U. S. DEPARTMENT OF AGRICULTURE.

BUREAU OF PLANT INDUSTRY—BULLETIN NO. 205.

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

SEEDS AND PLANTS IMPORTED

DURING THE PERIOD FROM OCTOBER 1 TO DECEMBER 31, 1909:

INVENTORY No. 21; Nos. 26048 to 26470.

ISSUED MARCH 17, 1911.

WASHINGTON:

GOVERNMENT PRINTING OFFICE.

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BUREAU OF PLANT INDUSTRY.

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FOREIGN SEED AND PLANT INTRODUCTION.

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LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF PLANT INDUSTRY,
OFFICE OF THE CHIEF,
Washington, D. C., October 31, 1910.

SIR: I have the honor to transmit herewith and to recommend for publication as Bulletin No. 205 of the series of this Bureau the accompanying manuscript, entitled "Seeds and Plants Imported During the Period from October 1 to December 31, 1909: Inventory No. 21; Nos. 26048 to 26470."

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

Respectfully,

G. H. POWELL,
Acting 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, 1909: INVENTORY NO. 21; NOS. 26048 TO 26470.

INTRODUCTORY STATEMENT.

Although our agricultural explorer Mr. Frank N. Meyer has been in the field during the period covered by this inventory, the material received from him which is herein recorded is but a small part of the work performed by him. He has been investigating the prevalence of the crown-gall disease of the apple in France for the purpose of ascertaining whether the French have resistant stocks; making studies in the English, French, German, and Russian arboreta for the purpose of familiarizing himself with the important plants and plant cultures of Chinese Turkestan, which region it is expected he will explore this summer; and he has been unexpectedly delayed for six weeks in St. Petersburg. This office is negotiating by correspondence for the valuable material he has reported in the different arboreta.

To the fruit growers the question of better stock plants is of great importance and is being emphasized more strongly now than ever before. To such as are working on the problem, the introduction from Palestine, through Mr. Aaron Aaronsohn, of a large red-fruited variety of haw, *Crataegus azarolus* (Nos. 26116 and 26354), will be interesting. It has been used successfully both in Tunis and Palestine and is considered by Mr. Aaronsohn to be an ideal stock for dwarf early pears in our arid irrigated regions of the Southwest, where the question of growing early pears is attracting attention. A species of Photinia (No. 26133) from western China is sent in by Mr. Meyer, who suggests its use as a possible stock for the loquat.

The possibility of using the Chinese brambles for the production of new types of raspberries has been pointed out as promising. For those interested in this field, nine species of Rubus from the Yangtze Valley (Nos. 26270 to 26278), collected by Mr. E. H. Wilson, of the Arnold Arboretum, are likely to prove of very considerable interest.

The problem of growing in this country the large-fruited English gooseberry has proved difficult to solve because of the gooseberry mildew to which all English gooseberry varieties seem subject. Those interested in this fruit will be glad to test Dr. W. Van Fleet's three new hybrids between *Ribes missouriense*, *R. cynosbati*, and *R. rotundifolium* crossed by *R. reclinatum*. These represent twelve years of careful work in selection from hundreds of seedlings from various crosses, and preliminary tests have shown them remarkably resistant to the gooseberry mildew. (Nos. 26138 to 26140.)

Feijoa sellowiana (Nos. 26120 and 26121) is a new fruit from Uruguay which is attracting some attention in California and Florida, since it is said to withstand more cold than the guava and to have a unique flavor of its own which is especially relished by many. An acid-fruited species of *Psidium laurifolium* (No. 26413), from Trinidad, will interest those who believe in the future of the guava and its jelly-making qualities, since it is said to jelly much quicker than the common West Indian varieties and, quite distinct from them, to have an agreeable acidity.

To the Florida and California fruit growers who are watching the possibilities of the anonas, the introduction of eight large-fruited, smooth-skinned varieties from Chile will be of interest. (Nos. 26148 to 26155.)

The loganberry is already well known in the United States and those who realize its value will doubtless wish to test the lowberry (No. 26197) and Low's Phenomenal raspberry-loganberry hybrid (No. 26198), which are said to be new rivals of the loganberry.

Those who are experimenting with forage plants will be interested in a new importation of shaftal, *Trifolium suaveolens*, from Tashkend (No. 26135), a clover which is being given a thorough trial in the irrigated regions of the Southwest. Although normally an annual, this species behaves as a perennial if regularly cut for hay. The Wallaby grass, *Danthonia semiannularis*, from New Zealand (No. 26119), is recommended especially for heavy clay soils or gumbo lands subject to drought; and ray-grass, *Lolium strictum* (No. 26200), coming from the dry regions along the Mediterranean, is recommended by the veteran experimenter, Doctor Trabut, of Mustapha, Algiers, as being an excellent forage grass, an annual worthy of cultivation in the Southwest; while the New Zealand rice-grass, *Microlaena stipoides* (No. 26118), may find a use in America for pasture or lawn purposes.

Potato breeders have already shown an interest in the introduction of a few tubers of a species of Solanum thought to be a wild hybrid of *Solanum tuberosum* (No. 26122), which has been used by Mr. Paton, of Scotland, to originate what he believes are varieties practically immune to the potato blight, *Phytophthora infestans*. Interesting

varieties have also been introduced from Bogota, Colombia (Nos. 26126 to 26129).

The Arracacia of South America forms a staple food of the Venezuelans, who know it under the name of apio. It is cultivated in high altitudes and requires a long season in which to mature. It deserves a thorough trial in the South to determine where it will succeed. (No. 26204.)

The destructive fungous disease of the chestnut, which threatens to destroy the native chestnut trees of the Atlantic coast region, makes the production of a chestnut-chinquapin hybrid of unusual interest, since its resistance to this bark disease may furnish a way out of a situation which seriously threatens the chestnut industry. Doctor Van Fleet's hybrids (Nos. 26230 to 26235) have so far shown a high degree of immunity to the disease.

The interest in the Japanese flowering cherry trees, which have been found to succeed well in the United States, makes it worth while to call attention to seven Chinese flowering cherry trees from the Yangtze Valley, collected by Mr. E. H. Wilson, of the Arnold Arboretum. (Nos. 26246 to 26252.)

For many years attempts have been made to introduce the cliff-grown tea and the teas from the Dragon Pool, of the Kienningfu and Wuishan districts of China, but without success. Through the kind assistance of Mr. Rockhill, ambassador to Russia, formerly American ambassador to China, and the hearty cooperation of the American consul and vice-consul at Foochow, fourteen varieties of these specially noted teas have been introduced and are being propagated.

As heretofore, the work of identification and nomenclature, as well as that on the geographical distribution, has been done by Mr. H. C. Skeels under the supervision of Mr. W. F. Wight, of the Office of Taxonomic and Range Investigations, and the manuscript has been prepared by Miss Mary A. Austin.

DAVID FAIRCHILD,
Agricultural Explorer in Charge.

OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION,
Washington, D. C., March 7, 1910.

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INVENTORY.

26048 and 26049. PRUNUS spp.

From the Himalayas. Presented by Mr. E. Shearer, Assistant Inspector-General of Agriculture in India, Nagpur, Central Provinces, India. Received October 2, 1909.

Seeds of the following:

26048. PRUNUS ARMENIACA L. **Apricot.**

"*Shari.* A nursery of shari plants is prepared in January each year. The soil is first dug, properly cleaned, and manured; ditches are then made about 4 inches deep and the seeds are put in and covered with earth. These seeds germinate in the following March.

"These plants are then transplanted where desired in January next, i. e., after one year. They are planted in pits dug deep enough and are watered every second or third day until they take root in the ground. Shari plants when grafted with aru (peach) give a better variety of shari fruit." (*Shearer.*)

26049. PRUNUS sp. **Plum.**

"*Aloocha.* The season and process of sowing this seed are the same as that of shari (apricot) (S. P. I. No. 26048).

"Jamun (wild cherry) and aru (peach) when grafted on aloocha plants produce fine varieties of jamun and aru, respectively." (*Shearer.*)

26050. ALEURITES TRISPERMA Blanco. **Banucalag.**

From Philippine Islands. Presented by Mr. Elmer D. Merrill, Bureau of Science, Manila. Received October 2, 1909.

"As there are probably no live specimens of this species in America to-day, these seeds were procured to grow plants for trial in the tropical possessions of the United States. A portion of them will also be used for the expression of a sample of oil to be tested in the Bureau of Chemistry of the United States Department of Agriculture in Washington in comparison with oils derived from other species of Aleurites.

"This species, which yields a valuable drying oil, is found in the Philippines; so far as known, it is restricted to these islands and is comparatively rare but quite generally distributed. This plant is botanically known as *Aleurites trisperma* Blanco, but carries also the synonym *Aleurites saponaria* Blanco. It is known locally as 'banucalag,' 'lumbang banucalag,' 'lumbang banucalad,' 'baguilumban,' 'calumban,' or 'lumbang gubat,' besides having a variety of other names in the different provinces. It is much mixed and confused with the true lumbang (*Aleurites moluccana*), especially when information in regard to it is sought.

"*Aleurites trisperma* belongs to the same section of Aleurites as the Chinese and Japanese species; this may readily be seen by comparing the seeds and foliage of these three plants. The seeds resemble those of *Aleurites fordii*, while the leaves resemble those of *Aleurites cordata*. The seeds are somewhat larger, however, than those of the China wood-oil tree, besides being thicker shelled and of a distinct brick-red color." (*W. Fischer.*)

26051 to 26054. GLYCINE HISPIDA (Moench) Maxim. **Soy bean.**

From Nanking, China. Presented by Dr. F. B. Whitmore. Received September 13, 1909. Numbered October 4, 1909.

Seeds of each of the following:

26051. Yellow.
26052. Yellowish green.
26053. Green.
26054. Black.

26055 to 26061. SACCHARUM OFFICINARUM L. **Sugar cane.**

Presented by Mr. Edward W. Knox, general manager of the Colonial Sugar Refining Company (Limited), Sydney, New South Wales, Australia. Received October 4, 1909.

Seeds of each of the following; notes by Mr. Knox:

26055. *Striped Singapore.* "Standard variety, medium thickness, medium quality. Very similar to Rose Bamboo, but striped amber and red."

26056. *Rose Bamboo.* "Standard variety, medium tonnage and sweetness, medium thickness, straw-rose color."

"These are at present most grown in the drier districts of Fiji, being of very fair weight and sweetness. According to Mr. J. Clark (one of our officers who recently paid a visit to Demerara and Barbados) Striped Singapore is the striped variant of the cane called White Transparent in the West Indies; Rose Bamboo is an allied cane which is very nearly identical with White Transparent, the latter being called Yellow Singapore in Fiji. The obvious difference between Rose Bamboo and Yellow Singapore is that the latter is somewhat thicker in the stalk and arrows very freely, while the former rarely flowers."

26057. *Badila.* "Best variety in Fiji and Queensland. Very heavy and very sweet, thick, purple."

26058. *Mohona.* "Early maturing, successful variety in New South Wales, but dies off early in the season in tropical Queensland and Fiji; rather thin, purple; white bloom."

"These have been obtained from New Guinea. Badila is a dark-purple cane of stout build, giving heavy and sweet crops under favorable conditions, but being a slow grower at the start. Mohona is of a lighter purple color, of medium size and yield, attaining high sweetness when comparatively young, readily going back in quality in the Tropics, but much more enduring in semi-tropical districts. It supplies very fertile seeds."

26059. *HQ. 10.* "Fairly sweet variety, fair tonnage, seedling raised from Mohona by Mr. J. Clark at Hambledon, Queensland. Thin, olive-green."

26060. *HQ. 50.* "Seedling raised from Mohona; rather thin, purple; white bloom; good cropper; good quality; raised at Hambledon, Queensland."

"These are both sweet and have given fair crops so far when tried on small areas only."

26061. *Couvé 87.* "This is a thick, purple Mauritius seedling, giving a heavy crop, which is somewhat discounted by shortcomings as regards quality. Seed from this variety is more fertile than that from any other known by us."

26062 to 26065. MUSA TEXTILIS Née. **Manila hemp.**

From Davao, Mindanao, Philippine Islands. Presented by Mr. M. M. Saleeby, in charge of fiber plants, Bureau of Agriculture, Manila, through Mr. Lyster H. Dewey. Received October 4, 1909.

26062 to 26065—Continued.

Seeds of each of the following:

26062. *Tanguyon* (also spelled *Tangouan* and *Tongongon*).

26063. *Libuton.*

26064. *Puteean.*

26065. *Arupan.*

"Mr. Saleeby, who is making a careful study of abacá (Manila hemp), writes that although abacá seedlings are often found in the fields in well-shaded moist places, he has never found good plants growing directly from the seeds. He suggests trying to grow plants from root cuttings or suckers from the seedlings that we may secure. He also states that he finds seedlings only in soil well drained yet constantly moist and constantly shaded. I would suggest that these seeds be grown with a view to sending the young plants to Porto Rico." (*Dewey.*)

26067. BETA VULGARIS L. **Beet.**

From Sicily. Presented by Dr. Carl Sprenger, Hortus Botanicus Vomerensis, Vomero, Naples, Italy. Received October 5, 1909.

Seed collected in a wild state.

26068. APIUM GRAVEOLENS L. **Celery.**

From France. Presented by Mrs. E. M. Sheridan, 2300 G street NW., Washington, D. C., who procured the seed from Vilmorin-Andrieux & Co., Paris, France. Received October 5, 1909.

Improved Paris celeri-rave (Falaise). "The taste of this is similar to the meat of the large artichoke and only requires boiling and a dressing of drawn butter gravy after it is cut in slices or small chunks." (*Sheridan.*)

"Sow in February or March in a bed under glass; set out in well-manured ground at a distance of 30 to 40 centimeters (12 to 16 inches). Harvest in August and September.

"Plant in nursery beds in April or May; set out in May or June. Gather in October or November and keep during the winter.

