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U. S. DEPARTMENT OF AGRICULTURE.

BUREAU OF PLANT INDUSTRY—BULLETIN NO. 223.

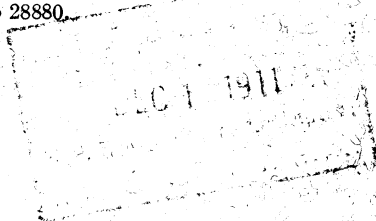
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B. T. GALLOWAY, *Chief of Bureau.*

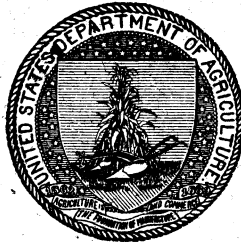
SEEDS AND PLANTS IMPORTED

DURING THE PERIOD FROM JULY 1
TO SEPTEMBER 30, 1910:

INVENTORY No. 24; Nos. 28325 to 28880.



ISSUED NOVEMBER 27, 1911.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.

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BUREAU OF PLANT INDUSTRY.

Chief of Bureau, BEVERLY T. GALLOWAY.
Assistant Chief of Bureau, WILLIAM A. TAYLOR.
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FOREIGN SEED AND PLANT INTRODUCTION.

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Edward Goucher, John H. Allison, and W. H. F. Gomme, *Experts*.

LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF PLANT INDUSTRY,
OFFICE OF THE CHIEF,
Washington, D. C., June 6, 1911.

SIR: I have the honor to transmit herewith and to recommend for publication as Bulletin No. 223 of the series of this Bureau the accompanying manuscript, entitled "Seeds and Plants Imported during the Period from July 1 to September 30, 1910: Inventory No. 24; Nos. 28325 to 28880."

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

Respectfully,

WM. A. TAYLOR,
Acting Chief of Bureau.

HON. JAMES WILSON,
Secretary of Agriculture.

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SEEDS AND PLANTS IMPORTED DURING THE
PERIOD FROM JULY 1 TO SEPTEMBER 30, 1910:
INVENTORY NO. 24; NOS. 28325 TO 28880.

INTRODUCTORY STATEMENT.

No satisfactory test can be made of a new plant to determine its economic value until many months, or even years, have passed since its introduction. To emphasize those included in this inventory before they are tested may therefore appear somewhat premature, but it seems warranted for the reason that while in the printed descriptions new plants which arrive may seem much alike and equally interesting, to those who see all the correspondence which has led up to their introduction some of the new arrivals stand out as of special promise.

Those interested in the cover-crop problem of the California orange growers will notice the importation of a half ton of seed of the Palestine kirsenneh (*Vicia ervilia*, No. 28761) and 500 pounds of seed of another Palestine legume (*Lathyrus sativus*, No. 28762), and will note also the opinion expressed by Mr. Aaron Aaronsohn that the *Lathyrus* will make a quicker growth in the California orange orchards than *Vicia ervilia* and will have an advantage over the fenu-greek that is now used there in that seed can be obtained cheaper.

The unusual interest in the mango in Florida, Porto Rico, and Hawaii has made it desirable to get the best East Indian varieties as rapidly as possible to increase the collection, which now numbers more than a hundred sorts. Some of these are early and others late ripening sorts; others have unusual keeping qualities; while still others are in the form of seeds imported for the purpose of originating new varieties. As pointed out by Mr. Walter T. Swingle in his citrus work, seeds like the mango, which are polyembryonic, are likely to give rise through the unfertilized embryos to strains of the original variety, which are characterized by increased vigor and productivity.

So much interest has been aroused in the possibilities of the oriental persimmon through the introduction of the Tamopan variety and the perfection by Mr. H. C. Gore, of the Bureau of Chemistry, of new methods by which the tannin can be rendered insoluble in a practical way and the fruit hold its firm texture that a special search is being

made for all the species of *Diospyros* which may in any way be of value for breeding purposes or as a stock. Special interest may attach to *Diospyros peregrina* (No. 28584), from Sibpur, Calcutta, from the fact that the expressed juice when boiled with powdered charcoal is used on a large scale for paying the bottoms of boats and that an excellent glue is made from the juice by the natives of the Malabar coast. *Diospyros montana cordifolia* (No. 28684), a tree which is found from the Himalayas to Australia and which bears small fruits the size of cherries, and *Diospyros microcarpa* from Australia (No. 28343) have also been secured.

Two strains of maize from the Kalahari Desert region of South Africa (Nos. 28614 and 28615) and a form from Zomba, Nyasaland Protectorate (No. 28661), may interest the corn breeders.

Dr. A. Weberbauer, whose collections in the Peruvian Andes are well known, has sent two wild forms of *Solanum* from the region about Lima. One, which he believes to be *Solanum maglia*, is from the cool, cloudy Loma region and the other from the same vegetation zone is an undetermined form (Nos. 28656 and 28657).

Western China is known to have many wild species of *Rubus*, some of which are reported to bear fruit of unusual excellence. The vigor of the Chinese brambles and the early-ripening habit of certain of those already introduced have attracted the attention of plant breeders in this field, and the introduction of a species from the top of Mount Omei, on the Upper Yangtze, described by the sender, Dr. Edgar T. Shields, of Yachow, as "a delicious large yellow raspberry" can scarcely fail to attract their attention.

Two of the best fruits of the Malay Archipelago are the ramboetan and the kapoelasan, species of *Nephelium*. A Wardian-case shipment has been made from Java, containing three varieties of the latter (Nos. 28332 to 28334) and seven varieties of the former (Nos. 28335 to 28341), and an attempt will be made to propagate these on various stocks for distribution in Porto Rico, Hawaii, and the Panama Canal Zone.

Dr. L. Trabut, the veteran experimenter of Algiers, has sent in seeds of the remarkably alkali-resistant grass *Festuca fenas* (No. 28355) from the Shott Khreida.

A collection of medicagos and trifoliums from Beirut, Turkey, containing six species (Nos. 28788 to 28793) will be of use to those breeding these leguminous plants.

The khat plant of Yemen, on the west coast of Arabia, has been in cultivation for generations. Its fresh leaves are chewed by the Arabs almost universally in that region. To them life and hard work would be unendurable without khat, and every coolie, even the poorest, buys the leaf. The plant yields a marketable crop the sec-

ond year, is grown from cuttings, and is considered one of the most valuable cultures of the country. Plants have been secured and are now growing both from the Edinburgh Botanic Gardens and also direct from Aden, Arabia, through Mr. C. K. Moser, the American consul, who has furnished an interesting report on the industry. It is quite probable that this plant will grow in our southwestern country, but until the chemists and animal physiologists have closely examined the action of the alkaloid it contains, it will not be distributed to experimenters.

Picea breweriana of Oregon and California, which because of its appearance may be called the veiled spruce, is one of the rarest of all the spruces, and the seeds, though sought after many times, have so rarely been obtained that the distribution of more than a pound of fresh seed, received from Miss Alice Eastwood, is of unusual interest.

The nomenclature in this inventory and the notes on geographical distribution have been prepared in the Office of Taxonomic and Range Investigations by Mr. H. C. Skeels, under the direction of Mr. Frederick V. Coville. The inventory was prepared by Miss Mary A. Austin, of this office.

DAVID FAIRCHILD,
Agricultural Explorer in Charge.

OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION,
Washington, D. C., April 24, 1911.

INVENTORY

28325 and 28326. AGAVE spp.

Zapupe.

From Tampico, Mexico. Purchased from Mr. Mordelo L. Vincent. Received July 5, 1910.

Suckers of the following:

28325. AGAVE LESPINASSEI Trelease.

Vincent. "A fiber-producing agave, similar in appearance to sisal, with leaves 4 to 5 feet long, light green, armed with reddish marginal spines. Yields its first crop of leaves for fiber three to five years after planting and annual or semiannual crops thereafter for three to five years. The fiber is of the same class as the sisal of commerce, but is finer and more flexible.

"This variety, developed on the island of Juana Ramirez, is regarded as one of the best of the half-dozen different kinds of zapupe cultivated in that region. It can be cultivated successfully only in places free from severe frost in winter." (*Lyster H. Dewey.*)

28326. AGAVE ZAPUPE Trelease.

Estopier. "A fiber-producing agave, similar in appearance to the henequen cultivated in Yucatan, but with more slender leaves. The leaves are 4 to 5 feet long, glaucous, and with dark-reddish marginal spines. The first crop of leaves may be cut three to five years after planting and annually or semiannually thereafter for three to five years, when the plant will send up a flower stalk bearing bulbils and then die. It may be propagated by both bulbils and suckers. The fiber is similar to sisal and may be used for the same purposes, viz, binder twine and other hard-fiber twines.

"Cultivated most extensively in the vicinity of Tuxpam, Vera Cruz, Mexico, where it is called '*zapupe azul*' because of its bluish leaves. The variety *Estopier* has been improved somewhat by cultivation. Like all of the agaves cultivated for the production of fiber, it requires a climate practically free from frost." (*Lyster H. Dewey.*)

28327. CATHA EDULIS Forsk.

Khat.

From Edinburgh, Scotland. Presented by the regius keeper, Royal Botanic Garden. Received July 5, 1910.

Plants. See No. 24714 for previous introduction, and No. 28825 for description.

28328 to 28330.

From Kandawglay, Rangoon, Burma, India. Presented by the secretary of the Agri-Horticultural Society of Burma. Received July 2, 1910.

Seeds of the following:

28328. PHYLLANTHUS EMBLICA L.

Emblie myrobalan.

See No. 25724 for description.

28329. TERMINALIA BELLERICA (Gaertn.) Roxb.

Bellerie myrobalan.

See No. 25541 for description.

28330. TERMINALIA CHEBULA Retz.

Black myrobalan.

See No. 25542 for description.

28331. ANDROPOGON SQUARROSUS L. f. Cuscus grass.

From Peradeniya, Ceylon. Presented by Mr. M. Kelway Bamber, government chemist. Received July 2, 1910.

Clumps.

"This plant grows in large dense tufts, with stout, spongy, aromatic roots, which are sparingly branched. It is grown to a considerable extent in the hills of Jamaica for the purpose principally of binding loose soils and forming embankments on steep hill-sides to prevent washing by rains.

"In India the roots are used in making aromatic-scented mats, and also fans, baskets, and other articles. The roots also when distilled with water yield a fragrant oil which is used as a perfume. Used also as medicine in case of fever and bilious complaints." (Extract from *Botanical Department of Jamaica Bulletin B. S. vol. 7, 1900, pp. 152-153.*)

Distribution.—Throughout the plains and lower hills of India and Burma, rising to an elevation of 4,000 feet, and in Ceylon and Java, and tropical Africa.

28332 to 28341. NEPHELIUM spp.

From Buitenzorg, Java. Presented by the Director of Agriculture. Received July 2, 1910.

Plants of the following; notes by Mr. F. W. J. Westendorp in "Teysmannia," 1910:

28332 to 28334. NEPHELIUM MUTABILE Bl. Kapoelasan.

28334. *Si babat.* "Dark colored, almost black; not so common as some other varieties."

28335 to 28341. NEPHELIUM LAPPACEUM L. Ramboetan.

28335. *Atjeh lebak boeloes.* "This variety, a ramboetan of the second rank, is handled in large quantities."

28336. *Atjeh goela batoe.* "A variety of the first class, but can not be obtained in large quantities."

28337. *Atjeh tangkoeweh.*

28338. *Atjeh si konto.* The same remarks apply to this as to No. 28335.

28339. *Atjeh lengkeng.* 28340. *Si njonja.*

28341. *Atjeh matjan.*

"The two preceding ramboetans are of the first class and are the best commercial varieties."

For a general note on these fruits, see Nos. 25163 and 25165.

28342. COMBRETUM APICULATUM Sonder.

From Komati Poort, Transvaal, South Africa. Presented by Prof. J. Burt Davy, government agrostologist and botanist, Transvaal Department of Agriculture, Pretoria. Received July 5, 1910.

"Seed collected by me at an altitude of 600 feet. The climate is almost tropical and free from frost, the tamarind being grown there. I am not aware that this Combretum has any economic value beyond the fact that it is ornamental; it would be of interest in a tree collection in Florida, Louisiana, or southern California." (Davy.)

Distribution.—In the woods in the vicinity of Magaliesberg, in the Transvaal region of South Africa.

28343. DIOSPYROS MICROCARPA (Jacq.) Gurke.

From Sydney, New South Wales. Presented by Prof. J. H. Maiden, director and government botanist, Botanic Gardens. Received July 6, 1910.

"A large shrub or tree 20 to 40 or even 100 feet high; trunk sometimes 2 feet in diameter. Leaves oblong or oval, alternate, palish green, especially beneath. Flowers diœcious, tetramerous (or rarely trimerous). Fruit globular or ovoid, $\frac{1}{2}$ to $\frac{3}{8}$ inch thick, fuscous and glabrescent when ripe; edible; ultimately one-celled and one-seeded. Slender-growing tree with elongated trunk and elegant, rigid foliage. Wood close, very tough and firm." (*Extract from Hiern's Monograph of Ebenaceæ, in Transactions of the Cambridge Philosophical Society, vol. 12, p. 246.*)

Distribution.—In the forest region along the coast in New South Wales and Queensland, Australia.

28344. CROTALARIA CANDICANS Wight and Arnott.

From Poona, Bombay, India. Presented by Mr. P. S. Kanetkar, superintendent, Empress Botanical Gardens. Received July 9, 1910.

"This crop is used for green manuring in the Madras Presidency. Out of that presidency it is not known." (*Kanetkar.*)

"A copiously branched undershrub, attaining 4 feet in height, with short-petioled leaves and panicles of bright-yellow flowers, produced in great profusion at the beginning of January. It thrives in any fair garden soil and is propagated by seed." (*Extract from Woodrow's Gardening in India, p. 277.*)

Introduced for experimental growing as a cover crop, for breeding purposes, and as an ornamental in our Southern States.

Distribution.—Slopes of the Nilgiri and Madura Hills, in the southern part of India.

28345. VICIA FABA L.**Horse bean.**

From Dongola Province, Egypt. Presented by Mr. S. E. Durant, inspector of agriculture, at the request of the Director of Agriculture and Lands, Sudan Government, Khartum. Received July 7, 1910.

"This grain is never used for stock feed, but it is ground into flour and mixed with wheat flour, then baked into bread. The straw is fed to stock, the only preparation being that the grain is first thrashed out by hand. The natives do not consider that bean straw forms such a valuable fodder as that of wheat." (*Durant.*)

28346 to 28350. ORYZA SATIVA L.**Rice.**

From Philippine Islands. Received through Mr. William S. Lyon, Manila, July 1, 1910.

Seeds of the following; native names and notes as given by Mr. Lyon:

28346. *Inaplaya.* Matures in $4\frac{1}{2}$ months.

28347. *Inita.* One of the earliest; often matures in 100 days.

28348. *Dinalaga.* Late; matures in 4 to $4\frac{1}{2}$ months.

28349. *Minalit.* Very late; matures in 5 or more months.

28350. *Pimling-berto.* Medium; matures in 4 to $4\frac{1}{2}$ months.

28351. DIOSPYROS DISCOLOR Willd.**Mabola.**

From Buitenzorg, Java. Presented by the Director of Agriculture. Received July 14, 1910.

Seeds. See No. 26112 for description.

28352. DIOSPYROS sp.

From Baroda, Madras Presidency, India. Presented by Mr. B. S. Cavanaugh, superintendent, State Gardens. Received July 14, 1910.

Seeds.

28353. PASSIFLORA EDULIS Sims.**Passion flower.**

From Madras Presidency, India. Presented by Mr. P. S. Kanetkar, superintendent, Empress Botanical Gardens, Poona, Bombay, India. Received July 14, 1910.

“Edible passion fruit grown for culinary purposes.” (*Kanetkar.*)

28354. TERMINALIA CHEBULA Retz.**Black myrobalan.**

From Baroda, India. Presented by Mr. B. S. Cavanaugh, superintendent, State Gardens. Received July 5, 1910.

See No. 25542 for description.

28355 and 28356.

From Algeria. Presented by Dr. L. Trabut, Algiers. Received July 5 and 11, 1910.

Seeds of the following; notes by Dr. Trabut:

28355. FESTUCA FENAS Lagasca.

“Grows in the very alkaline regions of Shott Khreida. This grass has a very remarkable resistance to alkalinity.”

Distribution.—Southwestern Europe, extending from central Spain and southern France eastward to Croatia.

28356. VICIA FABA L.**Horse bean.**

“Grows wild on the plateau of Sersou, Algeria.”

28357. MELILOTUS SEGETALIS (Brot.) Ser.

From Maison Carree, Algeria. Presented by the Botanic Garden. Received July 5, 1910.

“This is a small, sparsely leaved annual melilot, native of Mediterranean Europe and Africa. It was originally described from Portugal. In former tests carried on by the Office of Forage-Crop Investigations of the Bureau of Plant Industry it has attained a height of only 10 to 15 inches and its small growth makes it of doubtful value for the United States. This melilot has been received previously under S. P. I. Nos. 17003 and 27473.” (*H. N. Vinal.*)

28358. CROTALARIA CANDICANS Wight and Arnott.

From Sibpur, Calcutta, India. Presented by Maj. A. T. Gage, superintendent, Royal Botanic Garden. Received July 14, 1910.

See No. 28344 for description.

28359. MEDICAGO SATIVA L.**Alfalfa.**

From Ecuador. Procured by Mr. Herman R. Dietrich, consul general, Guayaquil. Received July 14, 1910.

Guaranda.

28360 to 28363.

From Port Louis, Mauritius. Presented by Mr. G. Regnard. Received July 7, 1910.

Seeds of the following; notes by Mr. Regnard:

28360. ERYTHROXYLON LAURIFOLIUM Lam. "Mauritius torchwood."

Distribution.—A branching shrub common in the woods in the islands of Mauritius and Reunion and the Seychelles.

28361 and 28362. (Undetermined.) (Liliaceæ.)

28361. "Blue fruited."

28362. "White fruited."

28363. (Undetermined.)

"Forest tree bearing scarlet berries."

28364. GOSSYPIUM sp.**Cotton.**

From Honduras. Presented by Mr. F. S. Chaffee, Trujillo, Honduras. Received July 8, 1910.

"This is supposed to be wild cotton from the Aguan River, 25 miles east of here (Trujillo). I found it three years ago while hunting in that vicinity. At that time it was a tree some 8 or 9 inches in diameter and 25 or 30 feet high and full of bloom. It stood out in the middle of a savannah in a sand and gravel soil with no other trees around it and fully a mile from any house. No one in that vicinity has any knowledge of its origin or how long it has been there; but last fall it was burned down by a savannah fire. These bolls were taken from the sprouts that have come up from the roots. There are also two or three other trees about a mile apart located in the heavy forest." (Chaffee.)

28365. TRITICUM AESTIVUM L.**Wheat.**

From near the shore of Lake Van, a few miles from Bitlis, Turkey in Asia.

