, called *Ak kiltrick*. In looks and yield very much the same as the preceding number, but not near so good in quality; swells but little in cooking and is not so white and large. To be tested like the preceding number." (*Meyer.*)

**32042. HORDEUM sp.****Barley.**

From Yengi Malah, Tien Shan Mountains, Chinese Turkestan. Altitude, 7,950 feet.

"(No. 1587a, March 4, 1911.) A black hull-less summer barley, grown under irrigation on rocky fields at high altitudes. A very rare local variety, apparently a mutation which has not yet been fixed. It is intermixed with other varieties and with wild black and white oats, which may also prove to be interesting. Locally used as a feed for horses and may possibly be of value for growing for this purpose in elevated arid and semiarid regions. To be tested especially in the intermountain sections of the United States." (*Meyer.*)

NOTE.—See Nos. 32280 and 32281 for oats and barley picked out of this lot.

**32043 to 32060.**

From Brazil. Presented by Mr. Welman Bradford, Crowley, La. Received October 2, 1911.

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

**32043. MICHELIA CHAMPACA L.****Champac.**

"Magnolialike tree having yellow blooms. Not as sweet as our magnolia. Grows 30 feet high. It is being planted in Sao Paulo as an ornamental street tree."

*Distribution.*—A tall tree found wild in the forests on the temperate slopes of the Himalayas in northern India; often cultivated.

**32044 to 32046. ANNONA SQUAMOSA L.****Sweetsop.**

"*Fruta de conde*. This is known as the *Princess fruit*; there is another variety called the *Prince*. In my estimation it is the best fruit that ever grew. The largest plants I have noticed are about 12 feet high, and the largest fruit about 5 inches in diameter."

**32047. PASSIFLORA sp.****Passion fruit.**

"*Maracuja roxo* (purple maypop). This is round, very hard, and stiff. Should not be eaten until quite ripe, as it is too sour."

**32048 and 32049. PASSIFLORA sp.****Passion fruit.**

"Said to be the best to eat."

**32048.** "*Maracuja amarello* (yellow maypop). Large."

**32049.** "*Maracuja amarello* (yellow maypop). Small."

**32050. PASSIFLORA LIGULARIS Juss.****Passion fruit.**

"*Maracuja guasu* (large maypop)."

**32051. ERYTHRINA CRISTA-GALLI L.**

See No. 29655 for description.

**32052. ROLLINIA sp.****32053. TOLUIFERA sp.**

"A tall forest tree. Wood deep purple, oily, very sweet scented, proof against the attack of ants, absolutely everlasting. Posts made from it never rot, and trunks and furniture are insect proof."

**32043 to 32060—Continued.**

**32054.** DOLICHOLUS PHASEOLOIDES (Swartz) Kuntze.

"A little vine that grows wild and bears a very pretty bean. All the people of the East Indies use these beans for ornament, stringing, etc."

*Distribution.*—In the West Indies and from Nicaragua southward through tropical South America.

**32055.** ORMOSIA MONOSPERMA (Swartz) Urban.

"A hardwood timber forest tree growing on the banks of rivers."

**32056.** GOSSYPIUM sp.

**Cotton.**

**32057.** ORYZA SATIVA L.

**Rice.**

"Black rice. Planted here in fields to fool the birds."

**32058.** CANAVALI sp. (?)

"This is known throughout the Parahyba Valley, also between Sao Paulo and Rio Janeiro. It is an easy and luxuriant grower found in the woodlands and in the timber, thrives in the dense shade, the vines climbing up to the tops of the trees at least 20 feet until they find the sun. Not cultivated at all. Some people seem to think it is poisonous and say that the cattle after eating the beans and pods and drinking water will die. It is a prolific bearer; the pods are about 8 inches long, and as well as I can remember are smooth. It has three leaflets somewhat separated from each other, not close, as with the cowpea."

**32059.** ASTRAGALUS SINICUS L.

"From Parahyba Valley. A giant clover growing 3 or 4 feet high. Flowers pink to yellow. Bears a slightly curved, fuzzy pod 1½ inches long. The roots are well covered with nodules. It is a weed at present, but by planting closely it will get finer and softer. May be of value for plowing under."

**32060.** VIGNA SINENSIS (Torner) Savi.

**Cowpea.**

"From a bean exposition in Sao Paulo."

**32061 and 32062. ANDROPOGON SORGHUM (L.) Brot. Sorghum.**

From Buitenzorg, Java. Presented by the Department of Agriculture, at the request of Mr. C. V. Piper, Bureau of Plant Industry. Received October 5, 1911.

Seeds of the following; quoted notes by Mr. Carleton R. Ball:

**32061.** "Seeds brown (clay on the included portion and burnt sienna to claret brown on the exposed tips), narrowly obovate, cuneate at the base; 3 by 5 millimeters in diameter. Glumes transversely shouldered, black, and indurated below the shoulder, somewhat scarious above; more or less pubescent."

**32062.** "A form of white durra. Seeds white, sublenticular; 3½ by 4 millimeters to 4 by 4½ millimeters in diameter. No glumes present."

**32063. (Undetermined.)**

From Brazil. Presented by Mr. Fred. Birch, Theophilo Ottoni, Minas Geraes, Brazil. Received November 4, 1911.

"Seeds of a forest shrub which I have discovered here. It is a rare pleasure to find a new fruit thus. It is a shrub about 4 feet high, of very compact growth; stem and branches tough and elastic, leaves dark green, glossy, and fairly tough, about 1½ to 2 inches long by 1 inch wide, built like so many of the leaves here for living through a long dry season. I have not yet seen the flower. The fruit is a sort of elongated



cherry, about seven-eighths of an inch long by three-eighths to seven-sixteenths of an inch thick in the middle, black or purple black, and with a bright glossy skin. They usually occur singly, strung along the branches, but sometimes there are two together. From one small shrub we have eaten, I think, about 300 fruits. The flesh is about one-eighth of an inch thick over the seed and it is soft and juicy, tasting more like a black cherry than any other northern fruit I can think of. When I recall the size of the wild fruit from which the common cherry is supposed to have originated, I think this little fruit promises well to repay cultivation. I would suggest trying it in Florida or California or Texas; the last-named State may be the best for it. From mid-August until the end of September is the time of fruiting—i. e., in early spring here." (*Birch.*)

### 32064 to 32069.

From Mexico. Presented by Dr. C. A. Purpus, Zacuapam, Huatusco, Vera Cruz, Mexico. Received November 6, 1911.

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

**32064 to 32067.** SOLANUM NIGRUM L. **Nightshade.**

**32064.** "From Minas San Rafael, San Luis Potosi, 1,600 meters [5,250 feet]."

**32065.** "From Esperanza, Puebla, 2,700 meters [9,850 feet]."

**32066.** "From Tehuacan, Puebla, 1,700 meters [5,575 feet]."

**32067.** "From Rascon, San Luis Potosi, 400 to 500 meters [1,300 to 1,650 feet]."

**32068 and 32069.** NICOTIANA spp. **Wild tobacco.**

**32068.** "From Guascama, San Luis Potosi."

**32069.** "From Minas San Rafael, San Luis Potosi."

### 32070. CACARA EROSA (L.) Kuntze.

From Tampico, Mexico. Presented by Mr. Clarence A. Miller, American consul, through Mr. E. C. Green, in charge, South Texas Garden, Brownsville, Tex. Received December 18, 1911.

"*Hicama de Agua.*" See No. 27959 for previous introduction.

### 32071. CALLITRIS CUPRESSIFORMIS Ventenat.

#### **Tasmanian cypress pine or Oyster Bay pine.**

From Tasmania. Presented to the United States Forest Service by Mr. L. A. Evans, editor of the Agricultural Gazette, Hobart, Tasmania, and to the Office of Foreign Seed and Plant Introduction by Mr. Raphael Zon, Chief of Silvics, United States Forest Service. Received November 8, 1911.

"This pine is described by Col. W. V. Legge in a report on the 'Tasmanian cypress pine,' published this year [1911]. According to this paper, the tree is confined mainly to the coast, where it does well on poor soils. It seems to have a slow growth, but in time reaches a height of 100 feet and a diameter of about 2½ feet. In spite of the fact that it is chiefly a warm climate tree, it also thrives in some of the colder parts of Tasmania, where there is considerable frost. It has a plain whitish wood, without figure, and with little difference in color between the sapwood and the heartwood. Its grain is hard and close, and the wood is exceedingly durable. It is largely used for piles, telegraph poles, and in general construction work. It not infrequently grows in mixture with eucalypts and when grown in the forest under moderate light conditions its form is that of a sharp cone, which is tall both in proportion to the diameter and the spread of the lateral branches. There are all gradations from this form to the spreading bushy tree found in the open.

"Since Florida is apparently the region in the United States best adapted to this species, I would advise growing some at Miami for experimental planting by the Forest Service in the Florida National Forest. Although the tree is widely used for a great variety of purposes in Tasmania, I doubt if it would prove superior to our own conifers and believe that the chief advantage in introducing it into Florida would probably be to furnish a comparatively soft, light wood for local use." (*Zon.*)

**32072. SYZYGIUM CUMINI (L.) Skeels.****Jambu.**

From Algiers, Algeria. Presented by Dr. L. Trabut. Received November 10, 1911.

"Originally from Madagascar. A very vigorous tree, bearing large leaves and large, sweet fruits." (*Trabut.*)

See No. 31571 for previous introduction.

**32073. SECALE CEREALE L.****Rye.**

Purchased from Landwirtschaftsvereins, Insterburg, Germany. Brought in by Mr. E. Brown, Botanist in Charge, Seed Laboratory, Bureau of Plant Industry. Numbered November 11, 1911.

Variety *multicaule*. "*Johannisroggen, Johannistagroggen, Seigle de la Saint-Jean*. A variety commonly cultivated in northern Germany in mixture with *Vicia villosa* for green forage and hay. It is also a favorite grain variety in East and West Prussia. It can be seeded any time between June 15 and October 15, and when seeded early furnishes abundant green fodder or pasture in the fall and green fodder, hay, or grain in the spring. It is an especially hardy variety adapted to a wide variety of soils, and on account of its stooling habit less seed is required than for other varieties of rye. This should prove an especially valuable forage crop throughout the sections of the South where it is difficult to maintain a good turf for pasture or meadow on account of the lack of vegetable matter or because of an acid condition of the soil." (*Brown.*)

**32074 to 32077.**

From Alhajuela, Panama. Collected by Mr. August Busck. Presented by Mr. William R. Maxon, United States National Museum, Washington, D. C. Received November 10, 1911.

Plants of the following:

**32074 to 32076.** (Undetermined.)

**Orchid.**

**32077.** *HIERACIUM* sp.?

**32078. MEDICAGO FALCATA L.**

From Tomsk, Siberia. Received through Mr. Frank N. Meyer, agricultural explorer, Bureau of Plant Industry, November 13, 1911.

"(No. 1636a, August 22, 1911.) A tall semierect form of *Sholteek* growing 4 to 5 feet in height, having much foliage and bearing large pods containing heavy seeds. Apparently shatters very little. Collected in the botanical garden of the University of Tomsk. To be tested for forage purposes and for hybridization exclusively." (*Meyer.*)

**32079. CHRYSOPHYLLUM sp.**

From Paraguay. Presented by Mr. C. F. Mead, Villa Encarnacion. Received December 19, 1911.

"In Guarany this is called *aguay*. A quick-growing tree reaching a height of 20 meters [65 feet]; it fruits in the fourth year. The bark is smooth, the wood white and

very light. The fruit is something the size and shape of an olive, very astringent and not relished when fresh, but is very widely used hereabouts in preserves, for which purpose it is excellent." (*Mead.*)

**32080 and 32081. ASPARAGUS SUBLATUS Steud. Asparagus.**

From Jeolikote, United Provinces, India. Presented by Mr. Norman Gill, superintendent, Kumaon Government Gardens. Received November 13, 1911.

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

**32080.** "Barb asparagus."

*Distribution.*—On the subtropical slopes of the Himalayas at an altitude of 2,000 to 4,000 feet, from Kumaon to Nepal in northern India.

**32081.** "Without barbs."

**32082. GARCINIA sp.**

From China. Presented by Mr. George Campbell, Kiayingchow, on native boat en route to Swatow, China. Received November 14, 1911.

"This morning (October 6, 1911) my boat stopped at a market town and I strolled through it. I found a few specimens of a fruit called *Sann pee pah*, or wild loquat. I brought one back to the boat with me. It was the size of an unhulled walnut and looked like a yellow apple, save that it was spherical and marked into seven segments. It peeled like an apple.

"The flesh was about as thick as the hull of a walnut and very sour, but inclosed a core of seven lobes, each, with the exception of one, containing a seed. Each seed was inclosed in a sweet pulp very pleasant to the taste and suggesting the mangosteen to me." (*Campbell.*)

**32083. ANNONA RETICULATA L. Bullock's-heart.**

From Cairns, North Queensland, Australia. Presented by Prof. Charles E. Wood, manager, Kamerunga State Nursery. Received November 15, 1911.

Cuttings of this species introduced for the work of the Office of Foreign Seed and Plant Introduction in bringing together all the improved varieties of this genus for trial.

**32084 to 32086. IPOMOEA BATATAS (L.) Poir. Sweet potato.**

From Port Moresby, Papua. Presented by Mr. A. C. English, Barodobo Plantation, Kapa Kapa, Port Moresby. Received November 15, 1911.

