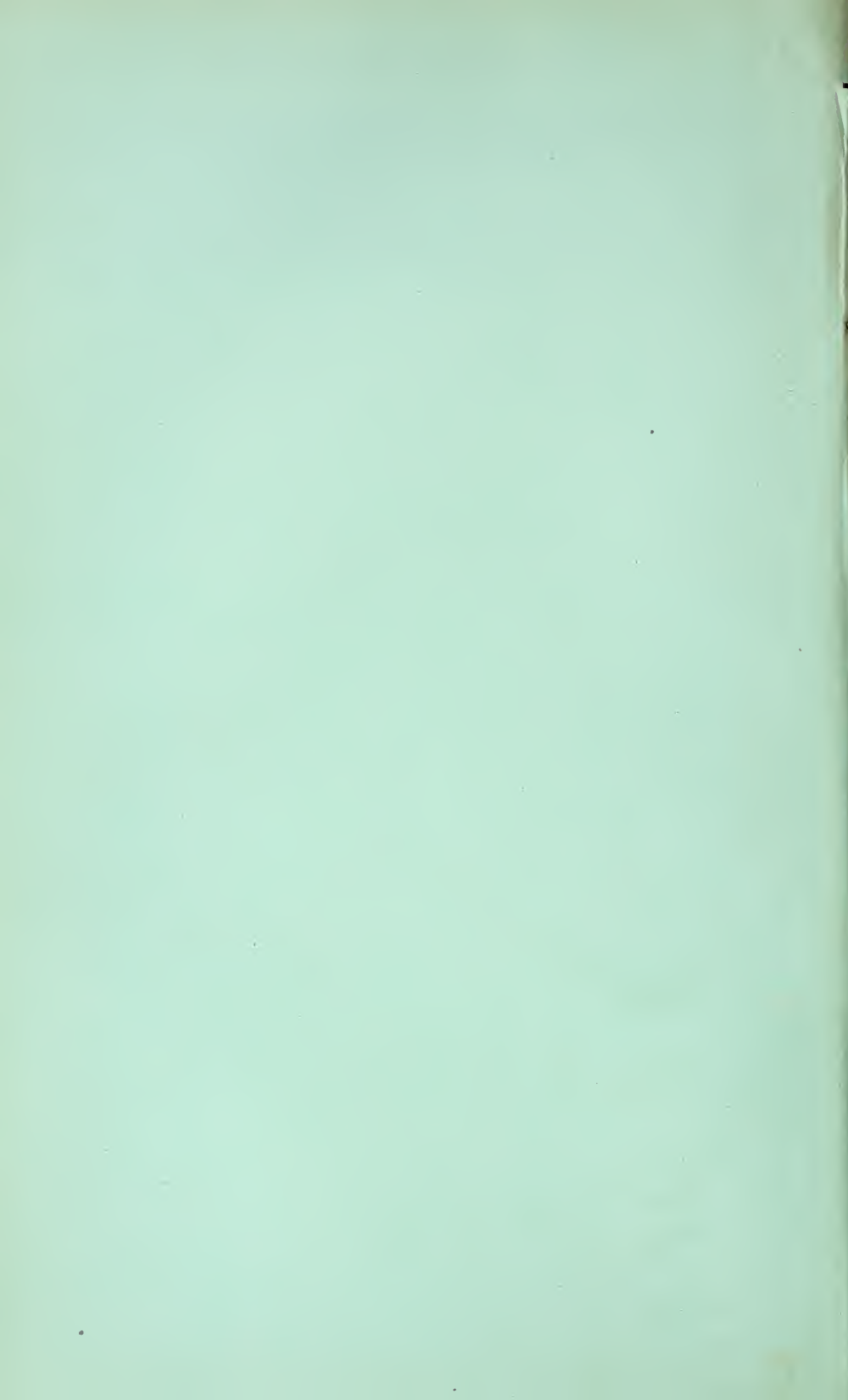


Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.



U. S. DEPARTMENT OF AGRICULTURE.

BUREAU OF PLANT INDUSTRY—BULLETIN NO. 207.

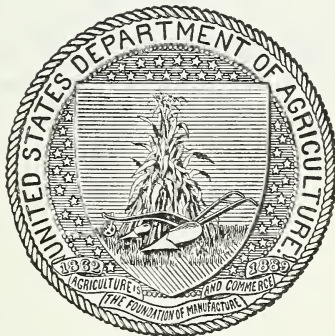
B. T. GALLOWAY, *Chief of Bureau.*

SEEDS AND PLANTS IMPORTED

DURING THE PERIOD FROM JANUARY 1
TO MARCH 31, 1910:

INVENTORY No. 22; Nos. 26471 to 27480.

ISSUED MAY 4, 1911.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1911.

BUREAU OF PLANT INDUSTRY.

Chief of Bureau, BEVERLY T. GALLOWAY.
Assistant Chief of Bureau, WILLIAM A. TAYLOR.
Editor, J. E. ROCKWELL.
Chief Clerk, JAMES E. JONES.

FOREIGN SEED AND PLANT INTRODUCTION.

SCIENTIFIC STAFF.

David Fairchild, *Agricultural Explorer in Charge*.

P. H. Dorsett and Peter Bisset, *Expert Plant Introducers*.

George W. Oliver, *Expert Propagator*.

Frank N. Meyer, *Agricultural Explorer*.

Stephen C. Stuntz, *Botanical Assistant*.

H. C. Skeels and R. A. Young, *Scientific Assistants*.

Henry F. Schultz, *Agent, in Charge of Subtropical Introductions*.

E. C. Green, *Pomologist, in Charge of South Texas Plant Introduction Garden, Brownsville, Tex.*

Robert L. Beagles, *Agent, Acting in Charge of Plant Introduction Garden, Chico, Cal.*

Edward Simmonds, *Gardener, in Charge of Subtropical Plant Introduction Garden, Miami, Fla.*

John M. Rankin, *Expert, in Charge of Yarrow Plant Introduction Garden, Rockville, Md.*

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

LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF PLANT INDUSTRY,
OFFICE OF THE CHIEF,
Washington, D. C., December 28, 1910.

SIR: I have the honor to transmit herewith and to recommend for publication as Bulletin No. 207, of the series of this Bureau, the accompanying manuscript, entitled "Seeds and Plants Imported during the Period from January 1 to March 31, 1910: Inventory No. 22; Nos. 26471 to 27480."

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.

CONTENTS.

	Page.
Introductory statement.....	7
Inventory.....	9
Publication of new names.....	94
Index of common and scientific names, etc.....	95

207

5

SEEDS AND PLANTS IMPORTED DURING THE PERIOD FROM JANUARY 1 TO MARCH 31, 1910: INVENTORY NO. 22; NOS. 26471 TO 27480.