"A variety obtained by Mr. Falaise and distinguished from the common celeri-rave by a much greater development of the root. Foliage tolerably high with slender petioles, dark green, strongly tinted with red; the leaves themselves are large, tolerably serrate, of a dark and shining green, especially on the upper part of the stalk. It is the race most liked by the Parisian market gardeners; it is an improvement on Large Smooth Paris celeri-rave, which it has replaced and which was itself a good selection from Common celeri-rave." (*Vilmorin-Andrieux & Co.*)

26069. ARALIA CORDATA Thunb. **Udo.**

From New York, N. Y. Purchased from J. M. Thorburn & Co. Received October 7, 1909.

Kan. See Bureau of Plant Industry Bulletin 42 for description; also S. P. I. No. 9166.

26070 to 26077. MEDICAGO spp.

From Chico, Cal. Grown at the Plant Introduction Garden by Mr. Roland McKee. Received September 22, 1909.

Seeds of the following; descriptive notes by Mr. McKee:

26070. MEDICAGO HISPIDA CONFINIS (Koch) Burnat.

"This is a selection from S. P. I. No. 16771 made at Chico, Cal., in 1906. It is a prickleless form of bur clover and well adapted for pasturage, especially for sheep. It should be tested throughout the southern and southwestern United States. It has been grown for the increase of seed."

26070 to 26077—Continued.

Distribution.—The British Islands, France, Spain and Portugal, Italy, and the Balkan Peninsula.

26071. MEDICAGO HISPIDA NIGRA (L.) Burnat.

"Seed in the bur was received at the Plant Introduction Garden, Chico, Cal., in December, 1905, from the University of California. It perhaps will succeed wherever *M. hispida denticulata* or *M. arabica* does well. In California it is perhaps a little more aggressive than *M. hispida*. Of value for pasturage and soil improvement."

Distribution.—The European countries bordering on the Mediterranean Sea, including Spain, southern France, and Italy; also in the Balkan Peninsula, Asia Minor, Syria, Palestine, and northern Africa.

26072. MEDICAGO HISPIDA NIGRA (L.) Burnat.

Same as No. 26071.

26073. MEDICAGO HISPIDA Gaertn.

"Seed in the bur was received at the Plant Introduction Garden, Chico, Cal., in December, 1905, from the University of California. Of value for pasturage and soil improvement wherever common bur clover is adapted."

Distribution.—The Mediterranean region.

26074. MEDICAGO HISPIDA Gaertn.

Same as No. 26073.

26075. MEDICAGO HISPIDA TEREBELLUM (Willd.) Urban.

"Seed in the bur received at the Plant Introduction Garden, Chico, Cal., in December, 1905, from the University of California. This is practically a prickleless form of bur clover and needs to be tested extensively in the West and South for pasturage and soil improvement."

Distribution.—The countries along the Mediterranean, from Spain to Palestine and Egypt.

26076. MEDICAGO MURICATA (L.) All.

"This is a selection made from seed which was received at the Plant Introduction Garden, Chico, Cal., in December, 1905, from the University of California. It is a form of bur clover having a large but very hard bur. Should be tested in sections adapted to bur clovers."

Distribution.—The province of Riviera, southern France, and in Dalmatia, Croatia, and Herzegovina, southern Austria.

26077. MEDICAGO SCUTELLATA (L.) Miller.

"Seed in the bur was received at the Plant Introduction Garden, Chico, Cal., in December, 1905, from the University of California. This is a form of bur clover having a very large papery pod, making it especially desirable for pasturage. It should be tested in particular in the warmer sections of the South."

Distribution.—The Mediterranean region.

26078. CAPRIOLA INCOMPLETA (Nees) Skeels.

Cynodon incompletus Nees, Linnæa 7: 301. 1832.

The genus Capriola was established by Adanson in 1763, while Cynodon was not published until 1805, forty-two years later. Dactilon was proposed for the same genus by Villars in 1787 and Fibichia by Koeler in 1802.

From Pretoria, Transvaal, South Africa. Presented by Prof. J. Burtt Davy, government agrostologist and botanist, Transvaal Department of Agriculture. Received October 14, 1909.

"This is closely related to common Bermuda grass." (*C. V. Piper.*) (Roots.)

26078—Continued.

Distribution.—This species occurs in South Africa and was originally described from "Gaaup," in the district of Beaufort, Cape Colony. It has since been found in various localities from the vicinity of Lydenburg, Transvaal Colony, southward, and westward to the banks of Orange River in Little Namaqualand. In the central region of Cape Colony it is found at elevations of 3,000 feet.

26109. ZIZYPHUS SATIVA Gaertn. **Chinese date.**

From Chekiang Province, China. Presented by Mr. J. H. Judson, Hangchow, China. Received April 21, 1908. Numbered October 6, 1909.

"I can not say whether these plants are of a named variety or not. The Chinese have three kinds on the market, which they call red, black, and honey dates." (*Judson.*)

26110 and 26111.

From Beirut, Syria. Presented by Mr. A. E. Day, professor of natural science, The Syrian Protestant College. Received October 8, 1909.

Seeds of each of the following:

26110. CUCURBITA PEPO L.

"*Kusa.*" See No. 22810 for description.

26111. CUCUMIS SATIVUS L. **Cucumber.**

"We eat freely of this cucumber, and it is a common sight to see a Syrian child one or two years old chewing away at one; it does not seem to hurt them." (*Day.*)

26112. DIOSPYROS DISCOLOR Willd. **Mabola fruit.**

From Philippine Islands. Presented by Mr. William S. Lyon, Gardens of Nagtajan, Manila. Received October 11, 1909.

"A small tree, native of the Philippine Islands, introduced into India and cultivated in gardens, especially in Vizagapatam. The fruit is like a large quince and in some places is called mangosteen; its proper name should be the *Mabola* fruit. It is agreeable and has a pink-colored fleshy rind." (*Extract from Watt, Dictionary of Economic Products of India, vol. 3, p. 138.*)

See No. 19216 for previous introduction and description.

26115. MUCUNA GIGANTEA (Willd.) DC.

From Buntal, at the mouth of Sarawak River, Sarawak, Borneo. Presented by Mr. J. C. Moulton, curator, Sarawak museum. Received October 12, 1909.

Black. See No. 25514 for distribution.

26116. CRATAEGUS AZAROLUS L.

From Zichron-Jacob, near Haifa, Palestine. Presented by Miss Rifka Aaronsohn, through Mr. A. Aaronsohn. Received October 4, 1909.

"Arabian name za'arur. This species is very abundant throughout the Orient, where a great many varieties and forms of it are found. It grows wild on the slopes of dry, arid hills, preferably amongst calcareous rocks. It is a shrub with spiny branches from 1.5 to 4 or 5 meters in height, with a diameter of 10 to 30 centimeters. It is rather a slow grower.

"In the spring it bears dense corymbs of white flowers which are pleasantly fragrant. The size of the fruits varies in different varieties. Some have fruits as large

26116—Continued.

as 1 inch in diameter. The acid flesh has a delicate flavor, but there is not enough of it to give the fruits a commercial value. Fruits are occasionally found, however, that are practically without seeds and it might be possible to fix this character by selection. As it is the fruit is often sold in the oriental markets.

"I particularly recommend this Crataegus as a stock for pears. It is good for dry localities at any altitude. It is found as low as 200 meters below the level of the Mediterranean in the valley of the Jordan and as high as 1,800 meters above sea level in the desert near Petra. It ought, therefore, to thrive in southern California as well as on the plateaus of Colorado.

"My personal experience has shown that a top graft 6 inches or a foot above the ground is the best for this stock. It is best suited for the early varieties of pears.

"I recommend this as a stock, therefore, in high, arid situations where water is scarce or costly. It is an ideal stock for dwarf early pears. At Indio, Cal., for instance, it ought to yield prime fruit with very little irrigation.

"Palestine (where my father has had trees grafted in this way for 18 years) is not the only region in which *Crataegus azarolus* has been used as a stock for the pear. Mr. Dumont has used it for the same purpose near Tunis.

"I speak of pears because I have had personal experience with this fruit. But I can see no reason why it would not do as well as a stock for dwarf early apples." (*A. Aaronsohn.*)

Distribution.—A native of southern Europe, western Asia, and northern Africa, being found in Spain, Italy, Crete, Caucasia, Asia Minor, Syria, Palestine, Arabia; Persia, and Algeria.

26117. MEDICAGO SATIVA L. **Alfalfa.**

From Indian Head, Saskatchewan, Canada. Presented by Mr. Angus Mackay, superintendent, Dominion Experimental Farm for Saskatchewan, through Mr. Charles J. Brand. Received October 18, 1909.

Grimm.—"Grown at Indian Head from S. P. I. No. 12991; seeded in comparison with eight other strains in the spring of 1905. No. 12991 was produced in Minnesota in 1904 and was secured from Mr. A. B. Lyman, Excelsior, Minn. In the Indian Head experiments it has proven from the first (1905 to 1909) to be the best of the nine strains under test." (*Brand.*)

26118 and 26119.

From Wellington, New Zealand. Presented by Mr. T. W. Kirk, Biologist, Department of Agriculture. Received October 18, 1909.

Seeds of the following:

26118. MICROLAENA STIPOIDES (Labill.) R. Br. **New Zealand rice-grass.**

A native grass, much relished by all kinds of stock; the herbage is of a rich green color, and is produced in great abundance.

Distribution.—A native of New Zealand and Australia, where it is widely distributed and used for a lawn and pasture grass.

26119. DANTHONIA SEMIANNULARIS (Labill.) R. Br. **Wallaby grass.**

A grass which does well on any of the poorer classes of gumbo land, also on heavy clay soils. It stands drought with impunity, and throws up a good quantity of feed, which is eaten by all classes of stock.

See No. 21024 for previous introduction.

Distribution.—New Zealand, Tasmania, and the temperate parts of Australia.

26120 and 26121. FEIJOA SELLOWIANA Berg.

From Los Angeles, Cal. Presented by Mr. H. Hehre. Received October 11, 1909.

Seeds of the following:

26120. "These fruits were raised from a plant imported by me from Europe a number of years ago and which has been bearing regular crops for five or six years." (*Hehre.*)

26121. "These fruits are from a plant originated by me from seed imported from Europe; it has not been named. Ripens later than the preceding variety." (*Hehre.*)

"*Feijoa sellowiana* is worthy to be mentioned under promising new fruits and deserves the widest distribution. The plant stands more cold than the guava, is beautiful in bloom, and is evergreen. The fruit is green and when ripe has a tinge of yellow. As it blooms for a period of about two months, so does the fruit ripen successively for two months; therefore there are all sizes of fruit on the plant at the same time, which grow at the leaf axil on new wood." (*Hehre.*)

Distribution.—Found in the province of Rio Grande do Sul, in the southeastern part of Brazil, and in the vicinity of Montevideo, Uruguay; cultivated in southern Europe.

26122. SOLANUM sp. **Potato.**

From Castle Kennedy, Scotland. Presented by Rev. J. Aikman Paton, Soulseat. Received October 19, 1909.

"Tubers of *Solanum etuberosum* (so called; I think it is a wild hybrid of *S. tuberosum*, simply), which I used as the parent of my 'Immune' strain. A certain proportion of the 'selfed' seedlings of it and its hybrids are immune to *Phytophthora infestans* even here." (*Paton.*)

26123. CITRUS BERGAMIA Risso. **Bergamot orange.**

From Nice, France. Presented by Dr. A. Robertson Proschowsky. Received October 20, 1909.

Variety *mellarosa plena*. (Cuttings.)

26124. TRIFOLIUM SUBROTUNDUM Steud. & Hochst.

From 70 miles east of Lake Victoria Nyanza, British East Africa, at about 7,500 feet altitude. Presented by Mr. E. Blackbun, Salem, Ohio. Received October 19, 1909.

Distribution.—A native of Abyssinia, where it is cultivated as forage, under the name of Mayad; also native of Upper and Lower Guinea.

26125. MANGIFERA INDICA L. **Mango.**

From Port of Spain, Trinidad, B. W. I. Presented by Mr. F. Evans, Department of Agriculture. Received October 19, 1909.

Julie. "This plant is grafted upon the common mango, *Mangifera indica*." (*Evans.*)

See No. 21515 for description.

26126 to 26129. SOLANUM spp. **Potato.**

From Bogota, Colombia. Presented by Mr. Eugene Betts, American vice and deputy consul-general. Received October 18, 1909.

Tubers of the following; quoted notes received with the shipment:

26126. "*Pápas Tocanas.* Produced on high, broken ground, mountain sides, high and very cold."

26126 to 26129—Continued.

26127. "*Pápas Arrayanas, criallas coloradas.* Produced on the mountain tops and on high table lands."

26128. "*Pápas Paramunas.* Produced on the mountain slopes above the Savannah of Bogota."

26129. "*Pápas Amapalá.* Produced on the Savannah of Bogota."

26130. MEDICAGO SATIVA L. **Alfalfa.**

From Talas, Caesarea, Turkey. Presented by Dr. Wm. S. Dodd, through Mr. Charles J. Brand. Received October 19, 1909.

"In his letter transmitting this seed Doctor Dodd states: 'I am not sure whether the lucern for which you ask is the plant that we cultivate here for horse feed or not, but I send some of that. Yonja is the Turkish name.' Only a small package of this seed was received, and it should be reserved for experiments in the Southwest." (*Brand.*)

26132 and 26133.

From Mr. Frank N. Meyer, Agricultural Explorer. Received October 13, 1909.

Seeds of the following:

26132. PRUNUS sp.

From China. Obtained at the M. L. de Vilmorin Arboretum, Les Barres, Nogent sur Vernisson, France.

26133. PHOTINIA VILLOSA (Thunb.) DC.

From Western China. Obtained at the M. L. de Vilmorin Arboretum, Les Barres, Nogent sur Vernisson, France. "This plant has a rather dwarfy habit, is apparently evergreen in a climate not too cold, and may serve as a stock for loquats, besides being also ornamental. The plant will probably not be hardy in Washington, D. C." (*Meyer.*)

Distribution.—A native of the southeastern provinces of the Chinese Empire and of Formosa, and widely distributed in Japan.

26134. ALLIUM CEPA L. **Onion.**

From Denia, Spain. Procured from Señor Don Luis Tono, American consular agent, through Mr. Robert Frazer, jr., American consul, Valencia, Spain. Received October 20, 1909.