"Seeds of three varieties that we have here in this locality, which are great tuber producers. One has a white skin and white flesh, one white skin and deep yellow flesh, and one a pink skin and white flesh. Seed from sweet potatoes are rarely known here, even amongst the natives who plant them extensively." (*English.*)

**32087. CASTANOSPERMUM AUSTRALE Cunn. and Fraser. Moreton Bay chestnut.**

From Brisbane, Queensland, Australia. Presented by Mr. Frederick Manson Bailey, Colonial Botanist, Department of Agriculture and Stock, Brisbane. Received November 16, 1911.

"In the scrub near Kuranda we noticed trees bearing pods about the size and shape of a banana, but at least twice the diameter. Upon opening the pods they were found to contain huge beans that look very much like chestnuts. They have a leathery skin, and the interior is white and not very hard, about the consistency of a nut. I tasted one of the beans, although I was told that it was poisonous. It tasted very much like a nut, but had no distinctive flavor. In spite of the poisonous nature of

the bean, the 'black fellows' have learned to use it as a food. They first roast the beans in hot ashes, then skin them and pound the white flesh into coarse flour. They fill a basket with this flour and place it in running water all night. In this way the poisonous principle is washed out." (*Dr. Alexander Graham Bell.*)

*Distribution.*—A tall tree found in the valleys of the Endeavour and Brisbane rivers in the State of Queensland, and in the valley of the Clarence River in the province of New South Wales in Australia.

**32088. CICER ARIETINUM L. Chick-pea.**

From Nogales, Sonora, Mexico. Presented by Mr. Alexander V. Dye, American consul. Received November 11, 1911.

"From the Mayo River Valley. Known locally as *Garbanzo gordo*. While there is only one variety grown for commercial purposes, those raised in the Mayo River Valley are usually considered larger and better." (*Dye.*)

**32089. MEDICAGO SATIVA VARIA (Mart.) Urb. Sand lucern.**

From Isere, France. Presented by Dr. L. Trabut, Algiers, Algeria. Received November 18, 1911.

**32090. LEUCADENDRON MELLIFERUM (Thunb.) W. F. Wight. See Botanical Notes, etc., p. 60.**

From the slopes of Table Mountain, Cape Colony, South Africa. Presented by the Assistant Conservator of Forests, Western Conservancy, Cape Town, at the request of Prof. J. Burt Davy, Pretoria, Transvaal. Received November 20, 1911.

See No. 28016 for previous introduction.

**32091. ASPARAGUS sp. Asparagus.**

From Geok Tapa, Aresch District, Elisabethpol Government, Trans-Caucasia, Russia. Presented by Mr. A. Schelkownikow, Chaldan station, Trans-Caucasia, Russia, at the request of Mr. Frank N. Meyer, agricultural explorer, Bureau of Plant Industry. Received November 21, 1911.

"Seeds of the large wild asparagus, which grows so well in this vicinity." (*Schelkownikow.*)

A large asparagus which so impressed Mr. Meyer that he made a special effort to have seeds secured for the work now being undertaken in breeding rust-resistant forms and also improved forms for the use of florists.

**32093 to 32110.**

From India. Collected by Mr. C. V. Piper, Bureau of Plant Industry. Received November 17, 1911.

The following material; quoted notes by Mr. Piper:

**32093. ALOCASIA MACRORRHIZA (L.) Schott.**

"(No. 104.)"

**32094. PHASEOLUS VULGARIS L.**

**Bean.**

"(No. 97.) White beans purchased in the market of Calcutta, September 12, 1911."

**32095. PHASEOLUS VULGARIS L.**

**Bean.**

"(No. 98.) White beans purchased in the market of Calcutta, September 12, 1911."

## 32093 to 32110—Continued.

32096. *CICER ARIETINUM* L.

Chick-pea.

“(No. 69.) Bought in the market at Trichinopoli, August 29, 1911.”

32097. *CUCURBITA PEPO* L.

Squash.

“(No. 95.) Bought on the market at Trichinopoli, August 31, 1911. Large, dull, pale orange; subglobose; deeply ribbed with about ten ribs.”

32098. *ELAEOCARPUS SERRATUS* L.

“(No. 81.) An olivelike fruit bought in the market at Colombo, August 28, 1911.”

*Distribution.*—A tree found from the tropical slopes of the Himalayas, where it grows as far up as 3,000 feet in the province of Sikkim, southeastward through India and the Malay Islands to Java.

32099. (Undetermined.)

“(No. 82, August 29, 1911.) A shrub, bearing large pink flowers. This grows 3 to 10 feet high and is very ornamental. It is abundant at Newara Eliya, Ceylon, altitude of 6,000 feet.”

32100. (Undetermined.)

“(No. 83, August 27, 1911.) An irislike plant with loose panicles of blue flowers. Decidedly ornamental. Native at Newara Eliya, Ceylon.”

32101. *RUBUS* sp.

“(No. 84, August 27, 1911.) A shrub much like the common blackcap. Fruits in large clusters, red but tomentose. Flavor good. Flowers pink. Abundant at Newara Eliya, Ceylon. Altitude 6,000 feet.”

32102. *BERBERIS* sp.

Barberry.

“(No. 86, August 27, 1911.) A common species at Newara Eliya, Ceylon, altitude 6,000 feet. It closely resembles *Berberis vulgaris*, but the fruits are black.”32103. *RHODOMYRTUS TOMENTOSA* (Ait.) Wight.

“(No. 87, August 27, 1911.) A melastomaceous shrub with pink flowers and anescent leaves. Grows 3 to 6 feet high. Quite ornamental. Common at Newara Eliya, Ceylon, 6,000 feet altitude.”

32104. *BENINCASA HISPIDA* (Thunb.) Cogniaux.

Wax gourd.

The wax gourd has heretofore been listed in the inventories as *Benincasa cerifera*, a name published in 1818 by Savi (*Bibliotheca Italiana*, vol. 9, p. 158), who cited *Cucurbita cerifera* Fischer (*Catalogue du Jardin des Plantes à Gorenki*, 1812, p. 32), a name not accompanied by a description. The attention of the Office of Foreign Seed and Plant Introduction has recently been called to the publication in 1881 of the name *Benincasa hispida* Cogniaux (*De Candolle, Monographiae Phanerogamarum*, vol. 3, p. 513) based on *Cucurbita hispida* Thunberg (*Flora Japonica*, 1784, p. 322) which appears to be the correct name for this species.

“(No. 94.) Purchased in the Trichinopoli market, August 31, 1911. Large, cylindrical, 12 to 18 inches long by 6 to 8 inches in diameter. Very white and waxy fruit.”

This vegetable, commonly used by the Chinese for vegetable soups and also candied as a sweetmeat wherever it grows, is recommended to amateurs who are experimenting with new vegetables. It has been grown successfully near Washington, D. C.

**32093 to 32110—Continued.****32105.** *PHYLLANTHUS ACIDA* (L.) Skeels.

“(No. 96.) A round, green, gooseberrylike fruit bought in the market at Colombo, Ceylon, August 28, 1911.”

See No. 23472 for previous introduction.

**32106.** *CITRUS* sp.**Orange.**

“(No. 88.) Best orange at Colombo. Round, green, light skin, very juicy, subacid, much rag, many seeds.”

**32107.** *CITRUS DECUMANA* (L.) Murray.**Pomelo.**

“(No. 99, September 4, 1911.) From Calcutta. Large globose pomelo of the dry type. Flesh yellow; good quality, but not as good as the Siam.”

**32108.** *BELOU MARMELOS* (L.) Lyons.**Bael.**

“(No. 90, August 29, 1911.) From Colombo.”

See No. 24450 for description.

**32109.** *CALAMUS VIMINALIS* Willd.**Rattan.**

“(No. 93, August 31, 1911.) From Trichinopoli. A peculiar fruit said to be used in curries. Flesh very acid. A rattan palm.”

“It is a stout scrambling and climbing species, with cane thin but strong. It makes excellent walking sticks and is the chief rattan of the Malay Peninsula.” (*Watt, Commercial Products of India.*)

*Distribution.*—A climbing palm found in the Malay Islands.

**32110.** *SPONDIAS CYTHEREA* Sonnerat.**We fruit.**

“(No. 91.) Bought in the market at Colombo, August 28, 1911. Fruit smooth, oval, size of a large hen’s egg, each containing one stone. Flesh firm, yellowish, subacid, pleasant to taste, odor of pineapple.”

**32111 to 32135.**

Collected by Mr. C. V. Piper, of this Department. Received November 20, 1911. The following material; quoted notes by Mr. Piper:

**32111.** *POLYTRIAS DIVERSIFLORA* (Steud.) Nash.

“(No. 41.) Collected at Batavia, July 23, 1911. The common lawn and pasture grass of Java at low altitudes. Makes a good lawn. Horses as well as cattle eat it readily and seem to thrive on it. Introduced in the Philippines, where it is spreading.”

*Distribution.*—Java, and introduced in other tropical regions.

**32112.** *STIZOLOBIUM* sp.

“(No. 52, July 27, 1911.) The native Java form cultivated in the botanic garden at Buitenzorg.”

**32113.** *PANICUM NUMIDIANUM* Lam.

“(No. 55, August 3, 1911.) Collected at Karanganjar, Java. The same as Para grass. To be tested in comparison with the American form.”

*Distribution.*—Northern Africa, India, and generally distributed in the Tropics.

**32114.** *MEIBOMIA HETEROPHYLLA* (Willd.) Kuntze.

“(No. 65, August 24, 1911.) From Peradeniya, Ceylon. Similar to but much larger than *Meibomia triflora*, now abundantly established in Florida. If this proves equally aggressive it will be a valuable pasture plant.”

*Distribution.*—From the plains of India eastward through the Malay Archipelago, including the Philippines, and in China.

## 32111 to 32135—Continued.

## 32115. ARUNDINELLA sp.

"(No. 70, August 11, 1911.) From mountains near Garoet, Java. Makes a good sward and is probably valuable as pasturage. Seed habits good."

## 32116. AXONOPUS COMPRESSUS (Swartz) Beauv.

"(No. 71, July 26, 1911.) Best lawn grass in Buitenzorg; will grow in dense shade."

*Distribution.*—The West Indies and southward to Brazil; introduced into the Tropics of the Old World.

## 32117. SYNTERISMA SANGUINALIS (L.) Dulac.

"(No. 72, July 25, 1911.) Collected in shady ground at Hotel des Indes, Batavia, Java. A lawn grass much like St. Augustine, but hardly as good."

## 32118. SYNTERISMA DEBILIS (Desf.) Skeels.

(*Panicum debile* Desf., 1800, Flora Atlantica, vol. 1, p. 59.)

The seeds of this grass, received from Java as an unidentified species of *Syntherisma*, belong to *Panicum debile* Desfontaines. This species seems not to have been placed in the genus *Syntherisma* heretofore.

"(No. 73, July 26, 1911.) Growing in an orchard near Buitenzorg. Much smaller and more slender than our crab-grass, but perhaps of similar value. Makes a good turf."

*Distribution.*—Found on the plains and low hills of India and extends eastward through the Malay Archipelago as far as the Philippines.

## 32119. PANICUM MAXIMUM HIRSUTISSIMUM Nees.

"(No. 74, July 2, 1911.) Growing at Singalong Experiment Station, Manila, P. I. Smaller than Guinea grass. Decumbent at base, and roots at nodes."

## 32120. SYNTERISMA LONGIFLORA (Retz.) Skeels.

(*Paspalum longiflorum* Retz., 1786, Observationum Botanicarum, vol. 4, p. 15.)

The seeds of this grass, received from Ceylon, were identified as *Paspalum longiflorum* Retz., which seems not to have been heretofore placed in the genus *Syntherisma*.

"(No. 75, August 25, 1911.) From Peradeniya, Ceylon. A creeping species rooting at the joints, which makes a good but thin turf."

*Distribution.*—Found in India from Kashmir to Ceylon, and in Malakka; is generally distributed in the tropical and subtropical regions of the Eastern Hemisphere.

## 32121. PTEROCARPUS INDICUS Willd.

"(No. 42, August 15, 1911.) From Singapore. A beautiful shade tree, elm-like in form, but with drooping branches. Abundantly planted in the Malay Peninsula, but, according to Mr. Ridley, is not native. Said to differ from the true *Pterocarpus indicus* in having larger pods."

*Distribution.*—A tall tree found throughout India and eastward through China and the Malay Archipelago as far north as the Philippines.

## 32122. SALAKKA EDULIS Reinw.

"(No. 44, July 24, 1911.) From Batavia, Java. A palm cultivated in Java. The fruit consists of three carpels enclosed in a scaly envelope. Each carpel is fleshy, with a large central seed. The flesh is firm and much like quince in flavor. Abundant in the Java markets in July. Malay name *Salak*."

*Distribution.*—Known only from the islands of the Malay Archipelago.

## 32111 to 32135—Continued.

**32123.** SESBAN sp.

"(No. 45, August 9, 1911.) A large shrub or small tree grown on the dikes surrounding the rice paddies near Surabaya, Java. *Agati grandiflora* and *Cajan indicum* are also grown in the same way."

**32124.** MYRISTICA sp.

"(No. 46, July 26, 1911.) Purchased in the market at Batavia, Java. A seed used by the Javanese as a cheap substitute for the nutmeg."

**32125.** PTYCHORAPHIS AUGUSTA (Kurz) Beccari.

"(No. 51, July 20, 1911.) An ornamental palm from Singapore."

*Distribution.*—Found in the Nicobar Islands in the Indian Ocean.

**32126.** DIALIUM INDUM L.

"(No. 53, July 20, 1911.) Fruit like a tamarind in structure and flavor. Purchased in the market at Singapore."