Presented by Mr. Hamilton King, American minister to Siam, who procured it from Miss A. C. Ely. Received July 12, 1910.

"This is sown in drills and does not need to be irrigated. The soil is sandy, mixed with volcanic ashes, and probably some moisture percolates from the near-by lake. This is a rather inferior sample." (Ely.)

28367 and 28368.

From Marash, Turkey. Purchased from Mr. Paul N. Nersessian. Received July 16, 1910.

Seeds of the following; notes by Mr. Nersessian:

28367. LATHYRUS SATIVUS L.

"*Agh jilban* (white jilban). For cultivation, soil, and time and manner of sowing, see No. 28368."

28368. VICIA ERVILIA (L.) Willd.

Bitter vetch.

"*Koushne*. They do not cultivate these plants for green manuring but only for seeds which they use for cattle feed. The seed is sown here from about the middle of September until near the end of November. It sprouts or stools some in the fall and remains that way during the winter. In the spring it sprouts more, covers the ground perfectly, grows about a foot high, and is ripe enough to harvest in these days (about June 1?). Usually it is sown on poor or exhausted fields from which a good crop of grain can not be expected. Of course it does

28367 to 28368—Continued.

better in richer ground and especially in ground where potash predominates. The usual practice in sowing it around here is to irrigate the grain stubble field if there has not been rain enough, to sow nearly a bushel of seed to an acre right on the stubble and just cover the seeds with the old native plow, and then drag a pole over the field to smooth it somewhat, which of course helps the seeds to come up more evenly and also decreases the surface evaporation. It is sown broadcast. It likes the ground well drained, either naturally or artificially, and the earlier it is sown the better it is, within the time mentioned."

28369. BAMBOS ARUNDINACEA Retz.**Bamboo.**

From Sibpur, Calcutta, India. Purchased from Maj. A. T. Gage, superintendent, Royal Botanic Garden. Received July 16, 1910.

"This bamboo does not spread rapidly and it is seldom necessary to keep the plant in check. It never becomes a troublesome weed, and it can be extirpated without difficulty, if desired." (*Gage.*)

See No. 21317 for further description.

28370. PICEA BREWERIANA S. Watson.**Veiled spruce.**

From near Kerbyville, which is reached by stage from Grants Pass, Oreg. Collected by Mrs. A. J. Adams; purchased from Miss Alice Eastwood, Gray Herbarium, Harvard University, Cambridge, Mass. Received July, 1910.

"This is one of the rarest and most unique of all the spruces. It grows only on the summit of the Siskiyou Mountains of northern California and southern Oregon. I saw some small trees on Canyon Creek in Trinity County and I should call the tree the veiled spruce rather than the weeping spruce. It grows to quite a height, 70 or 80 feet, and with a diameter of 1 to 2 feet. The drooping branches are clothed with long pendent, slender branchlets. The tree is delicate and graceful in outline, but not funereal or sad. The cones resemble those of the Norway spruce." (*Eastwood.*)

Distribution.—Dry mountain ridges and peaks near the timber line on both slopes of the Siskiyou Mountains on the boundary between California and Oregon at an elevation of 7,000 feet, and on the Oregon coast ranges at the headwaters of the Illinois River, at an elevation of 4,000 to 5,000 feet.

28371 to 28531.

The following material presented by Dr. Walter Van Fleet to the Plant Introduction Garden, Chico, Cal. Numbered July, 1910. Notes by Dr. Van Fleet.

A collection made by Dr. Van Fleet, at Little Silver, N. J., and selected by him out of many thousands as especially valuable for breeding purposes in the various groups represented. Many of them are his own hybrids or crosses. The technical descriptions of the various species have been omitted for the sake of brevity.

28371. ALBIZZIA JULIBRISSIN Boivin.

(P. I. G. No. 6460.) "Seedlings from a tree 20 feet high growing in Monmouth County, N. J., little injured by winter temperatures as low as -12° F. Evidently a hardy type."

Distribution.—Mountains of northern Persia, India, northern China, and Japan; cultivated as an ornamental tree in Asia, southern Europe, northern Africa, and the United States.

28371 and 28531—Continued.**28372.** ANTHOLYZA sp.(P. I. G. No. 6225.) "Received from Natal, South Africa, as *Gladiolus* sp., possibly *Antholyza paniculata*."**28373.** AQUILEGIA OXYSEPALA × CANADENSIS.

(P. I. G. No. 6222.) "A hardy and long-lived hybrid, dwarf and early blooming; flowers wine red and white."

28374. ZANTEDESCHIA ELLIOTTIANA × PENTLANDII.

(P. I. G. No. 6534.) "A weak-growing hybrid; spathes pure golden yellow."

28375. ZANTEDESCHIA REHMANNI × PENTLANDII.

(P. I. G. No. 6533.) "Vigorous hybrids with lanceolate, spotted foliage; spathes pale yellow or white, overlaid with purple and rose shadings."

28376. ZANTEDESCHIA REHMANNI × PENTLANDII.

(P. I. G. No. 6299.)

28377. AZALEA NUDIFLORA × SINENSIS.

(P. I. G. No. 6442.) "Vigorous hybrids with profuse cream, rose and salmon colored blooms."

28378. × BERBERIS STENOPHYLLA Lindl.

(P. I. G. No. 6493.) "A very ornamental evergreen variety."

28379. BERBERIS THUNBERGII × VULGARIS.

(P. I. G. No. 6302.)

28380. BERBERIS THUNBERGII × VULGARIS.

(P. I. G. No. 6494.) "Third-generation plants from original hybridization."

28381. CASTANEA PUMILA × SATIVA.

(P. I. G. No. 6227.) This introduction had previously been assigned No. 26233, so the number 28381 will be discarded and 26233 used.

28382. CELASTRUS ARTICULATUS Thunb.(P. I. G. No. 6425.) *Distribution*.—In the provinces of Chihli, Shantung, Kiangsu, Kiangsi, Hupeh, and Kwangtung in China, in Chosen and the Korean and Nansei archipelagoes, and in the vicinities of Kiushu, Nagasaki, Yokosuka, Shimoda, and Hakodate in Japan.**28383.** CITRUS TRIFOLIATA L.(P. I. G. No. 6447.) "Taken from a tree growing in Monmouth County, N. J. Has endured -8° F. without injury."**28384.** DEUTZIA SCABRA × DISCOLOR.

(P. I. G. No. 6549.) "One-year seedlings."

28385. FRAGARIA FILIPENDULA Hemsl. (?)

(P. I. G. No. 6566.)

28386. FRAGARIA INDICA Andrews.

(P. I. G. No. 6567.)

28387. FRAGARIA MOSCHATA Duchesne. (?)

(P. I. G. No. 6573.)

28388. FRAGARIA sp.(P. I. G. No. 6568.) *Alfonso* × *filipendula*.**28389.** FRAGARIA sp.(P. I. G. No. 6219.) *Alfonso XIII* × *President*.

28371 to 28531—Continued.

28390 to 28396. FREESIA REFRACTA (Jacq.) Klatt.

28390. (P. I. G. No. 6211). "× *Freesia arbutus* (*F. leichtlinii* × *armstrongi*)."

"An undisseminated hybrid; has large, sweet-scented, rosy lilac blooms, disposed in a conspicuous 2-ranked scape."

28391. (P. I. G. No. 6414.) "*F. armstrongi* × commercial *Refracta alba*."

28392. (P. I. G. No. 6385.) "*F. armstrongi* × *Purity* (*Refracta alba*)."

28393. (P. I. G. No. 6224.) "*F. aurea* × (*chapmani* × *armstrongi*)."

28394. (P. I. G. No. 6450.) "*F. chapmani* (*F. aurea* × *refracta*)."

"The finest yellow-flowered *Freesia*; raised in England."

28395. (P. I. G. No. 6196.) "*F. refracta* × *armstrongi* (selected)."

28396. (P. I. G. No. 6213.) "*F. refracta* × *armstrongi* (good variety)."

28397. GERBERA JAMESONI Bolus.

(P. I. G. No. 6461.) See No. 25513 for description.

28398. GLADIOLUS ALATUS L.

(P. I. G. No. 6206.) *Distribution*.—The southwestern provinces of Cape Colony and in Namaqualand, South Africa.

28399. GLADIOLUS ALATUS × CARDINALIS.

(P. I. G. No. 6215.)

28400. GLADIOLUS ALATUS × COLVILLII (*Delicatissima*).

(P. I. G. No. 6378.)

28401 to 28429. "Various undisseminated hybrid gladioli and parent species."

28401. GLADIOLUS ALATUS × PRIMULINUS.

(P. I. G. No. 6536.)

28402. GLADIOLUS ALATUS × PRIMULINUS (*Goldbug*).

(P. I. G. No. 6535.)

28403. GLADIOLUS ALATUS × TRISTIS.

(P. I. G. No. 6208.) "Green flowered."

28404. GLADIOLUS BYZANTINUS Miller.

(P. I. G. No. 6207.) Variety *albus*. *Distribution*.—The countries bordering on the Mediterranean Sea.

28405. GLADIOLUS BYZANTINUS (*albus*) × PRIMULINUS.

(P. I. G. No. 6199.)

28407. GLADIOLUS CARDINALIS Curtis.

(P. I. G. No. 6214.) *Queen Wilhelmina*.

28408. GLADIOLUS CARDINALIS × GRANDIS.

(P. I. G. No. 6203.)

28409. GLADIOLUS CARDINALIS × PRIMULINUS.

(P. I. G. No. 6386.)

28410. GLADIOLUS COLVILLII (*Bride*) × PURPUREO-AURATUS (*Klondike*).

(P. I. G. No. 6201.)

28371 to 28531—Continued.

28401 to 28429—Continued.

28411. GLADIOLUS CRUENTUS Moore.

(P. I. G. No. 6524.) *Distribution*.—Known only from Natal on the east coast of South Africa.

28412. GLADIOLUS CRUENTUS × a selected dark-red seedling.

(P. I. G. No. 6528.)

28413. GLADIOLUS GRANDIS × ALATUS.

(P. I. G. No. 6198.)

28414. GLADIOLUS GRANDIS × PRIMULINUS.

(P. I. G. No. 6200.)

28415. GLADIOLUS PAPILIO × “*Precious*.”

(P. I. G. No. 6529.)

28416. GLADIOLUS PRIMULINUS × “*Goldbug*.”

(P. I. G. No. 5527.)

28417. GLADIOLUS PRIMULINUS × GRANDIS.

(P. I. G. No. 6537.)

28418. GLADIOLUS sp. (No. 74) × PRIMULINUS.

(P. I. G. No. 6384.)

28419. GLADIOLUS PSITTACINUS × “*Very Odd*.”

(P. I. G. No. 6530.)

28420. GLADIOLUS PURPUREO-AURATUS (*Klondike*) × CARDINALIS
(*Delicatissima*).

(P. I. G. No. 6538.)

28421. GLADIOLUS QUARTINIANUS A. Rich.

(P. I. G. No. 6526.) *Distribution*.—Mountains of tropical Africa from Abyssinia southward to Zambesia, Matabeleland, and Angola, rising to an elevation of 8,000 feet in Kassailand.

28422. GLADIOLUS QUARTINIANUS × (?).

(P. I. G. No. 6531.)

28423. GLADIOLUS RAMOSUS (*Ne plus ultra*) × COLVILLII (*Express*).

(P. I. G. No. 6379.)

28424. GLADIOLUS SALMONEUS Baker.

(P. I. G. No. 6525.) *Distribution*.—Occurs at an elevation of 4,800 feet on the mountain slopes in the vicinity of Kokstad, in Griqualand, eastern part of Cape Colony.

28425. GLADIOLUS SALMONEUS × QUARTINIANUS.

(P. I. G. No. 6204.)

28426. GLADIOLUS TRISTIS × COLVILLII.

(P. I. G. No. 6377.)

28427. GLADIOLUS TRISTIS × VITTATUS.

(P. I. G. No. 6451.)

28428. GLADIOLUS VITTATUS × PRIMULINUS.

(P. I. G. No. 6197.)

28429. GLADIOLUS WATSONIUS × GRANDIS.

(P. I. G. No. 6202.)

28371 to 28531—Continued.

28430. HIBISCUS SYRIACUS L.

(P. I. G. No. 6546.) "A single-flowered, pure white seedling."

28431. HEMEROCALLIS AURANTIACA (MAJOR) × CITRINA.

(P. I. G. No. 6519.)

28432. HEMEROCALLIS MAGNIFICA Hort.

(P. I. G. No. 6300.)

28433. HEMEROCALLIS MAGNIFICA × FLORHAM.

(P. I. G. No. 6298.)

28434. HIPPEASTRUM RUTILUM × VITTATUM.

(P. I. G. No. 6423.) "Fine, red-flowered varieties, blooming when foliage is fully developed."

28435. HIPPEASTRUM VITTATUM × (?).

(P. I. G. No. 6413.)

28436. IRIS ATROPURPUREA ATROFUSCA Baker.

(P. I. G. No. 6397.)

28437. IRIS ATROPURPUREA Baker.

(P. I. G. No. 6458.) *Distribution*.—Imported from Syria.

28438. IRIS BARTONI Foster.

(P. I. G. No. 6469.) *Distribution*.—The vicinity of Kandahar in the southern part of Afghanistan.

28439. IRIS BISMARCKIANA Baker.

(P. I. G. No. 6402.) *Distribution*.—The province of Lebanon, on the coast of the Mediterranean Sea, in Asiatic Turkey.

28440. IRIS CRISTATA Soland.

(P. I. G. No. 6459.) *Distribution*.—Rich woods from Maryland to Georgia and westward to Ohio, Indiana, and Missouri.

28441. IRIS DELAVAYI × SIBIRICA.

(P. I. G. 6517.)

28442. IRIS FULVA Ker.

(P. I. G. No. 6516.) "A very large-flowered copper iris, bred by selection from the wild plant."

Distribution.—In swamps from Kentucky and Illinois southward to Missouri.

28443. IRIS GRACILIPES A. Gray.

(P. I. G. No. 6466.) *Distribution*.—In damp meadows in Nambu and in the vicinity of Hakodate on the island of Hokushu (Yezo), Japan.

28444. IRIS GRANT-DUFFII Baker.

(P. I. G. No. 6523.) *Distribution*.—Along the banks of the River Kishon in Palestine.

28445. IRIS HELENÆ Barbey.

(P. I. G. No. 6396.) *Distribution*.—In the vicinities of El Arish, Ouadi-el-Gradi, Ouadi-Cheriah, and Nachel Aboukeila, in the desert between Egypt and Palestine.

28446. IRIS HEXAGONA × MISSOURIENSIS.

(P. I. G. No. 6463.)

28371 to 28531—Continued.**28447. IRIS HIMALAICA Hort.**

(P. I. G. No. 6470.) Received in 1908 from Mr. W. R. Dykes, England. Not bloomed. This is probably *Iris clarkei* Baker, a native of Sikkim, India.

28448. IRIS LAEVIGATA Fisch.

(P. I. G. No. 6303.) *Distribution*.—In the vicinity of Yokosuka, Shimoda, and Hakodate in Japan; in the province of Shengking, China, and near Port Chusan in Chosen (Korea). Also extensively cultivated in other countries.

28449. IRIS KOROLKOWI Regel.

(P. I. G. No. 6401.) *Distribution*.—Sent alive by Gen. Korolkow to St. Petersburg in 1870 from Turkestan.

28450. IRIS PARADOXA × PUMILA.

(P. I. G. No. 6421.) “Very meritorious hybrids. Plants vigorous, free blooming, and of easy culture.”

28451. IRIS LACUSTRIS Nutt.

(P. I. G. No. 6467.) *Distribution*.—Gravelly shores of Lakes Huron, Michigan, and Superior.

28452. IRIS LORTETHI Barbey.

(P. I. G. No. 6399.) *Distribution*.—On the slopes of the Lebanon range of mountains at an altitude of 2,000 feet, between Mais and Hussin, in the province of Lebanon, Asiatic Turkey.

28453. IRIS MILESII × TECTORUM.

(P. I. G. No. 6380.)

28454. IRIS MILESII × TECTORUM.

(P. I. G. No. 6464.)

28455. IRIS MONNIERI DC.

(P. I. G. No. 6518.) *Distribution*.—The islands of Rhodes and Crete, in the eastern part of the Mediterranean.

28456. IRIS OBTUSIFOLIA Baker.

(P. I. G. No. 6520.) *Distribution*.—The province of Mazanderan, on the southern shore of the Caspian Sea, in Persia.

28457. IRIS PALLIDA Lam.

(P. I. G. No. 6462.) *Distribution*.—The islands of Crete and Rhodes, and in Palestine, Syria, and Morocco, rising to an elevation of 7,000 feet in the Atlas Mountains.

28458. IRIS NIGRICANS Hort.

(P. I. G. No. 6400.)

28459. IRIS PARADOXA × SAMBUCINA.

(P. I. G. No. 6465.)

28460. IRIS SIBIRICA × (?).

(P. I. G. No. 6446.)

28461. IRIS SIBIRICA × (?).

(P. I. G. No. 6521.)

28462. IRIS SIBIRICA × DELAVAYI.

(P. I. G. No. 6301.)

28371 to 28531—Continued.**28463.** IRIS SOFARANA Foster.(P. I. G. No. 6398.) *Distribution.*—On the Lebanon Mountains in the vicinity of Ain Sofar, Asiatic Turkey.**28464.** IRIS STRAUSSI Leichtl.(P. I. G. No. 6515.) *Distribution.*—The vicinity of Sultanabad, in the province of Irak Ajemi, western Persia.**28465.** IRIS SUAVEOLENS \times LUTESCENS STATELLAE.

(P. I. G. No. 6220.)

28466. IRIS TECTORUM Maxim.(P. I. G. No. 6522.) *Distribution.*—The provinces of Shantung, Hupeh, Ichang, Hunan, Shensi, Kansu, and Szechwan, in China, and in the vicinity of Yokohama, in Japan.**28467.** IRIS TECTORUM \times MILESII.

(P. I. G. No. 6221.)

28468. IRIS TENAX Dougl.(P. I. G. No. 6514.) *Distribution.*—Northwestern America, where it is common in open places from British Columbia southward to Oregon.**28469.** IRIS TENAX \times VERSICOLOR.

(P. I. G. No. 6452.)

28470. IRIS VERNA L.(P. I. G. No. 6468.) *Distribution.*—Wooded hillsides from Pennsylvania to Kentucky and southward to Georgia and Alabama.**28471.** IRIS VERSICOLOR L.(P. I. G. No. 6445.) *Distribution.*—In swamps from Newfoundland to Manitoba and southward to Florida and Arkansas.**28472.** JUGLANS CORDIFORMIS Maxim.(P. I. G. No. 6449.) *Distribution.*—In the vicinity of Yokohama and of Hakodate on the island of Hokushu (Yezo), Japan.**28473.** JUGLANS CORDIFORMIS \times REGIA.

(P. I. G. No. 6511.)