INTRODUCTORY STATEMENT.

This inventory, No. 22, is a record of seed and plant introductions received by the Office of Foreign Seed and Plant Introduction of the Bureau of Plant Industry from January 1 to March 31, 1910. It contains 1,010 introductions, an increase of 588 over those of the quarter ended December 31, 1909.

Some of these introductions merit especial mention in this introductory statement. In Nos. 26471 to 26475 we have several interesting introductions from Kashmir, India, embracing a cherry (No. 26471), a peach (No. 26472), an apricot (No. 26473), a pear (No. 26474), and an apple (No. 26475). Five hardy drought-resistant Chinese pears come to us from Manchuria under Nos. 26485 to 26489. Another introduction of interest is a dry-land shrub related to Citrus (*Limonia acidissima*, No. 26496) from Kirkee, India. This will be especially valuable for breeding purposes. No. 26511 is a wild pomegranate (*Punica protopunica*) from the island of Socotra, probably a prototype of the cultivated pomegranate. This was introduced for breeding purposes and as a suitable stock for the southwest sections of the country on which to graft the improved form. The first generation of potatoes from seed introduced from Chile (Nos. 26517 to 26535); a number of interesting species of wild clovers from the mountains of Turkey, for testing and breeding purposes (Nos. 26574 to 26578); a wild medicago (No. 26590) from the arid mountain regions of Algeria; seeds of the native hardy Manchurian pear (No. 26591) are all worthy of attention.

An introduction of considerable commercial value is the Black Monukka seedless grape of India. This was found by the writer in the greenhouses of the Royal Horticultural Society at Wisley, England, and sent in at his request by Rev. W. Wilks, secretary of the society. This adds a dark-purple seedless grape to the seedless grapes already in cultivation in America. A number of varieties of soy beans from Manchuria (Nos. 26643 to 26646) and two species of dry-land alfalfa from the Crimea (Nos. 26666 and 26667); *Medicago orbicularis* (No. 26673) from Balaklava, Crimea, an annual form found growing on dry, hilly slopes and on sterile, stony plains, and much relished by sheep and horses, will be of interest to forage-crop

experimenters. A new form of *Malus baccata*, from Nertchinsk, Siberia, introduced under No. 26681, is being used around St. Petersburg for hybridizing with *M. prunifolia* in an endeavor to obtain a hardier race of apples, and a new crab apple (No. 26682) said to be a better keeper than the American crab, the result of a cross between *M. baccata* and *M. prunifolia*, will attract the attention of the apple breeder.

The introductions from Nos. 26689 to 26730, inclusive, comprise 42 selected varieties of avocados from seedlings grown in Florida and imported from Cuba and Costa Rica. There are many fine types among these introductions that will be very valuable to growers of this new fruit in Florida and probably in southern California. Nine varieties of cherimoya (Nos. 26731 to 26739) have been selected from a number of seedlings grown in Florida, for their superior qualities. An interesting relative of our wild rice is introduced under No. 26760, *Zizania latifolia*. This wild rice is a native of and is cultivated extensively in China and Japan for its edible shoots and for a fungous growth that develops on the inflorescence which is said to be edible when in a young state. *Pyrus salicifolia* (No. 26763) is a wild pear from the hills near Sebastopol, Russia, where it is subjected to extremely dry conditions, and no doubt will prove valuable as a pear stock in our semiarid regions. Another introduction that will be valuable for the same regions, coming from the neighborhood of Sebastopol, is *Crataegus orientalis* (No. 26765). This is recommended as a stock for pears and for uses as an ornamental plant. In Nos. 26801 to 26811 is a very hardy race of olives that has withstood a temperature of about -2° F. without injury. These olives may be valuable for sections of Texas and California where heavy frosts prevail during the winter months.

No. 27310, *Amygdalus davidiana*, is another importation of this valuable plant that may mean much to the peach growers of the colder and semiarid sections of our country. A report comes to us from the Upper Mississippi Valley Plant Introduction Garden that young trees of this peach passed through the winter of 1909-10 without the slightest injury, while such well-known varieties as Chihli and Champion were more or less seriously injured. This wild peach promises to be very valuable for breeding work. Nos. 27362 and 27363 are Ohanez grapes (*Vitis vinifera*), famed for the extraordinary carrying and keeping qualities of their fruit. The fruits ripen late and are therefore adapted only to the warmer grape-growing sections.

Mr. W. F. Wight, Mr. H. C. Skeels, and Miss Mary A. Austin are responsible for the preparation of this inventory.

DAVID FAIRCHILD,
Agricultural Explorer in Charge

OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION,
Washington, D. C., November 19, 1910.

INVENTORY.

26471 to 26475.

From Kashmir, India. Presented by Mr. J. Mollison, Inspector General of Agriculture in India, Nagpur, Central Provinces. Received January 3, 1910.

Seeds of the following wild species; notes by Mr. Mollison:

26471. *PRUNUS CERASUS* L. Cherry.

"This tree bears fruit when 5 years old and 10 feet high."

26472 to 26474. "These trees bear fruit when 4 years old and 15 feet high."

26472. *AMYGDALUS PERSICA* L. Peach.

26473. *PRUNUS ARMENIACA* L. Apricot.

26474. *PYRUS COMMUNIS* L. Pear.

26475. *MALUS SYLVESTRIS* Mill. Apple.

"This tree bears fruit when 6 years old and 20 feet high."

"These seeds are sown in October or in March. If sown in October, the seedling comes out in March, but if sown in March, it comes out in April."

26476. *PENNISSETUM PEDICELLATUM* Trin.

From Senegal, West Africa. Presented by Dr. L. Trabut, Government Botanic Gardens, Algiers, Algeria. Received January 4, 1910.

"Variety *occidentale*."

Distribution.—Rajputana and Banda, in India, and in tropical Africa.

26477 to 26484. *PHOENIX DACTYLIFERA* L. Date.

From Tripoli-in-Barbary, North Africa. Procured by the American vice consul, at the request of Mr. William Coffin, formerly American consul. Received December 15, 1909.

Seeds of the following:

26477. *Bayoudi*. 26481. *Hallaoui*.

26478. *Brunsi*. 26482. *Hammuri*.

26479. *Cabouni*. 26483. *Hurra*.

26480. *Hadruri*. 26484. *Limsi*.

26485 to 26489. *PYRUS* spp.

From Manchuria. Presented by Mr. Edward C. Parker, agriculturist, Bureau of Agriculture, Industry and Commerce, Mukden. Received January 3 and 4, 1910.