*Distribution.*—A tree with alternate pinnate leaves found in the island of Java.

**32127.** PASSIFLORA EDULIS Sims.**Passion fruit.**

"(No. 57, July 19, 1911.) Bought in the market at Singapore. Fruit yellow, ovoid, 2 inches long. Pulp subacid, seedy."

**32128.** IMPATIENS sp.

"(No. 58, August 24, 1911.) From Peradeniya, Ceylon. A species with rose-colored flowers."

**32129.** IMPATIENS sp.

"(No. 59, August 1, 1911.) Collected on high mountains near Garoet, Java. Flowers rose colored, perhaps two species mixed."

**32130.** RUBUS sp.**Raspberry.**

"(No. 63, August 1, 1911.) Collected in the mountains near Garoet, Java. Vines very large, ascending. Leaves grapelike. Flowers and fruits in large panicles. Fruit a raspberry, salmon yellow, subacid, of fair quality."

**32131.** RUBUS sp.**Raspberry.**

"(No. 64, August 1, 1911.) Collected in the mountains near Garoet, Java. Leaves digitate, 5 to 7 leaflets. Fruit a raspberry red, with large pyrene, subacid, juicy."

**32132.** CITRUS sp.**Orange.**

"(No. 66, July 24, 1911.) From Batavia, Java. Fruit dark green, 2½ inches in diameter. Stem rather loose. Flesh yellow, subacid, juicy, but much rag and many seeds."

**32133.** CITRUS sp.**Orange.**

"(No. 67, July 20, 1911.) From Singapore. A loose-skinned, yellow, very seedy, sour kid-glove orange."

**32134.** TRIPHASIA TRIFOLIATA (L.) DC.

"(No. 68, July 23, 1911.) A common hedge plant at Batavia, Java. Fruit red, pyriform, about 1 inch long."

**32135.** ELETTERIA SPECIOSA Blume.

"(No. 69, August 2, 1911.) From Garoet, Java. A fruit commonly seen in Javanese markets."

*Distribution.*—A herbaceous perennial found in damp woods on the island of Java.



**32136. MEDICAGO SATIVA L.****Alfalfa.**

From Tulare, Cal. Presented by Mr. J. T. Bearss, Agricultural Experiment Station, Kearney Park, Fresno Co., Cal. Received November 23, 1911.

"One of the surviving plants from the plat of Arabian alfalfa (No. 8823?), but presumably a hybrid between this and the Turkestan (No. 1151) on an adjoining plat." (*Bearss.*)

**32137 and 32138. PASSIFLORA INCARNATA L.****Maypop.**

From Salem, Mass. Purchased from Mr. Harlan P. Kelsey, Higginson Square. Received November 22 and 24, 1911.

Seeds and plants procured for breeding purposes and for the collection being made by the Office of Foreign Seed and Plant Introduction of all the species of this genus having edible fruits for use in hybridization work.

**32141 and 32142. PHOENIX DACTYLIFERA L.****Date.**

From Cairo, Egypt. Received through Mr. George J. Salem, November 22, 1911.

Seeds of the following:

**32141.** *Zaglool.*

**32142.** *Samany.*

"These are supposed to be the best in the market and are grown extensively in the delta, particularly in the gardens of Alexandria, Rosetta, Edku, and Cairo. They are used for the table, confectionery, and exportation." (*Salem.*)

**32143. CUCUMIS MELO L.****Muskmelon.**

From Beni Suef, Egypt. Received through Mr. George J. Salem, Cairo, November 22, 1911.

"*Domiri.* This melon is somewhat larger and sweeter than our cantaloupes, and could keep for several days. It is grown in the province of Beni Suef and sold in the markets of the large cities for only a few days." (*Salem.*)

**32144 to 32150. SOLANUM NIGRUM L.****Nightshade.**

Presented by Mr. K. Portele, agricultural ministry, Vienna, Austria. Received November 23, 1911.

Seeds of the following:

**32144 to 32149.** From Austria.

**32144.** From Krakow.

**32145.** From Linz, Upper Austria.

**32146.** From Halterthal, near Vienna.

**32147.** From Trieste.

**32148.** Cultivated in the botanic garden at Vienna. Origin unknown.

**32149.** From Pratu, near Vienna.

**32150.** From Breslau, Germany.

**32151 and 32152. FEIJOA SELLOWIANA Berg.**

From Los Angeles, Cal. Presented by Mr. H. Hehre. Received November 15, 1911.

Seeds of the following:

**32151.** "The fruits of this variety weighed nearly 1½ ounces each. The quality is good when the fruit is properly ripened. The flesh is somewhat granular." (*R. A. Young.*)

**32152.** "The fruits of this variety weighed nearly 2 ounces each. The quality is very good when the fruit is properly ripened, the flavor being mild and the flesh less granular than in some forms." (*R. A. Young.*)

**32153 and 32154. CONVULVULUS spp.****Rose-root.**

From Puerto Orotava, Teneriffe, Canary Islands. Presented by Dr. George V. Perez. Received November 23, 1911.

Seeds of the following:

**32153. CONVULVULUS FLORIDUS L. f.****Rose-root.**

"One of the most interesting and striking plants in the Canary Islands is this shrubby *Convolvulus*, known locally as *guadil*. This, together with a closely allied species, *C. scoparius*, is sometimes known as rose-root and is said to yield oil of roses. The *guadil* is, however, more interesting as an ornamental flowering shrub than for any economic purposes to which at one time it may have been applied. It belongs to the bindweed order (*Convolvulaceæ*), although nothing can be less like a *Convolvulus* in habit, and is one of the comparatively few examples of this order (containing the jalap plant, the sweet potato, the scammony, and the showy ipomoeas), possessing an upright stem and a treelike habit. It may be described as a compact shrub from 4 to 6 feet in height, with a stout woody stem and numerous branches. The branches, especially in the young state, are white powdered, as also are the abundant linear undulate leaves. The latter are about 3 or 4 inches long, attenuated toward the petiole, with rounded and somewhat emarginate tips. The flowers are abundantly produced in large loose terminal panicles. The sepals are ovate acuminate, about 2 lines long. The corolla is about one-half to three-quarters of an inch in diameter and pure white. The capsule is conical and slightly villose at the apex. When in flower the plant appears as if covered with newly fallen snow. It is one of the few native plants which awakens the enthusiasm of local residents of Teneriffe. According to Dr. Perez the *guadil* was an object of high regard by the Guanches, the aboriginal race of the island. This can well be understood, for when in flower it is one of the brightest and most attractive objects in the Teneriffe landscape. The pale powdered green of the leaves forms an excellent background for the masses of pure white flowers. The only pity is it is so rarely seen. In the search for rose-roots for export purposes this and the allied species have been nearly exterminated in the wild state. In Teneriffe it grows from sea level up to elevations of about 1,000 feet. It evidently prefers a free porous soil and thrives in exposed situations on rocks and slopes. In rich soil the plant appears to put on a looser habit and when laden with flowers the panicles become almost pendulous. It is readily increased by seed, and as it is a fast grower it should flower in the second or third year." (*Extract from D. Morris, Kew Bulletin of Miscellaneous Information, 1893, pp. 133-134.*)

**32154. CONVULVULUS SCOPARIUS L. f.****Rose-root.**

"This, as its name denotes, is a *Convolvulus* with the habit of the common broom. It is an erect shrub 7 to 8 feet high with a few long narrow branches and somewhat short linear leaves. The flowers are produced in many flowered axillary cymes. The corolla is slightly plaited with a 5-partite limb; it is tinged with red outside and white within. This is known locally as *Leña Noel* or *Leña Loel*. It is only rarely met with; Teneriffe specimens in the Kew Herbarium are from Guia on the southwestern slopes of the island and from Barranco Santo. It is said to be more common at Palma, but owing to the excessive digging of the roots many years ago for export purposes it is restricted to very few localities.

"There is a single specimen of the root of *Convolvulus scoparius* in the Kew Museum. It is about 8 inches long, 2½ inches wide, and 1 inch thick. The heartwood occupies about three-fourths of the entire diameter of the specimen and is of a distinct orange-yellow color, very dense, marked by closely lying

**32153 and 32154—Continued.****32154—Continued.**

annual rings and numerous very fine medullary rays, the spaces between them being filled with small, partially open vessels. The sapwood is very much lighter in color and is comparatively soft and easily cut. It was sent to the museum about 1850 and still retains its roselike smell. A sample of oil in the museum is of clear amber color and possesses a distinct though not a penetrating odor of roses.

"In Lindley's *Flora Medica* (1838), p. 400, there is the following note on this plant:

"Wood perfumed, smelling strongly of roses, yellowish fawn color veined with red, burning readily when lighted. Taste bitter, balsamic. Yields by distillation an essential oil of bitter balsamic flavor; little used, except, according to Feé, for adulterating oil of roses."

"The latest information on the subject is probably contained in Piesse's *The Art of Perfumery* (1879), p. 188, as follows:

"When rosewood, the lignum of the *Convolvulus scoparius*, is distilled, a sweet-smelling oil is procured, resembling in some slight degree the fragrance of the rose, and hence its name. At one time, that is, prior to the cultivation of the rose-leaf geranium, the distillates from rosewood and from the root of the *Genista canariensis* (Canary rosewood) were principally drawn upon for the adulteration of real otto of roses; but as the geranium oil answers so much better the oil of rhodium has fallen into disuse, hence its comparative scarcity in the market at the present day, though our grandfathers knew it well. One hundredweight of wood yields about 3 ounces of oil.

"Ground rosewood is valuable as a basis in the manufacture of sachet powders for perfuming the wardrobe." (*Extract from D. Morris, Kew Bulletin of Miscellaneous Information, 1893, pp. 134-136.*)

**32155 to 32157.**

From southeastern Russia. Received through Mr. Frank N. Meyer, agricultural explorer, Bureau of Plant Industry, November 25, 1911.

Seeds of the following:

**32155. HELIANTHUS ANNUUS L. Sunflower.**

From Bezenshook (Besentschuk), Government of Samara, southeastern Russia.

"(No. 1704a, November 8, 1911.) A variety of sunflower called *Pantsernara*, meaning armor-plated; originated by Mr. Karsin in Russia. The seeds of this remarkable variety are provided with an extremely hard shell, being thickened with silica, and the insects that have been playing such havoc heretofore with the sunflower-seed crop in Russia find it beyond their power to penetrate the hulls of this variety. Obtained from Prof. N. M. Tulaikoff, director of the agricultural experiment station at Bezenshook." (*Meyer.*)

**32156. TRITICUM DURUM Desf. Wheat.**

From Bezenshook (Besentschuk), Government of Samara, southeastern Russia.

"(No. 1705a, November 8, 1911.) A large-grained, uncommon, summer variety of durum wheat, called *Amerikanka*. Grown here and there in southeastern Russia, having apparently originated in these regions. Obtained like the preceding number." (*Meyer.*)

**32157. TRITICUM DURUM Desf. Wheat.**

From Bezenshook (Besentschuk), Government of Samara, southeastern Russia.

"(No. 1706a, November 8, 1911.) A new and valuable winter variety of black-bearded durum wheat, having very long open ears. It is called *Teiskaiia*

**32155 to 32157—Continued.****32157—Continued.**

and originated at the Bezenshook Agricultural Experiment Station. This variety is proving extremely hardy, having survived snowless winters, when other winter wheats were either killed out entirely or severely injured. It is expected that within a few years this wheat will play a big rôle in the agricultural development of the Government of Samara. Obtained like the preceding numbers." (*Meyer.*)

**32158 and 32159. CARICA PAPAYA L.****Papaya.**

From Miami, Fla. Grown at the Subtropical Plant Introduction Garden. Received November 25, 1911.

Seeds of the following:

**32158.** "Grown from No. 28536. Fruit medium size, globular, from 5 to 6 inches in diameter, with very tender meat of excellent flavor and pale yellow or orange colored. The parent tree of this variety produced pear-shaped fruits of large size, demonstrating the great variation of papayas in the shape and size of fruit when raised from seed." (*H. F. Schultz.*)

**32159.** "Grown from No. 28534. Fruit pyriform, of large size, 10½ inches long and 5½ inches in diameter, weighing 10 pounds. The meat is rich yellow and of excellent flavor, nearly 2 inches thick. Seeds quite numerous, but easily separated from the meat. The tree matured its fruit within 16 months from seed." (*H. F. Schultz.*)

**32160 to 32162. COFFEA spp.****Coffee.**

From Mayaguez, Porto Rico. Presented by Mr. D. W. May, director, Agricultural Experiment Station. Received November 29, 1911.

Seeds of the following:

**32160.** COFFEA sp.

"Ceylon hybrid."

**32162.** COFFEA ARABICA L.

"Native variety."

**32161.** COFFEA sp.

"*Maragogipe.* Java variety."

**32163. ANNONA DIVERSIFOLIA Safford. Ilima, or anona blanca.**

From Acapulco, Mexico. Presented by Mr. Marion Letcher, American consul, through Mr. W. E. Safford, Bureau of Plant Industry. Received December 1, 1911.

Seeds.

**32164. COLOCASIA sp.****Dasheen.**

From Kiayingchow, China. Presented by Mr. George Campbell. Received December 1, 1911.

"*Penang.* The tubers of this variety are quite uniform in size and shape, and are about the size of a goose egg. The people here think them far superior to the kinds I sent you previously (Nos. 27297 and 27298)." (*Campbell.*)

"The tubers resemble the Japanese dasheens in appearance and are very slightly acid when raw. The cooked tubers are mealy, grayish white in color, and the flavor is good, though a little strong and suggestive of the taro." (*R. A. Young.*)

**32167. MENTHA PIPERITA L.****Peppermint.**

From Kobe, Japan. Presented by Mr. George N. West, American consul. Received December 2, 1911.