28474. JUGLANS SIEBOLDIANA Maxim.(P. I. G. No. 6448.) *Distribution.*—In forests on the mountains in Kiushu and in the vicinity of Tokyo, Yokohama, Kamakura, Yokosuka, and Hakodate, in Japan.**28475.** LACHENALIA PENDULA Ait.(P. I. G. No. 6192.) *Distribution.*—Along the coast of Cape Colony in the vicinity of Hout Bay and Cape Flats.**28476 to 28478.** LACHENALIA PENDULA \times TRICOLOR.**28476.** (P. I. G. No. 6191.) *Cowslip.***28477.** (P. I. G. No. 6193.) *Delight.***28478.** (P. I. G. No. 6194.) *Rector of Cawston.***28479.** LACHENALIA TRICOLOR Jacq.(P. I. G. No. 6195.) *Distribution.*—Along the coast of Cape Colony at Malmesbury, near Cape Town, Saldanha Bay, Cape Flats, and Port Elizabeth, South Africa.

28371 to 28531—Continued.

28480. LATHYRUS LATIFOLIUS L.

(P. I. G. No. 6491.) *Leichtlin Extra White*.

28481. LILIUM HENRYI × SPECIOSUM.

(P. I. G. No. 6553.)

28482. LILIUM HENRYI × SUPERBUM.

(P. I. G. No. 6498.) "The largest flowered Hemerocallis."

28483. LILIUM MACULATUM × MARTAGON.

(P. I. G. No. 6552.)

28484. LILIUM PHILIPPINENSE × LONGIFLORUM.

(P. I. G. No. 6562.)

28485. LILIUM PUBERULUM × LINIFOLIUM.

(P. I. G. No. 6297.) "Very characteristic hybrids bearing large scarlet blooms of great substance, the small centers being yellow, dotted brownish purple. The other cross-pollinated lilies, as far as bloomed, do not show evidence of hybridity."

28486. LILIUM SPECIOSUM Thunb.

(P. I. G. No. 6381.) Variety *magnificum*.

28487. LILIUM SPECIOSUM × HENRYI.

(P. I. G. No. 6551.)

28488. LILIUM sp.

(P. I. G. No. 6382.) *Ellen Wilmot*.

28489. MALUS BACCATA × SYLVESTRIS.

(P. I. G. No. 6547.) "MALUS BACCATA × 'Baldwin' × 'Yellow Transparent.' Second-generation hybrids of considerable vigor."

28490. NARCISSUS INCOMPARABILIS × POETICUS.

(P. I. G. No. 6209.)

28491. PAEONIA SUFFRUTICOSA Andr.

(P. I. G. No. 6453.)

28492. PAEONIA sp.

(P. I. G. No. 6454.) Seedling varieties.

28493. PHILADELPHUS CORONARIUS × MICROPHYLLUS.

(P. I. G. No. 6495.)

28494. PHILADELPHUS CORONARIUS L.

(P. I. G. No. 6492.)

28495. PLATYCODON GRANDIFLORUM (Jacq.) DC.

(P. I. G. No. 6432.) Variety *Mariesi macranthum*.

28496. PRUNUS SIMONII × AMERICANA.

(P. I. G. No. 6548.)

28497. PYRUS CHINENSIS × COMMUNIS.

(P. I. G. No. 6510.) Chinese varieties, *Kieffer*, *Le Conte*, and *Golden Russet*, pollinated with *Bartlett*, *Angouleme*, *Anjou*, *Seckel*, and *Lawrence*.

28498. QUAMASIA LEICHTLINII × CUSICKII.

(P. I. G. No. 6223.)

28371 to 28531—Continued.

28499 to 28503. Promising hybrids between native gooseberry species and European garden varieties.

28499. *RIBES CYNOSBATI* × *RECLINATUM*.

(P. I. G. No. 6565.)

28500. *RIBES MISSOURIENSE* × *RECLINATUM*.

(P. I. G. No. 6217.)

28501. *RIBES MISSOURIENSE* × *RECLINATUM*.

(P. I. G. No. 6563.)

28502. *RIBES MISSOURIENSE* × *RECLINATUM* × *ROTUNDFOLIUM*.

(P. I. G. No. 6218.)

28503. *RIBES RECLINATUM* × *ROTUNDFOLIUM*

(P. I. G. No. 6564.)

28504. *ROSA CHINENSIS* Jacq.

(P. I. G. No. 6443.) *Distribution*.—The provinces of Hupeh and Kwangtung, in China, and the island of Formosa.

28505. *ROSA LAEVIGATA* × *Frau Karl Druschki*.

(P. I. G. No. 6422.) “Attractive hardy hybrids bearing large semidouble sweet-scented blooms, blush white in color.”

28506. *ROSA FERRUGINEA* × *Paul Neyron*.

(P. I. G. No. 6456.) “Nearly thornless variety with reddish foliage; bloom very double, medium in size, bright rose pink in color.”

28507. *ROSA LUTEA* × *Harrison's Yellow*.

(P. I. G. No. 6543.) “Very striking; buds nasturtium scarlet; blooms when opening light orange, turning to white and then to blush pink; semidouble, 2 inches across.”

28508. *ROSA MULTIFLORA* × *LUTEA*.

(P. I. G. No. 6455.)

28509. *ROSA RUGOSA* × *CHINENSIS*.

(P. I. G. No. 6539.) *Victor Hugo*. “Profuse, large, double, sweet-scented blooms, fiery scarlet-crimson in color. Apparently the best *Rosa rugosa* hybrid.”

28510. *ROSA RUGOSA* (ALBA) × *CHINENSIS* (*Devoniensis*).

(P. I. G. No. 6540.) “Good double white *Rugosa*, resembling Mad. Georges Bruant.”

28511. *ROSA RUGOSA* × *Ards Rover*.

(P. I. G. No. 6497.)

28512. *ROSA RUGOSA* × ?.

(P. I. G. No. 6305.)

28513. *ROSA RUGOSA* × ?.

(P. I. G. No. 6541.) *Souvenir de Pierre Lepredieux*.

28514. *ROSA SOULIEANA* Crepin.

(P. I. G. No. 6569.) *Distribution*.—In the vicinity of Tatsienlu, in the province of Szechwan, western China.

28515. *ROSA* sp.

(P. I. G. No. 6544.) “Hybrids of *Crimson Rambler*.”

28371 to 28531—Continued.

- 29516.** ROSA sp.
(P. I. G. No. 6545.) *Lyon.*
- 28517.** ROSA sp.
(P. I. G. No. 6417.) "*Lyon* × *President Carnot.*"
- 28518.** ROSA sp.
(P. I. G. No. 6542.) *Richmond.*
- 28519.** ROSA sp.
(P. I. G. No. 6496.) *Victor Hugo.* (Hybrid *Remontant.*)
- 28520.** ROSA spp. Miscellaneous fruits.
(P. I. G. No. 6304.)
- 28521.** ROSA spp. Seeds of hardy roses.
(P. I. G. No. 6428.)
- 28522.** ROSA spp. Miscellaneous fruits.
(P. I. G. No. 6444.)
- 28523 and 28524.** "Promising crossbred garden raspberries."
28523. RUBUS NEGLECTUS × IDAEUS.
(P. I. G. No. 6571.)
28524. RUBUS NEGLECTUS × STRIGOSUS.
(P. I. G. No. 6572.)
- 28525.** TRITOMA NORTHIAE (Baker) Skeels.
(*Kniphofia northiae* Baker, Jour. Bot., vol. 27, p. 43, 1889.)
(P. I. G. No. 6509.)
- 28526.** TRITOMA TUCKII (Baker) Skeels.
(*Kniphofia tuckii* Baker, Gard. Chron., ser. 3, vol. 13, p. 68, 1893.)
- The generic name *Kniphofia* was applied by Moench in 1794 (Meth., p. 632) to *Aletris uvaria* L., a species belonging to the same genus as the two given above, but *Kniphofia* had been published by Scopoli in 1777 (Introd., p. 327) as a generic name for *Terminalia catappa* L., and was therefore invalid as a designation for the other and later genus.
- The next earliest name available for this genus is *Tritoma*, which was published by Ker-Gawler in 1804 (Botanical Magazine, vol. 20, pl. 744), based on *Tritoma sarmentosa* (Andrews) Skeels (*Aletris sarmentosa* Andrews), a South African species belonging to the same genus as the two listed above. These species are therefore recognized under the name given to the genus by Ker-Gawler, a name perhaps more frequently applied to them in horticultural literature than *Kniphofia*.
- These plants are both indigenous to Cape Colony, *Tritoma northiae* occurring near Grahamstown, in the Albany division of the coast region, and *Tritoma tuckii* in the Colesberg division of the central region.
- 28527.** × TRITONIA "*Prometheus.*"
(P. I. G. No. 6427.)
- 28528.** VITIS VINIFERA × (AESTIVALIS × LABRUSCA).
(P. I. G. No. 6418.) *Black Hamburgh* × *Gold Coin.*

28371 to 28531—Continued.**28529.** *YUCCA FILAMENTOSA* L.(P. I. G. No. 6419.) Variety *variegata*.*Distribution.*—In dry and sandy soil from North Carolina to Florida and Mississippi.**28530.** *YUCCA FLACCIDA* Haw.(P. I. G. No. 6306.) *Distribution.*—On dry or sandy slopes in or near the mountains from North Carolina to Alabama.**28531.** *ZEPHYRANTHES SULPHUREA* Hort.

(P. I. G. No. 6216.)

28532. *MEDICAGO CARSTIENSIS* Wulfen.

From Edinburgh, Scotland. Presented by Dr. Isaac Bayley Balfour, director, Royal Botanic Garden. Received July 21, 1910.

See No. 27794 for previous introduction.

28533 to 28536. *CARICA PAPAYA* L.**Papaya.**

From Empire, Canal Zone, Panama. Presented by Mr. W. G. Ross, at the request of Mr. H. F. Schultz. Received July 21, 1910.

Seeds of the following:

28533. "Fruit cylindrical in shape, very rich flavor, heaviest one here weighing 16½ pounds." (Ross.)

"This variety has a very small seed cavity and less seeds than most others." (Schultz.)

28534. "Fruit oblong in shape, extra size, 10½ pounds, and having an excellent flavor." (Ross.)**28535.** "Fruit oblong and slightly tapering in shape, above medium in size, and having very sweet meat." (Ross.)**28536.** "Fruit pear shaped. Tree was planted three years ago and produced 30 papayas last year, all very large and of very fine flavor." (Ross.)**28537.** *TRICHOLAENA ROSEA* Nees.

From Benguela, Angola, Portuguese West Africa. Presented by Mr. T. W. Woodside, A. B. C. F. M. Received July 20, 1910.

"A grass that grows spontaneously in old worn-out fields. Grows often to the height of 2½ or 3 feet. It is very succulent and sweet, and cattle like it very much. From the fact that it grows in old abandoned fields I would judge that it does not require rich soil." (Woodside.)

28538 and 28539. *MEDICAGO SATIVA* L.**Alfalfa.**

From the Bombay Presidency, India. Presented by Mr. P. S. Kanetkar, superintendent, Empress Botanical Gardens, Poona, Bombay, India. Received July 23, 1910.

Seeds of the following:

28538. "From the Surat district, a few miles from the sea and at sea level. It is grown in fields in which sugar cane was grown in the rains and harvested in October. The seed is sown in November. No cuttings for green fodder are taken, but the crop is allowed to run to flower and seed. The crop is harvested at the end of March. The cultivators near Surat have only recently taken

28538 to 28539—Continued.

to growing lucern for seed only. The crop from this seed, however, is not as lasting a one as from the seed of the following (S. P. I. No. 28539).” (*Kanetkar.*)

28539. “From Poona, which is situated at a height of 1,900 feet and is distant 80 miles from the sea. The soil is loamy and responds to manure and irrigation treatments readily. The lucern crop in Poona is kept for three years, the cuttings which are taken every four to five weeks being fed to cattle and horses. The plants are allowed to run to seed in March every year. The seeds are sold at about triple the price of seed of the preceding (S. P. I. No. 28538). A quart bottleful is sold at from 2 to 2½ rupees, a rupee being equal to 16 pence.” (*Kanetkar.*)

28540 to 28550.

From Pretoria, Transvaal, South Africa. Presented by Prof. J. Burt Davy, government agrostologist and botanist, Transvaal Department of Agriculture. Received July 23, 1910.

Seeds of the following:

28540. *TRICHLORIS MENDOCINA* (Phil.) Kurtz.

See No. 26651 for previous introduction.

28541. *CERVICINA UNDULATA* (L. f.) Skeels.

See No. 27520 for previous introduction.

28542. *ERAGROSTIS LAPPULA DIVARICATA* Stapf.

Distribution.—On the Pellat Plains, between Matlaren River and Takun, in Bechuanaland, South Africa.

28543. *TRisetum SPICATUM* (L.) Richter.

Distribution.—Alpine regions and in the Arctic and Antarctic zones.

28544. *CHAETOCLOA NIGRIROSTRIS* (Nees) Skeels.

See No. 26653 for previous introduction.

28545. *ERAGROSTIS PLANA* Nees.

Distribution.—In the Kalahari district and along the eastern coast of Cape Colony and Natal in South Africa.

28546. *Panicum MAXIMUM HIRSUTISSIMUM* Nees.

(*Panicum hirsutissimum* Steud.)

Distribution.—The coast region of Natal and Cape Colony.

28547. *SPINIFEX HIRSUTUS* Labill.

Distribution.—Sandy shores of New Zealand, Tasmania, and southern Australia.

28548. *TRICHLORIS MENDOCINA* (Phil.) Kurtz.

See No. 28540 for previous introduction.

28549. *ERAGROSTIS GUMMIPLUA* Nees.

Distribution.—South Africa; in the Kalahari region and along the eastern coast of Cape Colony and Natal.

28550. *ACACIA ROBUSTA* Burchell.

“This is a characteristic tree of the dry bush veldt below 4,500 feet altitude (i. e., in the subtropical zone of the Transvaal).

28540 to 28550—Continued.

"I have not been able to learn much about the wood, beyond the fact that it is sometimes used for fence posts when the rarer and harder sorts, such as *Olea verrucosa*, are not available." (Davy.)

Distribution.—In the vicinity of Litakun, Bechuanaland, and at Magaliesberg in the interior of Cape Colony.

28551. MANGIFERA INDICA L.**Mango.**

From Monrovia, Liberia, West Africa. Presented by Mr. E. L. Parker, Commissioner of Agriculture. Received July 20, 1910.

Sierra Leone.

28552 to 28555. MANGIFERA INDICA L.**Mango.**

From Poona, Bombay, India. Purchased from Mr. P. S. Kanetkar, superintendent, Empress Botanical Gardens. Received July 20, 1910.

Seeds of the following:

28552. *Alphonse.*

28554. *Pakria.*

28553. *Kadarpasant.*

28555. *Totafari.*

28556 to 28563. MANGIFERA INDICA L.**Mango.**

From Sibpur, Calcutta, India. Purchased from Maj. A. T. Gage, superintendent, Royal Botanic Garden. Received July 20, 1910.

Seeds of the following:

28556. *Alphonso.*

28560. *Small Malda.*

28557. *Baromassia.*

28561. *Paranay.*

28558. *Bhadoorea.*

28562. *Peters.*

28559. *Large Malda.*

28563. *Soondershaw.*

28564 to 28568. MANGIFERA INDICA L.**Mango.**

From Colombo, Ceylon. Purchased from Dr. C. Drieberg, secretary, Ceylon Agricultural Society. Received July 22, 1910.

Seeds of the following; descriptive notes by Dr. Drieberg:

28564. *Dampara.* "Prolific; fruit small in size, of second quality, rather fibrous; skin yellow brown; seed small; ripens early and keeps fairly well. The tree is a free grower and is hardy. It is not much cultivated."

28565. *Heart.* "This is also called *Bombay* and is the commonest variety found on the market. Prolific; fruit medium in size, not much longer than broad, of second quality; skin golden yellow; seed of medium size; ripens early and is a fair keeper. The tree is a free grower and is hardy."

28566. *Jaffna.* "The favorite variety here. Prolific; fruit medium in size, twice as long as broad, of first quality; skin green; seed of medium size; ripens early and is a fair keeper. The tree is a fairly free grower and is hardy."

28567. *Parrot.* "Fairly prolific; fruit medium to small, of second quality; skin dark green; seed of medium size; ripens late and is a fair keeper. The tree is a free grower and is hardy. This variety has a slight turpentine flavor and is not very common."

28564 to 28568—Continued.

28568. *Rupee*. "This is also called '*Two-Shilling*.' It is a sparse bearer; fruit the largest of local (Ceylon) varieties, of first quality; skin pale green; seed small compared to size of fruit; ripens late and is not a good keeper. The tree is not a free grower and is tender. This variety is scarce and expensive. Requires very careful ripening."

28569 to 28582. *MUSA* spp.**Banana.**

From Paramaribo, Surinam. Presented by Mr. Goldsmith H. Williams, manager, United Fruit Co. Received July 21, 1910.

Suckers of the following; notes by Mr. Williams:

28569 to 28580. *MUSA* sp.

28569. "*Bas Joe*. From southern China. Has seeds in very small fruit."

28570. "*Cinerea Sahramphur*. Short, slim-pointed fruit of good flavor."

28571. "*Congo*."

28572. "Dwarf banana, frequently called *Cavendishii*."

28573. "Jamaica banana."

28574. "Large *Horse* banana. Sweeter than the plantain. Very good fried or roasted."

28575. "*Pisang Ambon*. A trifle better than the *Horse* banana of Florida and much the same shape."

28576. "*Pisang Celat*. Small, sweet fruit with 13 to 16 hands on a bunch."

28577. "*Pisang Kudjo*. Red banana."

28578. "*Pisang Siam*. Much like the *Horse* banana of Florida."

28579. "*Pisang Susa*. Similar to the ordinary *Apple* banana."

28580. "*Rubra India Sapientum Dacca*. One of the silver-skin varieties. What we term silver skin is a fruit that is like the red banana in shape and flavor, but with a clear, yellow skin."

28581. *MUSA ROSACEA* Jacq.

"Variety *Chittagong*. Very small, with seeds. New York Botanical Garden No. 9636."

Distribution.—The lower slopes of the eastern Himalayas in Chittagong, upper Burma, and in the Konkan region on the western coast of India; said to have been introduced from Mauritius in 1805.

28582. *MUSA ZEBRINA* Van Houtte.

"Reddish leaves. Very small worthless fruit, with seeds. Good as an ornamental plant."

28583. *ARRACACIA XANTHORRHIZA* Bancroft.**Arracacha.**

From Caracas, Venezuela. Presented by Señor Antonio Valero Lara. Received July 26, 1910.

See No. 3511 for description.

28584. DIOSPYROS PEREGRINA (Gaertn.) Guerke.

From Sibpur, Calcutta, India. Presented by Maj. A. T. Gage, superintendent, Royal Botanic Garden. Received July 26, 1910.