"Seed of the onion that is commercially grown on an extensive scale in Denia. These onions come upon the American market in a peculiar type of package and are the large yellow or straw-colored onions which are sold under the name of Spanish onions. The closest American representative of this type is the Prizetaker, which I understand is an American sport from this variety. It is probably the largest of the onions which are grown extensively for market, has the thinnest skin, is the mildest in flavor, and altogether is the best onion produced in the world. From imported seed we have succeeded in producing some very fine specimens in parts of Texas, and we hope that from this small beginning a very considerable industry will be built up. The probabilities are that we shall always need to import the seed direct from Spain in order to maintain the high quality in the American-grown product." (*L. C. Corbett.*)

26135. TRIFOLIUM SUAVEOLENS Willd. **Shaftal, or schabdar.**

From Tashkend, Turkestan. Purchased from Dr. Richard Schröder, director Chief Agricultural Experiment Station, at the suggestion of Prof. N. E. Hansen, Agricultural Experiment Station, Brookings, S. Dak. Received October 23, 1909.

26135—Continued.

The following notes were taken from a letter written by Doctor Schröder to Professor Hansen; clause in brackets is by Professor Hansen:

"In Persia the schabdar seed is usually sown in the fall, not too late. It endures the winter quite well. By sowing in the fall it develops in the spring so quickly that the first cutting is ready before the first cutting of alfalfa. According to information obtained in Persia the schabdar endures several years. This lot is of a new variety which endures from five to seven years. The fact that this plant is perennial comes in conflict with botanical statements [that it is an annual].

"In Persia the fresh shoots of the schabdar are also used for salad. The flowers are visited by bees."

26136. GOSSYPIUM BARBADENSE L. **Cotton.**

From Nyassaland Protectorate, British Central Africa. Presented by Mr. J. Stewart J. McCall, director of agriculture, Zomba. Received October 23, 1909.

"*Egyptian* (*Abbasi*). Our Egyptian is not nearly so good as our Upland cotton (S. P. I. No. 25964)." (*McCall.*)

26137. FRAGARIA sp. **Strawberry.**

From Germany. Presented by Rev. J. M. W. Farnham, Chinese Tract Society, Shanghai, China. Received September 13, 1909

White fruited. (Seed.)

26138 to 26140. RIBES hybrids. **Gooseberry.**

From Little Silver, N. J. Presented by Dr. W. Van Fleet. Received October 22, 1909.

Plants of the following; quoted notes by Doctor Van Fleet:

26138. RIBES MISSOURIENSE × RECLINATUM.

"Third generation. (*R. gracile* (*R. missouriense*) × *Red Warrington* × *Triumph* × *Keepsake.*) Six-year-old plant, very vigorous, 6 feet high, disease-resistant foliage, productive, berries dark reddish-purple when ripe, smooth, thin skinned, larger than Houghton, excellent quality, seeds small."

26139. RIBES CYNOSBATI × RECLINATUM.

"Second generation. (*R. cynosbati* × *Triumph* × *Whitesmith.*) Fair grower; rather spreading; good, disease-resistant foliage; berries large, dark red when ripe, few soft spines, very firm, agreeable flavor, small seeds; excellent for jelly."

26140. RIBES ROTUNDIFOLIUM × RECLINATUM.

"Third generation. (*R. rotundifolium* × *Houghton* × *Triumph* × *Keepsake.*) Healthy, upright grower; disease-resistant foliage; berries rather small, smooth, bright red when ripe, brisk, pleasant quality, exceedingly productive."

"These hybrids are final selections from hundreds of seedlings, representing 12 years of arduous work."

NOTE.—"Houghton is supposed to be *R. oxycanthoides* × *grossularia* (*reclinatum*)."

26141 and 26142.

From Pretoria, Transvaal, South Africa. Presented by Mr. F. T. Nicholson, secretary, Transvaal Agricultural Union. Received October 25, 1909.

26141. VICIA FABA L. **Horse bean.**

Light brown seeded. (Seed.)

26142. GLADIOLUS sp. (Bulbs.)

26143 and 26144.

From the Himalayas, India. Presented by J. Mollison, esq., Inspector-General of Agriculture in India. Received October 26, 1909.

Seeds of the following:

26143. MALUS SYLVESTRIS Mill. **Crab apple.**

"*Pala* (*Palu*) is generally propagated by cuttings. When grown from seeds, the method of raising the plants is as follows: In the month of January, the plat to be sown is dug about one-half foot deep and is manured. Then the seeds are sown and germinate in the following summer.

"In January next (i. e., a year after), the plants are transplanted, where desired, in pits dug for that purpose. Pala is only grafted on seb (apple). It is also grafted with nashpati (pears), but the pears produced are sour." (*Mollison.*)

26144. PRUNUS PADUS L.

"*Jamu.* The process of cultivating jamu is the same as that of pala (S. P. I. No. 26143).

"This plant is grafted with aloocha (plum) (S. P. I. No. 26049) and yields aloocha fruit. If it is grafted on aloocha plant, jamu fruits will be produced." (*Mollison.*)

26145 and 26146. ANDROPOGON SORGHUM (L.) Brot. Durra.

From Igatpuri, India. Presented by Mrs. Effie Pyle Fisher, through Miss Audrey Goss. Received August 31, 1909.

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

26145. "Apparently very similar to No. 9856, Dagdi durra, which we are selecting for grain production, and which now gives considerable promise of value for the Southwest."

26146. "A white durra with black hulls, probably a late sort."

26147. CITRUS AURANTIUM SINENSIS L. Orange.

From Mount Gravatt, Brisbane, Australia. Presented by Mr. John Williams. Received October 28, 1909.

"*Usher's Favorite.* It ripens in October here, and is a splendid keeper; quality, flavor, and all things considered, I believe it to be really first class." (*Williams.*)

(Plants.)

26148 to 26155. ANONA CHERIMOLA Mill. Cherimoyer.

From Santa Inez, Chile. Presented by Mr. Salvador Izquierdo. Received October 26, 1909.

"Nos. 26148, 26152, 26153, 26154, and 26155 are different cherimolas with very large fruits, of the form 'ananas.' No. 26149 is a very large cherimolia with smooth skin. Nos. 26150 and 26151 are large-fruited cherimolias, smooth skin, form 'concha.'" (*Izquierdo.*)

(Cuttings.)

26156 to 26160.

From Foochow, China. Presented by Mr. Samuel L. Gracey, American consul. Received October 25, 1909.

Seeds of the following:

26156 to 26158. CITRULLUS VULGARIS Schrad. **Watermelon.**

26156. "White or Shanghai melon, very popular in this district." (*Gracey.*)

26156 to 26160—Continued.

26156 to 26158—Continued.

26157. Yellow. **26158.** Red.

26159 and 26160. GLYCINE HISPIDA (Moench) Maxim. **Soy bean.**

26159. Yellow seeded. **26160.** Green seeded.

26161. MEDICAGO SATIVA L. **Alfalfa.**

From different oases in the region of Ourlana and Tougourt, Algeria. Purchased from M. Colombo, père, Biskra, Algeria, at the request of Mr. Walter T. Swingle. Received October 29, 1909.

26162 to 26178.

Presented to Mr. P. J. Wester, Subtropical Garden, Miami, Fla., and turned over by him to this office for distribution, October, 1909.

Seeds (unless otherwise noted) were received of the following; notes by Mr. Wester:

26162 to 26174. Presented by Mr. J. M. Doctor, acting superintendent, Victoria Gardens, Bombay, India.

26162. ACACIA ARABICA (Lam.) Willd.

"The gum arabic. An evergreen shade tree with dense and spreading crown, attaining a height of 60 feet; valuable for its gum, bark, and timber; the pods are a favorite food for sheep and goats. The tree thrives on a great variety of soils and is resistant to droughts."

Distribution.—Widely distributed, being found in India, Ceylon, Egypt, Arabia, tropical Africa, and Natal.

26163. ACACIA sp.

26164. BARRINGTONIA ASIATICA (L.) Kurz.

"An ornamental, lecythidaceous, evergreen shrub, attaining a height of 6 to 8 feet; cultivated as an ornamental on account of its shining foliage and large, handsome purple and white flowers produced on an erect thyrse."

Distribution.—Found along the shores of southern India, and of Australia, and on the islands between.

26165. BAUHINIA ACUMINATA L.

"A leguminous ornamental shrub, 6 to 8 feet tall, native of Malabar, bearing white flowers."

Distribution.—India, especially in the northwestern part, and extending to Ceylon, China, and the Malayan Islands.

26166. THESPESIA LAMPAS (Cav.) Dalz. and Gibs.

Distribution.—The tropical Himalayas of India, from Kumaon eastward, and in Bengal, Burma, and Ceylon; also found in Java and in eastern tropical Africa.

26167. BUTEA MONOSPERMA (Lam.) Taub.

"Leguminous, native of India. An ornamental shade tree with dense foliage, attaining a height of 40 to 50 feet. The flowers are very showy, crimson, 2 inches long."

Distribution.—Found throughout the plains of India, from the Himalayas to Ceylon and Burma.

26162 to 26178—Continued.

26162 to 26174—Continued.

26168. CASSIA AURICULATA L.

"A shrub or small tree, native of India, the bark of which yields tannin. In young plants the bark has been found to contain 11.92 tannin and 22.35 extract; in old plants the corresponding figures are 20.12 and 29. In India the leaves are used as a substitute for tea and eaten as a vegetable in times of famine. This is also cultivated for its ornamental value. The yellow flowers appear in June and July."

Distribution.—Wild in the western and central part of India and in Ceylon; often cultivated in the Tropics.

26169. CASSIA GLAUCA Lam.

"A tall leguminous tree."

Distribution.—From the Himalayas, in India, through Ceylon and the Polynesian Islands to Australia.

26170. CASSIA GRANDIS L. f.

"A tree attaining a height of 45 to 55 feet furnishes a very handsome fine-grained wood. A dense shade tree, flowers very handsome, appearing in April."

Distribution.—The northern part of South America, from Panama, through Colombia and Guiana, to Brazil; also found in the West Indies.

26171. CAESALPINIA CORIARIA (Jacq.) Willd.

See Nos. 23335 and 25281 for previous introductions.

26172. PITHECOLOBIUM DULCE (Roxb.) Benth.

"A tree of very rapid growth, deserving wider distribution." See No. 23457 for description.

26173. FICUS BENGHALENSIS L. **Banyan tree.**

"In tropical India and Africa this tree attains a height of 70 to 100 feet. The aerial roots descending from the branches form accessory trunks, thus extending the growth of the tree from the main stem. The leaves are eaten by cattle. In India the fruits are eaten in time of famine. The wood, if carefully cut and seasoned, can be made into furniture and is sometimes employed in making boxes and door panels. The Hindoos regard the tree as sacred. The one tree in southern Florida that has come to my attention does so exceedingly well that the species deserves wider distribution."

Distribution.—Found wild in the lower Himalayan forests and on the Deccan hills; cultivated throughout India on the plains.

26174. FICUS CANNONII (Bull.) N. E. Brown.

"An ornamental-leaved greenhouse plant from the Society Islands. With the exception of the cultivated fig all species of Ficus introduced to southern Florida, as far as they have come to my attention, do so exceedingly well that I have thought it well worth while to introduce all species that are cultivated in other parts of the world in the hope of finding a suitable stock for the fig, which does not do well on its own roots here, largely on account of root-knot."

26175 to 26178. Presented by Mr. A. S. Archer, Antigua, British West Indies.

26175. THRYALIS GLAUCA (Cav.) Kuntz.

"An ornamental shrub bearing yellow flowers, Malpighiaceae."

26162 to 26178—Continued.

26175 to 26178—Continued.

Distribution.—Mexico and Central America, from Sierra Madre and Zacatecas, south to Nicaragua.

26176. HAEMATOXYLUM CAMPECHIANUM L. **Logwood.**

"Leguminous. The tree furnishes the logwood of commerce and the wood may be utilized in turning. The honey produced from the flowers of this species is said to be the finest in the world. The tree attains a height of 30 to 45 feet."

Distribution.—Central America, from Tehuantepec and Yucatan to Nicaragua and Colombia; also West Indies.

26177. BOUSSINGAULTIA BASELLOIDES H. B. K.

"A rapid-growing half-hardy ornamental climber. The flowers on opening are white and fragrant, turning black before withering. Easily propagated from tubers growing on the stem."

Distribution.—Southern Mexico and South America, from Gonacatepec south to southern Brazil.

26178. CEDRELA ODORATA L.

"Indigenous to the West Indies; attains a height of 80 feet. The wood is light, of pleasant odor, and easily worked, preferentially chosen in its native country for cigar boxes and a variety of other articles; also furniture."

26179 to 26182.

From Tripoli, in Barbary, North Africa. Presented by Mr. William Coffin, American consul. Received October 28 and November 1, 1909.

Seeds of the following; descriptive notes by Mr. Coffin:

26179. HORDEUM VULGARE L. **Barley.**

Dry land.

26180. PENNISETUM AMERICANUM (L.) Schum. **Pearl millet.**

"*Kassab.* The Arabs think very highly of this grain as a food and use the grass as fodder for their stock."

26181. MEDICAGO SATIVA L. **Alfalfa.**

"*Safsafa* or *Susfa.* Sometimes they get eight crops of this in the eight months of the year it grows. I have seen at least five, and I think six, crops harvested from fields just back of my house. They irrigate about every four days."

26182. CITRUS AURANTIUM SINENSIS L. **Orange.**

Blood flesh. (Plants.)

26183. STIZOLOBIUM sp.

From Sibpur, near Calcutta, India. Presented by Maj. A. T. Gage, director, Royal Botanic Garden. Received November 2, 1909.

Black seeded.

26184. FUNTUMIA ELASTICA (Preuss) Stapf.

Presented by Mr. Gilbert Christy, F. L. S., care of Thomas Christy & Co., 4, 10, and 12 Old Swan lane, Upper Thames street, E. C., London, England. Received December 2, 1909.

"Seeds of a very large forest tree. I suggest that you have them planted in one of the Cuban stations. It would be necessary to shade the growing seedlings in the summer, otherwise they would be likely to dry off." (*Christy.*)

26184—Continued.

Distribution.—Along the west coast of Africa from the Gold Coast in Ashanti through Lagos and lower Nigeria to the valley of Mungo River; usually in forests and along streams.