Roots.

**32168. PRUNUS SUBCORDATA Benth.**

From Lassen County, Cal., west of Honey Lake, at an altitude of about 4,700 feet.

Collected by Mr. Karl Kair; presented by Mr. Marsden Manson, San Francisco.

Received September 7, 1909. Numbered for convenience in recording distribution December 4, 1911.

Variety *kelloggii*. "A small tree, native of dry rocky hills of northern California, with thick leaves and white flowers changing to rose. The dark-red, clingstone fruits contain a subacid flesh and are used for drying and preserving. For testing and breeding purposes in dry regions of the United States."

Plants of this variety were formerly distributed under No. 25933.

**32169. ARALIA CALIFORNICA S. Watson. California spikenard.**

From Mill Valley, Marin Co., Cal., Presented by Mr. Charles G. Adams, at the request of Mr. G. P. Rixford, Bureau of Plant Industry. Collected November 15, 1911. Numbered December 6, 1911.

"In moist, cool ravines where the sun only slants athwart the branches and a certain dankness always lingers the California spikenard scents the air with its peculiar odor. It closely resembles *Aralia racemosa* of the Eastern States, but it is a larger, coarser plant in every way. It throws up its tall stems with a fine confidence that there will be ample space for its large leaves to spread themselves uncrowded. Its feathery panicles of white flowers are followed by clusters of small purple berries and are rather more delicate than we should expect from so large a plant." (*M. E. Parsons, The Wild Flowers of California, pp. 77-78.*)

"Introduced for the breeding experiments with the Japanese udo (*Aralia cordata*) and the American spikenard (*Aralia racemosa*) in an effort to improve the character of the Japanese vegetable." (*Fairchild.*)

**32170 to 32172.**

From San Jose, Costa Rica. Presented by Mr. Carlos Wercklé. Received December 4, 1911.

The following material; quoted notes by Mr. Wercklé:

**32170. DIOSCOREA sp.**

"*Papa caribe.*"

**32171. (Undetermined.)**

"A very large and good green sapote."

**32172. PERSEA PITTIERI Mez.**

**Avocado.**

"A very early variety, but rather poor. Good quality, but little flesh."

**32173. ARALIA CORDATA Thunb.**

**Udo.**

From Chevy Chase, Md. Grown by Mr. David Fairchild, Bureau of Plant Industry, on his place, "In the Woods."

Collected November 5, 1911.

"Seeds collected from plants 2, 3, and 4 years old." (*Fairchild.*)

**32174. THEA sp.**

**Tea.**

Presented by Mr. J. R. C. Boyer, Cranford, N. J. Received through Mr. E. C. Green, Pomologist in Charge, South Texas Plant Introduction Garden, Brownsville, Tex., December 2, 1911.

"Chinese tea seed, not of the regular tea plant, but, as I understand it, of the *Camellia* family. The seeds are crushed for the oil, which is used as an edible oil and for many other purposes." (*Boyer.*)

**32175 to 32245.**

From Siberia. Collected by Mr. Frank N. Meyer, agricultural explorer, Bureau of Plant Industry. Received November 29, 1911.

Seeds of the following:

**32175.** TRITICUM POLONICUM L. **Wheat.**

From Omsk, Siberia.

“(No. 1631a, August 9, 1911.) A very large hard wheat, obtained at the agricultural exhibition held in Omsk during July and August, 1911. Said to have been grown at Atbasar, Akmolinsk Government. Called *Afrikanski*, or *Africanum congrum*. To be tested in the semiarid Northwest.” (Meyer.)

**32176.** TRITICUM POLONICUM L. **Wheat.**

From Omsk, Siberia.

“(No. 1632a, August 9, 1911.) A very large hard wheat, obtained like the preceding number. Locality from whence it came not given.” (Meyer.)

**32177.** TRITICUM DURUM Desf. **Wheat.**

From Omsk, Siberia.

“(No. 1633a, August 9, 1911.) A hard summer wheat having blue ears; called *Sineshka*. Said to be very drought resistant and to stand the Siberian climate well, although constant selection has to be practiced to prevent it from deteriorating. Obtained like the preceding numbers.” (Meyer.)

**32178.** MEDICAGO FALCATA L.

From near Ust Kamenogorsk, southwestern Siberia.

“(No. 1635a, October 4, 1911.) A bunchy, upright form of sholteek growing about 2 to 3 feet in height. Pods rather broad and flat, apparently nonshattering. Only two plants found of this variety. These were growing in decomposed rock on a mountain slope facing the Irtysh River. To be tested exclusively for forage purposes and hybridization.” (Meyer.)

**32179.** MEDICAGO FALCATA L.

From near Tomsk, Siberia.

“(No. 1637a, August 24 and 25, 1911.) A sholteek of prostrate habit and very vigorous growth, shoots being over 6 feet long. Pods very large, apparently nonshattering. Found on sandy level stretches of land along the River Tom, 20 to 30 feet above the water. To be tested in meadows where grass is grown for hay production.” (Meyer.)

**32180.** MEDICAGO FALCATA L.

From Barnaul, Siberia.

“(No. 1638a, September 1, 1911.) A sholteek collected in the Kuznetsk district to the east of Barnaul, said to be of vigorous growth. Presented by Mr. N. B. Sokoloff, agricultural instructor at Barnaul. To be tested like No. 1634a (S. P. I. No. 32389).” (Meyer.)

**32181.** MEDICAGO PLATYCARPA (L.) Trautv.

From near Sminogorsk, southwestern Siberia.

“(No. 1639a, September 21, 1911.) A strange wild alfalfa having yellow flowers and large flat pods of black color when ripe. Seeds very large. Prefers to grow between shrubbery and tall grass on the north slopes of hills. Of erect growth, but needs some support. Apparently not of as great value as a fodder plant as other members of the same genus. To be tested in cool, moist-air sections of the United States.” (Meyer.)

## 32175 to 32245—Continued.

**32182.** *ONOBRYCHIS VULGARIS* Hill 1756.*(Onobrychis viciaefolia* Scop. 1772.)

From between Chistunka and Sminogorsk, southwestern Siberia.

“(No. 1640a, September 8 to 24, 1911.) The wild Siberian esparcet found along the edges of wheat fields and on stretches of level land that was once in cultivation. Apparently able to stand an unusual amount of cold and drought. Recommended as a forage plant in those sections of the semiarid belt, where the ordinary alfalfa gets winterkilled.” (*Meyer.*)

**32183.** *ONOBRYCHIS VULGARIS* Hill.

From Omsk, Siberia.

“(No. 1641a, August 9, 1911.) A large-seeded esparcet being tested at the agricultural experiment station near Omsk and promising to become an important forage plant for semiarid western Siberia.” (*Meyer.*)

**32184.** *ASTRAGALUS* sp.

From near Chistunka, southwestern Siberia.

“(No. 1642a, September 9, 1911.) A species of *Astragalus* bearing a close resemblance to esparcet, found on abandoned wheat fields. Of bunchy erect habits, making many stems, well supplied with almost glabrous foliage. Flowers purplish blue, seed racemes persistent. Eaten by horses and cattle. Of value possibly along with sholteek and esparcet as a forage plant for cool semiarid climates.” (*Meyer.*)

**32185.** *ASTRAGALUS* sp.

From near Chistunka, southwestern Siberia.

“(No. 1643a, September 8, 1911.) A species of *Astragalus* of somewhat open growth. Main stems being erect, side stems lying more or less on the ground. Foliage not very dense and quite hairy, flowers yellow, seed racemes persistent. Occurring on abandoned wheat fields and along ditches. To be tested like the preceding number, but it is not so promising.” (*Meyer.*)

**32186.** *ASTRAGALUS* sp.

From near Sminogorsk, southwestern Siberia.

“(No. 1644a, September 24, 1911.) A small serradellalike species of *Astragalus*, occurring on sandy pasture grounds; is browsed by cattle. Of value possibly as a pasture plant on sandy lands in semiarid regions.” (*Meyer.*)

**32187.** *HEDYSARUM SIBIRICUM* Poir.

From Tomsk, Siberia.

“(No. 1645a, August 22, 1911.) An upright-growing variety that throws up many stems and is well supplied with rather large glabrous foliage. May possess value as a forage plant for the northern sections of the United States and may also serve as a factor in hybridization experiments to be made with the famous sulla (*Hedysarum coronarium*) in making it hardier and available to regions outside the Mediterranean.” (*Meyer.*)

*Distribution.*—Central Siberia, extending eastward to the region of Lake Baikal.

**32188.** *HEDYSARUM* sp.

From near Sminogorsk, southwestern Siberia.

“(No. 1646a, September 21 to 24, 1911.) A rare legume found here and there in southern Siberia. Makes a luxuriant growth of leaves when planted in rich soil. Flowers of a purple-violet color and attractive to the eye. Of value like the preceding number, and perhaps of even more importance. Should be tested with great care.” (*Meyer.*)

## 32175 to 32245—Continued.

**32189.** *HEDYSARUM SPLENDENS* Fisch.

From near Ust Kamenogorsk, southwestern Siberia.

"(No. 1647a, October 2 and 4, 1911.) A very rare *Hedysarum* occurring on rocky mountain slopes facing south and southeast. Of value possibly as a forage and pasture plant on dry and rocky places. Roots sent under No. 989 (S. P. I. No. 32026); see the latter number for further remarks." (*Meyer.*)

*Distribution.*—The Altai region of Siberia.

**32190.** *LATHYRUS GMELINI* (Fisch.) Fritsch. (?)

From Tomsk, Siberia.

"(No. 1648a, August 20, 1911.) Variety *orientalis*. A very vigorous-growing legume found on moist hill slopes here and there in central and southern Siberia and in the Ural Mountains. It is a fodder of great value and eagerly sought by horses and cattle, who devour every bit of it. In protected localities, i. e., between shrubbery, the plants attain a height of 8 feet, but generally they are 3 to 4 feet high. Of value as a very promising forage plant for the cooler sections of the United States." (*Meyer.*)

**32191.** *VICIA UNIJUGA* A. Braun.

From near Tomsk, Siberia.

"(No. 1649a, August 25, 1911.) An erect-growing plant which attains its greatest luxuriance on fields from which light forest has recently been cut. Seems to possess value as a forage plant on wooded pasture grounds for the cooler sections of the United States." (*Meyer.*)

**32192.** *LATHYRUS PISIFORMIS* L.

From near Tomsk, Siberia.

"(No. 1650a, August 24, 1911.) A species of wild pea found mostly at the edges of clumps of shrubbery. Grows from 2 to 5 feet tall. Of erect growth, but when tall it needs some support. Eagerly eaten by horses and cattle. Apparently valuable for forage purposes in the cooler sections of the United States." (*Meyer.*)

**32193.** *LATHYRUS PRATENSIS* L.

From Tomsk, Siberia.

"(No. 1651a, August 18 to 20, 1911.) The well-known meadow pea, which is grown here and there in northwestern Europe for forage purposes. The Siberian form may prove to be extremely hardy and deserves therefore to be tested for forage purposes in the cooler sections of the United States. This plant thrives apparently best when allowed to overrun small scrub in slightly shaded places." (*Meyer.*)

**32194.** *LENTILLA LENS* (L.) W. F. Wight.

**Lentil.**

The lentil has heretofore been listed in these inventories as *Lens esculenta*, which was published in 1794 by Moench (*Methodus*, p. 131). The first binomial name given to the lentil was *Ervum lens*, which was published in 1753 by Linnæus (*Species Plantarum*, vol. 2, p. 738). As the type species of the genus *Ervum*, *E. ervilia*, is not congeneric with the lentil but belongs to the genus *Vicia*, which was published on page 734 of *Species Plantarum*, the generic name *Ervum* can not be used for the lentil. The generic name *Lens* was first published in 1754 by Stickman (*Herbarium Amboinense*, reprinted in Linnæus's *Amoenitates Academicæ*, 1759, vol. 4, p. 128) and was based on the plant described and figured in 1747 by Burmann (*Herbarium Amboinense*, vol. 5, p. 5, pl. 4) which



## 32175 to 32245—Continued.

## 32194—Continued.

is generally called *Entada scandens*. This use of the generic name *Lens* by Stickman prevents the use of the same name for the lentil. As no other generic name had been published for the lentil up to 1909, Mr. W. F. Wight (Century Dictionary Supplement, p. 719) published the name *Lentilla* by referring to "lens" and "lentil," under which names on pages 3409 and 3410 of volume 4 of the 1895 edition the lentil is described as *Lens esculenta*. When the new edition of 1911 appeared, in which the information first published in the two supplementary volumes 11 and 12 of 1909 was incorporated with the main body of the work, the name *Lentilla lens* was published (vol. 5, p. 3410) under the heading "lentil."

From Barnaul, Siberia.

"(No. 1652a, August 31, 1911.) A small-seeded variety of lentil that is grown by some progressive farmers in southern Siberia as a fodder for horses and milch cows. Prefers a light, sandy soil. Of value possibly for forage purposes in the cooler sections of the semiarid belt." (*Meyer.*)

## 32195. VICIA SATIVA L.

Spring vetch.

From Barnaul, Siberia.

"(No. 1653a, August 31, 1911.) A vetch that is grown here and there in Siberia for forage purposes. It is said to stand drought very well and promises to be a good fodder plant in semiarid southwestern Siberia." (*Meyer.*)

## 32196. VICIA CRACCA L.

Vetch.