"A dense, evergreen, small tree with dark-green foliage and long, shining leaves; common throughout India and Burma except the arid and dry zone in the Punjab and Sind. Distributed to Ceylon, Siam, and the Malay Peninsula; very abundant in Bengal. It is a beautiful tree; the fruit is eatable, but excessively sour. Its principal use is for paying the bottoms of boats. It is beaten in a large mortar and the juice is expressed. This is boiled, mixed with powdered charcoal, and applied once a year to the outside of the planks. The wood is of little value. The fruit is largely used in tanning, being a powerful astringent. The juice of the unripe fruit is used in medicine as an astringent. The tree produces a round fruit as big as a middle-sized apple, green when unripe, rusty yellow when ripe, and in the later stages containing a somewhat astringent pulp, in which the seeds are embedded. When ripe it is eaten by the natives, but is not very palatable. The leaves are also eaten as a vegetable. Ainslie mentions that the carpenters of the Malabar coast use the juice of the fruit as an excellent glue." (*Watt, Dictionary of the Economic Products of India, vol. 3, p. 145.*)

Seeds.

28585 to 28593.

From Domäne Niemiercze, Podolia, Russia. Presented by Messrs. K. Buszczyński and M. Lazynski. Received July 22, 1910.

Seeds of the following:

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| 28585 to 28587. AVENA SATIVA L. | Oat. |
| 28585. <i>Earliest, or Sixty-Day.</i> | |
| 28586. <i>Ligovo.</i> | |
| 28587. The new oats (cross between <i>Ligovo</i> and <i>Earliest</i>). | |
| 28588 to 28592. TRITICUM AESTIVUM L. | Wheat. |
| 28588. Brown bearded. | 28591. <i>Triumph of Podolia.</i> |
| 28589. <i>Crossed Wheat No. 1.</i> | 28592. White bearded. |
| 28590. <i>Improved Banat.</i> | |
| 28593. TRITICUM DURUM Desf. | Wheat. |
| White spring. | |

28594 and 28595.

From Spain. Presented by Mr. R. L. Sprague, American consul, Gibraltar, Spain. Received July 7, 1910.

Seeds of the following; notes by Mr. Sprague:

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| 28594. VICIA ERVILIA (L.) Willd. | Bitter vetch. |
| " <i>Yero.</i> This vetch is sown throughout Andalusia, but never plowed under for green manure. When the crop is ripe it is gathered and given to cattle during the winter months." | |

- 28595.** LATHYRUS SATIVUS L.

"*Alverjones.* These are used for green manure and can be procured in larger quantities than the preceding (S. P. I. No. 28594). At about the same price the practical result is considered better."

- 28596. HORDEUM sp. Barley.**
 From Maison Carree, Algeria. Presented by Dr. L. Trabut, Algiers, Algeria.
 Received July 27, 1910.
 "Smooth-bearded black barley. This barley appeared as a mutation in some black barley from Australia; it is very early and very resistant to drought. Curious on account of its absolutely smooth beards." (*Trabut.*)
- 28597. ALEURITES MOLUCCANA (L.) Willd. Candlenut.**
 From Manila, Philippine Islands. Presented by Mr. William S. Lyon. Received July 21, 1910.
 See No. 24351 for description.
- 28598 to 28603. ALLIUM CEPA L. Onion.**
 From Puerto de Orotava, Teneriffe, Canary Islands. Presented by Mr. Solomon Berliner, American consul, Teneriffe. Received July 27, 1910.
 Seeds of the following:
28598 to 28600. From Wildpret Bros. (Specially selected seed.)
 28598. *Bermuda Red.* **28600.** *Crystal Wax.*
 28599. *Bermuda White.*
28601 to 28603. From Mr. T. M. Reid.
 28601. *Bermuda Red.* **28603.** *Crystal Wax.*
 28602. *Bermuda White.*
- 28604. CICER ARIETINUM L. Chick-pea.**
 From Byers, Colo. Procured by Mr. H. N. Vinall from Mr. Edelen. Received July 29, 1910.
 "Mr. Edelen says the original seed of these peas was given to him by an Italian. He claims they yielded 2,500 pounds of grain per acre last season, and in the face of an extremely dry season this year he is counting on 1,000 pounds per acre. From the looks of his field I should judge that 500 or 600 pounds is nearer what the correct yield will be. Chick-peas are very drought resistant and hail does them little injury, as the plant itself is tough and fibrous." (*Vinall.*)
- 28606. CROTALARIA CANDICANS Wight and Arnott.**
 From Peradeniya, Ceylon. Presented by Dr. J. C. Willis, director, Botanic Garden. Received August 2, 1910.
 See No. 28344 for description.
- 28607. DENDROCALAMUS STRICTUS (Roxb.) Nees. Bamboo.**
 From Sibpur, near Calcutta, India. Presented by Maj. A. T. Gage, superintendent, Royal Botanic Garden. Received August 5, 1910.
 See Nos. 21548, 22819, and 23476 for previous introductions.
- 28609. MYRICA NAGI Thunb.**
 From Kiayingchau, China. Presented by Mr. George Campbell. Received July 25, 1910.
 Seeds. See Nos. 25908 and 26905 for previous introductions.

28610 and 28611. ANONA spp.

From Redland Bay, Queensland, Australia. Presented by Mr. James Collins.
Received August 2, 1910.

Cuttings of the following:

28610. ANONA sp.

"As far as I know this variety has never been named. It is a giant and far superior to any of the other anonas. It often attains a weight of 6 pounds, 'being a veritable custard.' It originated here about 30 years ago." (*Collins.*)

28611. ANONA CHERIMOLA Mill.

Cherimoya.

28612 and 28613. MANGIFERA INDICA L.

Mango.

From Poona, Bombay, India. Purchased from Mr. P. S. Kanetkar, superintendent, Empress Botanical Gardens. Received August 4, 1910.

Seeds of the following:

28612. *Pyrie.***28613.** *Kala Hapoos.***28614 and 28615.** ZEA MAYS L.

Corn.

From the Kalahari, about 30 miles east of Kuruman, on the Kaapscheberg, South Bechuanaland, Africa. Presented by Prof. J. Burt Davy, government agrostologist and botanist, Transvaal Department of Agriculture, Pretoria, Transvaal, South Africa. Received August 2, 1910.

Seeds of the following; notes by Prof. Davy:

"*White Botman* flint maize. This seed was procured from a very dry region, of shallow limestone soil, cold and dry in winter. It struck me that these strains might do for the extreme southwest of the corn belt of the United States (northwestern Texas)."

28614. "Donovan's strain (red cob) has been grown by him without selection or change of seed for 10 years, and came originally from a still drier region, Daniels Kuil, at the southeast end of the Kuruman Hills."

28615. "Mayer's strain, from the same vicinity as the preceding (S. P. I. No. 28614)."

28616. TRICHILIA DREGEANA E. Meyer.

From Durban, Natal, South Africa. Presented by Dr. J. Medley Wood, director, Botanic Gardens. Received July 26, 1910.

"A handsome evergreen shade tree." (*Wood.*)

Distribution.—In woods in the vicinity of Durban in South Africa.

See No. 9482 for previous introduction.

28617. VIGNA UNGUICULATA (L.) Walp.

Cowpea.

From Para, Brazil. Presented by Mr. Walter Fischer, acting director, Campo de Cultura Experimental Paraense. Received August 4, 1910.

"Probably identical with the *Blackeye* variety; I grew them on the campo and harvested them just two months after sowing. This cowpea could hardly be called a forage variety, at least not here in this soil, where it soon goes to seed, but bears heavily." (*Fischer.*)

28618 to 28625.

From Russia. Received through Mr. Frank N. Meyer, agricultural explorer, July 25, 1910.

28618 to 28625—Continued.

Seeds of the following:

28618. LATHYRUS SATIVUS L.

From Vladikavkaz, Caucasus, Russia. "(No. 1334a, May 4, 1910.) A legume very rarely seen, said to come originally from Russia. The seeds are used locally as a human food, being boiled in soups or mixed with chick-peas in stews. Suitable for trial as a forage crop in regions with a moderately light summer rainfall." (*Meyer.*)

28619. PISUM SATIVUM L.**Field pea.**

From Vladikavkaz, Caucasus, Russia. "(No. 1335a, May 4, 1910.) A very small pea, apparently an offspring from a cross between *Pisum sativum* and *Pisum arvense*. Used locally as a food, being more appreciated than the large-seeded varieties and consequently more expensive. Perhaps of value as a forage or food crop in the intermountain regions." (*Meyer.*)

28620. CICER ARIETINUM L.**Chick-pea.**

From Baku, Caucasus, Russia: "(No. 1336a, May 23, 1910.) A large variety of chick-pea, obtained from a Persian seed dealer and said to come from Persia. Chick-peas are much used by the orientals, preferably boiled with mutton in soups and stews." (*Meyer.*)

28621. VICIA FABA L.**Horse bean.**

From Baku, Caucasus, Russia. "(No. 1337a, May 23, 1910.) A horse bean, said to come from Persia. Used by the orientals both in the fresh green and in the dried state as a vegetable. Ground horse beans are a well-known and excellent feed for draft animals; perhaps they may be grown advantageously as a winter crop in the mild-wintered regions of the United States and as a summer crop in the intermountain regions." (*Meyer.*)

28622. TRITICUM DURUM Desf.**Wheat.**

From Baku, Caucasus, Russia. "(No. 1338a, May 23, 1910.) A good hard wheat, said to come from Persia." (*Meyer.*)

28623. TRITICUM DURUM Desf.**Wheat.**

From Vladikavkaz, Caucasus, Russia. "(No. 1339a, May 4, 1910.) An excellent hard wheat, coming from Persia and called '*Tatuch.*'" (*Meyer.*)

28624. HORDEUM sp.**Hull-less barley.**

From Baku, Caucasus, Russia. "(No. 1340a, May 23, 1910.) A naked barley of superior quality, said to come from Persia. Much imported into this country, where it is roasted and mixed with coffee. The beverage produced from this is very agreeable." (*Meyer.*)

28625. LENS ESCULENTA Moench.**Lentil.**

From Baku, Caucasus, Russia. "(No. 1341a, May 23, 1910.) A large variety of lentil, said to come from Persia. Much used by the orientals in soups and stews. Recommended as a crop in semiarid regions." (*Meyer.*)

28626. OPUNTIA sp.

From Nice, France. Presented by Dr. A. Robertson-Proschowsky. Received at the Subtropical Plant Introduction Garden, Miami, Fla., in the spring of 1909. Numbered for convenience in recording distribution on August 12, 1910.

"This *Opuntia* is easily propagated by cuttings of the pads. After being severed from the plant, they should be left in the sun for two or three days to dry up the

28626—Continued.

wound and then be planted rather deeply in the ground in comparatively dry soil. Because of the value of its fruits it seems that this species is likely to prove a very valuable one for dry soils where other plants are not likely to thrive." (*Robertson-Proschowsky, Journal d'Agriculture Tropicale.*)

28627 to 28631. MANGIFERA INDICA L.**Mango.**

From India. Purchased from Mr. P. S. Kanetkar, superintendent, Empress Botanical Gardens, Poona, Bombay. Received August 8, 1910.

Seeds of the following:

28627. *Amin.* From Madras Presidency.

28628. *Borsha.* From Poona.

28629. *Fernandez.* From Goa.

28630. *Peter pasant.* From Madras Presidency.

28631. *Shendrya.* From (Kothrud) Poona.

28632 and 28633. CAPSICUM ANNUUM L.**Pepper.**

From Sibpur, near Calcutta, India. Presented by Maj. A. T. Gage, superintendent, Royal Botanic Garden. Received August 2, 1910.

Seed of *Nepal* peppers from northern India, as follows:

28632. Red.

28633. Yellow.

28634 to 28636.

From Chile. Received through Mr. José D. Husbands, Limavida, Chile, August 3, 1910.

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

28634. CHENOPODIUM QUINOA Willd.

Quinoa.

"(No. 585.) A grain said to produce 1,000 for 1. After rubbing and washing well to remove its bitterness it is eaten boiled, toasted, and ground into flour, used in soups, etc. The ashes of the plant contain an extra amount of potash and are used in soap making."

28635. MYRTUS sp.

"(No. 590.) A new class of '*Arrayan*,' a Myrtus that flowers in the fall, has crimson seed berries, and seeks the altitude of the driest arid hills; the fragrance is about the same as of that which flowers in the spring and only grows in wet or moist places. A dense, evergreen, ornamental treelet or bush worthy of cultivation."

28636. PERSEA MEYENIANA Nees.

"(No. 584.) '*Lingue*' of central Chile."

28637 to 28642. VITIS VINIFERA L.**Grape.**

From Elqui, Chile. Received through Mr. José D. Husbands, Limavida, Chile, August 11, 1910.

28637 and 28638. "*Italia.* This is the finest raisin grape known." (*Husbands.*)

28637 to 28642—Continued.

28637 and 28638—Continued.

28637. Seeds.

28638. Cuttings.

“While I can not speak authoritatively upon the subject, I will give my opinion, which I believe will be found substantially correct upon investigation. Elqui raisins are made from the ‘Italia’ grapes. These are lemon yellow in color, long-oblong in shape, agreeably sweet, exquisitely flavored, have thin skins and semitransparent, long, slender bunches, a fruit which makes excellent raisins even when left hanging on the vine after maturity. The seeds vary. Some fruits are seedless; others in the same bunch have chaff seeds; others one, two, three, and rarely, but sometimes, more. I think neither machines nor shade are employed in drying raisins in Chile, nor are they steeped in boiling water or any sort of lye, nor are they dried on the plant. They are simply picked and sundried upon mats, trays, or shallow baskets. Their flexibility is natural and not due to sweating. The natural dryness of the climate is quite sufficient to dry them to perfection either in the shade or sun. The latter method is quicker and better, as it leaves the raisins softer. These vines are prolific bearers and the grapes are highly esteemed as extra fine and juicy table grapes.

“In view of the fact that all fruits, grains, etc., of a similar appearance are vulgarly called the same, I have an idea that the Elqui Italia is, or may be, a class by itself, a Chile strain of the Italias introduced from Italy. I have seen very many kinds of Italia grapes grown in central Chile, principally for consumption while fresh. There are other classes preferred for wines and brandy. All these have the same general appearance and are called alike, but show marked differences in plant and fruit. The Elqui grape for making raisins, however, is above competition.”
(*Husbands.*)

28639 and 28640. “*Pastilla.* It is from these grapes that the famous Chile brandy called ‘Pisco’ is distilled.” (*Husbands.*)

28639. Seeds.

28640. Cuttings.

“Pisco originated at a seaport just south of Callao, Peru, named Pisco. The liquor was sold in a jar about 30 inches high, mouth about 6 inches in diameter made so that it could not stand up. This jar was made by the Spanish upon models of the Incas. The brandy was placed within this piece of pottery new and unrefined; often buried as a refining process. I believe the plants came originally from Peru.” (*Husbands.*)

28641 and 28642. “*Negra* (black). It is from these grapes that the celebrated Elqui red wine is made.”

28641. Seeds.

28642. Cuttings.

28643 and 28644.

From the Andean Highlands near Cuzco, Peru. Presented by Mrs. Franklin Adams, Washington, D. C. Received August 10, 1910.

Seeds of the following:

28643. ZEA MAYS L.

Corn.

28644. CHENOPODIUM QUINOA Willd.

Quinoa.

See No. 28634 for previous introduction.

28645. VICIA FABA L.**Horse bean.**

From Paris, France. Purchased from Vilmorin, Andrieux & Co. Received August 12, 1910.

Winter.

28646. MEDICAGO SATIVA TUNETANA Murbeck.

From Oued Zenati, Algeria. Presented by Mr. A. Clavé. Received August 13 1910.

"The plants from which this seed was taken were found in a single, very limited place on calcareous and uncultivated ground. I had to watch carefully to save from the sheep, which are very fond of this excellent forage, a few flowering stems and a few seeds. It was impossible for me to get a larger quantity because of the great scarcity of this species in this region." (*Clavé.*)

Distribution.—Pine woods on both sandy and calcareous soil in the mountainous region of central Tunis and at Oued Zenati and Tebessa in the province of Constantine in Algeria.

28648 and 28649.

From Turkestan. Received through Mr. Frank N. Meyer, agricultural explorer, August 13, 1910.

28648. TULIPA sp.**Tulip.**

From mountains near Bachar-den, Turkestan. "(No. 790, June 5, 1910.) A tulip growing on unburned mountain sides in decomposed rock soil. Flowers apparently red." (*Meyer.*)

28649. EREMURUS sp.

From near Kulikalan, in the province of Samarkand, Turkestan. "(No. 789.) A very robust, ornamental Eremurus, having spikes of flowers that grow 4 feet tall and are rosy pink in color. Found at an altitude of about 7,000 feet in rich, blackish soil. Of value as an ornamental plant in fairly dry climes; apparently able to stand low temperatures." (*Meyer.*)

28653. ERAGROSTIS LEHMANNIANA Nees. (?)

From Mowbray, Cape Colony, South Africa. Presented by C. Starke & Co. (Ltd.). Received August 13, 1910.

Distribution.—Central and eastern South Africa, extending from the Graaf Reynet region and Natal southward to the Cape.

Seeds.

28655. TRITICUM TURGIDUM L.**Wheat.**

From Valencia, Spain. Presented by Mr. Robert Frazier, jr., American consul. Received July 12, 1910.

"Irrigated wheat, the typical variety grown in this vicinity. Usually planted from the end of November to the middle of December." (*Frazier.*)

28656 and 28657. SOLANUM spp.

From Peru. Presented by Dr. A. Weberbauer, German Legation, Lima. Received August 16, 1910.

Tubers of the following; notes by Dr. Weberbauer:

28656 and 28657—Continued.**28656.** SOLANUM sp.

"Tubers of an undoubtedly wild *Solanum* that I collected myself. I found the plants on the hills near Lima, between crumbled rocks in the so-called Loma formation, 200 meters above sea level. The specimens were very young, in the beginning of their growing period, but one of them already had blooms. These were deep violet, almost the color of *Viola odorata*. The plants were very similar to the potato, but were not *Solanum tuberosum*, but the *Solanum maglia* which I collected (formerly) near Mollendo.

"Lima, considering its latitude, has very low temperatures; from June to October the average monthly temperature is 15.9° to 16.7° C.; sometimes the temperature sinks to 12° C. From November to May there is practically no precipitation. From June to October, however, it is cloudy almost continuously, and slight rains dampen the ground so that the previously bare hills are covered with a green carpet of plants (chiefly annual plants, such as tuberous and bulbous plants). This vegetation is called Loma."

28657. SOLANUM sp.

"Tubers of another *Solanum* species related to the potato. This, too, was found at 200 meters above sea level and between crumbled rocks in the Loma. The plant has pale-lilac blooms and is distinguished from *Solanum tuberosum*, among other things, by the narrow leaf lobes." (*Weberbauer.*)

28658. RUBUS sp.**Raspberry.**

From the top of Mount Omei, Szechwan Province, China. Presented by Dr.