Cuttings of the following; descriptive notes by Mr. Parker:

"All these pears are very hardy and resistant to droughts and high, drying winds. They are cultivated by the Chinese in many places among the hills of southwestern

26485 to 26489—Continued.

Manchuria, as far north as 43° to 44° north latitude. Their power to resist drying winds and drought is the most notable character they possess. The fruits are all hard, maturing late and keeping all winter. The quality of the fruit is not anywhere near as good as the American *Bartlett* or *Anjou*; it is quite edible, however, and might be valuable for culture in such regions as North and South Dakota, where hot winds, short periods of drought, and cold winters form a climate very similar to the native habitat of these trees; they might also be used for grafting stocks."

26485. "(No. 6.) Chinese name *Ya li*. A very popular pear in Chinese markets; of medium size, shaped like the American *Bartlett* and of a yellowish-white color; flesh rather coarse and not highly flavored, keeps all winter. Kwangning is the oldest and best known producing center of this pear."

26486. "(No. 7.) Chinese name *Hung li*. Fruit is small, reddish yellow in color, and in shape similar to *Whitney* crab apples. Flesh of fruit coarse and not highly flavored."

26487. "(No. 8.) Chinese name *Chang pao li*. Fruit is yellowish white in color; shape long and oval; flesh of fruit coarse and not highly flavored."

26488. "(No. 9.) Chinese name *Yuen pao li*. Fruit is yellowish white in color, shape and size of a small round apple, flesh coarse and not highly flavored."

26489. (No name or description received with this lot of cuttings.)

26490 to 26494.

From Settsu, near Kobe, Japan. Procured by Mr. Albert J. Perkins, from the Japan Nursery Company. Received January 3, 1910.

Cuttings of the following:

26490 and 26491. DIOSPYROS sp. Persimmon.

26490. *Hachiya*. 26491. *Fuyu kaki*.

26492. PAPHYRIUS sp.

Kogo.

26493. PAPHYRIUS PAPHYRIFERA (L.) Kuntze.

26494. CITRUS AURANTIUM L.

Orange.

"*Natsu-mikan*." See No. 22670 for description.

26496. LIMONIA ACIDISSIMA L.

From Kirkee, India. Presented by Mr. G. A. Gammie, Imperial Cotton Specialist. Received January 5, 1910.

"This is a shrub or small tree growing in dry situations in India, sometimes at a height of as much as 4,000 feet. The fruits are very small, but are occasionally used as a condiment by the natives. The wood is hard and suitable for parts of machinery where great strength and toughness are required. This plant belongs to the orange family and is introduced primarily in connection with the experiments now in progress in the breeding of new types of citrus fruits and stocks for the same." (*W. T. Swingle*.)
(Seed.)

Distribution.—On dry hills in the northwestern Himalayas, ascending to 4,000 feet, on the Monghyr Hills in Behar, in Assam, and from the Bombay Ghats and Coromandel southward in the western peninsula of India. It occurs also in the Province of Yunnan, southwestern China.

26499 and 26500.

From Kavali, Nellore district, India. Presented by Rev. E. Bullard. Received January 10, 1910.

Seeds of the following; notes by Rev. E. Bullard:

26499. ERYTHRINA INDICA Lam.

"A useful hedge tree used commonly here around betel-leaf gardens. It is leguminous, does not have very spreading limbs, grows rapidly in almost any soil, and attains a height of 30 or 40 feet. It can be transplanted and propagated by cuttings of any size; these require watering for a time until well rooted. It is planted close together as a hedge, a foot or less apart, at first, and the spaces between are filled in with wild sugar cane. The leaf of the *Badidi* is excellent fodder for cattle, sheep, and goats—probably for any animals. The wood is also used in making some ordinary implements. By being cut low it forms an excellent hedge for keeping out animals. The Telugu name is *Badidi* or *Badishe*."

Distribution.—Throughout India and the Polynesian Islands; often cultivated.

26500. MELIA AZEDARACH L.

"A tree called *Turaka vyapa* in Telugu, or a variety of the margosa; it is much inferior, however, to the usual margosa, though useful as a quick-growing tree. Its seed contains an oil used for medicinal purposes."

26501. RHEUM NOBILE Hook. f. and Thoms.

From Sikkim, E. Himalaya, India. Presented by Capt. A. T. Gage, superintendent, Royal Botanic Garden, Sibpur, near Calcutta, India. Received January 10, 1910.

"The individual plants of *Rheum nobile* are upward of a yard high, and form conical towers of the most delicate, straw-colored, shining, semitransparent, concave, imbricating bracts, the upper of which have pink edges, the large bright, glossy, shining, green radical leaves, with red petioles and nerves, forming a broad base to the whole. On turning up the bracts, the beautiful membranous, fragile, pink stipules are seen, like red silver-paper, and within these, again, the short-branched panicles of insignificant green flowers.—The stems of this plant (called '*Chuka*' by the inhabitants) are pleasantly acid, and much eaten.—The seeds should be planted in peat soil and rockwork, and kept very cool and damp." (J. D. Hooker. Illustrations of Himalayan Plants, 1855, pl. 19.)

Distribution.—The alpine slopes of the Himalaya Mountains, at an elevation of 13,000 to 15,000 feet, in the Province of Sikkim, northeastern India.

26502 to 26504.

From Chinese Turkestan. Presented by Mr. E. Cotes, Simla, India. Received November 17, 1909.

Seeds of the following:

26502. PRUNUS ARMENIACA L.

Apricot.

26503. AMYGDALUS PERSICA L.

Peach.

26504. CITRULLUS VULGARIS Schrad.

Watermelon.

26505 and 26506. SESAMUM ORIENTALE L.

Sesame.

From China. Presented by Rev. J. M. W. Farnham, Shanghai, China. Received January 5, 1910.

Seeds of the following:

26505. Black seeded.

26506. White seeded.

26509 and 26510. MANGIFERA INDICA L.**Mango.**

From Kingston, Jamaica. Presented by Mr. Aston W. Gardner, Tangle Fruit Company. Received January 14, 1910.

26509. Maharajah. "Cuttings from a tree grown in my orchard. This special fruit has realized very high prices in London and New York."
(Gardner.)

26510. Mangalore. (Cuttings.)

26511. PUNICA PROTOPUNICA Balf. f.

From Edinburgh, Scotland. Presented by Dr. Isaac Bayley Balfour, director, Royal Botanic Garden. Received January 17, 1910.