From Tomsk, Siberia.

"(No. 1654a, August 18 to 20, 1911.) A wild vetch found on slightly shaded places. Likes to overrun low scrub. Is eagerly eaten by horses and cattle. Of value in pastures of the northern United States where some scrub is scattered over the land." (*Meyer.*)

## 32197. VICIA AMOENA Fisch.

Vetch.

From near Chistunka, southwestern Siberia.

"(No. 1655a, September 8 and 9, 1911.) A sturdy vetch with rather dark green foliage found on dry earth banks. Does not grow over 1 foot in height, but on favorable locations spreads out considerably. Of value possibly as a forage or pasture plant in the northern sections of the United States." (*Meyer.*)

## 32198. VICIA AMOENA Fisch.

Vetch.

From near Barnaul, Siberia.

"(No. 1656a, September 1 to 3, 1911.) A wild vetch, occurring along the edges of abandoned fields. Apparently a variety of the preceding number and as such the same remarks apply to it." (*Meyer.*)

## 32199. VICIA MEGALOTROPIS Ledeb.

Vetch.

From near Sminogorsk, southwestern Siberia.

"(No. 1657a, September 21 to 24, 1911.) An exceedingly vigorous species of vetch, often 8 to 10 feet in height when running up into bushes; in open places, however, it reaches only a couple of feet in height. Much relished by horses and cattle and apparently of great promise as a forage plant. To be tested in the cooler sections of the United States." (*Meyer.*)

*Distribution.*—Slopes of the mountains in the Altai region of southwestern Siberia.

**32175 to 32245—Continued.****32200. VICIA CRACCA L.****Vetch.**

From near Chistunka, southwestern Siberia.

“(No. 1658a, September 8, 1911.) A dense-growing variety of climbing vetch found between *Artemisia* growth on a dry plain. Of value for forage purposes in the semiarid belt of the United States.” (*Meyer.*)

**32201. VICIA CRACCA L.****Vetch.**

From near Sminogorsk, southwestern Siberia.

“(No. 1659a, September 21, 1911.) Variety *hircina*. A variety of wild climbing vetch, occurring mostly between low scrub, foliage slightly hairy. Of value like No. 1654a (S. P. I. No. 32196).” (*Meyer.*)

**32202. VICIA CRACCA L.****Vetch.**

From near Sminogorsk, southwestern Siberia.

“(No. 1660a, September 21, 1911.) A variety of vetch of more upright and vigorous growth than the ordinary *Vicia cracca*; apparently a hybrid. Found between scrub on the north slope of a hill. Valuable possibly for forage purposes in the northern United States.” (*Meyer.*)

**32203. VICIA sp.****Vetch.**

From near Sminogorsk, southwestern Siberia.

“(No. 1661a, September 21, 1911.) A vetch of vigorous yet graceful growth, having deep-green, finely pinnated foliage and bearing many seed pods on long stems. Found between scrub on the north slope of a hill. Valuable apparently for forage purposes.” (*Meyer.*)

**32204. VICIA SEPIUM L.****Vetch.**

From near Tomsk, Siberia.

“(No. 1662a, August 24, 1911.) A rather small-growing vetch occurring on open sandy plains. Of value possibly as a forage plant on sandy lands in cool semiarid regions.” (*Meyer.*)

*Distribution.*—Throughout Europe and eastward to the region of Lake Baikal in Siberia.

**32205. VICIA AMOENA Fisch.****Vetch.**

From near Chistunka, southwestern Siberia.

“(No. 1663a, September 9, 1911.) A rather large vetch found along a ditch on a dry plain. Apparently of value for forage purposes in semiarid regions.” (*Meyer.*)

**32206. VICIA sp.****Vetch.**

From near Sminogorsk, southwestern Siberia.

“(No. 1664a, September 21, 1911.) A vetch growing in dense shade between shrubs on the north slope of a hill. Has an abundance of juicy light-green foliage that seems to make this plant desirable for forage purposes in cool shady locations.” (*Meyer.*)

**32207. TRIFOLIUM LUPINASTER L.****Clover**

From western Siberia.

“(No. 1665a, August 24 to September 21, 1911.) A wild clover not growing to large size and but scantily furnished with foliage. Withstands extreme droughts and is able to grow on very sterile soils. Of value as an element in pasture grounds in cold semiarid regions.” (*Meyer.*)

## 32175 to 32245—Continued.

- 32208.** TRIFOLIUM MEDIUM Huds. **Clover.**  
 From Tomsk, Siberia.  
 "(No. 1666a, August 22, 1911.) A clover resembling the ordinary red clover very much, but the leaves are almost glabrous and the whole plant of a denser, more even growth. Apparently able to stand considerable drought. Of value possibly as a forage plant in semiarid regions." (*Meyer.*)
- 32209.** TRIFOLIUM HYBRIDUM L. **Alsike clover.**  
 From near Sminogorsk, southwestern Siberia.  
 "(No. 1667a, September 18 to 20, 1911.) A clover found in moist places and along low ditches in peaty and clayey soil. Apparently of value on pasture lands that are subject to inundation at times. Seems to make its heaviest growth toward the end of summer, which indicates that it will probably thrive better in cool moist-air localities than in warm and dry regions." (*Meyer.*)
- 32210.** TRIFOLIUM PRATENSE L. **Red clover.**  
 From near Sminogorsk, southwestern Siberia.  
 "(No. 1668a, September 18, 1911.) A rather vigorous form of red clover found in a ditch running through stony land. Possibly somewhat hardier than the ordinary clover." (*Meyer.*)
- 32211.** TRIFOLIUM INCARNATUM L. **Crimson clover.**  
 From Omsk, Siberia.  
 "(No. 1669a, July 22, 1911.) A clover obtained by my interpreter from the agricultural exhibition held in Omsk during the summer of 1911." (*Meyer.*)
- 32212.** TRIFOLIUM HYBRIDUM L. **Alsike clover.**  
 From Omsk, Siberia.  
 "(No. 1670a, July 22, 1911.) A clover that passes under the name *black clover*. Obtained like the preceding number." (*Meyer.*)
- 32213.** TRIFOLIUM REPENS L. **White clover.**  
 From Omsk, Siberia.  
 "(No. 1671a, July 22, 1911.) A clover that passes under the name *yellow clover*. Obtained like the preceding numbers." (*Meyer.*)
- 32214.** TRIFOLIUM PRATENSE L. **Red clover.**  
 From Omsk, Siberia.  
 "(No. 1672a, July 22, 1911.) A sample of clover obtained like preceding numbers." (*Meyer.*)
- 32215.** TRIFOLIUM REPENS L. **White clover.**  
 From Tomsk, Siberia.  
 "(No. 1673a, August 19, 1911.) A white clover collected in the vicinity of Tomsk, Siberia." (*Meyer.*)
- 32216.** FESTUCA ELATIOR L. **Meadow fescue.**  
 From near Widrichta, southwestern Siberia.  
 "(No. 1674a, September 30, 1911.) A grass of tall growth, with many spikes; found on earth banks. Of value possibly as a fodder plant in the colder sections of the United States." (*Meyer.*)

**32175 to 32245—Continued.****32217. AGROSTIS ALBA L.****Creeping bent-grass.**

From near Widrichta, southwestern Siberia.

“(No. 1675a, September 30, 1911.) A grass of tall, airy growth, found at the foot of an earth bank. Possibly of value like the preceding number.” (*Meyer.*)

**32218. DACTYLIS GLOMERATA L.****Orchard grass.**

From near Widrichta, southwestern Siberia.

“(No. 1676a, September 30, 1911.) A coarse grass found in an earth bank. Of value like the preceding number.” (*Meyer.*)

**32219. FESTUCA sp.**

From Omsk, Siberia.

“(No. 1677a, July 18, 1911.) Obtained by my interpreter at Omsk, said to come from western Akmolinsk, and not to send up new shoots after having once been plowed under. Possibly of value for forage purposes on dry plains.” (*Meyer.*)

**32220. PHLEUM PRATENSE L.****Timothy.**

From Omsk, Siberia.

“(No. 1678a, July 18, 1911.) A strain of timothy coming from Kungur, Perm Government, said to be superior to the ordinary kind. Obtained at Omsk by my interpreter. Of value like the preceding number.” (*Meyer.*)

**32221. BROMUS INERMIS Leyss.****Brome-grass.**

From Omsk, Siberia.

“(No. 1679a, July 18, 1911.) A coarse grass said to be a good fodder and able to stand much drought. Obtained by my interpreter. Of value like the preceding numbers.” (*Meyer.*)

**32222. TRIFOLIUM PRATENSE L.****Red clover.**

From Omsk, Siberia.

“(No. 1680a, July 18, 1911.) A species of clover said to stand much drought. Obtained by my interpreter. Of value like the preceding numbers.” (*Meyer.*)

**32223. MALUS sp.****Crab apple.**

From Barnaul, Siberia.

“(No. 1681a, September 5, 1911.) A low-growing variety of Siberian crab apple. The fruits are the size of a plum, of a yellowish color with a red blush. Thrives best on hill slopes facing north; suitable for cold regions.” (*Meyer.*)

**32224. PRUNUS FRUTICOSA Pallas.****Cherry.**

From Omsk, Siberia.

“(No. 1682a, August 5, 1911.) The so-called Kurgan cherry, grown quite extensively throughout the Ural district and in western Siberia as a home fruit. The dark-red individual cherries are only as large as good-sized red currants and are sour. However, they make delicious compote and preserves, having a spicy, nutty flavor, and are in great demand for this purpose. In Omsk they are sold during July and August at 4 to 5 rubles (\$2.06 to \$2.57) per pood (36 pounds). These cherry bushes grow from 2 to 4 feet in height, bear glossy dark-green leaves, and stand a remarkable amount of drought, cold, and neglect. A well-kept plantation is very pleasing to the eye and resembles a tea plantation more than anything else. This plant deserves to be given an extensive and thorough trial as a home fruit in the cold and semiarid sections of the United States. Is recommended also as a factor in hybridization experiments to

## 32175 to 32245—Continued.

## 32224—Continued.

create a perfectly hardy large-fruited cherry fit to thrive in the upper Mississippi Valley and the regions west of it." (*Meyer.*)

*Distribution.*—Eastern Russia and western Siberia from the valley of the Volga to the Altai region.

## 32225. PRUNUS FRUTICOSA Pallas.

Cherry.

From Tomsk, Siberia.

"(No. 1683a, August 25, 1911.) An improved form of the Kurgan cherry. Obtained from Prof. N. F. Kastchenko, of the University of Tomsk. See the preceding number for further remarks." (*Meyer.*)

## 32226. PRUNUS FRUTICOSA Pallas.

Cherry.

From Tomsk, Siberia.

"(No. 1684a, August 25, 1911.) A large-fruited variety of the Kurgan cherry almost as large as ordinary cherries, flesh blackish red. This introduction deserves extra care. Obtained like the preceding numbers." (*Meyer.*)

## 32227. RIBES DIKUSCHA Fisch.

Currant.

From Tomsk, Siberia.

"(No. 1685a, August 18, 1911.) The native name of this remarkable currant is *Aldansky vinograd*, meaning Aldan grape, on account of the resemblance of the berries to grapes. It is a black-fruited variety native to the Aldan Mountains in Yakutsk Government. Berries large, bluish black in color, and of sour flavor. They are fine for preserves and are also said to produce a sparkling wine resembling champagne. As the summer is remarkably short in Yakutsk Government and the winter's cold most intense, this currant may be expected to thrive in even the coldest sections of the United States. To be tested in the mountains of New England and in Alaska. Collected in the botanic garden of the University of Tomsk." (*Meyer.*)

## 32228. RIBES DIKUSCHA Fisch.

Currant.

From Tomsk, Siberia.

"(No. 1686a, August 25, 1911.) Variety *appendiculata*. An improved form of the Yakutsk black currant, being more prolific and bearing larger berries than the type. Obtained from Prof. N. F. Kastchenko of the University of Tomsk, who states that the climate in Tomsk is actually too hot for this remarkable currant. This number should be tested with extreme care." (*Meyer.*)

## 32229. RIBES NIGRUM L.

Black currant.

From Tomsk, Siberia.

"(No. 1687a, August 18, 1911.) A native Siberian variety of black currant of vigorous growth; fruits large, but not over juicy. Able to stand intense cold and recommended as a home fruit for the cool and somewhat moist sections of the United States. Obtained from the botanical garden of the University of Tomsk, Siberia." (*Meyer.*)

## 32230. RIBES sp.

Currant.

From near Sminogorsk, southwestern Siberia.

"(No. 1688a, September 24, 1911.) A wild red currant of thrifty growth and able to exist under adverse conditions. Fruits small and sour. This fruit is recommended for testing only in the sections of the United States where red currants do not grow at present." (*Meyer.*)

## 32175 to 32245—Continued.

## 32231. RUBUS ARCTICUS L.

Nimbleberry.

From Barnaul, Siberia.

“(No. 1689a, September 5, 1911.) A wild nimbleberry from Finland, called in Swedish *Okerbar*. Said to possess a remarkably delicious fragrance, and is used in small quantities for flavoring compotes and preserves. Obtained from a Finnish family in Barnaul. To be tested in some cool and moist section of the United States, preferably southern Alaska.” (*Meyer*.)

## 32232. SOLANUM DULCAMARA L.

Bittersweet.

From Tomsk, Siberia.