Edgar T. Shields, Yachow, Szechwan Province, China. Received July 23, 1910.

"Seed of a most delicious, large, yellow raspberry." (*Shields.*)

28659. VICIA FABA L.**Horse bean.**

From Yachow, Szechwan Province, China. Presented by Dr. Edgar T. Shields.
Received July 23, 1910.

"These are very prolific and are used extensively in feeding horses and cows. They are also eaten by the poorer people, boiled and roasted in oil." (*Shields.*)

28660. MAGNOLIA CAMPBELLII Hook. f. and Thoms.

From Erfurt, Germany. Purchased from Haage & Schmidt. Received August 17, 1910.

A large deciduous-leaved tree, whose rosy flowers, often 10 inches in diameter, open before the leaves appear. The leaves are 12 inches long by 4 inches wide, smooth above and silky pubescent below.

Distribution.—In the forests on the slopes of the Himalayas, at an elevation of 8,000 to 10,000 feet, in Sikkim and Bhutan, northern India.

28661. ZEA MAYS L.**Corn.**

From Zomba, Nyasaland Protectorate, Africa. Presented by Mr. E. W. Davy, agriculturist, Agricultural and Forestry Department. Received August 13, 1910.

"Seed of a native-grown type of Nyasaland. I have carried out selection work on it for only one year at present, and it will take some years to get a very true and improved type fixed. The results of even the first year show a marked improvement, the yield being at the rate of 4,550 pounds of dried husked corn per acre. I would recommend you to test it in your Southern States with a good rainfall." (*Davy.*)

28662 and 28663.

From South Africa. Presented by Prof. J. Burt Davy, government agrostologist and botanist, Transvaal Department of Agriculture, Pretoria. Received August 1, 1910.

Seeds of the following:

28662. ACACIA LITAKUNENSIS Burchell.

"This was collected 70 miles southeast of the type locality. I have not been able to learn that the wood has any special economic value, but the tree is ornamental and stands considerable drought, with some frost." (Davy.)

Distribution.—The vicinity of Litakun in Bechuanaland, South Africa.

28663. LEBECKIA CUSPIDOSA (Burch.) Skeels.

(*Spartium cuspidosum* Burchell, Travels, vol. 1, p. 348, 1822.)

(*Genista cuspidosa* DC., Prodrumus, vol. 2, p. 147, 1825.)

(*Stiza psiloloba* E. Meyer, Commentariorum de Plantis Africae Australioris, p. 32, 1835.)

(*Lebeckia psiloloba* Walp., Linnæa, vol. 13, p. 478, 1839.)

This South African leguminous shrub is reported by Harvey (Flora Capensis, vol. 2, p. 84, 1861-62) from "Near Uitenhage," and it was originally described from between "Gattikamma" (white water) and "Klaarwater," now known as Griquatown, and apparently near the latter locality. Burchell says in regard to it: "In one part, toward the end of our journey, we passed abundance of a handsome shrub, from 5 to 7 feet in height, covered with showy yellow flowers, but quite destitute of leaves, and even by this light easily to be distinguished as a plant which had not been anywhere seen before. It was completely armed at all points, its green leafless branches being terminated by a spine as sharp as a needle."

De Candolle in the Prodrumus restricted the use of the generic name *Spartium* to a single species of the Mediterranean region, *S. junceum*, and referred this South African plant to *Genista*. The species was apparently again described by E. Meyer under the name *Stiza psiloloba*, and since *Stiza* is not recognized as distinct from the earlier *Lebeckia*, Meyer's plant was placed in that genus by Walpers. The original specific name published by Burchell, though long in disuse, is here restored.

"This is a nearly leafless, dense shrub, about 6 feet high, bearing ornamental yellow flowers. It is very spiny and should be suitable for hedges. It comes from the Kalahari, near Kuruman, and is likely to suit dry, warm regions." (Davy.)

28665. SOLANUM TUBEROSUM L.**Potato.**

From Temuco, Chile. Presented by Mr. D. S. Bullock. Received August 19, 1910.

"*Damma*. An early variety." (Bullock.)

Tubers.

28667 to 28672.

From Mauritius. Presented by Mr. Gabriel Regnard. Received July 29, 1910.

Seeds of the following:

28667. APHLOIA THEAEFORMIS (Vahl) Bennett.

"*Bois Goyave* or *Bois Viliuu*. A glabrous, much-branched shrub; leaves oblong, obtuse, or acute, entire or toothed, 1 to 4 inches long. Flowers yellowish. Fruit ovoid-ampullæform $\frac{1}{4}$ to $\frac{1}{3}$ inch long; 10 to 12 seeded." (Regnard.)

28667 to 28672—Continued.

Distribution.—Frequent in the woods on the islands of Mauritius, the Seychelles, Rodriguez, and Madagascar.

28668. ELAEOCARPUS sp.

28669. EHRETIA ACUMINATA R. Br.

“An Indian tree of the boraginaceous family yielding a tough, light, and durable wood. It bears bunches of tiny white flowers and red seeds the size of a small pea. Is a very showy and ornamental tree.” (*Regnard.*)

Distribution.—Slopes of the subtropical Himalayas and the adjacent plains from Gurhwal to Bhutan in India, and in Java, Australia, and Japan.

28670. MIMUSOPS IMBRICARIA Willd.

“A large tree with gray, glabrous branches. Leaves oblong, glabrous, shining. Fruit a drupe, globose, the size of a small apple, one to four seeded.” (*Regnard.*)

Distribution.—Thick woods in the interior of the islands of Mauritius and Reunion.

28671. TAMBOURISSA AMPLIFOLIA (Tul.) DC.

“Branchlets stout. Leaves alternate, oblong, $\frac{1}{2}$ to 1 foot long. Bud of female perianth black, apiculate, $1\frac{1}{2}$ inches thick, globose, with conical fruits $\frac{1}{2}$ inch long.” (*Regnard.*)

Distribution.—In the forests on the slopes of the Pouce and other mountain ranges on the island of Mauritius.

28672. (Undetermined.)

“A forest shrub (?).” (*Regnard.*)

28673 to 28675.

Plants of the following, turned over to the Department for distribution by Dr. J. N. Rose, associate curator, Division of Plants, United States National Museum, Washington, D. C., August, 1910.

28673. ECHEVERIA HOVEYI ROSE *n. sp.*

“Usually stemless, but when old developing a short stem; leaves forming a loose spreading rosette, pale green with broad pinkish or white margins and these more or less wavy or sometimes colored throughout; flowering stem a second raceme bearing 6 to 12 flowers; corolla pinkish.

“The origin of this form is unknown. It is probably some horticultural sport or hybrid, but does not closely resemble any of our common cultivated forms, although it may be said to belong to the group of species in which *Echeveria secunda* and *Echeveria glauca* are found.” (*Rose.*)

28674. PARMENTIERA CEREIFERA Seem.

Candle tree.

“This is one of the most remarkable trees of the Tropics, a native of Panama. It grows 30 to 40 feet high and produces from its stem and old branches a profusion of almost sessile campanulate flowers; these are followed by yellowish cylindrical, smooth points, 12 to 18 inches long, which appear exactly like wax candles, as the botanical name implies. So close is the resemblance that travelers, seeing the tree in fruit for the first time, are liable to be temporarily puzzled as to whether the candles of shops are made in factories or grow on trees. The candlelike fruits are suspended from the bare stem and branches by short slender stalks; dangling in the air, they readily give the impression of a chandler’s shop. This impression is intensified as night falls and the numerous fireflies move among the fruits. It is not, perhaps, surprising that the inex-

28673 to 28675—Continued.

perienced traveler should not infrequently be informed that the fireflies perform the duty of lighting up these 'candles' when required by the denizens of the jungle. The fruits are fleshy and juicy and have a peculiar applelike odor. They are eaten by certain tribes, and also by cattle. The tree belongs to the natural order Bignoniaceæ." (*Rose.*)

28675. ZINZIBER sp.

Wild ginger.

"From near Tampico, Mexico. Sent in by Dr. Edward Palmer." (*Rose.*)

28676 and 28677. MANGIFERA INDICA L.

Mango.

From San Jose, Costa Rica. Presented by Mr. A. R. Guell, Louisiana State University, Baton Rouge, La., Received August 22, 1910.

Cuttings of the following:

28676. "Our common fiberless variety." (*Guell.*)

28679 to 28683.

From Richmond, New South Wales, Australia. Presented by Mr. H. W. Potts, principal, Hawkesbury Agricultural College. Received August 2, 1910.

Seeds of the following:

28679. ANDROPOGON PERTUSUS (L.) Willd.

Distribution.—Southern Europe and Asia, extending from Sicily to India, in tropical Africa, and in Queensland and New South Wales in Australia.

28680. ANDROPOGON REFRACTUS R. Brown.

Distribution.—Eastern Australia, at Port Essington in North Australia, along the Brisbane River in Queensland, at Port Jackson in New South Wales, and at Mitta-Mitta in Victoria.

28681. DICHELACHNE CRINITA (L. f.) Hook. f.

Distribution.—Throughout Australia and in Tasmania and New Zealand.

28682. EUCALYPTUS ROBUSTA Smith.

Swamp mahogany.

Distribution.—New South Wales in Australia, extending from Port Jackson to the Blue Mountains.

28683. STERCULIA DIVERSIFOLIA G. Don.

Kurrajong tree.

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

28684. DIOSPYROS MONTANA CORDIFOLIA (Roxb.) Hiern.

From Lahore, Punjab, India. Presented by Mr. W. R. Mustoe, superintendent of the Government Gardens. Received August 23, 1910.

A tree with short spines occasionally on the trunk and older branches; young branches and leaves softly pubescent; leaves narrowly ovate, slightly heart shaped at the base; fruit globular and about the size of a large cherry. The wood is yellowish gray and soft, but durable. It is used for making carts and tools and would be suitable for furniture.

Distribution.—India, from the Himalayas to Ceylon and Tenasserim, through the Malay Archipelago to tropical Australia.

28685. PRUNUS MUME Sieb. and Zucc. Japanese apricot.

From Yokohama, Japan. Purchased from the Yokohama Nursery Co. Received August 24, 1910.

See Nos. 9211 to 9216 for description.

28686 and 28687.

From Washington, D. C. Presented by Mr. W. R. Smith, superintendent, National Botanic Garden. Numbered for convenience in recording distribution August 25, 1910.

Plants of the following:

28686. ACTINIDIA KOLOMIKTA (Maxim.) Rupr.

See Nos. 20360 and 22593 for description.

28687. PASSIFLORA CAPSULARIS L.

"A climbing vine with leaves dividing below the middle into two oblong lanceolate lobes; flowers greenish white, the filament crown pale yellowish green surrounding a double white cup, anthers and stigmas yellow. Fruit about 2 inches long, oblong, and six-angled." (*Adapted from Botanical Magazine, vol. 55, pl. 2868.*)

Distribution.—Mirador in southern Mexico and southward to Ecuador and Brazil.

28688 and 28689.

From Paraguay, South America. Presented by Mr. C. F. Mead, Piropo, Faraguay. Received August 20, 1910.

Seeds of the following:

28688. PSIDIUM GUAJAVA L.

Guava.

"In Spanish called '*Guayaba grande*' and in Guarany '*araza-guaza*.' It is the same class of fruit as the small guayaba, except that it is much larger, about the size of a hen's egg, and is borne on a tree which in five years attains a height of 20 to 25 feet and a diameter of 8 to 10 inches. The wood of this tree is hard, tough, and impossible to split." (*Mead.*)

28689. BROMELIA sp.

"Caraguata."

"This plant in Guarany is called '*caraguata*'. It grows in camp hereabouts especially in barren spots. Every year in the fall the center leaves turn bright red and it bears a cluster of pink and white flowers, similar to tuberoses. The fruits, which are used here for preserves only, are borne in a cluster 10 to 15 inches long and 4 to 6 inches in diameter; they are the size of a small plum and are bright yellow when ripe. The plant has a bad name, owing to the difficulty of exterminating it when it is well started."

(*Mead.*)

28690. WIDDRINGTONIA WHYTEI Rendle. Mlanje cypress.

From Zomba, Nyasaland Protectorate, Africa. Presented by Mr. J. M. Purves, chief forest officer. Received August 25, 1910.

"The seed germinates quickly, usually in three or four weeks, in moist and slightly shaded soil, with a mean temperature of from 65° to 70° F. The tree occurs in about 17° south latitude at elevations of from 5,000 to 6,000 feet. Above the latter it becomes very stunted in growth. It exhibits a preference for deep gullies and ravines, and seems to detest very strong winds. The soil varies considerably, and fine trees often occur in the crevices of the decomposing granite rocks, of which the mountain chiefly consists. The rainfall will vary from 70 to 90 inches, and in the dry months the

28690—Continued.

forests are subject to heavy mist and fog, with the result that the undergrowth never dies and is always very moist. The rains fall in the hot months, October to April, and herein will lie your chief difficulty in establishing the tree in the Northern Hemisphere. In the south of England it is grown with difficulty, as it makes its new growth in the same months as at Mlanje, with the result that it does not ripen off before the advent of frosts. At elevations of 3,000 feet in Nyasaland, where the conditions of climate are more xerophytic, it makes a nice ornamental tree, but it begins to die out suddenly after 10 or 12 years. It seems to thrive best in its native habitat when it is slightly intermixed with other leaf-shedding trees and evergreens, typical of mountain forests, as the decaying foliage, etc., helps to form a better layer of humus." (*E. W. Davy, acting chief forest officer, Agricultural and Forestry Department, Zomba, Nyasaland Protectorate, Africa.*)

28691 to 28703. MANGIFERA INDICA L.**Mango.**

From Sheharunpur, India. Purchased from Mr. A. C. Hartless, superintendent, Government Botanic Gardens. Received August 23, 1910.

Seeds of the following:

| | |
|---------------------------------|--|
| 28691. <i>Sanduria.</i> | 28698. <i>Sharbati</i> (brown). |
| 28692. <i>Singapuri.</i> | 28699. <i>Bulbulchasm.</i> |
| 28693. <i>Gopalbhog.</i> | 28700. <i>Calcutta Amin.</i> |
| 28694. <i>Ennurea.</i> | 28701. <i>Hathijhal.</i> |
| 28695. <i>Faizan.</i> | 28702. <i>Chickna.</i> |
| 28696. <i>Tamancha.</i> | 28703. <i>Faquirmala.</i> |
| 28697. <i>Sunahra.</i> | |

28704. ROLLINIA sp.

From Port Louis, Mauritius. Presented by Mr. G. Regnard. Received August 26, 1910.

"Tree 30 feet; leaves 7 inches long; fruit heart shaped, with prominent eyes of a yellowish color when ripe; edible." (*Regnard.*)

28705 to 28707. SOLANUM spp.**Wild potato.**

From Marseille, France. Presented by Prof. Edouard Heckel, director, Botanic Gardens. Received August 29, 1910.

Tubers of the following:

| | |
|--|---------------------------------|
| 28705 and 28706. SOLANUM MAGLIA Schlecht. | |
| 28705. White and violet. | 28706. Fifth generation. |
| 28707. SOLANUM COMMERSONII DUN. | |
| Half wild. | |

28708 to 28710.**Willow.**

From Limavida, via Molina, Chile. Presented by Mr. José D. Husbands. Received August 30, 1910.

Cuttings of the following:

28708. SALIX VITELLINA L.

"(H. No. 609.) *Yellow Mimbre.* An industrial plant of value, introduced into Chile from Europe by the Spaniards. Grows in waste spots along the edge of canals, creeks, ravines, etc. It is used to make extra strong baskets for holding fruit, potatoes, or corn and for general farm and factory uses; also to tie fences, thatches, etc." (*Husbands.*)

28708 to 28710—Continued.**28709. SALIX HUMBOLDTIANA Willd.**

“(H. No. 611.) *Sauce*. A Chilean willow that grows wild, principally in the sands of the river-bottom lands. Its greatest use is for live fence posts in wet or water-covered lands. Cuttings when planted take root quickly and grow very rapidly. Its form varies and it is not a uniform growth like ‘castilla’ or the weeping varieties. The bark is used in medicine as an astringent, febrifuge, etc., and is a valuable remedy; it also gives a white crystallized substance called ‘salicina,’ used in feveræ as quinine.” (*Husbands.*)

28710. SALIX HUMBOLDTIANA Willd.

“(H. No. 610.) Variety *fastigiata*. The Chilean castilla. These trees grow perfectly straight and attain a great height. All the branches grow up close to the trunk, like a well-trimmed *Populus*. I have seen these trees growing in the worst arid clays, perfectly dry.” (*Husbands.*)

28711. GOSSYPIUM sp.**Cotton.**

From Manly, near Brisbane, Queensland, Australia. Presented by Mr. Daniel Jones. Received August 30, 1910.

“Seed of a hybrid, naturally crossed, found in a field; it is of good quality and a good bearer. So far we are not sure whether it will maintain its present standard, but we are experimenting with it. This sample is from a 3-year-old shrub. We hope to fix a type by breeding. Frequently 1 to 2 pounds of cotton are obtained from a shrub of this variety, and in one instance a 2-year-old plant gave us 4 pounds; this is abnormal, however. Mascote (tree cotton) types frequently give up to 6 pounds per shrub.” (*Jones.*)

28712. MORAEA BICOLOR (Lindl.) Steud.

From Glasnevin, Dublin, Ireland. Presented by Mr. F. W. Moore, M. A., director, Royal Botanic Gardens. Received August 29, 1910.

“A South African flowering bulb having a flower 2 inches across, yellow, with beautiful brown spots on the outer segments; style crests yellow.” (*Extract from Bailey, Cyclopedia of American Horticulture.*)

Distribution.—The coast region of Cape Colony between the Olifant’s and Kei rivers.

28713. BERBERIS FREMONTII Torrey.**Barberry.**

From Tucson, Ariz. Presented by Mr. J. J. Thornber, botanist, University of Arizona. Received August 29, 1910.

“Native barberry from northern Arizona. A very drought-resistant species, and promising as an ornamental.” (*Thornber.*)

See No. 12242 for previous introduction.

Distribution.—Slopes of canyons in western Texas, New Mexico, Arizona, and southern California.

28714. ANONA CHERIMOLA Miller.**Cherimoya.**

From Lima, Peru. Presented by the director of the National School of Agriculture and Veterinary Surgery, through Mr. Edw. J. Habick. Received through Rev. V. M. McCombs, Callao, Peru, August 30, 1910.

28715 to 28730.

From Durban, Natal, South Africa. Presented by Prof. J. Medley Wood, director, Botanic Gardens. Received July 25, 1910.

Seeds of the following trees and evergreen shrubs:

28715. *ASSONIA SPECTABILIS* (Bojer) Kuntze.

Distribution.—In the Mozambique district of East Africa, and in Madagascar and Mauritius.

28716. *BAUHINIA GALPINI* N. E. Brown.