26185. STIZOLOBIUM sp.

From Tehwa, via Foochow, China. Presented by Miss Jessie A. Marriott. Received December 3, 1909.

"This species has pods about intermediate in character between the Lyon bean, No. 19979, and the Yokohama, No. 25254. To judge from its behavior in the greenhouse, it is about intermediate in time of maturity between these two species. The flowers are white as in the Lyon bean; very similar to the Japanese variety." (*C. V. Piper.*)

26186 and 26187.

From Nice, France. Presented by Dr. A. Robertson Proschowsky. Received November 2, 1909.

26186. FURCRAEA BEDINGHOUSI K. Koch.

"This plant is said (like most Furcraea, I suppose) to produce good fibers. This species is hardier than any other Furcraea I cultivate or know, and has once resisted from 5 to 7 degrees below zero Centigrade, without suffering the least. A few seeds were also produced on the 6-meter-high flower stalk." (*Proschowsky.*)

Distribution.—On the slopes of Acusca Mountain, south of the city of Mexico, at an elevation of about 12,000 feet. (Bulbs.)

26187. MAYTENUS BOARIA Molina.

See No. 3394 for description.

Distribution.—Dry lowlands along the coast of Chili and southward into Patagonia. (Seeds.)

26188. KAEMPFERIA sp. **"Sherungulu."**

From Transvaal, South Africa. Presented by Prof. J. Burtt Davy, government agrostologist and botanist, Transvaal Department of Agriculture, Pretoria. Received November 5, 1909.

"This plant grows in tropical and subtropical Transvaal and the tubers or rhizomes are dried and sent up from the Low Country, for sale to natives working on the Witwatersrand, by whom they are supposed to have medicinal or other virtues.

"It has been suggested that owing to the remarkable fragrance of the tubers, they might possibly be of use in the perfume trade for scenting tooth powders, soaps, etc.

"The flowers are distinctly ornamental." (*Davy.*) (Tubers.)

26189. CHRYSANTHEMUM HYBRIDUM Hort. **Shasta daisy.**

From Rosedale, Santa Cruz, California. Presented by Mr. George J. Streator. Received November 4, 1909.

"Streator's strain of the so-called Shasta daisy. Seed from the finest semidouble, quilled, fimbriated, or fringed forms." (*Streator.*)

26193 to 26195.

From Mexico. Procured by Dr. David Griffiths, Agriculturist, of this Department. Received November 5, 1909.

26193 to 26195—Continued.

Seeds of each of the following:

26193 and 26194. CICER ARIETINUM L. **Chick-pea.**

26193. Small seeded. **26194.** Large seeded.

26195. PHYSALIS IXOCARPA Brot. **Husk tomato.**

"This big blue husk tomato is often 4 centimeters in diameter, as found upon the markets of Oaxaca and Mexico City especially."

Distribution.—Found wild in California, Colorado, New Mexico, Texas, Mexico, and Cuba; cultivated, and often escaped, as far north as Massachusetts, Michigan, Dakota, Oregon, and Washington.

26196. SACCHARUM OFFICINARUM L. **Sugar cane.**

From Honolulu, Hawaii. Presented by Mr. Harold L. Lyon, Experiment Station of the Hawaiian Sugar Planters' Association. Received November 2, 1909.

Lahina. "This cane has proved itself to be the best money maker that Hawaii ever saw. Under irrigation it is a splendid cane if the conditions are suited. Unfortunately it is a cane that is very subject to disease. In those parts of Hawaii where it can still be used, namely, those parts where the sky is nearly cloudless the year around and the rainfall very slight, it still does better than any other cane. If any attempt to introduce this cane to other places from Hawaii is made, great care should be exercised to select cuttings free from disease." (*N. A. Cobb, letter of May 22, 1909.*) (Cuttings.)

26197 and 26198. RUBUS spp.

From Enfield, England. Purchased from Messrs. Stuart Low & Co., Royal Nurseries, Bush Hill Park, at the request of Mr. Walter T. Swingle. Received November 4, 1909.

Plants of the following:

26197.

"*Lowberry.* This is said to be as large as the loganberry and to be as strong a grower, and to be 'altogether the most valuable novelty in the fruit way produced for some years.'" (*Swingle.*)

26198.

"*Low's Phenomenal.* A raspberry-loganberry hybrid, 'possessing all the flavor of the raspberry, and combining the free fruiting qualities of this now famous berry.'" (*Swingle.*)

26199. (Undetermined.)

From Standerton, Transvaal. Presented by Mr. O. W. Barrett, director of agriculture, Lourenço Marquez, Portuguese East Africa. Received November 8, 1909.

"Seeds of a striking asclepiad. This vine is probably native to the locality. Foliage not seen. Stems, thickish, green. Fruits (follicles) about 4 inches long, opening to about 3 inches wide. Ornamental and ought to make a good trellis or porch vine for the Southern States and California." (*Barrett.*)

26200. LOLIUM STRICTUM Presl.

From Sfax, Tunis. Presented by Doctor Trabut, Algiers, Algeria. Received November 8, 1909.

"Seed of ray-grass, native name *maudjour*. Excellent forage; grows in arid regions; annual; interesting to cultivate in the steppes." (*Trabut.*)

26200—Continued.

Distribution.—The countries bordering on the Mediterranean Sea and the Canary Islands.

26201 and 26202.

From 30 miles north of Hangchow, China. Presented by Rev. J. M. W. Farnham, Presbyterian Mission, Shanghai, China. Received November 2, 1909.

Seeds of the following:

26201. CUCUMIS MELO L. **Muskmelon.**

Golden.

26202. SILENE sp. **Wild pink.**

"Found on the mountain here." (*Farnham.*)

26203 to 26206.

Presented by Mr. H. F. Schultz, Ancon, Canal Zone, Panama. Received November 9, 1909.

26203. ANONA SQUAMOSA L.

From David, Chiriqui, Panama. "Seed from a tree bearing large and very superior fruits of fine flavor." (*Schultz.*)

26204. ARRACACIA sp. **"Aracache."**

From Boquete, Chiriqui, Panama. "Tubers of a plant found growing in the neighborhood of Boquete in a cultivated and semicultivated state. The tubers grow to a size of 6 to 15 inches in length and about 6 to 8 inches in diameter, weighing from 2 to 10 pounds. The foliage resembles somewhat that of celery, and it grows to a height of about 10 to 18 inches above the ground. The taste of the root resembles a cross between a potato, celery, and asparagus, and it is eaten like potatoes, roasted, baked, or fried, as well as cut up in soups. I have found it growing at an altitude of 3,000 to 5,000 feet above sea level, and the inhabitants claim that it will not grow on the lower levels. I think, however, that it will do well in the Gulf States and that it will prove valuable, as I know that it is a well-flavored vegetable." (*Schultz.*)

See S. P. I. No. 3511 for previous introduction.

26205. BYRSONIMA COTINIFOLIA H. B. K.

From Chiriqui, Panama. "Seeds of a fruit called 'Nance' which is used by the inhabitants as the main ingredient for a cooling and very pleasing drink. This tree is found growing at all altitudes from sea level up to about 4,000 feet and above. I do not think that it is a very valuable tree. It may possibly succeed in southern California." (*Schultz.*)

Distribution.—Along the Pacific coast of Mexico, from the province of Tepic to Chiapas.

26206. PARMENTIERA CEREIFERA Seem.

From Bugaba, Panama. "Seed of an ornamental tree with peculiarly shaped candle-like fruits produced in great abundance on the second year's growth of the plant. The long, smooth, yellow fruits are 8 to 20 inches long and one-half to three-fourths of an inch in diameter, containing in the strong, fibrous, fleshy pulp numerous small flat seeds. The inside of the fruit has a strong musky fragrance, and the appearance of the bushy, spreading shrub, which grows to a height of about 12 to 15 feet, with its numerous candle-like fruits, is quite odd. The fruits were obtained on the ranch of Mr. Alexander Croetsch, of Bugaba, province of Chiriqui, and flowers were not in evidence." (*Schultz.*)

Distribution.—Confined to the valley of Chagres River, Republic of Panama.

26207. PROTEA MELLIFERA Thunb.

From Durban, Natal, South Africa. Presented by Prof. J. Medley Wood, director, Botanic Gardens. Received November 8, 1909.

A South African bush, useful both as an ornamental and as a bee plant.

26208. SOLANUM TUBEROSUM L. **Potato.**

From Solomon, Alaska. Presented by Mr. T. Brown. Received October 14, 1909.

"Tubers round to oblong, flattened; skin deep flesh color; eyes few and shallow." (*W. V. Shear.*)

26209 to 26223. CITRUS spp.

From Sawbridgeworth, Herts, England. Purchased from Thomas Rivers & Son, at the request of Mr. Walter T. Swingle. Received November 11, 1909.

Plants of the following:

26209 to 26219. CITRUS AURANTIUM SINENSIS L. **Orange.**

26209 to 26216. Subvarieties of the St. Michael's orange, which is said to be the ordinary orange of commerce, and although some of the strains have been tried in this country it was thought desirable to introduce the following:

26209. *Long.*
26210. *Botelha.*
26211. *Bittencourt.*
26212. *Nonpareil.*
26213. *Dom Louise.*
26214. *Egg.*
26215. *Excelsior.*
26216. *Dulcissima.*

26217. *White.* "Very distinct, with striped fruit and white pulp; flavor very good." (*T. Rivers & Son.*)

26218. *Embigus* (Navel).

"A singular variety, with a nipple-like excrescence at the apex; fruit large and good; pulp pale in color." (*T. Rivers & Son.*)

26219. *Silver* (Plata). "A delicious orange." (*T. Rivers & Son.*)

26220 and **26221.** CITRUS LIMETTA Risso. **Lime.**

26220. *Common.* "An abundant bearer; fruit excellent for cooling drinks." (*T. Rivers & Son.*)

26221. *Bitter.* "Remarkable for the great fertility and dwarf habit of the tree; resembles the Bijou lemon so closely as to be distinguished with difficulty except by the color of its fruit." (*T. Rivers & Son.*) See No. 26222.

26222 and 26223. CITRUS LIMONUM Risso. **Lemon.**

26222. *Bijou.* "Pronounced to be a lime by some authorities. Fruit small, with a delicious aroma; growth of the tree very dwarf and fruitful; this is a remarkable sort." (*T. Rivers & Son.*) See No. 26221.

26223. *White.* "One of the largest and best." (*T. Rivers & Son.*)

26224. CARICA PAPAYA L. **Papaw.**

From Puerto Plata, Dominican Republic. Presented by Mr. A. W. Lithgow, American vice-consul. Received November 12, 1909.

"Native name 'lechosa,' the only class known here." (*Lithgow.*) (Seeds.)

26225 to 26227. CITRULLUS VULGARIS Schrad. **Watermelon.**

From Bucharest, Roumania. Presented by Mr. William G. Boxshall, vice consul-general, through Mr. Horace G. Knowles. Received November 13, 1909.

Seed of the following small melons:

26225. Red flesh.
26226. Yellow flesh.
26227. Red flesh.

26228 and 26229. AVENA SATIVA L. **Oat.**

From Feuchtwangen, Germany. Purchased from Mrs. Sophie Kreiselmeyer. Received April 20, 1909. Numbered for convenience in recording distribution November 15, 1909, at which time definite information regarding this shipment was received.

Seed of the following:

26228. *Giant of Ligowa.* **26229.** *Fichtelgebirge.*

26230 to 26235. CASTANEA hybrids.

From Little Silver, N. J. Presented by Dr. W. Van Fleet. Received October, 1909.

26230 and 26231. CASTANEA PUMILA × CRENATA.

"Mostly shrubby in habit; good growers; nuts twice as large as *C. pumila*, often three in a bur; productive, and bears at two to three years from seed. Supposed to be resistant to bark disease." (*Van Fleet.*)

26230. (Seeds.) **26231.** (Plants.)

26232 and 26233. CASTANEA PUMILA × SATIVA (*Paragon* variety).

"Nuts four times as large as those of *C. pumila*, sometimes three in a bur; good growers; arborescent; productive and bears at six years from seed." (*Van Fleet.*)

26232. (Plants.) **26233.** (Seeds.)

26234 and 26235. CASTANEA PUMILA × CRENATA.

"Second generation from self-pollinated seeds; vigorous; not fruited; supposed to be resistant to bark disease." (*Van Fleet.*)

26234. Arborescent plant. **26235.** Shrubby plant.

26236 and 26237. GLYCINE HISPIDA (Moench) Maxim. **Soy bean.**

From Cedara, Natal, South Africa. Presented by Mr. E. R. Sawer, director, Division of Agriculture and Forestry. Received November 12, 1909.

Seeds of the following:

26236. "Mammoth yellow." **26237.** "Chinese," yellow.

"This is our principal field crop in the Midlands." (*Sawer.*)

26238 to 26240. RUBUS spp.

From Lowdham, Nottinghamshire, England. Purchased from Messrs. J. R. Pearson & Sons, at the request of Mr. Walter T. Swingle. Received November 16, 1909.

Plants of the following:

26238. **Blackberry.**

Parsley leaved. "This is said to be of English origin, supposed to have originated at Handsworth, and is, in the opinion of Messrs. Pearson & Sons, 'far

26238 to 26240—Continued.

26238—Continued.

better than any of the American kinds, and in addition to being a good cropper, it is very ornamental and may be used with good effect for covering wild rockery and rough banks.'" (*Swingle.*)

26239. **Raspberry.**

November Abundance. "This is said to produce 'a good supply of fruit during September and onwards.'" (*Swingle.*)

26240. **Raspberry.**

Superlative. "Said to be a good dessert berry, of red color, large size, and of excellent flavor, readily picked on account of its long stalks." (*Swingle.*)

26241. BRASSICA OLERACEA CAPITATA L. **Cabbage.**

From Dalny, Manchuria. Presented by Mr. A. A. Williamson, vice-consul in charge. Received November 15, 1909.

"The Manchurian cabbage is one of the chief articles of diet of the inhabitants of these regions. It is particularly tender, succulent, and well flavored. These are a few of the first seeds, which only ripen in the spring." (*Williamson.*)

26242. QUERCUS AEGILOPS L. **Oak.**

From Patras, Greece. Presented by Hon. F. B. Wood, British consul. Received November 16, 1909.