“(No. 1690a, August 24, 1911.) Variety *persicum*. A vigorously growing variety of bittersweet, growing in shrubbery up to a height of over 10 feet. Stands extreme cold and may be used as an ornamental porch and pillar vine. To be tested in the cool and moist sections of the United States.” (*Meyer*.)

## 32233. CRATAEGUS SANGUINEA Pallas.

Hawthorn.

From near Tomsk, Siberia.

“(No. 1691a, August 24, 1911.) An ornamental native Siberian haw, much used in Tomsk as a hedge plant. When left alone this haw develops into a tall shrub and becomes loaded in the fall with masses of orange-red berries, which make these shrubs very ornamental. The berries are often collected by the Russian peasants and after having been boiled with sugar a passable haw butter is made from them. To be tested in the cool and moist sections of the United States.” (*Meyer*.)

*Distribution*.—Throughout Siberia from the Ural Mountains to the region of Lake Baikal.

## 32234. COTONEASTER sp.

From near Sminogorsk, southwestern Siberia.

“(No. 1692a, September 18, 1911.) A cotoneaster growing 2 to 3 feet in height. Occurs on dry stony hill slopes. Possibly of value as a small ornamental shrub in gardens and parks in the cool semiarid sections of the United States.” (*Meyer*.)

## 32235. BERBERIS SIBIRICA Pallas.

Barberry.

From near Sminogorsk, southwestern Siberia.

“(No. 1693a.) A rare low-growing species of barberry, occurring on rocky mountain slopes facing north or northeast. Rarely seen over 1 foot in height. Berries hang solitary and are of coral-red color. Suitable for planting in rockeries and as an ornamental ground cover on rocky places in the colder sections of the United States.” (*Meyer*.)

*Distribution*.—The Altai Mountain region of southwestern Siberia and northern Mongolia.

## 32236. JUNIPERUS SABINA L.

Juniper.

From near Sminogorsk, southwestern Siberia.

“(No. 1694a, September 24, 1911.) A pretty, dense-growing variety of juniper, found on wind-swept, rocky mountain slopes, facing south or southeast. Often very spreading in habit. Of value like the preceding number.” (*Meyer*.)

## 32237. ARTEMISIA sp.

From near Kalmukski Meesi, southwestern Siberia.

“(No. 1695a, September 15, 1911.) A perennial semiwoody wormwood having gracefully divided light-green foliage and possessing a very attractive, aromatic odor. Grows to a height of 3 to 4 feet and occurs on dry waste places.

## 32175 to 32245—Continued.

## 32237—Continued.

Of value as a lining plant along paths and as low hedge material for the cold semiarid sections of the United States." (*Meyer.*)

32238. *HYSSOPUS OFFICINALIS* L.

Hyssop.

From near Ust Kamenogorsk, southwestern Siberia.

"(No. 1696a, October 2, 1911.) Variety *ambigua*. A very aromatic herbaceous perennial growing in rocky cliffs and between stony débris along the Irtish River. Flowers blue and apparently very rich in honey. Of value as a useful bee plant and as an ornamental perennial for the hardy border. Will probably do especially well in the drier sections of the United States." (*Meyer.*)

32239. *CLEMATIS INTEGRIFOLIA* L.

Clematis.

From near Sminogorsk, southwestern Siberia.

"(No. 1697a, September 18, 1911.) An erect-growing herbaceous clematis, making stems 2 to 4 feet in height and bearing large deep-blue flowers of somewhat roselike form; blooms in June. Occurs between shrubbery or in slightly shaded places where the soil remains damp. Of value as an ornamental hardy perennial for the northern United States and may also be of use as a factor in hybridization experiments in trying to create races of erect-growing large-flowered forms of clematis." (*Meyer.*)

32240. *PAEONIA ANOMALA* L.

Peony.

From Tomsk, Siberia.

"(No. 1698a, August 19, 1911.) A strong-growing wild peony found on well-drained hill slopes, mostly between scrub. Flowers large, of pale-rose color; foliage somewhat coarse. Of interest as a perfectly hardy herbaceous perennial; will thrive in regions with short cool summers and long cold winters." (*Meyer.*)

*Distribution.*—Throughout central and southern Siberia from the Ural Mountains eastward to the region of Lake Baikal.

32241.  $\times$  *RHODODENDRON PRAECOX* DAVIS.

From Tomsk, Siberia.

"(No. 1699a, August 20, 1911.) A rare deciduous shrubby rhododendron, able to stand extreme cold. Obtained from the botanical garden at Tomsk, Siberia." (*Meyer.*)

Considered to be a hybrid between *Rhododendron dauricum* L. and *R. ciliatum* Hook. f.

32242. *GUULDENSTAEDTIA MONOPHYLLA* FISCH.

From Tomsk, Siberia.

"(No. 1700a, August 20, 1911.) A very rare legume, up to the present having been found only in one place in Mongolia and in another spot in southern Siberia, occurring on dry, rocky places. Leaves and flowers small. This plant is of botanical interest only, although it possibly might enter as an item in the flora of very dry pasturing grounds in the western sections of the United States. Obtained like the preceding number." (*Meyer.*)

*Distribution.*—Dry rocky places in the Altai Mountain region of southwestern Siberia.

32243. *ASPARAGUS OFFICINALIS* L.

Asparagus.

From Chistunka Steppe, southwestern Siberia.

"(No. 1701a, September 8, 1911.) A vigorously growing wild asparagus, found here and there on a dry plain. Seems to be able to withstand more drought and adverse conditions than the ordinary forms of asparagus. To be tested in rustproof breeding experiments." (*Meyer.*)

**32175 to 32245—Continued.****32244. CITRULLUS VULGARIS Schrad. Watermelon.**

From Ust Kamenogorsk, southwestern Siberia.

"(No. 1702a, September 30, 1911.) A watermelon of medium size; rind dark green, quite thin; flesh pale red, of fresh sweet taste; seeds brown. Keeps well and is a good variety in general. Of value possibly in extending the watermelon belt farther north." (*Meyer.*)

**32245. CITRULLUS VULGARIS Schrad. Watermelon.**

From Ust Kamenogorsk, Siberia.

"(No. 1703a, October 1, 1911.) A watermelon of medium size; rind light green, very thin; flesh dark red and very sweet; seeds very small, of brownish black color. Is a good keeper. To be tested like the preceding number." (*Meyer.*)

**32247. GOSSYPIUM sp. Cotton.**

From Addis Abeba, Abyssinia. Presented by Mr. Guy R. Love, American vice consul general, Addis Abeba. Received November 23, 1911.

"Native Abyssinian cotton." (*Love.*)

**32248. ANNONA MURICATA L. Soursop.**

From Camaguey, Cuba. Presented by Mr. Roberto L. Luáces. Received December 5, 1911.

"I have found here in this part of Cuba two trees of *Annona muricata*, growing in primitive woods on the banks of the Caunao River. From fruit of these trees I collected some seed. These seeds are not from cultivated plants escaped from cultivation, for, in the first place, the general mode of carriage of seeds from cultivation to wildness, such as birds, is wanting in this case, for neither birds nor beasts (except man) will eat the *A. muricata*, and, besides, the tree itself and its fruits are very different from what we call the cultivated." (*Luáces.*)

**32249 to 32255. CITRUS TRIFOLIATA × AURANTIUM. Citrange.**

The following plants, propagated by Mr. G. L. Taber, Glen St. Mary Nursery Co., Glen St. Mary, Fla., for distribution by the Office of Crop Physiology and Breeding Investigations, were numbered December 7, 1911.

Seedling plants as follows:

**32249.** *Willits.* See No. 13003 for description.

**32250.** *Rustic.* See No. 19608 for description.

**32251.** *Savage.* See No. 21594 for description.

**32252.** *Norton.* "Fruits small and somewhat ribbed, resembling the *Savage* (No. 21594)." (*S. C. Mason.*)

**32253.** *Saunders.* "Fruits small, orange yellow, with unusually thick skin. Pulp vesicles rather large, adhering compactly, making the interior of the fruit seem hard and dry as compared to the other citranges. What juice there is is sharply acid and entirely free from the bitter taste so prominent in some of the citranges." (*S. C. Mason.*)

Grafted plants as follows:

**32254.** *Cunningham.* "Resembles a miniature *Colman* (No. 19609), having the same fuzzy skin possessed by that citrange." (*S. C. Mason.*)

**32255.** *Sanford.*



**32256. MANGIFERA INDICA L.****Mango.**

From Chiloane Island, Africa. Presented by Mr. R. H. B. Dickinson, Assistant Director of Agriculture, Beira, Portuguese East Africa. Received December 8, 1911.

"Cuttings taken from a tree said to be 50 or 60 years old, growing near a small Mohammedan temple. It bears large fruits, which may be expected to ripen in January." (*Dickinson.*)

This may possibly be the *Lathrop* mango described under Nos. 9486 and 9669.

**32257. (Undetermined.)****Indian cane.**

From Burringbar, New South Wales, Australia. Presented by Mr. B. Harrison. Received July 3, 1911. Numbered December 15, 1911.

"I wish to draw your attention to the value of Indian cane as a heavy yielding fodder plant for dairy or other stock. It is rapidly coming into great favor here and yields from 40 to 100 tons of fodder per acre, while it is said to be superior to any of the sorghum species for resisting drought and frost and is not injurious to stock during any period of its growth. One writer says: 'After some forty years' practical experience in fodder growing I consider this cane miles ahead of anything else I have tried before, the great advantage being that you can cut it as you require it; secondly, the enormous yield. I estimate the yield of my crop at 56½ tons per acre, but the land was manured heavily.' There is a large area of land in many of the States where this cane would thrive well and would without doubt prove of incalculable benefit to many stock owners." (*Harrison.*)

**32258. SCOPOLINA JAPONICA (Maxim.) Kuntze.**

From Yokohama, Japan. Purchased from the Yokohama Nursery Co. Received December 6, 1911.

*Distribution.*—A herbaceous perennial found along the banks of streams in the vicinity of Nikko in the province of Tozando, Japan.

**32259. GARCINIA TINCTORIA (DC.) W. F. Wight.**

From Port Louis, Mauritius. Presented by Mr. G. Regnard. Received December 8, 1911.

Introduced as a possible stock for the mangosteen.

**32260 and 32261. NEOGLAZIOVIA spp.**

From Bahia, Brazil. Presented by Mr. Omar E. Mueller, American vice consul. Received November 29, 1911.

Plants of the following; quoted notes from Bulletin of the Pan American Union, 1910:

"These fiber plants are of great commercial worth. They grow abundantly in this section, but other than making a few cords for local use nothing is being done with them."

**32260. NEOGLAZIOVIA VARIEGATA (Arrudo) Mez.****Caroá.**

"This is half round, light green, white banded, snakelike, produces an excellent fiber, and flourishes regardless of droughts.

"Mr. Louis Raposo, a Brazilian gentleman resident in Philadelphia, gives the following information concerning this plant:

"Among the new things found growing in the vast wilds of Brazil is a fibrous plant called *caroá*, of which the supply is apparently inexhaustible. The plant is produced from a bulb and is of rapid growth. When stripped at maturity of its fiber it takes but six months under the coaxing influence of the Brazilian sun and soil to reproduce a full-length crop from 6 to 8 feet in length.

**32260 and 32261—Continued.****32260—Continued.**

"Mr. Raposo states that shipments of the fiber sent to London and manufactured into rope, as tested by English engineers, show a tensile strength 10 times greater than manila rope of like dimension. As compared with other products from which rope and twine are made, the caroá gives a 10 per cent greater outturn of finished material from the same weight of raw material.

"Tests of caroá rope,' he says, 'for use on shipboard show great wearing quality, as well as other superiorities. The rope does not swell from wetting. In three round trips from London to Bombay the rope gave no appearance of serious damage.

"It takes 20 tons of the green caroá to make 1 ton of the fiber ready for shipment, but a large part of the wastage is said to be suitable for making paper. This if true would give the plant a far more considerable value. The cost of the fiber as rudely produced in Brazil and laid down in London was \$80 per ton. This cost would be largely reduced by economical handling. The discovery of this new fiber, if what is claimed for it be true, is a most important addition to the raw material of manufacture.'" (*Bulletin, Pan American Union, 1910.*)

"This species and the closely related following one occur throughout the arid districts along the Rio Sao Francisco in a climate said to resemble that of our arid Southwest. Mr. Tennant Lee, who saw 2,000 acres of these plants in a wild state and who tested their fiber, says this is one of the finest fibers ever brought into the United States. Ropes made of it will stand salt water longer than manila hemp; it is 28 per cent stronger than manila, yields a larger percentage of fiber than the abacá, and the waste is suitable for paper making." (*Fairchild.*)

**32261. NEOGLAZIOVIA CONCOLOR C. H. Wright.****Makimbira.**

"This plant has leaves protected by stout incurved spines upon their edges, thereby rendering the handling both difficult and dangerous."

**32262. CASIMIROA SAPOTA Oersted.****Sapota blanco.**

From San Jose, Costa Rica. Presented by Mr. Carlos Wercklé, Museo Nacional. Received August 4, 1911. Numbered December 15, 1911.

**32263. ECHIUM PININANA Webb and Berth.**

From Palma, Canary Islands. Presented by Dr. George V. Perez, Puerto Orotava, Teneriffe, Canary Islands. Received December 8, 1911.

"This is a most striking ornamental plant with a very tall single spike of light-blue flowers. I believe the leaves will turn out to be an excellent forage, better than the prickly comfrey (No. 2152). These seeds are from a wild plant in Palma, where it is native. Try it in southern California or Florida." (*Perez.*)

**32264. GARCINIA VENULOSA (Blanco) Choisy.**

From the Limay Forest Station, Philippine Islands. Presented by Maj. George P. Ahern, Director of Forestry, Department of the Interior, Manila. Received December 9, 1911.