Distribution.—Along the coast of southeastern Africa, in the Makua district of Mozambique, and in the vicinity of Barberton in the Transvaal.

28717. *BAUHINIA PETERSIANA* Bolle.

Distribution.—The vicinity of Senna in Zambesiland, at the foot of Mount Moramballa and in the Manganya Hills in the Mozambique district of tropical Africa.

28718. *BAUHINIA PICTA* (H. B. K.) DC.

Distribution.—The valley of the Magdalena River, in the northern part of Bolivia.

28719. *BOSCIA UNDULATA* Thunb.

Distribution.—In the primitive woods in the vicinity of Uitenhage and district of George in Cape Colony; also in the island of Mauritius.

28720. *BRUNSFELSIA AMERICANA* L.

28721. *CALPURNIA AUREA* (Lam.) Benth.

Distribution.—In Abyssinia, the highlands of Huilla and Golungo Alto in Lower Guinea, and in the vicinity of Durban in Natal.

28722. *CARISSA GRANDIFLORA* (E. Mey.) DC.

See Nos. 11734 and 13239 for previous introductions.

28723. *DOYYALIS CAFFRA* (Hook. and Harv.) Warb.

Distribution.—The eastern districts of Cape Colony and in Kafirland, South Africa.

See No. 3724 for description.

28724. *DRACAENA RUMPHII* (Hook.) Regel.

Distribution.—In woods along the eastern coast of Cape Colony, from near Uitenhage northward to Pondoland.

28725. *INDIGOFERA* sp.

28726. *MIMOSA RUBICAULIS* Lam.

Distribution.—Afghanistan and India, rising to an elevation of 5,000 feet in the western Himalayas.

28727. *MORAEA IRIDIOIDES* L.

See No. 13732 for previous introduction.

Distribution.—Tropical and South Africa, extending from the valley of the River Umba in German East Africa and from British Central Africa southward to Cape Colony.

28728. *TECOMA BERTEROI* DC.

Distribution.—On the island of Haiti in the West Indies.

28715 to 28730—Continued.**28729.** OPHIOBOSTRYX VOLUBILIS (Harvey) Skeels.*(Bowiea volubilis* Harvey; Hooker, Botanical Magazine, vol. 93, pl. 5619. 1867.)

The original generic name given this curious liliaceous plant is invalid since it had been used by Haworth 43 years earlier (Philosophical Magazine, vol. 64, p. 299, 1824) for another proposed genus belonging to the same family. No other name has been applied to the later genus *Bowiea*, and *Ophiobostryx* is therefore proposed, in allusion to the leafless asparaguslike branches suggesting snaky locks, such as supplanted hair on the head of the monster Medusa, according to classical mythology. The genus has only one species, *O. volubilis*.

Ophiobostryx volubilis was first sent to the Royal Gardens, Kew, by Henry Hutto, of Grahamstown, South Africa, and has since been found at Katberg in the Stockenström division of the coast region, in the Orange River Colony and Transvaal, in the Kalahari region, and near Transkei, Kokstad, and Durban, in the eastern part of Cape Colony.

28730. MONDIA WHITEII (Hook. f.) Skeels.*(Chlorocodon whiteii* Hook. f., Botanical Magazine, pl. 5898, 1871.)

The generic name *Chlorocodon*, "in allusion to the bell-like green flowers," was applied to this plant in 1871 by Sir Joseph Hooker (Botanical Magazine, vol. 97, pl. 5898), who was doubtless unaware that the name had been used by Fourreau in 1869 (Annales de la Société Linnéenne de Lyon, n. s., vol. 17, p. 113) for a proposed genus of ericaceous plants. No other name appears to have been used for the later genus known as *Chlorocodon*, and since a new name is necessitated *Mondia* is proposed, this being an adaptation of the native name "Mondi," or "Mundi," applied to this plant.

Mondia whiteii was originally described from Fundisweni, Natal, but has since been collected at Yaunde in Kamerun; Bumbo, Pungo Ndongo, and other places in Angola; also at Karagwe and Bukoba in German East Africa, and in Nyasaland.

28731 and 28732. SOLANUM MAGLIA Schlecht. Wild potato.

From Marseille, France. Presented by Dr. Edouard Heckel, director, Botanic Garden. Received September 1, 1910.

28731. Fourth generation, violet.**28732.** Fourth generation, violet.*Distribution.*—See No. 28705.**28733 to 28738.**

From Fort Hall, Nairobi, British East Africa. Presented by Mr. J. McClellan, Provincial Commission. Received July 29, 1910.

Seeds of the following:

28733. ANDROPOGON SORGHUM (L.) Brot. **Sorghum.**

"This lot represents a mixture of two of the East African sorghum types, probably durras, one with white seeds and one with red. Such mixtures are commonly received from central East Africa and from Abyssinia, but the varieties have always proved too late to mature in this country." (*Carleton R. Ball.*)

28734. CAJAN INDICUM Spreng.

28733 to 28738—Continued.

28735. CHAETOCLOA ITALICA (L.) Scribn.
 28736. DOLICHOS LABLAB L. Bonavist bean.
 28737. ELEUSINE CORACANA (L.) Gaertn. Ragi millet.
 28738. PENNISETUM AMERICANUM (L.) Schum. Pearl millet.

28739. CERATONIA SILIQUA L. Carob.

From the estate of the Comte de Puerto Hormosa, at Pizarra, near Malaga, Spain.
 Received through Mr. R. S. Woglum, September 6, 1910.

"These cuttings were taken from the best carob tree I saw in Spain. A magnificent tree, fully 30 feet high and noted for being very prolific in fruit." (Woglum.)

28740 to 28744.

From Mauritius. Presented by Mr. G. Regnard, Port Louis. Received September 2, 1910.

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

28740. PECTINEA PAUCIFLORA (Thouars) Skeels.
 (*Erythrospermum pauciflorum* Thouars, Veg. Iles Austr. Afr., p. 67, pl. 21, fig. 1, 1806.)
 (*Erythrospermum mauritianum* Baker, Flora of Mauritius and Seychelles, p. 10, 1877.)

The genus *Pectinea* was published by Gaertner in 1791 (*De Fructibus et Seminibus Plantarum*, vol. 2, p. 136, pl. 111, fig. 3), with *P. zeylanica* as the only species, while the name *Erythrospermum*, often applied to this genus, appears to have been used no earlier than 1792 or 1793 on a plate published by Lamarck (*Encyclopédie Méthodique*, pl. 274). No description accompanied this plate and the text explaining it was not published until even a later date. The first publication of a description of the genus under the name *Erythrospermum* appears to have been effected in 1806 by Thouars (*Histoire des Végétaux Receuillis dans les Isles Australes d'Afrique*, p. 65), who states that Lamarck's figure only had appeared. There is apparently no reason, therefore, why Post and Kuntze, *Lexicon Generum Phanerogamarum*, should not be followed in the restoration of Gaertner's name, *Pectinea*, published 15 years earlier than *Erythrospermum*.

Pectinea pauciflora was originally described by Thouars from Mauritius and is still unknown elsewhere in an indigenous state.

"*Bois Manioc* or *Bois Cochon*. Small tree. Fruit globose, hard, $\frac{1}{4}$ to 1 inch thick. Found in mountain woods in Mauritius."

28741. EUGENIA GLOMERATA Lam.

"*Bois de Pomme*. Berry as large as a pea. Frequent in mountain woods in Mauritius; also in Madagascar."

28742. (Undetermined.)

"*Bois Maigre*. *Bois sans écorce*. *Bois Bigaigon*. Berry $\frac{1}{2}$ inch long. Found in Mauritius in dense woods; also in Reunion."

28743. MERIANA sp.?

"From Pouce Mountain, Mauritius. Pink color."

28744. VOANDZELA SUBTERRANEA (L.) Thouars. Woandsu.

"Bambara ground nuts. Nuts are eaten boiled and are very rich and nourishing. From Africa."

See No. 23453 for further description.

28745. PRUNUS sp. "Plumcot."

From Harput, Turkey. Presented by Mr. William W. Masterson, American consul. Received August 26, 1910.

"An unusually fine-tasting fruit that might be called a 'plumcot.' It was about the size of a greengage plum, of a light-yellow color, and had a decided apricot flavor, indicating that it was a hybrid between the plum and the apricot." (*Masterson.*)

28746. SOLANUM COMMERSONII Dun. Wild potato.

From Montevideo, Uruguay. Presented by Mr. Fred W. Goding, American consul. Received September 6, 1910.

Tubers.

28747. SOLANUM sp. Wild potato.

From Asuncion, Paraguay. Presented by Mr. T. R. Gwynn. Received September 6, 1910.

"The wild potato is here in profusion. The plant and leaf are almost exactly like the cultivated varieties, but the roots are very different. It puts forth a long underground stem to the end of which the potatoes are attached. These are sometimes as large as a walnut, hull and all, though generally much smaller." (*Gwynn.*)

28748 to 28751. MANGIFERA INDICA L. Mango.

From Poona, Bombay, India. Purchased from the Empress Botanical Gardens. Received August 31, 1910.

Seeds of the following:

- | | |
|---------------------------------|----------------------------------|
| 28748. <i>Badsha.</i> | 28750. <i>Gudbeli.</i> |
| 28749. <i>Fernandez.</i> | 28751. <i>P'ote (?)</i> . |

28752 to 28760. MANGIFERA INDICA L. Mango.

From Seharunpur, India. Purchased from the Government Botanic Gardens. Received August 31, 1910.

Seeds of the following:

- | | |
|--------------------------------------|------------------------------------|
| 28752. <i>Gola.</i> | 28757. <i>Fajri (long).</i> |
| 28753. <i>Khaparia.</i> | 28758. <i>Lamba Bhadra.</i> |
| 28754. <i>Langra.</i> | 28759. <i>Malda.</i> |
| 28755. <i>Bombay (green).</i> | 28760. <i>Najibabadi.</i> |
| 28756. <i>Fajri (round).</i> | |

28761 and 28762.

From Palestine. Purchased from Mr. Aaron Aaronsohn, director, Jewish Agricultural Experiment Station, Haifa, Palestine. Received August 22, 1910.

Seeds of the following:

- | | |
|--|----------------------|
| 28761. <i>VICIA ERVILIA (L.) Willd.</i> | Bitter vetch. |
| 28762. <i>LATHYRUS SATIVUS L.</i> | |

"I think that *Lathyrus sativus* will make a quicker growth in the California orange orchards than *Vicia ervilia*, and for this reason I believe it will be better adapted as a green manure. Furthermore, I believe it will make a heavier growth and give a bigger yield than *Vicia ervilia*; at least, this is its behavior in Palestine, where I have had experience with both species. In my opinion *Lathyrus sativus* is in no way inferior to the fenugreek, which has been used so successfully in the orange orchards in Cali-

28761 and 28762—Continued.

fornia. There might be a possible advantage in trying *L. sativus* in place of fenugreek, inasmuch as the seed is cheaper." (*Aaronsohn.*)

28763. ANONA MONTANA MacFayden.

From Mayaguez, Porto Rico. Presented by Mr. W. E. Hess, assistant horticulturist, Agricultural Experiment Station, through Mr. P. J. Wester. Received August 23, 1910.

"A small tree indigenous to the West Indies; the fruit is subglobose, muricate, and the flesh dry and unedible.

"Introduced for trial as a stock for the cultivated anonas." (*Wester.*)

28764. ZIZIPHUS JUJUBA Miller.

From Las Cruces, N. Mex. Presented by Mr. David Griffiths. Received September 8, 1910.

"The trees from which these seeds were obtained were loaded with fruit. There are only two alive; one is 12 feet high. The trees are probably about 12 to 15 years old, but have had very poor conditions and are badly crowded." (*Griffiths.*)

28765. PHASEOLUS MAX L.

From Port of Spain, Trinidad. Presented by the assistant secretary of the Board of Agriculture at the request of Mr. R. B. Dickson. Received August 23, 1910.

28766. HELYGIA PADDISONI (Baker) Skeels.

(*Parsonsia paddisoni* R. T. Baker, Proc. Linn. Soc. N. S. Wales, vol. 24, p. 385, 1899.)

The original use of the generic name *Parsonsia* was by Patrick Brown in 1756 (*Natural History of Jamaica*, p. 199, pl. 21, fig. 2), for a species later published by Linnæus as *Lythrum parsonsia*, a plant of the family Lythraceæ. The genus *Parsonsia* as proposed by Brown was recognized in 1763 by Adanson (*Familles des Plantes*, vol. 2, p. 234), whose description and citation completed the technical publication of the name. *Parsonsia* is therefore the valid name for *Cuphea*, the genus to which *Lythrum parsonsia* was later referred. This original use of *Parsonsia* by Patrick Brown and Adanson invalidates its use by Robert Brown in 1809 (*Memoirs Wernerian Natural History Society*, vol. 1, p. 64) for the apocynaceous genus to which the species given above belongs. Several other generic names have been proposed for various species of this genus, and the earliest of them, *Helygia*, published by Blume in 1826 (*Bijdragen tot de flora van Nederlandsch Indië*, vol. 2, p. 1043) with *H. javanica* as the type, is recognized as the valid name for the group, and the species under consideration is accordingly transferred to it.

Helygia paddisoni was originally described from New Angledool, New South Wales, and is not known to occur elsewhere.

From Sydney, New South Wales, Australia. Presented by the curator, Department of Public Instruction, Technical Education Branch, Technological Museum. Received August 30, 1910.

"A glabrous woody climber. Leaves opposite, glabrous on both sides. The stem is about 1 inch in diameter a foot or so above the ground, the bark being of a quite corky nature.

"Stock are very fond of the leaves, so that this plant should be ranked as a fodder. My attention was first drawn to this plant by Mr. A. Paddison, of New Angledool, who

28766—Continued.

sent for identification a large tuber or 'yam' weighing about 10 pounds, stating that similar 'yams' were eaten both by settlers and aborigines. The interior is composed of a whitish substance, the chemical analysis of which shows only 4½ per cent of carbonaceous principles. It tastes very much like a turnip, both in the raw and cooked condition. The color and consistency of the largest specimens resemble those of the common mangel-wurzel." (*R. T. Baker.*)

"A vine generally found growing at the foot of and twisting itself around some small tree, and that tree in nine cases out of ten a 'wilga' (*Geijera parviflora* Lindl.). The top 'yam' of the plant we dug was 4 inches from the surface, and the deepest that we could find was 21 inches from the surface. We dug up all that we could find, carried them home, and weighed each one separately, 29 'yams' in all. The total weight was 101¼ pounds; the heaviest one weighed 12¼ pounds." (*A. Paddison.*)

28767 and 28768. MELINIS MINUTIFLORA Beauv. **Molasses grass.**

From Sao Paulo, Brazil. Purchased from Mr. H. M. Lane, Mackenzie College. Received September 3, 1910.

Seeds of the following:

28767. "*Negro Head.*" **28768.** Ordinary variety.

See Nos. 23201 and 23381 for previous introductions.

28770. SOLANUM JAMESII Torr. **Wild potato.**

Collected in the Chiricahua National Forest. Presented by Mr. Arthur H. Zachau, forest supervisor, Portal, Ariz., through the Forest Service. Received September 15, 1910.

28771. SOLANUM sp. **Wild potato.**

From Zacatecas, Mexico. Collected by Mr. F. E. Lloyd. Presented by Dr. J. N. Rose, associate curator, United States National Museum, Washington, D. C. Received September 10, 1910.

(Rose No. 08.219.)

28772 to 28779.

From Chile. Received through Mr. José D. Husbards, Limavida, via Molina, Chile, September 2, 1910.

Seeds of the following; notes by Mr. Husbards:

28772. GEVUINA AVELLANA Molina.

"(H. No. 595.) *Avellano.* These are fresh seed from the South and therefore hardier than those sent heretofore from central Chile (S. P. I. No. 25611)."

28773. DRIMYS WINTERI Forster.

"(H. No. 599.) *Canelo del Sur.*"

Distribution.—Damp slopes of the exposed valleys in the vicinity of the Strait of Magellan in southern Chile.

28774. GERANIUM ROBERTIANUM L.

"(H. No. 601.) *Alfilerillo* single."

28775. ERODIUM sp.

"(H. No. 602.) *Alfilerillo* double."

28776. ARISTOTELIA MACQUI L'Herit.

"(H. No. 603.) White maqui."

See No. 26306 for previous introduction.

28772 to 28779—Continued.**28777.** (Undetermined.)

“(H. No. 605.) A beautiful evergreen lumber tree; name unknown to me.”

28778. *MELICA VIOLACEA* Cav.

“(H. No. 606.) A wild grass from the south of Chile. Is eaten by animals.”

Distribution.—The vicinity of Talcahuano on the coast of central Chile.**28779.** *SANGUISORBA MINOR* Scop.

“(H. No. 607.) A wild grass from the south of Chile. Is eaten by animals.”

See No. 25040 for previous introduction.

28780. *DIOSCOREA* sp.

From Paraguay. Presented by Mr. C. F. Mead, Piropo. Received September 17, 1910.

“This will stand the same amount of frost as tomato vines. The tubers above ground are very similar to potatoes, but the color is dark, from yellow to red. There are also white tubers below the ground, the same as regular potatoes, but these are very small. It may be possible by selection or crossing to induce the plant to bear marketable potatoes, both below and above ground. It is not as heavy a cropper as the regular potato, and the necessity for a trellis upon which it can climb makes its economic value doubtful. It should be planted in the same manner as the potato. Will probably thrive in regions favored by sugar cane and oranges.” (*Mead.*)

28781. *MELOCANNA BACCIFERA* (Roxb.) Skeels. **Muli bamboo.**(*Bambusa baccifera* Roxb., Pl. Corom., vol. 3, p. 37, pl. 243, 1819.)(*Melocanna bambusoides* Trin., in Spreng., Neue Entdeckungen im Ganzen Umfang der Pflanzenkunde, vol. 2, p. 43, 1821.)

The genus *Melocanna* was established by Trinius in 1821 (Spreng., Neue Entdeckungen im Ganzen Umfang der Pflanzenkunde, vol. 2, p. 43), based on the single species *Bambusa baccifera* Roxburgh. Unfortunately the original specific name was changed and in consequence the species has since been known as *Melocanna bambusoides* Trin. The earlier specific name of Roxburgh is here restored.

The species was described by Roxburgh from the Chittagong Mountains in the southwestern part of Upper Burma, India, where it was called “Payu-tullu,” and it is now known to occur on the Khasi and Garrow Hills in Assam, and in Arakan and Tenasserim, in India.

From Sibpur, Calcutta, India. Presented by Maj. A. T. Gage, superintendent, Royal Botanic Gardens. Received September 19, 1910.

See No. 21347 for description.

28782. *SECALE CEREALE* L.**Rye.**

From Schlanstedt, Saxony, Germany. Purchased from Mr. W. Rimpau. Received September 19, 1910.