"This is a small tree which grows in abundance over the plateau sloping southward from the Haghier peaks. In general habit it is not unlike the pomegranate, but its leaves are larger and coarser and it lacks the delicate character of the foliage of that species. The flowers, too, are somewhat smaller and their turbinate base is more angular; the fruit is very much smaller in size." (Balfour, *Botany of Socotra, 1888, Pl. 25, p. 96.*)

"It was considered desirable to introduce this plant, which, aside from the ordinary pomegranate, is the only species of the genus *Punica* and is possibly the ancestral form of the cultivated pomegranate, in order to test its value as a drought-resistant stock upon which to graft pomegranates in the hottest part of the Southwest." (T. H. Kearney.) (Cuttings.)

Distribution.—Known only from the island of Socotra, on the east coast of Africa.

26517 to 26535. SOLANUM spp.**Potato.**

Grown at Arlington Experimental Farm, Virginia, under the supervision of Mr. W. V. Shear, Office of the Horticulturist. Turned over to this office for distribution January, 1910.

Tubers of Chilean potatoes, first generation grown from seed as follows; notes by Mr. Shear:

26517. Grown from S. P. I. No. 23167. "Small tubers, round to oblong; skin smooth; eyes few and shallow; color yellowish white."

26518. Grown from S. P. I. No. 23173. "Elongated, cylindrical, somewhat flattened, uniform tubers; eyes numerous, shallow; skin smooth, flesh-colored; size variable, small to medium."

26519. Grown from S. P. I. No. 23184. "Tubers roundish, flattened at the ends, uniform; size small; skin smooth; eyes few, medium in depth; color violet."

26520. Grown from S. P. I. No. 23191. "Small to medium-sized tubers; shape round to oblong, uneven; eyes numerous and deep; color purple."

26521 to 26524. Grown from S. P. I. No. 23168.

26521. "Small tubers, ovoid, flattened; eyes medium depth; color flesh."

26522. "Small tubers, oblong, slightly flattened; eyes many and deep; color variable, yellowish to violet."

26523. "Tubers oblong, cylindrical, variable; eyes medium depth, uniform; color yellowish spotted with violet."

26524. "Tubers small, oblong, pointed at bud end; shape uniform, slightly flattened; eyes shallow; color yellowish with slight tinge of violet."

26517 to 26535—Continued.

26525 to 26531. Grown from S. P. I. No. 23178.

26525. "Tubers medium small, round, uneven; eyes deep, numerous; color deep violet."

26526. "Tubers $\frac{1}{2}$ to 2 ounces in weight; shape round to oblong, flattened, variable, uneven; eyes many, deep; color varying from flesh to light violet."

26527. "Tubers ovoid, uneven, smooth; eyes numerous, deep; color purple, yellowish around eyes."

26528. "Tubers round to ovoid, variable and uneven; skin rough; eyes numerous, medium; color yellowish white."

26529. "Tubers large, elongated, cylindrical, uneven; eyes many and deep; color yellowish with small patches of violet."

26530. "Tubers small to medium; shape round to ovoid; uneven, knobby; eyes numerous, shallow; color mottled violet and yellow."

26531. "Medium-small tubers; shape ovoid, flattened, uneven; eyes numerous, deep; skin rough; color yellowish, mottled with violet."

26532 and 26533. Grown from S. P. I. No. 23185.

26532. "Tubers small to medium; oblong, variable; eyes numerous and variable; color violet."

26533. "Tubers round, inclined to be flattened at each end; uneven; eyes few, variable."

26534 and 26535. Grown from S. P. I. No. 23194.

26534. "Tubers small, ovoid to oblong, pointed at bud end, uniform; smooth; eyes numerous, medium depth; flesh-colored."

26535. "Tubers small; shape variable, ovoid, flattened; skin smooth; eyes few, shallow; light yellow mottled with violet."

26536. MEDICAGO SATIVA L.**Alfalfa.**

Presented by Mr. D. S. Elder, El Centro, Imperial Co., Cal., through Mr. Charles J. Brand. Received December, 1909.

"This alfalfa is ordinary American alfalfa and was grown 3 miles west of Brawley in the Imperial Valley of California from seed secured by Mr. Elder from his brother in Wyoming. It was grown in a loose, sandy soil on a field which was without water from April, 1906, until May, 1908. The ditch which supplied this field was dry during this period on account of the Colorado River breaking through its banks and flowing into the Salton Sea. No records of rainfall are available for Brawley, but it is estimated that the precipitation for the two years was about 2 inches each. Part of this alfalfa was cut and part pastured during the time that it was without water. The present sample should be of use in selections for drought resistance." (*Brand.*)

26537 to 26539. MEDICAGO SATIVA L.**Alfalfa.**

From Sacaton, Ariz. Grown under the supervision of Mr. Charles J. Brand on the Testing and Demonstration Garden in cooperation with the Office of Indian Affairs and received through Mr. William L. Flanery, January, 1910.

Seeds of the following; notes by Mr. Brand:

26537. "Mixed seed from a plat in which over 100 regional strains of alfalfa are being grown, intended for use in mass selection work."

26538. "First crop of Peruvian alfalfa, grown in hills $2\frac{1}{2}$ feet apart, rows 3 feet apart. It yielded at the rate of about 6 bushels per acre. The seed plat received only one irrigation up to the time of cutting the first crop."

26537 to 26539—Continued.

26539. "Second seed crop of Peruvian alfalfa from the same plat that produced No. 26538. Both of these lots of seed are second-generation progeny of S. P. I. No. 9303. The first-generation seed was produced at Yuma, Ariz., from the original lot."

26540. MEDICAGO SATIVA L.**Alfalfa.**

From Tappen, N. Dak. Grown by Mr. W. H. Niles in cooperative experiments with Mr. Charles J. Brand. Received January, 1910.

Grimm. "This seed was produced in 1909 from an acre plat seeded in comparison with 15 others at Tappen, N. Dak., in the spring of 1905. To date it has proven the hardiest variety in the experiment, which includes seed from a number of points in the United States, Germany, France, and Russia." (*Brand.*)

26543. AMYGDALUS COMMUNIS L.**Almond.**

From mountainous regions of Algeria, height about 3,300 feet. Presented by Dr. L. Trabut, Algiers, Algeria. Received January 18, 1910.

"A wild form of tolerably large size, robust, and very resistant to drought. Would be a good stock." (*Trabut.*)

26561. BAUHINIA MONANDRA KURZ. (?)

From Port Louis, Mauritius. Presented by Mr. G. Regnard. Received January 18, 1910.

26562. CYDONIA sp.**Quince.**

From Shanghai, China. Presented by Rev. J. M. W. Farnham. Received January 21, 1910.