"The seeds from which these plants were grown were collected in Bataan Province." (*Ahern.*)

*Distribution.*—A tree found in the Philippines.

**32265 and 32266. CICER ARIETINUM L. Chick-pea.**

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

Seeds of the following:

**32265.** "*Garbanzo grande.*"

**32266.** "*Garbanzo chico.*"

**32267. DIOSPYROS KAKI L. f. Persimmon.**

From Fayetteville, N. C. Presented by Mr. J. S. Breece. Received October, 1911.

"Seeds taken from a Tamopan persimmon, grown by Mr. Breece under No. 17172. The other fruits received at the same time were seedless and it is thought that the seeds in the single specimen were the result of accidental cross-pollination." (*Fairchild.*)

The fruit from which these seeds were taken is identical with Mr. Frank N. Meyer's description of No. 16921, and it is thought that there may have been some mistake made in sending it out under No. 17172.

**32268 to 32271. ASPARAGUS spp. Asparagus.**

From South Africa. Presented by Sir Percy Fitzpatrick, Johannesburg, Transvaal, South Africa. Received December 6, 1911.

Seeds of the following; quoted notes by Sir Percy Fitzpatrick:

**32268 to 32270.** ASPARAGUS OFFICINALIS L.

**32268.** "From Harrismith, Orange Free State."

**32269.** "From cultivated plants, Johannesburg."

**32270.** "From cultivated plants near Johannesburg."

**32271.** ASPARAGUS sp.

"Seed gathered on slopes of Table Mountain from wild plants in native bush forest. This asparagus is a great delicacy and to my taste is better than any of the cultivated kinds. Table Mountain, near Cape Town, is 1,000 miles away. The asparagus is gathered by colored people, who are jealous of the monopoly and most ignorant of methods of seed collecting. I got some seed in March last, but the berries were quite green in color. I know that our wild asparagus (which is here known as *Wach-eeen-beetze*, or *Wait-a-bit*, on account of its hooked thorns) ripens red, as do the others. I tried again during all April, but the 'children of the sun' smilingly replied that I was mistaken and that the green berries were quite ripe."

**32272 to 32277.**

From Darmstadt, Germany. Presented by Prof. William R. Lazenby, of the Ohio State University, Columbus, Ohio. Received November 23, 1911.

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

**32272.** LYCIUM BARBARUM L.

"This is used very largely here as a hedge plant around yards and small orchards. It grows so dense that rabbits can not get through it. I am told it is easily pruned and kept within bounds. It is also planted on sandy railroad embankments to bind the soil and prevent washing or sliding."

*Distribution.*—A shrub found in southwestern Asia from Mesopotamia eastward through Persia to the Punjab region of northern India.

**32272 to 32277—Continued.****32273.** ROSA sp.**Rose.**

"A rose used for the same purpose as the preceding number. The fruits or hips of this rose are very ornamental. It grows along the edges of the forest. I have no idea what the flower is, but the plant seems to have merit. May be useful for breeding purposes."

**32274.** EUONYMUS sp.

"A fruitful and beautiful Euonymus."

**32275.** VIBURNUM sp.

"A strong-growing variety."

**32276.** PRUNUS sp.

"This seems to have merit as a hedge plant."

**32277.** PTELEA sp.

"A Ptelea whose large-winged seeds are quite attractive. It seems to be of much more vigorous growth than our common *Ptelea trifoliata*."

**32278.** BELOU MARMELOS (L.) Lyons.**Bael.**

From Zafarwal, India. Presented by Mr. H. S. Nesbitt, American Mission. Received July 20, 1911. Numbered December 14, 1911.

"This bael is used in India as an astringent curative of dysentery, etc." (*Nesbitt*.)

See No. 24450 for further description.

**32280 and 32281.**

From Yengi Malah, Tien Shan Mountains, Chinese Turkestan. Collected by Mr. F. N. Meyer, agricultural explorer, Bureau of Plant Industry. Received November 3, 1911.

Seeds of the following; picked out of No. 32042. See that number for remarks.

**32280.** AVENA SATIVA L.**Oat.****32281.** HORDEUM sp.**Barley.****32282.** ANNONA DIVERSIFOLIA Safford. **Llama, or anona blanca.**

From Salvador, Central America. Presented by Don Rafael B. Castillo, Director General of Agriculture, through Mr. W. E. Safford. Received December 12, 1911.

Seeds.

**32283 to 32294.**

From Manila, Philippine Islands. Presented by Mr. E. D. Merrill, Bureau of Science. Received November 11, 1911. Numbered December 15, 1911.

Seeds of the following:

**32283.** PAHUDIA RHOMBOIDEA (Blanco) Prain.

See No. 31586 for description.

**32284.** PARKIA TIMORIANA Merrill.**32285.** PITHECOLOBIUM ACLE (Blanco) Vidal.**32286.** PHYTOCRENE BLANCOI Merrill.**32287.** PANDANUS LUZONENSIS Merrill.

*Distribution.*—A treelike species reaching a height of 25 feet, found in the valley of the Lamao River in the island of Luzon in the Philippines.

**32283 to 32294**—Continued.**32288.** MUCUNA sp.**32289.** BARRINGTONIA sp. (?)**32290.** TERMINALIA OVOCARPA Merrill.

*Distribution.*—A large tree growing at an elevation of 300 to 400 feet in the dry hill forests in the island of Luzon, in the Philippines.

**32291.** KNEMA HETEROPHYLLA (Vill.) Warburg. (?)

*Distribution.*—A tall tree found on the islands of Luzon, Panay, Mindanao, and Sulu in the Philippines.

**32292.** CARYOTA CUMINGII Lodd.

*Distribution.*—Known only from the Philippines.

**32293.** DRACONTOMELON EDULE (Blanco) Skeels.**Lamio.**

(*Paliurus edulis* Blanco, 1837, Flora de Filipinas, p. 174.)

The seeds of this Philippine tree, which belongs to the family Anacardiaceæ, were received under the name *Dracontomelon cumingianum*. This name is attributed in the Index Kewensis to Baillon (Bulletin de la Société Linnéenne de Paris, vol. 1, 1877, p. 122), who, although he did not use the binomial credited to him, cited Adansonia, vol. 10, 1872, p. 329, where the genus Comœurya is characterized and one species, *C. cumingiana*, is listed. Merrill (A Review of the Identifications of the Species Described in Blanco's Flora de Filipinas, 1905, p. 36) has identified *Paliurus edulis* Blanco as being, for the most part, the same as *Dracontomelon cumingianum* Baillon. Blanco's specific name, being earlier, is here restored.

**32294.** CHALCAS CRENULATA (Turcz.) Mueller.

*Distribution.*—A shrub or small tree found in the Philippines and in Queensland, Australia.

**32295.** COFFEA ARABICA L.**Coffee.**

Grown not far from the town of Villeta, at an altitude of 3,000 feet, in the province of Cundinamarca, Colombia. Presented by Mr. Arthur Hugh Frazier, Chargé d'Affaires ad Interim, American Legation, Bogota. Received November 29, 1911.

“Actually no coffee is grown at or near Bogota, the altitude being much too high for the plant. The so-called Bogota coffee is grown at altitudes varying from 3,000 to 6,000 feet and, roughly speaking, is confined to the Department of Cundinamarca, although in the trade the coffees of Antioquia and Santander are sometimes confused with the product of Cundinamarca.” (*Frazier.*)

**32296 and 32297.**

From Costa Rica. Presented by Mr. Carlos Wercklé, Museo Nacional. Received December 18, 1911.

Seeds of the following:

**32296.** LUCUMA sp.

Seed small, roundish.

**32297.** ACHRAS ZAPOTA L.**Mamee sapota.**

**32298 to 32301. ANNONA CHERIMOLA Miller. Cherimoya.**

From Costa Rica. Presented by Mr. Carlos Wercklé, Museo Nacional, San Jose.  
Received December 9, 1911.

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

**32298.** "Fruit medium to large, round, with well-marked mottling only or a slight depression in upper part of carpel; green with a brownish gray tinge. Highest quality, less seeds than any other I have seen (eight in a good-sized fruit). The fruit from which these seeds were taken was quite distinct in form, very plump and thick, short, hardly tapering, not compressed, medium sized, brownish black."

**32299.** "Fruit medium to large, similar to the preceding number, but without the brownish gray tinge, not inferior to it, but more seedy (still few seeds). Seeds of common shape and color."

**32300.**

"Fruit large, cordiform ovate, completely even, with no depressions at all in the carpels and netting; i. e., the edge of carpels or rather the division lines of the carpels not noticeable, except in a very few places. Color yellowish green to greenish yellow, suffused with a very light brownish tinge; on the sun side the color passes to greenish orange, which is very rare in this species. In many places the skin is a little russety. Seeds few; black, long, and narrow. Quality the highest."

**32301.**

"Quite a good annona from San Pedro."

**32302. ANNONA MURICATA L. Soursop.**

From Camaguey, Cuba. Presented by Mr. Roberto L. Luáces. Received December 18, 1911.

"Seeds from a cultivated tree with sweet fruits." (*Luáces.*)

**32303 to 32308.**

From near Saratoff, southeastern Russia. Received through Mr. Frank N. Meyer, agricultural explorer, Bureau of Plant Industry, December 19, 1911.

The following material:

**32303. MALUS sp.****Apple.**

"(No. 991, November 23, 1911.) A wild apple of shrubby growth occurring on dry, well-drained hills, in company with such shrubs as *Acer tataricum*, *Rhamnus cathartica*, *Prunus spinosa*, *Spiraea crenifolia*, etc. Of value possibly in breeding work." (*Meyer.*)

**32304. SALIX sp.****Willow.**

"(No. 992, November 23, 1911.) A medium-sized willow of slightly drooping habits. The young branches are of a shiny brown color, while the trunk and heavy branches assume a grayish green color. Occurring on rather dry places. Of value as an ornamental park and garden tree in those semiarid sections of the United States where the summers are hot and the winters cold." (*Meyer.*)

**32305. CORONILLA VARIA L. (?)**

"(No. 993, November 23, 1911.) A legume found on dry hill slopes and in loess ravines. Apparently very drought resistant. Of possible value as a forage and pasture plant for the drier sections of the United States." (*Meyer.*)

**32303 to 32308—Continued.****32306. MEDICAGO sp.**

“(No. 994, November 23, 1911.) A wild alfalfa of erect growth occurring on stony places. May possibly be *Medicago caerulea*.”

**32307. HEDYSARUM GRANDIFLORUM Pallas (?).**

“(No. 995, November 24, 1911.) This plant occurs on hill slopes which are mainly composed of limestone. It is of low growth and may possibly possess value as a pasturing plant in semiarid regions; also as an ornamental garden perennial. See Nos. 1645a to 1647a (Nos. 32187 to 32189) for further remarks.” (*Meyer.*)

**32308. PYRUS COMMUNIS L.****Pear.**

“(No. 996, November 24, 1911.) A wild pear of shrubby growth, growing on dry, pebbly hill slopes in company with *Prunus spinosa*, *Crataegus sanguinea*, etc. Possibly of value in breeding experiments.” (*Meyer.*)

**32309. LAGERSTROEMIA SPECIOSA (L.) Pers.**

From Lamac, Bataan, Philippine Islands. Presented by Mr. O. B. Burrell, superintendent, Lamac Experiment Station, Bureau of Agriculture. Received December 20, 1911.

*Distribution.*—A tall tree found from northwestern India, where it is cultivated, southward and eastward to China and the Malay Archipelago.

**32310. ASPARAGUS FILICINUS Hamilton.****Asparagus.**

From Sibpur, near Calcutta, India. Presented by Maj. A. T. Gage, superintendent, Royal Botanic Garden. Received December 18, 1911.

**32311 to 32315.**

From Dehra Dun, India. Presented by Mr. A. C. Hartless, superintendent, Government Botanic Gardens, United Provinces, Seharunpur. Received December 18, 1911.

Seeds of the following:

**32311. ALYSICARPUS VAGINALIS (L.) DC.**

“Variety No. 2.”

**32312. ALYSICARPUS RUGOSUS (Willd.) DC**

“Variety No. 1. Narrow leaved.”

**32313. CASSIA MIMOSOIDES L.****32314. ZORNIA DIPHYLLO (L.) Persoon.**

*Distribution.*—On the plains of India and cosmopolitan throughout the Tropics.

**32315. ANDROPOGON MONTICOLA Schultes.**

*Distribution.*—On the slopes of the Himalayas in northern India, where it ascends to an elevation of 6,000 feet, and southward to Ceylon and Burma.

**32316 and 32317.**

From India. Procured by Mr. R. S. Woglum, Bureau of Entomology, United States Department of Agriculture. Received December 12, 1911.

Seeds of the following:

**32316. CASSIA FISTULA L.**

"A large tree with very pretty, yellow flowers. Seed pods cylindrical, 1 to 1½ feet long, ¾ inches in diameter. My boy says that the natives use the partitions between the seeds to steep into tea which is used for fever, etc. Seeds are not used." (*Woglum.*)

See No. 29182 for previous introduction.

**32317. CHALCAS PANICULATA L.**

See No. 25350 for previous introduction.

**32318 and 32319.**

From Costa Rica. Presented by Mr. Carlos Wercklé, Museo Nacional, San Jose. Received December 26, 1911.

The following material; quoted notes by Mr. Wercklé:

**32318. MUSA sp.**

"*Banana-guinea*, intermediate between the banana and the guinea; better than the banana. From the Coyalar."