“*Old-breeding.*”**28783.** *ARGANIA SPINOSA* (L.) Skeels.**Argan.**(*Sideroxylon spinosum* L., Sp. Pl., vol. 1, p. 193, 1753.)(*Argania sideroxylum* Roem. and Schult., Syst., vol. 4, p. 502, 1819.)

The genus *Argania* was established by Roemer and Schultes in 1819 (Linn. Systema Vegetabilium Secundum Classes, Ordines, Genera, Species, vol. 4, p. 502) and contained the single species *Sideroxylon spinosum* L., but in transferring the species to

28783—Continued.

the new genus the specific name was changed and the species has since usually been known as *Argania sideroxyllum* Roem. and Schult. The original specific name is here restored in accordance with the now nearly universal custom.

The name *Sideroxyllum spinosum* as used by Linnæus in the *Species Plantarum* appears to have included two distinct plants, the one under consideration here and that usually recognized as the type, being the one represented by the Plukenet synonym, but not the Malabar plant referred to by the Rheedee citation. The species seems to have been originally described by Linnæus in his *Hortus Cliffortianus* from a garden plant, and he is in error in ascribing India as its habitat. The species is known in an indigenous state only in Morocco.

From Tangier, Morocco. Procured by Mr. R. L. Sprague, American consul, Gibraltar, Spain. Received September 17, 1910.

See No. 3490 for description.

28784. CORCHORUS CAPSULARIS L.**Jute.**

From Shanghai, China. Presented by Mr. Nicholas Tsu. Received September 17, 1910.

See No. 1963 for description.

28785. PIRATINERA UTILIS (H. B. K.) W. F. Wight. Palo-de-vaca.

The "cow tree of South America" was first named *Galactodendrum utile* by Humboldt, Bonpland, and Kunth (*Nova Genera et Species*, vol. 7, p. 163) in 1825. In 1830 David Don (*Sweet, Hortus Britannicus*, ed. 2, p. 462) placed the species in the genus *Brosimum*, giving it the name *B. galactodendron*, which in 1880 was corrected by Karsten (*Deutsche Flora*, p. 498) to *Brosimum utile*. The generic name *Brosimum* was published by Swartz (*Nova Genera et Species Plantarum*, p. 12) in 1788, with two species, *B. alicastrum* and *B. spurium*. In 1775, however, Aublet (*Plantes de la Guiane Française*, vol. 2, p. 888, pl. 340, fig. 1) published the genus *Piratinera* with one species, *P. guianensis*, which is considered to be congeneric with *Brosimum alicastrum* Swartz. The change of name from *Brosimum galactodendron* to *Piratinera utilis* was made by Mr. W. F. Wight in the *Century Dictionary and Cyclopedic* (vol. 12, p. 934, 1909) under "palo," subhead "palo-de-vaca."

From Caracas, Venezuela. Presented by Mr. Antonio Valero Lara. Received September 20, 1910.

"This tree grows here in the wooded mountains and highlands as well as along the seacoast." (*Lara*.)

28786 and 28787. CITRUS spp.

From Buitenzorg, Java. Presented by the director, Department of Agriculture. Received September 22, 1910.

Seeds of the following:

28786. CITRUS AURANTIUM L.

Variety *macrocarpa*.

28787. CITRUS MACRACANTHA Hassk.**28788 to 28793.**

From Beirut, Turkey. Presented by Mr. Alfred E. Day, through Miss Lanice B. Paton, Hartford, Conn. Received September 20, 1910.

28788 to 29793—Continued.

Seeds of the following:

28788. *MEDICAGO HISPIDA DENTICULATA* (Willd.) Urb. **Bur clover.**

28789. *MEDICAGO ORBICULARIS* (L.) All.

28790. *MEDICAGO* sp.

28791. *TRIFOLIUM AGRARIUM* L.

28792. *TRIFOLIUM CLYPEATUM* L.

Distribution.—In the countries along the eastern part of the Mediterranean from Crete to Syria and Palestine.

28793. *TRIFOLIUM SCUTATUM* Boiss.

Distribution.—On the hills in the vicinity of Smyrna, and in Syria and Palestine.

28794. TALAUMA MUTABILIS Blume.

From Buitenzorg, Java. Presented by the director, Department of Agriculture. Received June 3, 1910. Numbered September, 1910.

Variety *splendens*.

Distribution.—Along the banks of the rivers in the interior of the province of Bantam, Java.

28796 and 28797.

From Port Louis, Mauritius. Presented by Mr. G. Regnard. Received September 23, 1910.

Seeds of the following:

28796. *ARTOCARPUS COMMUNIS* Forst.

See No. 26936 for previous introduction.

28797. *MIMUSOPS* sp.

28798. GOSSYPIUM sp.**Wild cotton.**

From Riviere du Rempart, Mauritius. Presented by Mr. G. Regnard, Port Louis, Mauritius. Received September 26, 1910.

See Nos. 28879 and 28880 for note.

28799 and 28800. FERONIA LUCIDA Scheffer.

From Buitenzorg, Java. Presented by the director, Department of Agriculture. Received September 16, 1910.

“This plant is known as *Kawis watoe* in Javanese and *Kawista-batoe* in Malayan. It differs from the wood-apple (*Feronia elephantum*) (S. P. I. No. 25888) in having yellowish petals and anthers instead of reddish as that has; also calyces linear-laciniate instead of ovate-acute as in the latter. Occurs in the province of Rembang, Java.” (*Extract from Scheffer in Natuurk. Tijds. Ned. Ind., vol. 31, p. 19. 1870.*)

28801 to 28809.

From Batum, Caucasus, Russia. Received through Mr. Frank N. Meyer, agricultural explorer, March 31, 1910.

Seeds of the following:

28801. *AMYGDALUS COMMUNIS* L.

Almond.

“A very small almond, but with thin shell and of good flavor. Said to come from Persia.” (*Meyer.*)

28801 to 28809—Continued.

- 28802.** *AMYGDALUS COMMUNIS* L. **Almond.**
 "A large almond with a very hard shell. Said to come from Persia." (*Meyer.*)
- 28803.** *CORYLUS AVELLANA* L. **Hazelnut.**
 "A hazelnut called '*Trepizond.*' A very popular variety and much grown in this section of the Caucasus. Quantities of them are exported to England and America. Selling at 6 and 7 rubles per pood (36 pounds)." (*Meyer.*)
- 28804.** *CORYLUS MAXIMA* Miller. **Filbert.**
 "A small filbert, quantities of which are sold locally." (*Meyer.*)
- 28805.** *CORYLUS MAXIMA* Miller. **Filbert.**
 "A filbert called '*Kerasund.*' Grown quite extensively and exported to England and America. Sells at 8 rubles per pood (36 pounds)." (*Meyer.*)
- 28806.** *ELAEAGNUS ANGUSTIFOLIA* L. **Oleaster.**
 "Sold sparingly as a sweetmeat. Said to come from Turkestan." (*Meyer.*)
- 28807.** *PISTACIA VERA* L. **Pistache.**
 "A very white pistache, of rather poor quality. Said to come from Persia." (*Meyer.*)
- 28808.** *PRUNUS DOMESTICA* L. **Plum.**
 "These plums when dried are used stewed with meats and in soups. Said to come from Persia." (*Meyer.*)
- 28809.** *PRUNUS CERASUS* L. **Cherry.**
 "Said to come from Gori, central Caucasus." (*Meyer.*)

28810. CANARIUM LUZONICUM (Blume) Gray. Pili nut.

From Nueva Caceres, Philippine Islands. Presented by the Hon. P. M. Moir, judge, 8th judicial district, Province of Ambos Camarines. Received September 22, 1910.

"These nuts grow in the southern part of Luzon and nowhere else in the Philippines. The tree is quite large and fairly pretty. The nut is the richest in flavor of any nut I have ever eaten, and all the Americans in the Philippines think it the finest nut grown. When the nuts are roasted, if you touch a lighted match to one it will burn like a lamp, it is so rich in oil. I think you will have to have them planted in Florida, southern Louisiana, or Mississippi, where the climate is warm and damp, as that is the kind of climate we have in the southern part of Luzon, and our rains are very frequent and abundant. The ground should be well drained. The trees are male and female, and it will take five or six years for them to bear nuts." (*Moir.*)

See Nos. 21860 and 23536 for previous introductions.

28811. PSIDIUM GUAJAVA L. Guava.

From Tlacotalpan, Vera Cruz, Mexico. Presented by Mr. Edward Everest. Received September 26, 1910. To be grown in connection with the guava-breeding work.

"An evergreen, arborescent shrub, 10 to 20 feet tall, indigenous to the tropical mainland of America whence it has been introduced to practically all parts of the Tropics. The fruit is round, oblong, or pyriform, the best forms attaining a weight of 8 to 10 ounces. The surface is smooth, yellowish, and the flesh, in which the numerous seeds are embedded, whitish, yellowish, or reddish and usually very aromatic. The quality and flavor vary exceedingly, certain types being flat and insipid, others very sweet, and still others more or less acid. The sweet and subacid sorts may be eaten

28811—Continued.

with cream as a dessert fruit, with sometimes sugar added. From the acid fruits a superior jelly is manufactured. By-products obtained in its manufacture are guava marmalade and guava cheese.

“The guava succeeds practically on all classes of land, even poorly drained land, if it is properly cared for and fertilized. Where the temperature during the winter frequently drops below 26° F., its cultivation ceases to be profitable.

“The seed should be sown thinly in flats and the young plants pricked off about 2 to 3 inches apart; keep dry to prevent damping off. When the plants are 6 inches tall they may be transplanted to the nursery, and they are ready for budding when the stems are hardly half an inch in diameter. If the operation is performed during the winter or spring the plants may readily be budded, using the method of shield budding. To obtain the best results, well-ripened budwood from the current year’s growth should be used and the buds tied with grafting tape. With good care the plants are ready for planting in the field nine months after insertion of the bud. Twenty to twenty-five feet apart is a good distance at which to plant the guava.” (*P. J. Wester.*)

Seeds.

28812. *FURCRAEA* sp.

From Nice, France. Presented by Dr. A. Robertson-Proschowsky. Received September 29, 1910.

Bulbils. For description see No. 29320.

28813 to 28815.

From the Gaucin district, Spain. Procured by Mr. R. L. Sprague, American consul, Gibraltar, Spain. Received September 29, 1910.

Seeds of the following:

28813 and 28814. *LATHYRUS SATIVUS* L.

28813. Large seeded. **28814.** Small seeded.

28815. *VICIA ERVILIA* (L.) Willd.

Bitter vetch.

28816 to 28822. *MANGIFERA INDICA* L.

Mango.

From Lal-Bagh, Bangalore, India. Procured from Mr. G. H. Krumbiegel, economic botanist with the Government of Mysore, Government Botanic Gardens. Received September 26, 1910.

Seeds of the following; notes by Mr. Krumbiegel:

28816. “*Amini.* Weight 12 to 15 ounces; size 7 by 3½ inches; color yellowish white with a light-red shade; shape long, with thin seed. Skin thin; pulp yellow and juicy; taste sweet.”

28817. “*Badami.* Weight 10 to 12 ounces; size 4 by 3½ inches; skin greenish yellow with reddish-orange shoulder; pulp fine, dark-cream color, of the finest piquant and delicate flavor. The keeping qualities of this fruit are excellent, and it is generally admitted to be the best of the mangos.”

28818. “*Mulgoa.* Weight 16 to 25 ounces; size 7 by 5 inches; color yellow and green; pulp pale yellow; fiberless; very sweet; thin stone and thick skin. One of the latest varieties. Keeps for a long time; a good variety for shipping; one of the best.”

28819. “*Puttu.* Weight 12 to 18 ounces; size 5 by 4½ inches; color dark green; thick skin; orange-white pulp; stone very small as compared with the size; taste not very sweet; juicy and fiberless.”

28816 to 28822—Continued.

28820. "*Raspuri*. Weight 12 to 15 ounces; size 6 by 4½ inches; color greenish yellow with dark spots and red shade; pulp yellow, fiberless; thin skin; taste good; flavor pleasant. Profusely fruiting. One of the earliest varieties."

28821. "*Romani*. Weight 10 to 14 ounces; size 4 by 3½ inches; skin very thin; pulp pale yellow; color varying from pale yellow with reddish spots to golden yellow; taste sweet; stone very small. Fruits on trees look like apples from a distance. A long-keeping variety, quite fit for long journeys."

28822. "*Sundersha*. Weight 15 to 20 ounces; size 8 by 4½ inches; color yellowish red; pulp white; stone thin and flat; skin thick; unripe ones are also sweet; shape long, with a pointed curve like that of a parrot's bill. A late variety."

28823 and 28824.

From Oregon. Presented by Mr. George R. Schoch, R. R. No. 1, Forest Grove, Oreg. Received August 26, 1910.

Seeds of the following:

28823. *LATHYRUS POLYPHYLLUS* Nutt.

From northwestern Oregon, altitude 800 feet. Crop of 1910.

"A perennial species with violet-colored flowers, abundant in the open coniferous woods throughout western Washington and western Oregon. The plants appear in early spring and become fully mature and dry in July. Stock are not fond of the plant when green, but eat the hay readily." (*C. V. Piper*.)

28824. *VICIA GIGANTEA* Hook.

Giant vetch.

From northwestern Oregon, latitude 45° 32', longitude 46° 8', altitude 1,000 feet. Crop of 1910.

"A perennial vetch with ochroleucous flowers, growing along the Pacific coast from Sitka to middle California. It grows to a great size, the vines being often 8 to 10 feet long and producing a great abundance of plants and pods. The seeds, however, are ordinarily destroyed by insects. Stock ordinarily will not eat the plants while green and are not particularly fond of the hay. The entire plant turns black on drying." (*C. V. Piper*.)

28825. CATHA EDULIS Forsk.

Khat.

From Aden, Arabia. Procured by Mr. Charles K. Moser, American consul. Received August 24, 1910.

"Khat is the Arabic name for *Catha edulis*, a shrub grown commercially in only two localities in the world, the Yemen and near Harrar in Abyssinia. The word is said to be derived from another Arabic word, kút, meaning food or sustenance, and refers to the most salient property of the plant, that of sustaining one who eats of its leaves under the most extraordinary bodily labor. The Arabs say that life and hard work would be unendurable in their country without khat.

"The shrub is found only in certain localities in the mountains from 3,500 to 5,000 feet above sea level. It will not grow, even in highlands, near salt water, or in any soil containing sand. The height of a full-grown plant varies from 5 to 12 feet, apparently more according to the nature of the climate than to the quality of the soil, as has been demonstrated by the Arabs. It appears that its chief requirements for cultivation are a fair amount of water, a cool but not cold climate, and a soil composed largely of disintegrated stone, well manured with sheep and goat droppings. A peculiarity of the plant is that it will not thrive in soil manured with camel or cattle dung.

28825—Continued.

“In appearance khat is a dark-green shrub of thick foliage, its elliptical leaves varying greatly in size, color, and texture in individual plants. In general the mature leaves will average from $1\frac{1}{4}$ to $1\frac{5}{8}$ inches in length, and from three-eighths to five-eighths of an inch in width, according to the locality in which they are grown.

“Khat is grown altogether from cuttings. Cultivation of it is simple and original. The field is first flooded until the soil has absorbed all the water it can hold; care is taken that the water brings in no sand with it. It is then well mixed with sheep and goat manure and left to ‘ripen’ for a few days. When the ground is sufficiently dry and ‘ripe’ they set out the cuttings in shallow holes from 4 to 6 feet apart, with space enough between the rows for pickers to pass easily (usually $2\frac{1}{2}$ to 3 feet). The cuttings grow rapidly and spread widely. They are given shallow hoeing for the first year, by which time the shrub is about 2 feet high, with a spread of perhaps 18 inches. Soft earth is then piled up about the base to conserve all moisture, and the leaves become more numerous. Though it is customary to begin picking the leaves when the plant is a year old, this may not always occur. The Arab follows a different rule. When he sees the leaves being eaten by the birds, he knows they are ripe and of good flavor for the market.

“The khat caravans arrive daily at Aden about 11 a. m. The British Government provides rooms for the storage and sale of the shrub, which later is taxed according to weight. On every 25 pounds of the high-grade kinds the tax is \$0.3244; on the low-grade product (which is used by the common people) the tax is \$0.3244 for every 20 pounds. The only reason advanced for the higher tax being placed on the cheaper khat is that its use is more common and therefore the more to be discouraged.

“Khat is used universally throughout all Arabia. There is no coolie too poor to buy his daily portion of this plant. It is the great fact, next to their religion, in the everyday life of the people. The expense to the native is out of all intelligible proportion to his income, and can only be explained as the Arabs explain it, to wit: that without khat they would not consider life worth living, nor would they ever achieve the energy to do any sustained or arduous work.

“The Arab of Aden who earns 30 cents per day spends at least half of it for khat. In Hodeida the man earning the same wage will average 10 cents per day for the support of his family and expend the other 20 cents wholly on khat. Among the better class the proportion of expenditure is not so high, but it is at least 25 per cent of their incomes, and some of the wealthy will spend several dollars per day for their favorite passion. The fresh leaves and tender stems are always chewed, never brewed or made into any sort of beverage. Nothing is known in Arabia of the chemical constituents of khat.” (*Moser.*)

See No. 24714 for previous introduction.

28826. PASSIFLORA EDULIS Sims.**Passion flower.**

From Melbourne, Australia. Presented by Mrs. Alexander Graham Bell, Washington, D. C. Received September 29, 1910.

“Passion fruit will grow in the States; it prefers a loose sandy-loam soil, but must be high enough up to be out of the reach of frosts, and near the sea for preference, within, say, 10 miles. It requires plenty of manure and should be grown on a wire trellis, that is, an ordinary fence with posts 15 feet apart. In place of having the wire as in the fence, nail a crosspiece about 18 inches long on the top of each post and run two wires along this crosspiece. Train the vine up by the main stem until the wires are reached, then run an arm out each side along the wires. The lateral growths will hang down like a curtain and the fruit bears on this lateral growth. Plant vines 15 feet apart, one between each two posts; train vines up a stick until they reach the wire. Rows to be 15 feet apart. The best manure for them is composed of 7 hundredweight

28826—Continued.

of bone dust, 5 hundredweight of superphosphate, and 3 hundredweight of potash, making 15 hundredweight to an acre. If the winter is fairly warm a winter crop can be grown by cutting off the lateral growth a foot below the wires in the late spring or early summer and then manuring, but if the winter is not mild I would simply go in for the natural summer crop—prune as above late in winter and manure early in spring. The vines are raised in seed boxes from the seed. Simply wash the pulp out of the fruit and dry the seed; plant out when about 6 inches high. Do not allow any lateral growth until the wires are reached. We plant in Australia about the end of September or the beginning of October. Shelter young plants until they get started. Some fruit will be obtained the first season and a full crop the second season. The vines are about done in four years. The passion flower does wonderfully well in the sandstone country around Sydney, yet it grows almost wild in the semitropical climate of the northern rivers of New South Wales." (*James Moody, Toomuc Valley Orchards, Melbourne, Australia.*)

See Nos. 1906 and 12899 for description.