Valonia. "The valonia oak derives its name from a Greek word signifying acorn. The valonia produces fully two or three times more than the ordinary oak. The term 'valonia' used commercially does not apply to the acorn but to the cup which contains it, which when ground is used for tanning purposes. The cup is a bright drab color, which it preserves as long as it is kept dry; any dampness injures it, as it then turns black and loses both its strength and value. The more substance or thickness there is in the husk or cup the better it is for commercial purposes.

"Valonia without the acorn (which is only of use for feeding swine, etc.) is worth about £8 to £10 per ton, but the finer quality sometimes fetches £2 or £3 more. In former years the article was worth double the above figures, but chemical and other substitutes used for tanning purposes have brought its value down to a point which scarcely covers the expense of picking and getting ready for shipment.

"The valonia oak flourishes almost exclusively in the Levant; Greece, several islands in the Aegean Sea, Crete, and Asia Minor are its favorite localities. There it thrives in great profusion and in every variety of soil and climate, being affected by neither severe heat nor great cold. In the plains of Elis in soft, heavy, rich soil the valonia displays all its beauties, and in perfect similarity to its congener growing on the barren and stony mountains of Acarnania and Laconia.

"The tree is very beautiful with its great outspreading branches and delicate foliage; it reaches in many instances a height of 60 feet and a girth of 15 feet 3 or 4 feet from the soil. In appearance it resembles the ordinary oak and has many of the latter's characteristics, forming occasionally great distorted boles. It produces the oak apple, and the mistletoe grows on it plentifully.

"The valonia tree can scarcely be called deciduous, for although the leaves attain a withered and brownish look in winter, only a certain proportion are cast before the fresh shoots appear in the early spring.

"The finest valonia forest I know of exists in the province of Achaia, between Patras and Pyrgos. In length it measures some 10 miles and in breadth about 4 or 5. The trees in most instances must be several centuries old.

"The manner of collecting valonia brings one back almost to patriarchal days. The Greek peasantry are for the most part and to a great extent nomadic. In the

26242—Continued.

summer and spring months they retire to their mountain villages, but in winter, driven down by the snows, they descend into the plains bordering the sea and live as squatters. Each family has acquired hereditary rights for years and years to occupy certain portions of the plains, paying a head tax for the cattle which accompany it and having a right to collect valonia in a certain area. The old patriarch of the family, with his wife, sons, daughters, and grandchildren may be seen collecting valonia, for which they pay a tax of 10 per cent in kind to the owner of the property.

"In 1899 the production of valonia in the different localities was as follows: 5,000 tons in Acarnania and Aetolia; 4,100 tons in Laconia and Arcadia; and 900 tons in Achaia. In 1908 the total product of Greece had diminished to 4,000 tons." (*Wood.*)

"Valonia consists of the acorn cups, the best of which contain about 40 per cent of tannin. It is especially serviceable in the production of heavy leathers. The tree has been grown in the vicinity of Paris, where it attained an age of 25 to 28 years before bearing fruit. In the collection of valonia the labor of children and young girls is said to be largely used, the pay of the most skillful amounting to about 30 cents per day." (*W. W. Stockberger.*)

Distribution.—Lower mountain slopes and valleys of Greece, and on the Cyclades. See No. 6833 for previous introduction.

26243. GARCINIA BRASILIENSIS Mart. (?).

From Lawang, Java. Presented by Mr. M. Buysman, Hortus Tenggerensis. Received November 19, 1909.

Distribution.—Found in the woods in the province of Para, in the northern part of Brazil. (Seed.)

26244 and 26245. POLAKOWSKIA TACACO Pittier.

From San José, Costa Rica. Presented by Mr. Ad. Tonduz, through Prof. H. Pittier. Received November 19, 1909.

26244. Small variety having fiber. **26245.** Large variety without fiber.

"A cucurbitaceous plant, the fruit of which is used as a green vegetable. It is a near relative to the chayote, but the fruit is smaller, fusiform, set with stiff spines at the base and of quite a distinct taste. It is one of the primitive foods of the native Indians of Costa Rica, where it grows wild in fresh, shady places of the temperate region, and its use as a vegetable has been readily adopted by the Spanish Costa Ricans. Nowadays the plant is at least semicultivated on the central plateau. To grow it, a whole mature fruit is set in a rich, loose leaf mold with the spiny end up and almost showing at the surface. The vines spread on the ground or on low bushes or supports. The fruits, which are about 2½ inches long and 1½ inches broad, hang from short peduncles and are picked when still green. After taking away the basal spines they are boiled in water, either whole or cut into small pieces, or pickled, or made into preserves. They are also a favorite addition to the native vegetable soups." (*H. Pittier.*)

26246 to 26252. PRUNUS spp. **Cherry.**

From western Hupeh, China. Purchased from Mr. C. S. Sargent, director of the Arnold Arboretum, Jamaica Plain, Mass. Received November 22, 1909.

Plants of the following; notes by Mr. E. H. Wilson:

26246. From Changyang Hsien. "(A. A. No. 3.) A very ornamental tree, attaining a height of 10 to 30 feet. Grows on mountains at an alititude of 2,500 to 3,500 feet. Flowers white."

26246 to 26252—Continued.

26247. From Changyang Hsien. "(A. A. No. 3a.) A very ornamental tree, attaining a height of 10 to 30 feet. Grows on mountains at an altitude of 2,500 to 3,500 feet. Flowers white."

26248. From north and south of Ichang. "(A. A. No. 3b.) A very ornamental tree, attaining a height of 10 to 30 feet. Grows on mountains at an altitude of 2,500 to 3,500 feet. Flowers white."

26249. "(A. A. No. 4.) No description.

26250. From Changyang Hsien. "(A. A. No. 5.) A rare and magnificent species, attaining a height of 35 feet. Grows in glades at an altitude of 3,500 feet. Fruit black."

26251. From Changyang Hsien. "(A. A. No. 7.) A very fine tree, rare, attaining a height of 25 to 35 feet. Grows in woods at an altitude of 3,000 to 3,500 feet. Flowers pink."

26252. From Changyang Hsien. "(A. A. No. 11.) A very common bush species, growing 10 feet high in mountains at an altitude of 2,500 to 3,500 feet. Flowers white and pink."

26253. VICIA FABA L. **Horse bean.**

From Kindred, N. Dak. Presented by Mr. A. P. Hertsgaard. Received November 22, 1909.

"Grown in North Dakota, summer of 1909. Seed originally from Holland. This is said to be called in Holland the pigeon pea." (*Hertsgaard.*)

26256 to 26259. EUCALYPTUS spp.

From Sydney, New South Wales, Australia. Procured from Mr. J. H. Maiden, director and government botanist, Botanic Gardens. Received November 25, 1909.

Seed of each of the following procured for planting on the experimental plantation to be established by the Forest Service, in cooperation with the Bureau of Plant Industry, at Brownsville, Tex.:

26256. EUCALYPTUS SIDEROXYLON A. Cunn.

Distribution.—Australia, in the provinces of New South Wales, Victoria, and South Australia.

26257. EUCALYPTUS GONIOCALYX F. Muell.

Distribution.—Southeastern Australia, from Twofold Bay in New South Wales, to the Buffalo Range in Victoria.

26258. EUCALYPTUS BOTRYOIDES Smith.

Distribution.—Eastern Australia, from Brisbane in Queensland, south through New South Wales, to Victoria.

26259. EUCALYPTUS PAUCIFLORA Sieber.

Distribution.—Common in Tasmania, and in South Australia, Victoria, and New South Wales.

26265. ROSA CANINA L. **Rose.**

From Mexico. Presented by Mr. Harvey C. Stiles, Mexico City, through Mr. P. J. Wester. Received November 26, 1909.

"Seeds of a wild rose, native of the cool, frostless Mexican highlands, but found only where there is constant moisture; it grows luxuriantly, often 12 to 20 feet high, and I have sometimes seen it in gardens, budded or grafted to other sorts of fine roses. It makes an ideal stock, not sprouting like *Manetti*, etc." (*Stiles.*)

26266 and 26267.

From Cape Town, South Africa. Presented by Mr. R. W. Thornton, government agriculturist, Department of Agriculture. Received November 23, 1909.

Seed of the following:

26266. PENTZIA INCANA (Thunb.) Kuntze. **"Karroo bush."**

Distribution.—Eastern South Africa, from Natal south to Uitenhage, Cape Colony.

26267. PANICUM sp.

"This is an indigenous grass which is considered to be one of the best grasses in the Orange River Colony, where in certain parts it is practically the only fodder which the stock have." (*Thornton.*)

26268 and 26269. PASSIFLORA spp.

From Port of Spain, Trinidad. Presented by Dr. E. André. Received November 27, 1909.

Seeds of the following:

26268. PASSIFLORA QUADRANGULARIS L. **Granadilla.**

"A plant of South American origin very closely allied to *Passiflora macrocarpa* and *P. alata*, now cultivated in many tropical countries. Its large, greenish-yellow fruit has a thick rind which is sometimes preserved, and the pulp surrounding its seeds, though sometimes insipid, is usually pleasant flavored and is made into cooling drinks and sherbets. The seeds are too large to be swallowed as in the case of the smaller fruited species. This plant is valuable for covering arbors and verandas. The leaves are large, membranaceous, and heart shaped; the large fragrant flowers have red petals alternating with the white sepals, while in the closely allied *P. macrocarpa* both the sepals and petals are purplish. Many species of Passiflora are incorrectly referred to this species." (*W. E. Safford.*)

26269. PASSIFLORA MALIFORMIS L. **Sweet cup.**

"This species is frequently cultivated in the West Indies, and on some of the islands it is found wild. The fruit is globose, or apple shaped, and much smaller than the Granadilla or Barbadine (S. P. I. No. 26268). It has a thin shell-like envelope, not soft like that of the waterlemon (*P. laurifolia*) but varying in rigidity. In the specimens sent the shell, which is yellow and marked with numerous white dots, is easily indented, almost like that of *P. ligularis*, but in some varieties it is hard and rigid, even sufficiently so that snuffboxes can be made of it. The pulp is pleasant flavored and slightly acidulous, and the seeds are small enough to swallow. The leaves are simple, entire, and oval or ovate, with linear lanceolate stipules and petioles bearing two glands. The flowers are sweet scented and beautiful, variegated red and white, with blue coronal filaments." (*W. E. Safford.*)

26270 to 26278. RUBUS spp.

From western Hupeh, China. Purchased from Prof. C. S. Sargent, director, Arnold Arboretum, Jamaica Plain, Mass. Received November 29, 1909.

Plants of the following; notes by Mr. E. H. Wilson:

26270. RUBUS BAMBUSARUM Focke.

From north and south of Ichang. "(A. A. No. 48.) A straggling plant; height 10 to 15 feet. Grows in thickets at an elevation of 3,000 to 5,000 feet. Flowers pink. A fine Rubus."

26270 to 26278—Continued.

Distribution.—Bamboo forests on the mountain slopes, at an elevation of 4,000 to 6,000 feet, in the province of Hupeh, central China.

26271. RUBUS INNOMINATUS S. Moore.

From north and south of Ichang. "(A. A. No. 92.) A shrubby plant; height 3 to 5 feet. Grows in thickets at an elevation of 3,000 to 4,500 feet. Pinkish flowers. Fine, red paniculate fruits."

Distribution.—The valley of the Yangtze River at Kiukiang, in the province of Kiangsi, central China.

26272. RUBUS ICHANGENSIS Hemsl. and Kuntze.

From north and south of Ichang. "(A. A. No. 663.) A straggling plant. Grows in thickets at an elevation of 2,000 to 4,000 feet. Flowers white. A good thing."

Distribution.—The vicinity of Ichang, province of Hupeh, China.

26273. RUBUS PARKERI Hance.

From north and south of Ichang. "(A. A. No. 44a.) A straggling plant; height 6 to 15 feet. Grows in glens, etc., up to an elevation of 2,000 feet. Pink flowers, calyx red, very glandular."

Distribution.—The provinces of Hupeh and Szechwan, China.

26274. RUBUS LAMBERTIANUS Ser.

From north and south of Ichang. "(A. A. No. 482.) A spreading plant; height 6 to 10 feet. Grows in thickets at an elevation of 2,000 to 4,000 feet. Whitish flowers. Red fruits."

Distribution.—Kiukiang, in the province of Kiangsi, and along the valley of Lienchu River, in the vicinity of Saingu, province of Kwangtung, central China.

26275. RUBUS CHROOSEPALUS Focke.

From south of Ichang. "(A. A. No. 80.) A rambling plant; height 7 to 10 feet. Grows in thickets at an elevation of 3,000 to 4,000 feet. Leaves small, cordate, hairy below."

Distribution.—The vicinity of Patung, in the western part of Hupeh.

26276. RUBUS CONDUPLICATUS Duthie.

From north and south of Ichang. "(A. A. No. 97.) An erect plant; height 6 to 8 feet. Grows in thickets at an elevation of 3,000 to 5,000 feet. Flowers pink. Fruit red, growing in dense clusters."

26277. RUBUS COREANUS Miq.

From north and south of Ichang. "(A. A. No. 31.) An erect plant; height 6 to 8 feet. Grows on mountains, etc., up to an elevation of 4,000 feet. Flowers purple. Stems white. Ornamental."

Distribution.—The provinces of Kiangsi and Hupeh, in central China, and the islands of the Korean Archipelago.

26278. RUBUS HYPARGYRUS Edgew.

From Changlo Hsien. "(A. A. No. 152.) Grows on mountains at an elevation of 3,000 to 4,500 feet. Fruit dark red. Flowers paniculate. Leaves silvery below."

Distribution.—Himalaya Mountains of northeastern India and mountains of central China.

26279 to 26281.

From China. Presented by Rev. T. D. Holmes, Alfred, N. Y. Received November 24, 1909.

Seeds of the following:

26279. ALEURITES FORDII Hemsl. **China wood-oil tree.**

Largest seeds of this variety yet received. See No. 25081 for description.