"These quinces grow very large, but are coarser and harder than American varieties. The one from which part of these seeds were taken was 12 inches in circumference and about 5 inches long." (*Farnham.*)

26563 and 26564. BRASSICA OLERACEA CAPITATA L.**Cabbage.**

From Manchuria. Presented by Mr. A. A. Williamson, American vice and deputy consul, Dalny, Manchuria. Received January 18, 1910.

Seeds of the following:

26563. From Kinchow.

26564. From Chefoo.

26566. VITIS VINIFERA L.**Grape.**

From Besni, in the Deyarbekir Valley, Turkey. Procured by Mr. Wm. W. Masterson, American consul, Mamuretul-Aziz (Harput), Turkey. Received January 20, 1910.

Cuttings of the following. The white and the black variety are contained in this shipment, but this was not learned until some time after it had been received:

Besni. "This grape is long in shape, similar to the *Thompson Seedless*, and from what I have heard, larger than *Muscat*, but not having as many seeds, only one or two. When it is dried, it is claimed it has an oblong shape and has a clearer and lighter color than a *Muscat*." (*Extract from letter of Mr. Z. J. Josephian, which was inclosed in one from Miss Dorothy Farmer, Oakland, Cal., received February 26, 1908.*)

"I have never tasted such grapes anywhere as I have here, and the raisins made from these particular grapes (*Besni*) are of a wonderfully fine flavor and very large, and I think if such vines could be cultivated in America, it would prove a wonderful addition to our grape industry." (*Masterson.*)

26567 and 26568.

From Japan. Purchased from the Yokohama Nursery Company, Yokohama, Japan. Received January 18, 19, and 20, 1910.

Seeds of the following:

26567. CITRUS TRIFOLIATA L.

From Kiushiu. "Up to Fukuoka this tree is cultivated, possibly as far north as Tsushima, though we are not certain. Prof. Ikeda says its north limit extends to 37° north latitude. The fruits from Kiushiu are larger than those produced here (Yokohama)." (*Yokohama Nursery Company.*)

26568. CITRUS sp.

Yuzu. "Orange grafted on this stock is said to be a little more sour than when grafted on *Citrus trifoliata.*" (*Yokohama Nursery Company.*)

"*Yuzu* is a large evergreen tree bearing round, medium-sized fruit, which is very acid, and has a coarse, thick rind. The fruit is used in Japan in place of the lemon, which is used in this country. The pulp cells are 12 or 13 in number, having 2 or 3 seeds in each. This *Yuzu* is so hardy that the bearing fruit can be seen when the ground is covered with snow more than 2 feet deep. In some sections of Japan the *Yuzu* is considered better than *Citrus trifoliata*, as trees grafted on it grow better and live longer than when grafted on *Citrus trifoliata*. When kumquats are grafted on *Yuzu* they weigh more than they do when grafted on *Citrus trifoliata* and have a smoother and more reddish-colored rind." (*Extract from a letter of Mr. Kizano contained in a letter from Mr. Walter T. Swingle, dated April 12, 1909.*)

26570 to 26579.

From the moister mountain regions of Asia Minor lying 25 to 30 miles from the Mediterranean, 3,000 to 4,000 feet above sea level, in lime and sandy soils. Presented by Mrs. F. A. Shepard, Adana, Turkey in Asia. Received January 3, 1910.

Seeds of the following:

26570. AVENA SATIVA L.**Oat.****26571. PISTACIA TEREBINTHUS L.**

Distribution.—The countries bordering on the Mediterranean Sea, from Bozen, in Austria, to Syria and Palestine.

26572. LATHYRUS sp.**26573. MEDICAGO ORBICULARIS MARGINATA (Willd.) Benth.****26574. TRIFOLIUM PILULARE Boiss.**

Distribution.—Stony and shady hills and mountain slopes in Asia Minor, extending from Smyrna through Mesopotamia and Syria.

26575. TRIFOLIUM sp.**26576. TRIFOLIUM sp.****26577. TRIFOLIUM sp.****26578. TRIFOLIUM sp.****26579. VICIA sp. (Several species mixed.)****26580. VIGNA CATJANG (Burm.) Walp.**

From Richmond, New South Wales, Australia. Presented by Mr. H. W. Potts, Hawkesburg Agricultural College. Received January 21, 1910.

Poona.

26581. ANDROPOGON CARICOSUS L.

From Antigua, Leeward Islands, British West Indies. Presented by Mr. S. Jackson, curator, Botanic Station. Received January 15, 1910.

"*Hay grass.* This is an East Indian grass, and in the West Indies, at present, is only found in Antigua. The history of its introduction is obscure. It is readily established, and once this is done takes possession of the land to the exclusion of other grasses. It grows on flat pasture areas, and when cut at the right time makes excellent hay." (*Extract from the Agricultural News, May 1, 1909, p. 131.*)

Distribution.—On the plains and low hills of India, from Scind to Burma; in the Province of Yunnan, China; and in Ceylon, Mauritius, and Timor.

26590. MEDICAGO SATIVA GAETULA Urb.

From Aures, Algeria. Procured by Mr. A. Clavé, director, Academy of Algiers, Oued-Zenati, Algeria. Received January 22, 1910.

"A wild form, said to occur in arid, exposed situations, and presumably very drought resistant." (*J. M. Westgate.*)

Distribution.—Slopes of the Atlas Mountains in the vicinities of Batna and Biskra, Algeria.

26591. PYRUS sp.**Pear.**

From Manchuria. Presented by Mr. Edward C. Parker, agriculturist, Bureau of Agriculture, Industry, and Commerce, Mukden. Received January 24, 1910.

"Seeds of the native Manchurian pear. I am of the opinion that the pear seedlings, when tested out in western nurseries or used for grafting purposes, will prove more valuable than the scions (S. P. I. Nos. 26485 to 26489)." (*Parker.*)

26592. VIGNA UNGUICULATA (L.) Walp.**Cowpea.**

From Millard, Arkansas. Presented by Mr. J. L. Forlines. Received January 24, 1910.

"Similar to *Taylor Crowder* but with the micropylar end white. The original seed said to have been found in the craw of a wild goose." (*C. V. Piper.*)

26593 to 26596.

From Mamuretul-Aziz (Harput), Turkey. Presented by Mr. Wm. W. Masterson, American consul. Received January 21 and 22, 1910.

Seeds of the following; notes by Mr. Masterson:

26593. AMYGDALUS PERSICA L.**Peach.**

"This peach is rather large, has an excellent flavor, with the ordinary stone, but a peculiar thing is, it has a smooth, tough skin of a mottled red and green color, like an apple, but with the ordinary peach shape.