28827 and 28828.

From Puerto de Orotava, Teneriffe, Canary Islands. Presented by Dr. George V. Perez. Received September 16, 1910.

Seeds of the following:

28827. CYTISUS PROLIFERUS L.**Tagasaste.**

Variety *palmensis*. "This is a splendid forage plant and very drought resisting. The failures with it are due to ignorance of farmers and to not cutting back the plant. Cattle and horses have to learn to eat it; they relish it ever after. In the island of Palma (Canary Islands), where it is native from time immemorial, it has been used with the greatest success possible. It is quite as nutritious as lucern and does not want irrigation. I know of nothing that will fatten cattle and horses so much. In Palma there are large districts planted with it where cattle and even pigs eat it at liberty. Chaffed and mixed with straw it is excellent. The seed must be scalded in boiling water before sowing." (*Perez.*)

28828. ECHIUM SIMPLEX DC.

"The so-called *Pride of Teneriffe*, a lovely, showy, native plant, remarkable for its single tall spike of white flowers reaching from 2 to 3 yards high. From what I have seen and observed I have come to the conclusion that besides being a very ornamental plant it could be turned into a most valuable fodder, beating the prickly comfrey, over which it has the advantage, like all plants of the Canary flora, of being drought resistant. The idea is entirely my own after watching in one of my properties how greedily my cows eat it." (*Perez.*)

28829 to 28832.

From Togo, Africa. Presented by Mr. G. H. Pape, through Mr. A. B. Conner, scientific assistant, Chillicothe, Tex. Received September 29, 1910.

Seeds of the following:

28829. VIGNA UNGUICULATA (L.) Walp.**Cowpea.**

Tan.

28830 to 28832. VOANDZEA SUBTERRANEA (L.) Thouars.**Woandsu.**

28833 to 28874.

From Ventimiglia, Italy. Presented by Mr. Alwin Berger, La Mortola. Received September 6, 1910.

Seeds of the following:

28833. ACER OBLONGUM Wall. **Maple.**

“Tree up to 50 feet in height, with glabrous, entire ovate-lanceolate leaves, coriaceous and glaucous beneath.” (*Bailey.*)

See No. 8659 for previous introduction.

Distribution.—Slopes of the temperate Himalayas at an altitude of 2,000 to 5,000 feet, extending from Kashmir to Sikkim in India, and in the vicinity of Hongkong, China, and in the Nansei Islands.

28834. ALTHAEA SULPHUREA Boiss. and Hohen.

Distribution.—Lower slopes of the mountains in northern Persia, Afghanistan, and Sungaria.

28835. ASPARAGUS ACUTIFOLIUS L.

See No. 17981 for description.

Distribution.—The countries bordering on the Mediterranean Sea from Portugal and Spain through Italy and Greece to Syria, and in northern Africa.

28836. BALLOTA PSEUDODICTAMNUS (L.) Benth.

“A white-woolly, herbaceous plant, wool densely floccose, leaves orbiculate, entire or obscurely crenate, base broadly cordate, petiole short, corolla white spotted with red, upper lip cut at the apex, bearded within.” (*Willkomm and Lange, Prodromus Florae Hispanicae.*)

Distribution.—In waste places and dry fields in Greece and the island of Crete.

28837. BALLOTA HISPANICA (L.) Benth.

“An herbaceous plant, stem white woolly, leaves broadly ovate, obtuse, velvety above, floccosely woolly below, corolla whitish.” (*Willkomm and Lange, Prodromus Florae Hispanicae.*)

Distribution.—Dry and stony places in Spain, Italy, Sicily, and Dalmatia.

28838. BENINCASA CERIFERA Sav.(?)

28839. BERBERIS NAPAULENSIS (DC.) Spreng. **Barberry.**

“The fruit of this evergreen species is edible. The plant is hardy to latitude 59° 55' in Norway (Schuebeler).” (*Von Mueller.*)

See No. 8853 for previous introduction.

Distribution.—On the lower slopes of the Himalayas at an elevation of 4,000 to 8,000 feet from Gurhwal to Bhutan in northern India, and on the Khasi Hills in southern India.

28840. BUDDLEIA BRASILIENSIS Jacq.

“An evergreen tender shrub with orange flowers.” (*Johnson's Gardeners' Dictionary.*)

A shrub with ovate leaves united around the square stem, native of Brazil.

28841. BUDDLEIA GLOBOSA Hope.

See No. 1576 for description.

28833 to 28874—Continued.

28842. *CELTIS OCCIDENTALIS* L.

Hackberry tree.

"Height reaching to 80 feet. Will grow tolerably well even on the poorest soil. (*B. E. Fernow.*) Hardy as far north as Christiania. Wood rather soft, difficult to split." (*Von Mueller.*)

28843. *CISTUS ALBIDUS* × *CRISPUS*.28844. *CLEMATIS INTEGRIFOLIA* L.

"Herbaceous, erect, becoming 2 feet high; leaves rather broad; flowers solitary, blue. Blooms from June to August." (*Bailey.*)

Distribution.—Central Europe and Asia, extending from Austria and Hungary eastward through central Russia and Siberia.

28845. *CRATAEGUS CRENULATA* Roxb.

"Shrub with branchlets and petioles rusty pubescent, at length glabrous; leaves oblong to oblanceolate, leathery, bright green and glossy above; corymbs glabrous; fruit globose, bright orange-red; blooms in May and June." (*Bailey.*)

Distribution.—Dry places on the slopes of the Himalayas at an altitude of 2,500 to 8,000 feet, between Sirmur and Bhutan, northern India.

28846. *CRATAEGUS* sp.28847. *CROTALARIA CAPENSIS* Jacq.

"Stout, much-branched shrub, 4 to 5 feet high. Cultivated in Florida." (*Bailey.*)

Distribution.—Common in the eastern districts of Cape Colony, extending northward to Durban.

28848. *EUCALYPTUS CREBRA* Muell.

Narrow-leaved ironbark.

"A tall tree. Bark persistent throughout, dark, almost blackish, ridged, and deeply furrowed, solid; timber heavy, hard, elastic, and durable; used for railroad ties, piles, fence posts, and in the construction of bridges and wagons; also suitable for splitting into palings." (*Bailey.*)

See No. 769 and 1622 for previous introductions.

Distribution.—Between the Flinders and Lynd Rivers in North Australia, in the vicinity of Moreton Bay in Queensland, and along the Hastings River in New South Wales.

28849. *EUCALYPTUS LEHMANNI* (Schauer) Preiss.

Lehmann's gum.

"A tall shrub or small tree; bark coming off in irregular sheets, roughish and reddish; flowers greenish yellow. A valuable ornamental tree. Blooms July to September.

Distribution.—West Australia, extending along the southern coast east to King George Sound, and on stony hills from Bald Island and Stirling Mountains eastward to Cape Arid.

28850. *PODACHAENIUM EMINENS* (Lag.) Baill.

"A tall shrub; on account of the grandeur of its foliage in requisition for scenic effects." (*Von Mueller.*)

Distribution.—Southern Mexico and Central America, extending from Orizaba southeastward through Guatemala to Costa Rica.

28851. *IRIS ALBOPURPUREA* Baker (?)

Received in a shipment from Japan without any information as to the locality from which it came.

28833 to 28874—Continued.**28852.** *IRIS ATTICA* Boiss. and Heldr.

“Stem short or almost none; leaves wide, falcate, equaling or longer than the spathe; limb violet or yellow, external segments slightly shorter, reflexed, bearded within.” (*Bailey.*)

Distribution.—In stony places on the lower slopes of Mount Parnassus and in the province of Attica in Greece.

28853. *IRIS CENGIALTI* Ambrosi.

“Resembles *Iris pallida*, of which it is probably merely a dwarf variety; leaves 6 inches long, stem about as long as leaves, flowers bright lilac, outer segments with a white beard. Blooms May and June.” (*Bailey.*)

Distribution.—Slopes of the Tyrolese Alps in southern Austria and northern Italy.

28854. *IRIS SPURIA DAENENSIS* Kotschy.

Distribution.—This subspecies comes from the southern part of Persia.

28855. *IRIS FOETIDISSIMA* L.

“This plant is very distinct and is easily recognized by the odor of the broken leaves. The capsules remain on the plant in the winter, bursting open and displaying rows of orange-red berries. The flowers are rather inconspicuous.” (*Bailey.*)

Distribution.—Central and southern Europe and eastward to Afghanistan and in Algeria.

28856. *IRIS GERMANICA* L.

“Leaves 1 to 1½ feet long; stem 2 to 3 feet high; spathe valves tinged with purple; outer segments obovate-cuneate, 2 to 3 inches long; beard yellow; inner segments as large, obovate, connivent. Blooms in early May and June.” (*Bailey.*)

See No. 9103 for previous introduction.

Distribution.—Throughout central and southern Europe.

28857. *IRIS HALOPHILA* Pallas.

“Leaves pale green, 1 to 1½ feet long; stem stout, terete, 1½ to 2 feet long, often bearing one to two spicate clusters below the end one; limb pale yellow; outer segments with an orbicular blade one-half to three-fourths of an inch broad, shorter than the claw, which has a bright-yellow keel and faint lilac veins; inner segments shorter, erect.” (*Bailey.*)

Distribution.—Eastern Europe and southern Asia, extending from Austria eastward through Turkey, Asia Minor, and the Caucasus region to Mongolia and Kashmir.

28858. *IRIS CHAMÆIRIS ITALICA* (Parl.) Baker.

“Leaves 3 to 4 inches long, one-half inch broad; stem very short, flowers dark violet; outer segments obovate-cuneate, tinged and veined with brown; inner segments oblong. Blooms in May.” (*Bailey.*)

Distribution.—Southern Europe, extending from southern France and northern Italy through Dalmatia.

28859. *IRIS LUTESCENS* Lam.

“Leaves 6 to 9 inches long; stem equaling the leaves; flowers pale yellow; outer segments obovate-cuneate, 2 to 2½ inches long, pale yellow, streaked with pale brown, undulate; inner segments broader, suddenly narrowed to a claw which is streaked with purple, crenulate.” (*Bailey.*)

Distribution.—Stony mountainous slopes in the southern part of France.

28833 to 28874—Continued.**28860. IRIS SIBIRICA L.**

“Compact, tufted; leaves green, not rigid, 1 to 2 feet long; stem slender, terete, fistulous, much overtopping the leaves, simple or forked, bearing several clusters of flowers; limb bright lilac blue; outer segments $1\frac{1}{2}$ to 2 inches long, with orbicular blade gradually narrowed to a slender claw, veined with bright violet, whitish toward the claw; inner segments shorter, erect. The plants form large compact clumps producing many long flowering stems from the center.” (*Bailey.*)

See Nos. 9104 and 13232 for previous introductions.

Distribution.—Throughout central and southern Europe and eastward to eastern Siberia.

28861. IRIS MISSOURIENSIS Nutt. (?)**28862. IRIS CHAMAEIRIS OLBIIENSIS (Henon) Baker.**

Same as No. 28858 except “flowers are bright yellow.” (*Bailey.*)

Distribution.—Northern Italy and southern France and eastward through Dalmatia.

28863. IRIS ORIENTALIS Miller.

Variety *gigantea*.

Distribution.—Asia Minor and Syria, and the island of Samoa.

28864. IRIS PARADOXA Stev.

“Plants dwarf; leaves linear; flowers large, outer segments reduced to a mere claw, dark, covered with pile; inner segments 2 inches long, orbicular, lilac to white. A flower with singular combinations of color. Grows in dry situations, but requires shelter in winter.” (*Bailey.*)

Distribution.—Dry sandy places in the Transcaucasian region of southern Russia and in northern Persia.

28865. IRIS PRISMATICA Pursh (?).**28866. IRIS RUTHENICA Dryand.**

“Leaves 5 to 12 inches long, in crowded tufts; stem slender, 3 to 6 inches long, but often obsolete; tube twice as long as the ovary; outer segments with an oblong blade rather shorter than the claw, lilac, violet scented. Blooms in April and May.” (*Bailey.*)

Distribution.—Eastern Europe and central Asia, extending from Austria eastward through Russia and Siberia to eastern China and Mongolia.

28867. IRIS SETOSA Pall. (?)

Distribution.—Eastern Siberia, Japan, and in northwestern North America.

28868. IRIS HALOPHILA SOGDIANA (Bunge) Skeels.

(*Iris sogdiana* Bunge, Academie de St. Petersburg, Memoires des Savants Etrangers, vol. 7, p. 507, 1850-54.)

(*Iris gueldenstaedtiana sogdiana* Baker, Iridae, p. 14, 1892.)

The name *Iris gueldenstaedtiana* was published by Lepechin (*Acta Academiae Petropolitanae* for 1781, pt. 1, p. 292, pl. 8) in 1784. But Pallas in 1773 (*Reise durch Verschiedene Provinzen des Russischen Reichs*, vol. 2, p. 733) had published the name *Iris halophila* for the same species. The earlier name should be used for the species, which necessitates transferring the subspecies published by Baker to *I. halophila*.

Same as No. 28857 but “with gray-lilac flowers (*Bailey.*)”

Distribution.—Throughout Asia, from Asia Minor and the Caucasus region eastward to Kashmir and Mongolia.

28833 to 28874—Continued.**28869. IRIS UNGUICULARIS Poir.**

"Leaves about six in a tuft, finally 1½ to 2 feet long, bright green; tube 5 to 6 inches long, filiform, exserted from the spathe; limb bright lilac, rarely white; outer segments 2½ to 3 inches long, 1 inch broad, with a yellow keel, streaked with lilac on a white ground at the throat; inner segments oblong. Blooms in January and February. Not hardy." (*Bailey.*)

Distribution.—A fragrant-flowered species coming from Algeria.

28870. IRIS XIPHIUM L.**Spanish iris.**

"Leaves about 1 foot long, stem 1 to 2 feet high; pedicel long; tube obsolete; outer segments 2 to 2½ inches long; violet-purple, yellow in the center; inner segments as long, but narrower. Blooms in late June." (*Bailey.*)

Distribution.—Spain and southern France, ascending to an elevation of 6,000 feet, and in northern Africa.

28871. MORAEA sp.

NOTE.—This was received as *Moraea aurantiaca* Eckl., which seems never to have been described.

28872. PISTACIA LENTISCUS L.

See No. 3011 for description.

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

28873. SALVIA SCLAREA L.

"A plant of exceptional interest. Cultivated for its culinary and medicinal value and also for ornament, but its ornamental value lies not in the flowers, which are pale purple or bluish, but in the colored bracts or floral leaves at the tops of the branches." (*Bailey.*)

Distribution.—Southern Europe and western Asia, extending from Germany eastward through Austria, Italy, Turkey, and southern Russia to Persia, and in northern Africa.

28874. VIBURNUM TINUS L.

See No. 2192 for description.

Distribution.—Southern Europe, extending from Portugal and Spain through southern France and Italy to Dalmatia, and in northern Africa.

28875. BELOU MARMELOS (L.) W. F. Wight.**Bael.**

From Pusa, Bengal, India. Presented by Dr. A. Howard, of the Agricultural Research Institute, through Maj. A. T. Gage, Royal Botanic Gardens, Sibpur, Calcutta, India. Received September 28, 1910.

Dalsing Serai.

See No. 24450 for description of this species.

28876. VITIS sp. (?)

From Hollywood, Cal. Presented by Mr. E. D. Sturtevant. Received September 29, 1910.

"Native of the southern part of the state of Vera Cruz, Mexico. Said to bear beautiful scarlet flowers. It is hardy here, but does not bloom. It might do so in south Florida." (*Sturtevant.*)

28877. CYNARA SCOLYMUS L.**Artichoke.**

From Maison Carree, Algeria. Presented by Dr. L. Trabut, Mustapha-Alger, North Africa. Received September 29, 1910.

Violet Provence.

28878. PASSIFLORA EDULIS Sims.**Passion flower.**

From Patras, Greece. Grown by Mrs. Crowe. Presented by Dr. A. Donaldson Smith, American consul, Aguascalientes, Mexico. Received September 29, 1910.

"I have tasted the passion fruit in many places, but the fruit from which these seeds were taken was the best." (*Smith.*)

See No. 25874 for distribution of this species.

28879 and 28880. GOSSYPIUM sp.**Wild cotton.**

From Mauritius. Presented by Mr. G. Regnard, Port Louis, Mauritius. Received September 26, 1910.

Seeds of the following:

28879. From Yemen, Black River. **28880.** From Carcenas, Black River.

"These cottons (see also No. 28798) grow particularly at the NNE. and NW. of the island at different altitudes and under different soil and climatic conditions without varying in growth and shape." (*Regnard.*)

PUBLICATION OF NEW NAMES.

28525. TRITOMA NORTHIAE (Baker) Skeels.
28526. TRITOMA TUCKII (Baker) Skeels.
28526 (in note). TRITOMA SARMENTOSA (Andr.) Skeels.
28663. LEBECKIA CUSPIDOSA (Burch.) Skeels.
28673. ECHEVERIA HOVEYI Rose n. sp.
28729. OPHIOBOSTRYX VOLUBILIS (Harvey) Skeels.
28730. MONDIA WHITEII (Hook. f.) Skeels.
28740. PECTINEA PAUCIFLORA (Thouars) Skeels.
28766. HELYGIA PADDISONI (Baker) Skeels.
28781. MELOCANNA BACCIFERA (Roxb.) Skeels.
28783. ARGANIA SPINOSA (L.) Skeels.
28868. IRIS HALOPHILA SOGDIANA (Bunge) Skeels.
19897. × ASSONIA CAYEUXII (Andre) Skeels.

(*Dombeya cayeuxii* Andre, Revue Horticole, vol. 69, p. 545, 1897.)

The name *Dombeya* (Cavanilles, 1787) seems to have been quite generally used to designate a genus of sterculiaceae shrubs or small trees, but as the same name was originally used (L'Heritier, 1784) for a genus belonging to the family Bignoniaceae, for which the name *Tourretia* (Fougeroux, 1787) was later proposed, it should not be applied to the genus established by Cavanilles. In fact, the latter author on a previous page of the same work in which he published *Dombeya* established the genus *Assonia* with the single species *A. populnea* (Tertia Dissertatio Botanica, p. 120, pl. 42, fig. 1, 1787). This species is now recognized as congeneric with the various species referred to Cavanilles's *Dombeya*, and *Assonia* should therefore be considered the valid name for the genus in question. It should be noted that both the names *Assonia* and *Dombeya* were proposed by Cavanilles in 1786 (*Secunda Dissertatio Botanica*, app.), but without mention of species.

Cuttings of the species listed were received in 1907 as "*Dombeya spectabilis*(?)" and were later distributed. Dr. Franceschi of the Montarioso Nursery, Santa Barbara, Cal., who received some of the cuttings, called attention to the identity of the plant with *Dombeya cayeuxii* Andre.

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