26280. SAPINDUS MUKOROSSI Gaertn.

"The Chinese use this fruit, just as it is gathered, to wash with. My wife says these soap balls are superior to our soap for washing flannel fabric, in that they prevent shrinking." (*Holmes.*)

Distribution.—Southeastern China, in the provinces of Chekiang, Fukien, Hupeh, and Kwangtung. Also in India, and introduced into Japan.

26281. GYMNOCLADUS CHINENSIS Baill.

"The pods of this tree are used as a soap." (*Holmes.*)

Distribution.—The southeastern part of China, in the provinces of Hupeh, Chekiang, and Kiangsi.

26282. VICIA FABA L. Horse bean.

From Cawnpore, United Provinces, India. Presented by Mr. H. M. Leake, economic botanist to government. Received November 29, 1909.

"Seed of the only form of *Vicia faba* grown here. It is a cold-weather crop, sown in October and ripening in March. The unripe pod is used as a vegetable and the ripe seed after soaking and boiling. The stalks are used as fodder for stock, chopped up and mixed with other fodder (e. g., sorghum).

"The plant is grown only for personal consumption. It has, therefore, no market value." (*Leake.*)

26283. PINUS PINCEANA Gordon.

From Mexico. Presented by Mr. Elswood Chaffey, Hacienda de Cedros, Mazapil, Zacatecas, Mexico. Received November 18, 1909.

"Seed from a pine which grows some 50 feet high and as much as 2 feet in diameter." (*Chaffey.*)

Distribution.—Along gulches on the slopes of the great table-land in northeastern Mexico, between 19° and 25° north latitude.

26284 to 26288.

From Tokyo, Japan. Presented by Mr. Albert J. Perkins, who procured them from The Tokyo Plant, Seed and Implement Co. Received November 29, 1909.

Seeds of the following:

26284 to 26287. RAPHANUS SATIVUS L. **Radish.**

26284. *Sakurajima.* See No. 22399 for previous introduction.

26285. *Nerima.* See No. 22397 for previous introduction.

26286. *Takuwan.*

26287. *Miyashige.*

26288. ARALIA CORDATA Thunb. **Udo.**

Kan. For description, see Bulletin 42, Bureau of Plant Industry, Department of Agriculture.

26289 to 26291.

From Kentung, Burma. Presented by Rev. R. Harper, M. D., American Baptist Shan Mission. Received November 29, 1909.

Seeds of the following; notes by Rev. R. Harper:

26289. STIZOLOBIUM sp.

"Collected by Captain McGregor. This is a sort of creeper, I believe, very thorny."

26290. ANONA SQUAMOSA L.

"*Mak au hsa.* This fruit is a favorite in Burma, and if it can be grown in the Southern States ought to command a large market."

26291. CARICA PAPAYA L. **Papaw.**

Papaia, from which a digestive extract called papain is made.

26292 and 26293. STIZOLOBIUM spp.

From Dharapuram, India. Presented by Rev. George N. Thomssen, Baptla, South India, who procured them from Dr. C. A. Barber, government botanist, Agricultural College, Coimbatore, India. Received November 29, 1909.

Seeds of the following:

26292. "*Punarkkali.*"

26293. (Native name not given.)

"These varieties grow wild in southern India." (*Barber.*)

26294 to 26296. VICIA FABA L. **Horse bean.**

Presented by Mr. R. L. Sprague, American consul, Gibraltar, Spain. Received November 29, 1909.

Seeds of the following:

26294. From Mazagan, Morocco.

26295. From Spain.

26296. From Taragona, Spain.

26297. AMYGDALUS ANDERSONII (Gray) Greene. **Wild peach.**

From Pyramid Lake, Nevada. Presented by Mr. Marsden Manson, San Francisco, Cal. Received December 1, 1909.

Mr. Manson recommends this wild peach as a stock and for hybridizing experiments. See No. 21657 for previous introduction.

Distribution.—California, from Sierra County southward to Inyo County, and in the western part of Nevada.

26298. ANONA LONGIFLORA S. Watson.

From Altadena, Cal. Presented by Dr. F. Franceschi, Santa Barbara, Cal. Received December 1, 1909.

"Fruit said to compare well in quality with the cherimoyer. The species is hardy and grows quite vigorously at Altadena, Cal. To judge from photographs of fruit, leaves, and seeds, it would seem to be a species intermediate between *Anona cherimola* and *Anona squamosa*, possibly a natural hybrid between these species." (*P. J. Wester.*)

Distribution.—In ravines on the slopes of the Cerro de San Estevan, in the vicinity of Rio Blanco, Mexico. (Seed.)

26299. (Undetermined.) (Scrophulariaceæ.)

From Yosemite Valley, Mariposa County, Cal. Presented by Mr. F. W. McCauley, through Col. G. B. Brackett, pomologist. Received December 1, 1909.

"Seed of a wild plant that grows in this section of the country and seems to be valuable for cattle to feed on. It is a large plant, attaining a height of 3 to 4 feet and growing in the shape of a small tree. It ripens in the latter part of October, coming up the following season from seed. It is at its best for cattle in August, when it is still tender. When driven cattle throng the woods at this season of the year they will go out of their way to munch on this plant; later in the season it becomes hard and woody, and then cattle will only eat the more tender branches of it. This plant grows in light, sandy soil of granitic origin and apparently without moisture; it thrives on steep south hillsides among brush and rocks, also on the mountain top in the pine forests 4,000 feet above sea level. A peculiarity of the plant is that it grows in little patches—here half a dozen plants, and there possibly 50 together; I believe the seed does not spread readily. If this plant could be cultivated with success I believe it would be valuable as a forage plant to be grown without irrigation. It grows well at altitudes as low as 2,000 feet above sea level, where the thermometer stands at 100° and marks as high as 110°." (*McCauley.*)

26300. ROYSTONEA REGIA (H. B. K.) O. F. Cook.

From Nice, France. Presented by Dr. A. Robertson Proschowsky. Received November 27, 1909.

"A variety from Mexico." (*Proschowsky.*)

Distribution.—Common about Cruces, Gorgona, and San Juan, in Panama, and in Cuba, Antigua, and other West Indian islands.

26301. ANDROPOGON HALEPENSIS VIRGATUS Hackel.

From Algiers, Algeria. Presented by Doctor Trabut. Received December 2, 1909.

"This grass is vigorous, but not stoloniferous, and would be interesting for hybridizing with *Sorghum vulgare* [*Andropogon sorghum*]. It is a moderately good forage like Johnson grass, but has the advantage of not stooling. This variety is perennial here and produces many seeds." (*Trabut.*)

Distribution.—Egypt, extending from Alexandria, through Nubia, to the valley of the White Nile, in the Province of Kordofan.

26302 and 26303. VIGNA UNGUICULATA (L.) Walp. **Cowpea.**

From Entebbe, Uganda. Presented by Mr. R. Fyffe, Botanical and Forestry Department. Received December 3, 1909.

Seeds of the following; native names as given by Mr. Fyffe:

26302. Buff seeded. (This number was assigned to three packages of seed which had been mixed in transit. The native names are as follows: "Mpendi Kiriya Mugombere," "Mpendi Kantinti," "Mpendi Bimogoti.")

26303. Black seeded. "Mpendi Luzzige."

26304 to 26329.

From Chile. Received through Mr. José D. Husbands, Limavida (via Molina), Chile, November 9, 1909.

Seeds of the following; notes by Mr. Husbands:

26304 to 26329—Continued.

26304. ACACIA LONGIFOLIA (Andr.) Willd.

"*Aromo.* A grand, yellow-flowered tree, grown in Chile from the time of the Spanish, for ornamental purposes."

Distribution.—A shrub or small tree found throughout Australia and in Tasmania. Used as a street tree in California.

26305. AEXTOXICON PUNCTATUM R. and P.

"In Valdivia and Chiloe this plant is called 'tique' or 'palo muerto;' in the north it is called 'acietunillo' or 'olivillo.' It grows along the coast of Chile from Valparaiso to the island of Chiloe."

26306. ARISTOTELIA MACQUI L'Herit.

"*El Maqui.* This is a valuable wild fruit tree and I believe is capable of improvement. The fruit is abundant, astringent, sweet, and refreshing. In time of fruitage 'chicha de maqui' is highly esteemed as a healthful beverage. It is nonfermented; the fruit is simply mashed and mixed with water and the liquid drawn off and drunk. The fruit juice is similar in color to blackberry juice; it stains whatever it comes in contact with, but it is not indelible. The fruit is gathered in immense quantities and dried for export and domestic uses, especially for coloring wines or imitating them. These seeds are from near Puerto Montt, which is the extreme southern limit of the territory allotted to their growth; they are as good as 'el maqui' of central Chile. The color of the fruit is generally a reddish black; brown, white, and pink fruits are sparsely found in a few localities, but these are different varieties. This tree sometimes attains a height of 30 to 35 feet. Usually it is not more than 12 to 15 feet high and 4 inches in diameter, but I have seen trees 16 inches in diameter. They thrive in dry central Chile, but seek the moisture of the ravines. The tree reminds one of a cherry tree. The wood is not considered. The bark of the new wood is very flexible and is used for making lassos and ropes for use about the farm; also for tying in the vineyards. The ties are strong and last a long time if dampened before using. Birds and foxes are very fond of the fruit and scatter the seeds in a fit state to germinate.

"The juice of the leaves is a splendid remedy for throat diseases and ulcers and has a fame for healing wounds. An infusion of the leaves is employed as a gargle. Reduced to a powder, they serve effectively as a healing ointment. They are also good made into a poultice, especially when placed over the kidneys to calm fevers. The fruit, being a quick, mild acid, and astringent, is often used as a refreshing drink in the sick room and is especially efficacious in fevers; toasted and ground or broken and put into hot water it is a sure remedy against the worst cases of diarrhea, dysentery, and cholera; being perfectly harmless the fruit or decoctions may be eaten or drunk in any quantity. The plant is widely distributed, from always dry, rainless Coquimbo to Chiloe's perpetual moisture."

Distribution.—Along ravines from central Chile to Puerto Veras.

26307 and 26308. AVENA SATIVA L. **Oat.**

26309. BOQUILA TRIFOLIATA (DC.) Decaisne.

" 'Voquil blanco,' 'boquila,' and 'pilpil blanco' are the Indian names. It grows along the edges of the woods from the thirty-fifth degree of latitude south to and including the island of Chiloe; it avoids altitudes and seeks the moist lowlands. The fruit is without importance."

26310 and 26311. CHUSQUEA QUILA (Poir.) Kunth. **Bamboo.**

"This seed is from the provinces of Cautin and Malleco, in the vicinities of the volcanos Lonquimai, Llaimi, and Villa Rica. Several small lots from

26304 to 26329—Continued.

26310 and 26311—Continued.

different places are contained in this shipment and may or may not be all of the same variety. They are not of the Valdivia class."

Distribution.—The Chilean coast from Valparaiso to Chiloe.

26312. CITRULLUS VULGARIS Schrad. **Watermelon.**

"A watermelon that was harvested in February and eaten in July."

26313. CUCUMIS melo L. **Muskmelon.**

"A melon that grew without water in the poorest arid soil."

26314 and 26315. EMBOTHRIUM COCCINEUM Forst.

26314. "'Notru,' 'el ciruelillo.' A beautiful, flowering ornamental tree fit for any place. Has bunches of bright crimson flowers in early October and dark-green leaves, which are pale green beneath. It grows in the south up to 22 feet and 12 to 16 inches in diameter. A decoction of the bark or leaves is used to cure glandular affections; infusion or smoke cures dental neuralgia, and is also used to cicatrize wounds."

26315. "'Lirhuerillo.' From the Province of Llanquihue. Useful as a timber tree."

Distribution.—The southern part of Chile.

See Nos. 25491 and 25492 for previous introductions.

26316. EUCRYPHIA CORDIFOLIA Cav.

"North of Valdivia this is called 'Ulmo;' at the south 'Muermo.' An evergreen tree with dense foliage, very beautiful on account of its abundant bunches of beautiful, white, fragrant flowers; it grows 50 feet high and 2 feet in diameter. Its hard wood is tan colored, of good quality for charcoal and bright blazing fuel, extra-durable railroad ties, heavy timbers, planks or boards, casks and vats, furniture, or any inside work; it becomes a darker red from exposure and age. Its wood and bark are highly impregnated with tannic acid. The bark contains about 35 per cent of tannin of great excellence, which quickly tans leather of superior quality and of much flexibility. The tanned product has a clean, light-buff color and an increased weight over the crude skins. The tannin of the wood serves for tanning, but is not used on account of its giving leather a blue cast. Ulmo bark is better than lingue and has been successfully applied in the form of concentrated extracts; its superiority as a tanning compound is of recent knowledge. It flowers in November and December and seeds in March and April."

Distribution.—The region around San Carlos, Chile, and extending south to the island of Chiloe.

See No. 25490 for previous introduction.

26317 and 26318. GEVUINA AVELLANA Molina.

26317. "'*Avellana.*' One of the handsomest trees in the world; its glossy, evergreen leaves, bunches of white, fragrant flowers and crimson nuts all at the same time, and its general symmetrical grace and beauty, make a very impressive sight. It grows in the Cordilleras of south and central Chile to the thirty-fourth degree of latitude and not beyond; is also found in the low coast range of the Cordillera Maritima. These seeds were found growing in latitude 44°; they need to be soaked in water a long time to germinate; they thrive in any soil, dry or wet, high or low lands here, but moist land is best for them. The wood of this tree is tough and elastic, takes a high polish, and is good for furniture."

26304 to 26329—Continued.

26317 and 26318—Continued.

26318. "'*Avellana.*' From the Cordillera of central Chile. Soak the seeds well."

See No. 25611 for previous introduction and distribution.

26319. GREIGIA SPHACELATA (R. and P.) Regel.

"'*Chupones.*' From the mainland in the Province of Llanquihue."

Distribution.—In humid situations about Concepcion, Chile, and south to the province of Llanquihue.

See No. 25476 for previous introduction.

26320. GUNNERA CHILENSIS Lam.

"'*Nalca.*' This grows only in wet places, banks of streams, ravines, etc. It is like a giant pieplant or rhubarb and is very ornamental; it is somewhat different from 'Pangue' (S. P. I. No. 25477); the former is eaten raw after the bark or skin is removed and has an agreeable sweet-acid taste; its juice made into ices is eaten with gusto. A decoction for diarrhea, etc., is made from the roots, which are hard and very astringent; the small quantity of juice which they contain is a valuable, permanent black dye for cloths and is estimable for tanning skins. The new sprouts are much esteemed by the Indians; they call them 'pampancallhue.' Oxen eat the leaves with relish when accustomed to them."