"One of the great drawbacks in handling peaches in America is the easily broken, fuzzy skin; in addition, this fuzz is exceedingly uncomfortable to the touch. This new peach is perfectly smooth, without the slightest sign of fuzz; it is of a size a little larger than the average shipping peach of America, grows on the same kind of a tree, and instead of its being a budded or hybrid fruit as I supposed, it is grown from the seed, and in this instance like produces like."

26594 and 26595. ELAEAGNUS ANGUSTIFOLIA L.**26594.** Large fruited.**26595.** Small fruited.

"Trebizond date. This might be called a shrub. It grows in clusters to a height of some 8 or 10 feet and has a few rather sharp thorns on each limb.

26593 to 26596—Continued.

The leaf is rather long for its width, is shaped something like a willow leaf, and, like some willows, the leaf is silvery white underneath and a rich green on top. In the spring it has a wonderfully fragrant blossom, and in the autumn a fruit is matured that looks very much like the commercial date, although not so rich and sweet, but the poor of the country are sometimes reduced to eating it to a considerable extent. These bushes are particularly adapted to hot, dry climates where only occasionally a little water is given to them by irrigation. They are rapid growers, and are used in this country for hedges surrounding the fields for turning cattle. They are capable of standing a good, sharp freeze, as it frequently falls to 15° or 20° F. in this high altitude, and as this much cold has no effect on them they may be able to stand much colder weather.

"The idea I particularly have in mind in mentioning this plant is its superiority as a hedge over the Osage orange that is so commonly used in our country for the same purpose. They make a much more beautiful show than the Osage, grow very rapidly, are very bushy and thick, can be easily trimmed and kept in order, and as a novelty and something new would likely be much appreciated by our people. They grow very readily from cuttings or from seed and require but little attention."

26596. VICIA FABA L.

Horse bean.

"This is called *Bakla* in Turkish. In addition to the beans the stalks are fed to cows and are said to be wonderful milk producers, and horsemen declare the stalks to be exceedingly cooling feed for horses during the summer. They are not as good as our best class of beans as a vegetable, but they have one merit—they are the first real garden vegetable in the spring after onions and lettuce, being a month earlier than the ordinary bunch beans. They are rather strong in flavor, and coarse, but among these people they are in great demand."

26598 to 26602.

From Pretoria, Transvaal, South Africa. Presented by Prof. J. Burt Davy, government agrostologist and botanist, Transvaal Department of Agriculture. Received January 17 and 18, 1910.

Seeds of the following:

26598. INDIGOFERA sp.

26599. DIOSPYROS SENEGALENSIS Perrott.

See No. 25634 for previous introduction.

26600. PITOSPORUM VIRIDIFLORUM Sims.

Distribution.—An erect shrub, found in the woods along the southeastern coast of Cape Colony, from the Knysna district to the vicinity of Umtata, in Kaffraria.

26601. ALOE TRANSVALENSIS Kuntze.

Distribution.—The vicinity of Pretoria, Transvaal.

26602. (Undetermined.)

"Rhodesian teak."

"A typical tree of dryish regions." (Davy.)

26603. ANONA CHERIMOLA Miller.

Cherimoya.

From Orange, Cal. Presented by Mr. C. P. Taft. Received January 27, 1910.

Golden Russet. "This variety originated or at least first fruited near Villa Park, Cal. I am told that the plant came from London, England. I do not think that they were budded trees, though they may have been. In form the fruit resembles a

26603—Continued.

flattened cone and weighs $1\frac{1}{2}$ to 2 pounds, the color is green with a slight yellowish tinge, and the flesh is of good quality; the trees are good bearers most years. I do not know of any other cherimoya that excels this variety in hardiness." (*Taft.*)
(Cuttings.)

26604. AMYGDALUS DAVIDIANA (Carr.) Beiss., Sch. and Zab.

From Tientsin, China. Procured through Mr. Hamilton Butler, American vice consul general in charge. Received January 25, 1910.

See No. 22009 for previous introduction.

(Seed.)

26605 and 26606. VITIS VINIFERA L.

Grape.

From England. Presented by Rev. W. Wilks, M. A., secretary, Royal Horticultural Society, Vincent Square, Westminster, S. W., England, through Mr. David Fairchild. Received January 27, 1910.

Black Monukka. "This was sent to us from India many, many years ago. It is a very strong grower. The berries are individually small, as we do not thin them at all; they are black and seedless, one seed in perhaps 1,000 berries, and of a nice, refreshing juiciness. I like it very much, as one can strip off a handful of berries and crush them in his mouth without fear of biting on the seed, which to my mind is the greatest drawback in grapes, being of such an intensely horrible taste.

"In pruning *Black Monukka* it must not be cut quite back to last year's wood, as we do all other grapes, but must have two or possibly three eyes left on the subbranch, as it seems never to send out a spray of blossoms from the first eye as other grapes do." (*Rev. W. Wilks, letter of November 15, 1909.*)

26605. From the society's garden at Wisley.

26606. From Mr. Wilks's own garden at Shirley.

26607. LATHYRUS PARVIFOLIUS S. Watson.

From Sierra Madre Mountains, Cal. Presented by Mr. John Leenhouts, Los Angeles, Cal. Received January 17, 1910.

"I have seen these vines grow to a length of 40 feet. They seem to sprout from the roots every year and grow here plentifully over an area of, I would say, 160 acres. They seem to have originated on one of the mountain sides and to have been washed down by the rains until you find them half a mile down the foothills." (*Leenhouts.*)

Distribution.—Throughout the region west of the Rocky Mountains, from Washington to Mexico.

26612. LATHYRUS SATIVUS L.

From central Russia. Procured by Mr. Frank N. Meyer, agricultural explorer, from Mr. Engel, of the firm E. Immer & Co., Moscow. Received January 29, 1910.

"Mr. Engel claims that this plant yields 500 to 600 poods (1 pood=40 pounds) of seed per hectare, and will grow on soil where peas will not thrive. He strongly recommends making a test of it in the Middle West and says that the farmers of certain districts in central Russia consider it a favorite cattle fodder." (*Meyer.*)

26613 to 26618.

From Liesnoi Forestry Institute, near St. Petersburg, Russia. Procured by Mr. Frank N. Meyer, agricultural explorer, through the kindness of Mr. Wolff, forester in charge of the arboretum at Liesnoi. Received January 24 and 31, 1910.

26613 to 26618--Continued.

Cuttings of the following:

26613. *POPULUS BALSAMIFERA SUAVEOLENS* (Fisch.) Wesm. **Poplar.**

"(No. 364, December 17, 1909.) A pyramidal form of poplar of rather slow growth and of neat habits. Introduced originally from Turkestan; proves to be hardy in St. Petersburg. Recommended very much for small gardens in uncongenial climates."