**32319. ANNONA sp.**

"*Anona de San Francisco*. Bears the second or third year; highest quality; stands the climate of the coast perfectly. Takes as splice graft on anona, guanávana, and soncoya."

See Nos. 31574 to 31576 for previous introduction of this variety.

**32322. ANNONA sp.**

From Costa Rica. Presented by Mr. Carlos Wercklé, Museo Nacional, San Jose. Received December 26, 1911.

"Mixed lot of seed of some very good varieties of anonas." (*Wercklé.*)

**32323. CASTANEA SATIVA Miller.****Chestnut.**

From Kutien, Fukien, China. Presented by Dr. T. H. Coole. Received December 22, 1911.

**32324. ARALIA CORDATA Thunb.****Udo.**

From Sapporo, Japan. Presented by Mr. Y. Takahashi, botanist and vegetable pathologist, Hokkaido Agricultural Experiment Station. Received December 28, 1911.

"Roots of a good cultivated strain of native udo." (*Takahashi.*)

**32325. FICUS RIGO F. M. Bailey.**

From Barodobo, Kapa Kapa, Papua. Presented by Mr. A. C. English. Received September 27, 1911. Numbered December 15, 1911.

"A good rubber-producing tree, hardy and will grow well in our dry belt here. The rubber from this tree is on a par with Para rubber. I have not yet been able to get the seed to germinate. I started my plantation with plants of this species obtained from the scrubs growing as a parasite on other trees, the seed being carried by birds and animals, and after passing through the bowels, it then germinates in the forks of trees and in decomposed timber. It readily strikes from cuttings and it appears to be free from all diseases." (*English.*)

*Distribution.*—The Rigo district of southeastern British New Guinea.



**32326. ANDROPOGON sp.****Lemon grass.**

From Tampico, Mexico. Presented by Mr. Clarence A. Miller, American consul. Received November 22, 1911. Numbered December 30, 1911.

"*Zacate Limon*. This is said to be a domestic plant. Each stalk should be separated, as it grows up like a multiplying onion and bears no seed. Each stalk with ordinary care usually produces a bunch about the size of a dish pan in a year. By many the leaves or blades are picked fresh. The leaves are then steeped and the resulting tea is used as a table beverage. This grass is very plentiful in this section." (Miller.)

**32327 and 32328.**

From Rome, Italy. Presented by Dr. Gustav Eisen, California Academy of Sciences, San Francisco, Cal. Received December 26, 1911.

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

**32327. PHOENIX DACTYLIFERA L.****Date.**

"*Zagloul*. The very best date that I have eaten anywhere. It is very large, in fact the largest date I have seen. Medium dark-brown, sweet, and remarkably tender flesh. Said to come from Fayum, but the dates were bought in Cairo. Ripe in January and lasts fresh until April. Best in March and February. Said to be the best date in Egypt."

**32328. PRUNUS DOMESTICA L.****Plum.**

"*Papagone*. The finest plum I have eaten in any country. Native of the campagna around Naples, especially Boscotrecase and other towns around Vesuvius. About 3 inches long, greenish yellow, oblong, with a remarkably long, thin, and slender stone compared to the size of the fruit. The quality of this plum can not be too highly praised. Have not seen it in any other part of Europe, nor in California."

**32329 to 32347.**

From Buitenzorg, Java. Presented by the Director of Agriculture, at the request of Mr. C. V. Piper. Received November 2, 1911.

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

**32329. ARUNDINELLA sp.**

"A rather coarse but leafy species and probably valuable for green feeding."

**32330. AXONOPUS COMPRESSUS (Swartz) Beauv.**

"A carpet grass."

*Distribution*.—Jamaica and other islands of the West Indies; naturalized in the Tropics.

**32331. BRADBURYA PUBESCENS (Benth.) Kuntze.**

"A twining legume forming a dense mass 6 feet tall when supported."

*Distribution*.—In southern Mexico, from the vicinity of Vera Cruz and Orizaba southward, through tropical South America, and in the West Indies.

**32332. BOTOR PALUSTRIS (Desv.) Kuntze.**

"Grown in the Buitenzorg Botanic Garden under the name of *Psophocarpus robustus*. A climbing vine much larger and more vigorous than the ordinary Goa bean."

*Distribution*.—Considered to be a native of Africa; generally cultivated in the Tropics.

**32329 to 32347**—Continued.**32333.** CASSIA ROTUNDIFOLIA Pers.

"A low-growing legume having much the same habit as *Lotus corniculatus*. It produces seed in abundance."

*Distribution.*—From the region of Orizaba in southern Mexico southward to Uruguay.

**32334.** CRACCA VILLOSA ARGENTEA (Lam.) Kuntze.

"An open bushy species growing 3 feet high. This seed shatters easily."

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

**32335.** DOLICHOLUS MINIMUS (L.) Medic.

"A slender vine climbing to a height of 12 or 15 feet in the trees. In cultivated ground it often makes a dense covering a foot or more deep and is inclined to be somewhat weedy."

*Distribution.*—Throughout the plains of India and generally distributed in the Tropics.

**32336.** DRACONTOMELON DAO (Blanco) Merrill and Rolfe. **Dao.**

*Distribution.*—A tree found on the islands of Luzon and Mindoro in the Philippines.

**32337.** ERAGROSTIS sp.**32338.** MEIBOMIA sp.

"A species having much the same habit as the Florida beggarweed and perhaps of equal value."

**32339.** PANICUM ARGENTEUM R. Brown.

*Distribution.*—On the islands in the Gulf of Carpentaria on the northern coast of Australia.

**32340.** PANICUM RADICANS Retz.

*Distribution.* Throughout India and eastward to tropical China and the Malayan and Polynesian Islands.

**32341.** PASPALUM CONJUGATUM Berg.

"This species is called *Carabao* grass in the Philippines, and *Bitter* grass in Java. It forms a vigorous, often pure, growth in low-lying lands, and also grows abundantly in dense shade. Stock are not very fond of it."

*Distribution.*—From San Luis Potosi in northern Mexico southward to Brazil; also in tropical Africa and Asia.

**32342.** PHASEOLUS SUBLOBATUS Wall.

"A twining species with slender stems."

*Distribution.*—Found on the estuary of the Irrawaddy River in southern Burma, India.

**32343.** SYNTHESISMA CILIARIS (Retz.) Schrad.**32344.** TRICHOLAENA ROSEA Nees.

"A grass very closely resembling tall grass and possibly identical."

**32345.** TRICHOLAENA ROSEA Nees.

See previous number for description.

**32346.** VIGNA sp. (?)

"An annual legume with the habit of the cowpea, but less vigorous in growth and the stems more slender and twining."

**32329 to 32347**—Continued.**32347.** (Undetermined.)

“A coarse species with the general appearance of Para grass, but the stems are erect.”

**32348 to 32350.** *PRUNUS ARMENIACA* L.**Apricot.**

From Imperial Estate “Murgab,” Bairam Ali, Oasis of Merv, Russian Turkestan. Collected by Mr. Frank N. Meyer, agricultural explorer, Bureau of Plant Industry, November, 1911. Received December 29, 1911.

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

**32348.** “(No. 1001.) A native central Asian variety of apricot, called *Murgab*. Said to be of fine qualities.”

**32349.** “(No. 1003.) A native central Asian variety of apricot, called *Abutalibe*. Said to be of fine qualities.”

**32350.** “(No. 1004.) A native central Asian variety of apricot, called *Acha-djanowood*. Said to be of fine qualities.”

**32351.** *BLIGHIA SAPIDA* Koenig.**Akee.**

From Jamaica, British West Indies. Presented by Mr. W. Harris, superintendent, Hope Botanic Gardens, Kingston. Received December 29, 1911.

See No. 24592 for description.

Seeds.

**32352.** *QUERCUS SUBER* L.**Cork oak**

From Algeciras, Spain. Procured through Mr. R. L. Sprague, American consul, Gibraltar, Spain. Received December 29, 1911.

**32353 to 32358.**

From Mexico. Presented by Dr. C. A. Purpus, Zacuapam, Huatusco, Vera Cruz. Received December 26, 1911.

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

**32353.** *NICOTIANA* sp.

**Tobacco.**

“From Tehuacan, Puebla. Altitude 1,000 meters [3,280 feet].”

**32354.** *PINUS MONTEZUMAE RUDIS* (Endl.) Shaw.

**Pine.**

“From Esperanza. Altitude 2,700 to 2,800 meters [8,800 to 9,100 feet].”

*Distribution.*—From the southern part of the province of Chihuahua, in central Mexico, southeastward to Central America.

**32355.** *PINUS LEIOPHYLLA* Schlecht. and Cham.

**Pine.**

“From Amecameca. Altitude 2,500 to 2,600 meters [8,200 to 8,500 feet].”

*Distribution.*—Subtropical and warm temperate altitudes from the province of Zacatecas southeastward to the province of Oaxaca in Mexico.

**32356.** *PINUS PATULA* Schlecht. and Cham.

**Pine.**

“From Boca del Monte, Puebla. Altitude 2,100 meters [6,900 feet].”

*Distribution.*—Warm temperate altitudes in the provinces of Hidalgo, Puebla, and Vera Cruz, in Mexico.

**32353 to 32358—Continued.**

**32357.** PINUS PSEUDOSTROBUS Lindl. **Pine.**

“From Zacuapam, Huatusco.”

*Distribution.*—From the province of Vera Cruz, in southern Mexico, south-eastward to Nicaragua.

**32358.** SOLANUM NIGRUM L. **Nightshade.**

“From Zacuapam, Vera Cruz. Altitude, 3,000 feet.”

**32359.** COFFEA LAURENTII Wildem. **Coffee.**

From Kingston, Jamaica. Presented by Mr. William Harris, superintendent, Hope Botanic Gardens. Received December 30, 1911.

Procured for experimental growing in Arizona, southern California, and Florida.

**32360.** MALUS sp. **Crab apple.**

From Jamaica Plain, Mass. Presented by Mr. Charles W. Livermore, Brookline, Mass. Received December, 1911.

“Seeds from an excellent crab apple. The tree from which these came is very hardy and bears abundantly. The apples are so generally superior that I hope you will be able to test the seeds at some station for the benefit of the Pacific coast.” (*Livermore.*)

**32361 to 32366.**

From China. Presented by Mr. Nathaniel Gist Gee, Soochow University, Soochow. Received December 30, 1911.

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

**32361.** GLYCINE HISPIDA (Moench) Maxim. **Soy bean.**

Olive green. “From Soochow. Hairy green beans planted in second or third month. Eaten green or dried.”

**32362.** VIGNA SINENSIS (Torner) Savi. **Cowpea.**

Black. “*Kaung doen.* About the same as red beans.”

**32363.** PHASEOLUS RADIATUS L.

“Small green beans planted in the fifth moon, ready to harvest in two months. Eaten only after being dried.”

**32364.** PHASEOLUS ANGULARIS (Willd.) W. F. Wight.

“Red beans planted the third or fourth month. Ready to eat in eight months. Dried before eating.”

**32365.** CASTANEA SATIVA Miller. **Chestnut.**

“Large chestnut from Dong Ding Mountain, near Soochow.”

**32366.** CASTANOPSIS sp.

“From Tientsin.”

**32367 and 32368.** HORDEUM spp. **Barley.**

From Transvaal, South Africa. Presented by Prof. J. Burt Davy, agronomist and botanist, Department of Agriculture, Pretoria. Received December 26, 1911.

Seeds of the following:

**32367.** HORDEUM VULGARE HIMALAYENSE Rittig.

**32368.** HORDEUM VULGARE CORNUTUM SCHRADER. **Awnless barley.**

## BOTANICAL NOTES AND PUBLICATION OF NEW NAMES.

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**32006.** DIMOCARPUS LONGAN Loureiro.

**32036 and 32037.** LANGUAS GALANGA (L.) Stuntz.

**32090.** LEUCADENDRON MELLIFERUM (Thunb.) W. F. Wight.

This South African proteaceous shrub has been listed in previous issues of the Inventories as *Protea mellifera* Thunberg (Dissertatio botanica de Protea, 1781, p. 34). In establishing the genus *Protea* (Species Plantarum, 1753, p. 94) Linnaeus published but two species, *P. argentea* and *P. fusca*. Both of these have since been referred to the genus *Leucadendron* of Berg (Handl. Vet. Akad. Stockholm, 1766, p. 325), which, however, is not the *Leucadendron* of Linnaeus (Species Plantarum, 1753, p. 91), the type of which is *L. lepidocarpodendron*. In his Mantissa (vol. 2, 1771, p. 189) Linnaeus, however, changed his conception of the genus *Protea* to include his *Leucadendron lepidocarpodendron*. This has resulted in the confusion and ultimate exact exchange of name between the two genera *Protea* and *Leucadendron*. Since the plant under discussion is congeneric with *Leucadendron lepidocarpodendron* and not with *Protea argentea*, the type of the genus *Protea*, it is necessary to retain it in the Linnaean genus *Leucadendron*. This was recognized in 1911 by Mr. W. F. Wight, who in the revised edition of the Century Dictionary, vol. 5, p. 3422, under "*Leucadendron*," published the name *Leucadendron melliferum*, based on *Protea mellifera* Thunberg.

**32104.** BENINCASA HISPIDA (Thunb.) Cogniaux.

**32118.** SYNTERISMA DEBILIS (Desf.) Skeels.

**32120.** SYNTERISMA LONGIFLORA (Retz.) Skeels.

**32194.** LENTILLA LENS (L.) W. F. Wight.

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