See No. 25477 for previous introduction and distribution.

26321. LAURELIA SEMPERVIRENS (R. & P.) Tul.

"Indian name 'el huahuan.' The evergreen laurel is too well known to need description. The industrial applications, large dimensions and merits of its timber, durability when not exposed to the elements, facility to work, ability to permanently receive any stain, etc., require no comment. It is necessary to cut the tree for lumber when the sap is down. It grows to immense size in the Cordilleran foothills of the south and gradually diminishes in size as it is found north of the river Bio Bio. It has nearly all the medicinal properties of *Laurelia aromatica*, among which are the following: An infusion of the scraped or pounded wood, the leaves or flowers is used to cure pains in the head which are the results of colds; the same and especially an infusion of the leaves is used for affections of the digestive tubes, urinary organs, to combat bronchitis and as baths or lotions to strengthen the nervous system, to alleviate or moderate paralysis, to fumigate the body against spasmodic convulsions; a pomade made of the powdered leaves cures skin diseases. The ground bark being placed in the cavity of a tooth stops the pain; an infusion of the bark is used as a remedy for lockjaw, etc."

Distribution.—Frequent in the woods in the vicinity of Valparaiso, Chile, and south to the island of Chiloe, rising to an elevation of 8,000 feet on the mountain slopes.

26322 and 26323. MAYTENUS BOARIA Molina.

26322. "Large-leaved variety." **26323.** "Small-leaved variety."

"An evergreen forest tree, native name 'el maiten.' A beautiful, fine-leaved, dense, semidrooping, small-limbed, shade tree of rare excellence, growing naturally in a round form up to a height of 12 meters and about 12 inches thick. It naturally seeks the dryest, poorest, arid lowland soils. It has great value as forage for horses and cattle; in times of drought or grass failure, hungry animals are kept alive by breaking a few branches daily and feeding the leaves. The wood is fine grained, hard, elastic, and mostly plain white and pale yellow, some-

26304 to 26329—Continued.

26322 and 26323—Continued.

times with a light pinkish-red cast; some varieties are beautifully veined with red and olive colors. The Araucana Indians use the wood to make their bows."

Distribution.—Dry lowlands along the Chilean coast and south to Patagonia.

See No. 23272 for previous introduction.

26324. NOTHOFAGUS sp.

"'*Rauli.*' A giant forest tree of the greatest industrial value; it may be favorably compared with the American black walnut in respect to its uses and commercial importance. Like the finest pines it is used to make all kinds of sash, doors, blinds, and for every class of furniture, and inside and outside construction; it is durable, easy to work, receives and long retains any paint or stain, admits of the highest class of polish, is tasteless, and is largely used for wine casks, tubs, vats, store fixtures, etc. The wood does not warp, split, fade, or rot. The trunks are long and extra thick, requiring the full capacity of both the upper and lower saws of the mills to cut them through. In my opinion 'rauli' is the most valuable wood in Chile for general uses. Grows only in the provinces of Nuble, Conception, Malleco, and Cautin."

26325. QUILLAJA SAPONARIA Molina.

"'*Quillai.*' It will certainly pay to plant plantations of this valuable tree. The natural source of supply is exhausted. They seek the dry hillsides and foothills, where they thrive in the driest and worst kinds of arid soils."

Distribution.—In the valleys and on the plains at the base of the mountains from Illapel, south to the valleys of the Angol and Levu rivers, Chile.

26326. RHAPHITHAMNUS PARVIFOLIUS Miers.

"In the province of Valdivia this is called 'espino blanco;' further south the Indians call it 'arrayan macho,' 'arrayan de espino,' 'guayun,' and 'repu.' It is an evergreen bush or treelet about 20 feet high, good for live fences and ornament."

Distribution.—The southern part of Chile and the adjacent islands.

26327. SOLANUM sp. **Potato.**

26328. SOPHORA TETRAPTERA J. Mill.

"'*Pelu.*' This treelet of 12 to 15 feet is beautifully ornamental, having abundant bunches of fragrant, yellow flowers, which come in August and September before the leaves appear. The wood is not very thick, but is extra valuable on account of its extreme hardness; it is used for hubs, spokes, plow points, pulleys, cogwheel teeth, pins for sailing boats, ships, etc. It grows between Concepcion on the north and Puerto Montt south, also upon the island of Juan Fernandez, where it is called 'Guayacan.' The scraped wood serves as a stimulant and cathartic. It is also used for chronic rheumatism, gout, syphilis, and cutaneous diseases. Lasts forever in water."

See No. 25479 for previous introduction.

26329. TEPUALIA STIPULARIS Griseb.

"'*Tepu.*' This is a small, beautiful tree, which grows along the coast of Chile from Valdivia to the island of Chiloe, where it forms dense impassable forests; the Indians call these woods 'Tepuales.'

26330 to 26343. THEA SINENSIS L. **Tea.**

From China. Procured by Vice-Consul Nightingale under directions from Mr. S. L. Gracey, American consul at Foochow, at the suggestion of Ambassador

26330 to 26343—Continued.

Rockhill before he left Pekin for St. Petersburg, Russia. Plants received at the Plant Introduction Garden, Chico, Cal., December 1, 1909; seeds received at Washington, D. C., December 6, 1909.

Plants of the following:

26330 to 26332. From the Kienning district.

26330. *Lotus Heart.*

26331. *Water Fairy.*

26332. *Dragon Pool.*

26333 to 26336. From Wuishan district, the cliff-grown teas from River of the Nine Windings.

26333. *White Cock Comb.*

26334. *Great Red Robe.*

26335. *Superior.*

26336. *Dragon Pool.*

Seeds of the following:

26337. *Water Fairy* (parent plant).

26338. *Dragon Pool* (parent plant).

26339. *Dragon Pool.* From Heaven Sauntering Place.

26340. *White Cock Comb* (parent plant).

26341. *Red Robe* (parent plant).

26342. *Red Robe.* From Heaven Heart Temple.

26343. *White Peony* (parent plant).

"The cliff-grown teas are extremely rare and valuable, and I do not believe can be obtained again, as the Chinese are not at all anxious to have the tea of this district become general. The department having for some years past written for seed of the 'Dragon Pool teas,' which I was unable to obtain otherwise, though repeated requests have been made, I sent my vice-consul, Mr. Nightingale, and through the extreme courtesy of the viceroy of Fukien, the magistrate of Chungan, and two mandarin friends, he was allowed to gather seeds and select the plants I send. There is 200 miles of foot journey besides considerable boat trip from Foochow to this district, which involves some expense. The peculiar flavor of these cliff-grown teas is said to come from the soil, and other soil may impart an entirely different flavor to the same plant. The earth about the cliff teas is very sandy and not at all rich. A rich soil they claim is not good for tea, as the plant will grow too high and not remain stunted, as is considered desirable. In this district frost occurs often, and now and then there is light fall of snow, which lasts but a short time. The entire district of the River of the Nine Windings is composed of huge red sandstone cliffs and bowlders, and in the shadow and clefts of these, wherever a little of the sandy soil is found, the tea grows. Other than a little digging about the roots at this season of the year (October), no attention is necessary.

"Some fertilize the plants once or twice a year with night soil; the fertilization is not considered necessary.

"Some plants produce as many as four kinds of tea, according to the size of the leaf and the time of gathering. The teas of this district in order of superiority are 'White Cock Comb,' 'Great Red Robe,' 'Superior,' 'Lotus Heart,' 'Water Fairy,' and 'Dragon Pool.' The White Cock Comb and the Red Robe plants were those growing closest to the original plant. The White Cock Comb is said to be 'the original tea plant and to have fallen from heaven;' twice a year the Chungan magistrate comes to see that it is all right and worship at a neighboring temple. The Dragon Pool tea plants are from a little inclosure back of this temple, where a brother of an emperor in the Sung dynasty retired at one time to raise tea, and which I believe has given rise to the story of the

26330 to 26343—Continued.

'Royal Inclosures.' The 'Special Tea' comes from the Chungan magistrate's private stock. The Kienningfu plants produce an inferior quality of tea from that of the cliff district. These plants may be raised from cuttings in the spring; those of the cliff district by seed only.

"The seeds should be soaked in water twenty-four hours before planting, and then planted in the open to a depth of 5 inches in low mounds 3 feet apart; ridges should be made so the rain runs freely from the mounds. Considerable moisture after planting is not desirable.

"The Dragon Pool seed sent is from the Wuishan district. All the seeds are authentic, as Mr. Nightingale gathered them personally." (*Extract from letter dated October 25, 1909, written by Consul Gracey to Mr. George S. Baker, United States dispatch agent, San Francisco, Cal.*)

26344 to 26352. Rosa spp. **Rose.**

From Woods Hole, Mass. Presented by Mr. M. H. Walsh. Received December 2, 1909.

Plants of the following Rambler roses; descriptive notes by Mr. Walsh:

26344. "*Kalmia* is a beautiful light Kalmia formed and colored flower, single."

26345. "*Bonnie Belle* is carmine and pink, single."

26346. "*Delight*, bright red."

26347. "*La Fiamma*, single; intense crimson, with white center."

26348. "*Coquina*, as its name denotes, is shell color."

26349. "*Milky Way*, single, white, large flower; an improved wichuriana."

26350. "*Lady Blanche*, double white wichuriana hybrid; very dark, glossy foliage; flowers borne in clusters similar to Lady Gay. This variety is deliciously fragrant."

26351. "*Excelsa* is double, crimson maroon, with tips of petals fiery scarlet; this will rank as one of the best."

26352. "*Jessica*, a climbing variety, large glossy foliage; large, double flower, cotton white, fragrant; a valuable acquisition."

26353. Metternichia wercklei K. Schum.

From San Jose, Costa Rica. Presented by Mr. Ad. Tonduz. Received December 4, 1909.

"Fleshy roots of what Mr. Carlos Wercklé calls the 'edible tuber' of *Metternichia wercklei* K. Schum. (Solanaceæ); he experimented with eating these pseudotubercles and found them agreeable and without any poisonous principle. *Metternichia wercklei* grows in the high plateaus of La Palma, near San Jose, at 5,000 feet altitude. It is sometimes a branching bush, 7 to 10 feet high, which grows in the ground, and sometimes a semiepiphyte which grows in rotted trunks of trees or in a hollow of some large tree. Mr. Wercklé says that this bush can be propagated very easily by means of pieces of roots." (*Tonduz.*)

26354. Crataegus azarolus L.

From Acre, Palestine. Presented by Miss Rifka Aaronsohn, Zichron-Jacob, near Haifa, Palestine. Received October 19, 1909.

"Seed of the large, red-fruited variety." (*Aaronsohn.*)

See No. 26116 for description.

26355. POPULUS LASIOCARPA Oliver.

From Chelsea, London, England. Purchased from Messrs. James Veitch & Sons. Received December 8, 1909.

"The ovate cordate leaves of this new poplar are extremely large and attractive, measuring 10 to 12 inches in width. They are bright green in color, whilst the petiole, midrib, and principal veins are of a rich red hue. The tree in central China attains a height of 15 to 40 feet and should prove a valuable addition to our ornamental deciduous trees." (*Veitch & Sons.*)

Distribution.—Central China, in the provinces of Hupeh and Szechwan.

26356 to 26362.

From Malkapur, Berar, India. Presented by Mr. A. S. Dhavale. Received November 29, 1909.

Seeds of the following; quoted native names as given by Mr. Dhavale:

26356. CROTALARIA JUNCEA L.
"*Boru.*"

Distribution.—Plains of India from the Himalayas to Ceylon, the Malayan Islands, and Australia. Cultivated for fiber.

26357. DOLICHOS BIFLORUS L.
"*Kulitha.*"

26358. DOLICHOS LABLAB L. **Bonavist bean.**
"*Val.*"

26359. GUIZOTIA ABYSSINICA (L.) H. Cass.
"*Karala.*"

26360. PHASEOLUS MAX L.
"*Urid.*"

26361. PHASEOLUS RADIATUS L.
"*Mug.*"

26362. VIGNA CATJANG (Burm.) Walp.
"*Chavali.*" Brown eye, small.

26363 to 26385. GARCINIA MANGOSTANA L. **Mangosteen.**

Grown at the United States Department of Agriculture greenhouse, Washington, D. C., numbered December 17, 1909.

"These seedlings were raised from S. P. I. No. 21276, received through Mr. H. F. Macmillan, Royal Botanic Gardens, Peradeniya, Ceylon, August 22, 1907. The seedlings were inarched to 4-year-old plants of *Garcinia tinctoria* (DC.) W. F. Wight (*G. xanthochymus*), S. P. I. No. 11788, raised from seeds obtained from Dr. John C. Willis, director of the Royal Botanic Gardens, Peradeniya, Ceylon, October 31, 1904. *G. tinctoria* was used as a nurse plant to which the seedlings of the mangosteen were inarched. Since the unions were effected the mangosteens have made splendid growth and this method promises to be the best one so far as my experimental work in the propagation of the mangosteen has gone. It has been deemed best to give each of these inarched plants a separate S. P. I. number, so that they will not be confused with other mangosteens worked by different methods." (*G. W. Oliver.*)

26386. PUNICA GRANATUM L. **Pomegranate.**

From Tripoli, in Barbary, North Africa. Forwarded by the American vice-consul, at the request of Mr. William Coffin, American consul, who presented them to the Department. Received December 10, 1909.

26387 and 26388.

From Georgetown, Demarara, British Guiana. Presented by Mr. F. A. Stockdale, assistant director and government botanist, Science and Agriculture Department, Botanic Gardens. Received December 10 and 11, 1909.

Seeds of the following palms:

26387. ATTALEA COHUNE Mart.

See No. 1970 for description.

Distribution.—Honduras, and the northeastern part of South America.

26388. COPERNICIA TECTORUM (H. B. K.) Mart. (?)

Distribution.—The valley of the Orinoco River, in South America.

26389 to 26397. ZEA MAYS L. Corn.