26614. \times *POPULUS BEROLINENSIS* Koch. **Poplar.**

"(No. 365, December 17, 1909.) Variety *Rossica*. This poplar is a form of the ordinary so-called Berlin poplar, but is proving to be much hardier than the type. It is, therefore, widely planted in and around St. Petersburg as a shade tree, mostly seen stiffly clipped, but when left alone grows into a rather tall tree of open, airy habits. Recommended for cold and uncongenial climates." (*Meyer.*)

26615. *SALIX VIMINALIS SPLENDENS SONGARICA* Anders. **Willow.**

"(No. 366, December 17, 1909.) A very hardy willow, of tall, bushy growth. Introduced from the Altai Mountains, central Asia. Is proving to be of much stronger and healthier growth in St. Petersburg than the European forms of *Salix viminalis*. Recommended for cold and uncongenial climates." (*Meyer.*)

26616. *SALIX VIMINALIS PALLIDA* (Hort.). **Willow.**

"(No. 367, December 17, 1909.) A very strong-growing willow, introduced from Siberia, proving to be very much hardier and of more healthy growth in St. Petersburg than the ordinary forms of *S. viminalis*, therefore recommended for cold and uncongenial climates." (*Meyer.*)

26617. *RIBES PETRAEUM* Wulf. **Currant.**

"(No. 368, December 17, 1909.) A large-fruited, very hardy species of red currant from the Altai Mountains, Turkestan, proving to be of much thriftier growth in St. Petersburg than the common red currants. May be valuable in breeding and in improving the red currant and extending its culture further northward in the United States." (*Meyer.*)

26618. *ROSA GALLICA* \times —?

"(No. 369, December 17, 1909.) A semidouble form, having rose-red flowers, and being extremely floriferous. Perfectly hardy in the severe climate of St. Petersburg, and proves there to be one of the most satisfactory garden roses. Recommended as an ornamental garden shrub of small dimensions in the upper Mississippi Valley States." (*Meyer.*)

26619 and 26620. *HIBISCUS SABDARIFFA* L. **Roselle.**

From Miami, Fla. Grown at the Subtropical Garden. Received January 29, 1910.

Seeds of the following:

26619. "The seed from which this number was grown was presented to the Department by Mr. E. N. Reasoner in 1909, he having obtained same from the West Indies.

"This variety is distinguished by its green leaves and stems, and less robust growth than the ordinary roselle. The calyxes are small and whitish in color. Mr. A. S. Archer, Antigua, British West Indies, says that in the West Indies the calyxes of this variety are not used for jelly and jam on account of the lack of color. It is, however, used in making a wine which is prepared as follows: The fruit is picked when fully ripe and the seed pods removed, after which the calyxes are washed in cold water and put into a

26619 to 26620—Continued.

stone jar—a metal jar will not do, as corrosion of the metal by the acid makes the fluid poisonous. Fill the jar with calyxes and press firmly, then pour on enough cold water to cover the calyxes and leave for 18 hours. Pour off liquid and sweeten it with best refined sugar, making it rather sweet. Pour the liquid into bottles, leaving a few inches of air space, and place in each bottle 2 or 3 bruised cloves. The corks should be well wired so that the gases generated during the fermentation can not force them out. The wine is fit to use after about three days, and has the color of champagne and is almost equal to it in taste.

"The calyxes of the red variety (S. P. I. No. 26620) may be utilized in the same way, but they make a red wine." (*Wester.*)

26620. *Victor.* "A few roselle plants were obtained from Mr. W. A. H. Hobbs, Cocanut Grove, Fla., in 1904, and planted in the Subtropical Garden at Miami. Some of these plants bore very much larger calyxes than the rest and seed was saved from these for breeding purposes. The selection work from this stock has been carried on from year to year with the result that a strain of roselle has been obtained that has much larger calyxes than the common kind and which has been named *Victor*. In south Florida the plants of this variety are more dwarfed than those of the common kind, seldom exceeding 5 feet in height. On the richer soil in the Gulf States farther north it is of exceedingly robust growth, frequently attaining a height of more than 8 feet.

"The measurements of the calyxes are 49 mm. in length and 28 mm. in diameter. They are strongly ribbed longitudinally and frequently inclined to be convolute at the apex.

"The seed may be planted where the plants are to grow, a few to each hill, 4 to 8 feet apart, in rows 6 to 10 feet apart, according to the fertility of the land and the moisture supply, or the seed may be sown in a seed bed and the plants transplanted to the field when they are 3 to 4 inches high. They do not succeed on poorly drained land. The roselle plant is peculiar in that no matter what time seed is planted it does not bloom until the latter part of October, the first calyxes being ready for picking 15 to 18 days from the time of blooming, consequently, the plant can be grown for its fruit only in the extreme south. A fruit sirup may be made from the leaves and tender stems of the plant, and jelly has also been obtained, but it lacks the brilliant color and also the firmness of the jelly made from the calyxes." (*Wester.*)

26621 to 26642. MEDICAGO SATIVA L.**Alfalfa.**

From Stockton, Kans. Grown under the supervision of Mr. Charles J. Brand, on the farm of Mr. E. Bartholomew, Stockton, Kans. Received January, 1909, and numbered for convenience in recording distribution, January 28, 1910.

"The following samples of seed were all produced in a comparative test of the behavior of the varieties in cultivated rows." (*Brand.*)

26621. Colorado. "Grown from S. P. I. No. 12398."

26622. Montana. "Grown from S. P. I. No. 13237."

26623. Germany. "Grown from S. P. I. No. 12748, the Eifeler lucern, a strain of alfalfa that is highly prized in the restricted area of southern Germany, including the Rhine Province and Hesse. It is grown especially in the region known as the Eifel, a range of hills reaching a maximum height of about 2,500 feet. It is not a region of great cold, the mean for the coldest month being practically identical with the mean for November at St. Paul, Minn. The Eifel has a mean annual rainfall of 25 to 36 inches." (*Brand.*)

26621 to 26642—Continued.