From Hamburg, Germany. Purchased from Mr. Albert Schenkel, 47 Rosenstrasse. Received December 10, 1909.

Seeds of each of the following; names of varieties as catalogued:

26389. ZEA ATROPURPUREA.

26390. ZEA CARAGUA.

26391. ZEA GRACILLIMA VARIEGATA.

26392. ZEA GRACILLIMA VARIEGATA *gigantea*.

26393. ZEA GRACILLIMA ZEBRINA AUREA.

26394. ZEA JAPONICA, foliage variegated.

26395. ZEA JAPONICA GIGANTEA QUADRICOLOR.

26396. ZEA sp. Rissen mais von Peru.

26397. ZEA TUNICATA, foliage variegated.

The above were purchased for the experiments of Mr. G. N. Collins, assistant botanist, Bionomic Investigations, this Department.

26398. CITRUS AURANTIUM SINENSIS L. Orange.

From Toliman Barranca, Hidalgo, Mexico. Presented by Mr. Jorge J. White, Zimapan, Mexico. Received December 15, 1909.

"Cuttings of an orange that retails for 10 centavos each in Mexico City; it is small and extremely sweet, and I believe with care will make a fancy shipping orange. The barranca where they grow was settled by the Spanish padres, who, I believe, introduced the orange; owing to neglect by the Indians, who own all the trees, which are now very few, I suppose that the fruit has deteriorated, but careful cultivation and perhaps crossing might give a remarkably fine orange.

"The winters here are very mild; the soil, generally speaking, is very poor and full of gravel, and is also thin, not exceeding a meter in thickness; underlying the soil is the usual detritus—coarse bowlders—found in the beds of mountain streams. The elevation is about 4,000 feet above sea level." (*White.*)

26399 to 26406. VIGNA UNGUICULATA (L.) Walp. Cowpea.

From Mount Selinda, Rhodesia, South Africa.

Presented by Mr. C. C. Fuller, through Mr. W. L. Thompson, M. D. Received November 27, 1909.

Seeds of the following, with descriptions of same:

26399. Small, black.

26400. Large, black.

26401. Small, speckled.

26402. Large, speckled.

26403. Maroon.

26404. Small, buff.

26405. Large, buff.

26406. Cloudy violet and buff.

26408. GOSSYPIUM HIRSUTUM L. **Cotton.**

From Northern Arabia. Presented by Dr. Arthur K. Bennett, Arabian Mission, Busrah, Persian Gulf, via Bombay. Received November 20, 1909.

"Seed of a cotton which I found while traveling across northern Arabia. The women were weaving a light-brown cloth from this kind of cotton, and they say it is bigger and better than the white." (*Bennett.*)

26411. IPOMOEA SINUATA Ortega.

From Iguala, Mexico. Collected by Dr. David Griffiths. Received December 23, 1909.

"Seeds of a native ipomœaceous vine which climbs over shrubs in the valley of Iguala, Mexico. The vine itself is a handsome thing. I have not seen the flowers." (*Griffiths.*)

26412. CARYOPHYLLUS MALACCENSIS (L.) Stokes. **Large rose-apple.**

From Honolulu, Hawaii. Presented by Mr. J. E. Higgins, horticulturist, Hawaii Experiment Station. Received December 16, 1909.

"The mountain-apple, as it is locally known in Hawaii, is a very beautiful fruit of a very dark red color when at its best. It is about the size of a small pear and is of mild, rather pleasing flavor. The tree grows to a height of 40 or 50 feet in the wild condition in the mountains and moist gulches, and bears fruit freely. The usual season is from June to September. It is probable that some interesting results would be obtained by the crossing of this species with some of the more highly flavored species of Eugenia, such as *E. michelii* (=*E. uniflora*)." (*Higgins.*)

Distribution.—Throughout the Polynesian islands; varieties in cultivation in Bengal and Burma.

26413. PSIDIUM LAURIFOLIUM Berg.

From Port of Spain, Trinidad. Presented by Mr. F. Evans, acting superintendent, Botanical Department, Department of Agriculture. Received December 10, 1909.

"Jelly made from this fruit has been found to be of considerable value, from the fact that by its agreeable acidity it is quite distinct in flavor from the ordinary guava jelly made from *Psidium guajava* and *P. polycarpum*. It is also said that it 'jellies' much quicker than the common West India guava.

"It is a plant, therefore, which is likely to become widely distributed on account of its usefulness. The jelly, with soda and ice, makes an excellent 'soft' or 'cool' drink equal to or better than any of the ordinary fruit sirups." (*Extract from Bulletin 57, Trinidad Botanical Department, January, 1908.*)

Distribution.—The vicinity of Masaya, near the Pacific coast of Nicaragua.

26414 to 26418. CITRULLUS VULGARIS Schrad. **Watermelon.**

From Salisbury, Md. Grown by Mr. W. F. Allen; presented through Prof. W. W. Tracy. Received December 15, 1909.

Seeds of the following selections made from the Roumanian watermelons received through Consul Knowles; notes by Mr. Allen:

26414. Rind nearly white; yellow flesh; reddish-brown seeds.

26415. Striped rind; red meat; reddish-brown seeds.

26416. Rind nearly white; red flesh; reddish-brown seeds.

26414 to 26418—Continued.

26417. Striped rind; red flesh; black seeds.

26418. Rind nearly white; red flesh; small reddish-brown seeds. This variety was quite uniform, there being only one type; grown from the second lot of S. P. I. No. 22658, received May 14.

26421 to 26423.

From Hwai Yuan, via Nanking, China. Presented by Mr. Samuel Cochran, American Presbyterian Mission. Received October 15, 1909.

Seeds of the following; notes and native names by Mr. Cochran:

26421. CITRULLUS VULGARIS Schrad. **Watermelon.**

"Hwang jang hsi kwa," yellow fleshed.

26422 and 26423. BRASSICA PEKINENSIS (Lour.) Skeels. **Pe tsai cabbage.**

26422. *T'ang pei ts'ai* (soup white vegetable).

Planted in spring, summer, and autumn by sowing thickly on freshly cultivated soil and then raking in. Ready for use in 20 to 30 days. Eaten boiled. It is also sometimes transplanted from the beds sown as above into rows, each bunch being a foot or so apart. It then grows into large, thick-stalked bunches which are pickled and eaten during the entire year. It is gathered at first hoarfrost when grown in this way, as the first frost kills it.

26423. *P'iao pei ts'ai* (dipper white vegetable).

So called from the shape of the leaf. Sown in beds in August and transplanted into rows in bunches, each clump being separate. It is transplanted in September or early October, and is ripe when snow falls; it continues to ripen through the winter in spite of frost and snow, but its quality is improved by being covered with straw.

26424 to 26439.

Procured by Mr. A. J. Perkins, of the firm of Jackson & Perkins, Newark, N. J., while making a trip through Japan. Received December 8, 1909.

Seeds of the following obtained in Japan, unless otherwise noted; descriptive notes by Mr. Perkins:

26424. AKEBIA LOBATA Decaisne.

A vine from which baskets are made at Aomori, Japan. It is used as an ornamental in the United States. Seeds of an especially large-fruited variety as well as a common kind are contained in this lot.

See No. 24744 for previous introduction and distribution.

26425. CITRUS sp. **Orange.**

"*Yusu.*" A Japanese sour orange, round and flat. Used as lemon and as a stock.

26426. CITRUS TRIFOLIATA L.

Seed from a tree in the Yokohama Nursery Co.'s grounds.

26427 and 26428. CUCURBITA PEPO L. **Squash.**

26427. "*Chirimen.*" Has a rough, knotted exterior; named after a kind of silk having rough knots in its texture.

26428. "*Kikuza.*" Has a smooth exterior, as its name signifies.

Both these kinds are said to have yellow meat 1½ inches thick which is of fine flavor when boiled.

26424 to 26439—Continued.

26429. DIOSPYROS KAKI L. f. **Persimmon.**

These seeds are from nonastringent fruit.

26430. EUONYMUS OXYPHYLLUS Miq.

From Botanical Gardens, Sapporo, Japan.

Distribution.—The vicinity of Port Chushan, Korea; also Japan.

26431. FEDIA SCABIOSAEFOLIA (Fisch.) Trev.

"*Omineshi.*" An ornamental herbaceous perennial from Morioka, Japan.

Distribution.—The provinces of Chihli, Shingking, Kiangsu, Chekiang, Fukien, Hupeh, and Kwangtung, in China; Korea, and Japan.

26432. FIRMIANA SIMPLEX (L.) W. F. Wight

"*Ao giri.*" From Morioka, Japan.

26433. HORDEUM DISTICHON NUDUM L. **Naked barley.**

"*Shiratama*" (white grain). Winter barley, procured by Prof. Gentau Tamada, from Morioka, Japan.

26434. HORDEUM VULGARE COELESTE L. **Barley.**

"*Marumi*" (round seed). From Messrs. Aizawa & Co., Sapporo, Japan.

26435 and 26436. PERILLA NANKINENSIS (Lour.) Decais.

26435. White or green leaved variety.

26436. Purple-leaved variety.

Known in Japan as "Shiso;" edible, being used as a condiment in cooking and to color pickles in combination with *Prunus mume.*

Distribution.—The provinces of Kiangsi and Szechwan, China; also Japan.

26437. PITHECOLOBIUM DULCE (Roxb.) Benth.

From Kapiolani Park, Honolulu, Hawaii. See No. 23457 for description.

26438. SESAMUM ORIENTALE L. **Sesame.**

Black seeded.

26439. ZANTHOXYLUM PIPERITUM (L.) DC.

"*San-sho.*" A condiment, purchased in Hakodate.

Distribution.—Provinces of Shensi and Shantung, eastern China; the island of Port Hamilton, in the Korean Archipelago; and the woods on the mountain slopes in central Japan.

26440. ANONA LONGIFLORA S. Watson.

From Altadena, Cal. Presented by Mr. F. O. Popenoe. Received December 20, 1909.

Budwood taken from the tree which produced the seed sent in under S. P. I. No. 26298, which see for description.

26441. ANONA sp.

From San Salvador, Salvador, Central America. Presented by Mr. H. F. Schultz, Ancon, Canal Zone, Panama. Received November 23, 1908.

"I obtained the seed of this Anona from a friend of mine whom I met in Panama and who mailed it to me from San Salvador, Salvador. When I saw him at Ancon he spoke very highly of these 'sugar apples' of his country; beyond his verbal descriptions, which were very general, I have no guide regarding the identity of the species." (*Schultz.*)

26442 to 26456.

The following seeds were turned over to this office by Dr. R. H. True, physiologist in charge of Drug-Plant, Poisonous-Plant, Physiological, and Fermentation Investigations, for distribution, December 27, 1909.

26442.	ATROPA BELLADONNA L.	**Belladonna.**
26443.	CALENDULA OFFICINALIS L.	**Pot marigold.**
26444.	CANNABIS SATIVA L.	**Hemp.**
26445.	CARUM CARVI L.	**Caraway.**
26446.	NEPETA CATARIA L.	**Catnip.**
26447.	CONIUM MACULATUM L.	**Conium.**
26448.	CORIANDRUM SATIVUM L.	**Coriander.**
26449.	DIGITALIS PURPUREA L.	**Foxglove.**
26450.	FOENICULUM VULGARE Hill.	**Fennel.**
26451.	INULA HELENIUM L.	**Elecampane.**
26452.	LOBELIA INFLATA L.	**Indian tobacco.**
26453.	ALTHAEA OFFICINALIS L.	**Marshmallow.**
26454.	MONARDA FISTULOSA L.	**Horsemint.**
26455.	SPIGELIA MARILANDICA L.	**Maryland pinkroot.**
26456.	SESAMUM ORIENTALE L.	**Sesame.**

White seeded.

26457 to 26459. HORDEUM spp. Hull-less barley.

From Nara, Japan. Procured by Mr. A. J. Perkins, from Dr. G. Nakamura, director, Experiment Station. Received December 22, 1909.

Seeds of the following; descriptive notes by Mr. Perkins:

26457. "*Zun-paku-mugi.*" Pure white naked barley; produces 1.751 koko per tau (one-fourth acre) and is hardy.

26458. "*Yane-hadake.*" This is hardy and produces more than 1 koko per tau.

26459. "*Kama-ore.*" Produces 2.005 koko per tau and is useful for both grain and straw.

26460. CITRUS TRIFOLIATA L.

From Tokyo, Japan. Presented by Prof. Y. Kozai, director, Imperial Agricultural Experiment Station. Received December 27, 1909.

Large seeded. To be used for stocks.

26462 to 26465. TRIFOLIUM SUBROTUNDUM Steud. & Hochst.

From Adis Ababa, Abyssinia. Presented by Mr. Hoffman Philip, American minister. Received December 20, 1909.

Seeds from plants found in a shady garden; descriptive notes by Mr. Philip:

26462. Most profuse variety; full flower; large leaves light in center; grows to height of about 1½ feet.

26463. Full flower; small leaves; grows to height of about 1 foot; not very profuse.

26464. Grows to height of about 3 feet; not very erect; large leaves, all one color.

26465. Grows to height of about 2 feet; not very erect; very narrow leaf."

26470. SPONDIAS DULCIS Forst. **We fruit.**

From Monrovia, Liberia. Presented by Mr. E. L. Parker, commissioner of agriculture. Received December 30, 1909.

"The we fruit (pronounced vee) or Tahiti-apple. The tree is of rapid growth, highly ornamental, and attains a height of 50 feet in its native habitat. The golden-yellow fruits, about 2 to 3 inches in diameter, are produced in loose clusters. The brownish-yellow flesh partakes of the flavor of a pineapple and most people become very fond of the fruit when once accustomed to it.

"The we fruit is indigenous to the Society Islands and is now disseminated to most tropical countries. In Florida, where it has fruited in Miami and Lemon City for at least four years, it appears well adapted to well-drained land underlaid with coral limestone. It is a trifle less hardy than the mango, to which plant the we fruit is related." (*P. J. Wester.*)

Distribution.—Cultivated throughout the Tropics; probably native in the Polynesian islands.

PUBLICATION OF A NEW NAME.

26078. CAPRIOLA INCOMPLETA (Nees) Skeels.

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