26624. Wyoming. "This seed was grown from P. L. H. No. 3253, which was collected from an individual plant growing without irrigation in a tough prairie sod near Cheyenne, Wyo. The parent plant was located in a pasture where it had received decidedly harsh treatment. This strain is quite uniform, and proved to be one of the most drought resistant, as well as one of the best seed producers in the experiment." (*Brand.*)
26625. Buffalo, N. Y. "Grown from S. P. I. No. 19896."
26626. *Turkestan*. "Grown from S. P. I. No. 14786."
26627. Utah. "Grown from S. P. I. No. 12409."
26628. *Turkestan*. "Grown from P. L. H. No. 3252, which was grown at the South Dakota experiment station, and originally procured from Tashkend, *Turkestan*."
26629. Ecuador. "Grown from S. P. I. No. 14972. This is the famous *Guaranda* alfalfa, of Ecuador, which resembles very strongly the Peruvian alfalfa described in Bulletin No. 118, of the Bureau of Plant Industry. During the winter of 1907-8 this strain killed out quite severely, the present seed being from the surviving plants. At Fallon, Nev., Mr. F. B. Headley reports that the *Guaranda* strain will yield four cuttings a year to three of the ordinary kind. Similar reports have been received concerning it from other sections." (*Brand.*)
26630. Kansas. "Grown from S. P. I. No. 19508."
26631. Nebraska. "Grown from P. L. H. No. 3228, which was procured from Mr. Lewis Brott, Sextorp, Nebr."
26632. New York. "Grown from S. P. I. No. 13291."
26633. Texas. "Grown from S. P. I. No. 12702."
26634. Arizona. "Grown from S. P. I. No. 13437."
26635. Kansas. "Grown from S. P. I. No. 12671."
26636. *South Dakota* 167. "This seed was grown from P. L. H. No. 3251, the so-called *Baltic* alfalfa, produced in Prof. W. A. Wheeler's experiments at Highmore, S. Dak., in 1906. In a comparative test for hardness of 68 kinds at Dickinson, N. Dak., this variety ranked fifth." (*Brand.*)
26637. Russia. "Grown from S. P. I. No. 13857."
26638. Ecuador. "See note under No. 26629."
26639. *Turkestan*. "Grown from S. P. I. No. 9453."
26640. *Algerian*. "Grown from S. P. I. No. 9322."
26641. Tunis. "Grown from S. P. I. No. 12846, the prized *Oasis* alfalfa obtained by Mr. T. H. Kearney from the Kebilli Oasis, Tunis. This strain is not hardy north of Kansas, and is not hardy enough without selection to be of use outside of the Southwest. It produces a very fine quality of hay." (*Brand.*)
26642. France. "Grown from S. P. I. No. 12695."

26643 to 26646. GLYCINE HISPIDA (Moench) Maxim. Soy bean.

From Mukden, Manchuria. Presented by Mr. Nelson T. Johnson, American vice consul-general in charge. Received January 21, 1910.

Seeds of each of the following; quoted notes by Mr. Johnson:

26643. Black, very similar to *Cloud*, No. 16790. "*Ho tou* or *Hei tou* (black bean) as they are known colloquially. These beans are used solely as food for cattle and horses."

26643 to 26646—Continued.

26644. Olive brown. "*Mo shih tou* or the *Mo shih* bean. This bean is mostly used for cattle feed. They also sometimes extract the oil and use it for hair tonic."

26645. Green, very similar to No. 20854. "*Ch'ing tou* or green bean. This bean is used to make bean curd, an article of food much prized by the Chinese; the sprout of this bean is also much liked."

26646. Yellow, very similar to No. 17273. "*Yüan tou* or *Huang tou* (yellow bean). This bean forms the staple crop of Manchuria, and is eaten by the natives in many ways. Oil is also extracted from them and the residuum forms the bean cake of commerce which is used so extensively in Japan for fertilizer."

26647. CANAVALI ENSIFORME (L.) DC.

Jack bean.

From Mayaguez, Porto Rico. Presented by Mr. D. W. May, director, Agricultural Experiment Station. Received February 3, 1910.

"An upright variety grown in 1909 at Biloxi, Miss., Baton Rouge, La., and Gainesville, Fla. It makes a bushy plant 3 to 5 feet high, very different from other varieties. Seeds white." (*C. V. Piper.*)

26648 and 26649. PRUNUS SIBIRICA L.

From Steglitz, near Berlin, Germany. Presented by Mr. F. Ledier, first curator, Royal Botanic Garden. Received February 3, 1910.

26648. (Cuttings.)

26649. (Seeds.)

"This has a future as a hardy ornamental shrub or small tree in our Northern States." (*F. N. Meyer.*)

26650 to 26653.

From Pretoria, Transvaal, South Africa. Presented by Prof. J. Burt Davy, Government agrostologist and botanist, Transvaal Department of Agriculture. Received February 3, 1910.

Seeds of the following:

26650. *PENTZIA INCANA* (Thunb.) Kuntze. "Karoo bush."

See No. 26266 for previous introduction.

26651. *TRICHLORIS MENDOCINA* (Phil.) Kurtz.

Distribution.—Central Argentina, in the Provinces of Santa del Estero, Cordoba, and Mendoza.

26652. *ELIONURUS ARGENTIUS* Nees.

Distribution.—South Africa, from German Southwest Africa, the Kalahari Desert, and Transvaal, southward to the Cape.

26653. *CHAETOCLOA NIGRIROSTRIS* (Nees) Skeels. (*Panicum nigrirostre* Nees, Fl. Afr. Austr. 55. 1841. *Setaria nigrirostris* Dur. and Schinz. Fl. Afr. 5: 774. 1895.)

The name *Setaria* Beauv. Agrost. 51. pl. 13. f. 3. 1812, is invalid as applied to a genus of grasses, since it was used earlier by Acharius, Lich. Suec. 4, 256. 1798, for a genus of lichens and in that sense replaces the genus *Alectoria* Acharius, 1810. The name *Chaetochloa* was therefore proposed by Scribner in 1897 for the genus of grasses previously known as *Setaria*.

Distribution.—South Africa from the vicinity of Klerksdorp in central Johannesburg southward through the eastern part of Orange River Colony and Natal to the Queenstown and Komgha districts in Cape Colony. Original locality,—"In altoribus ad Omsammubo, locis graminosis alt. 1,000' (Drege)."

26654 to 26656.

From Salisbury, Rhodesia, South Africa. Presented by Mr. R. McIlwaine, at the request of Mr. J. D. Riley, Box 11, Mercedes, Tex. Received February 2, 1910.

Seeds of the following. Native names as given by Mr. McIlwaine:

26654. *SCLEROCARYA CAFFRA* Sond.

"*Marula*." See No. 24762 for previous introduction.

26655. *FLACOURTIA RAMONTCHI* L'Herit.

"*Mgokolo*."

Distribution.—Common throughout India, both wild and cultivated; also in Madagascar and the East Indian islands.

26656. *SIDEROXYLON* sp.

"*Bumbulu*."

26657. EUPATORIUM sp. (?)

From Paraguay. Procured by Mr. Cornelius Ferris, jr., American consul, Asuncion, Paraguay. Received February 2, 1910.

"I think this is *Caahu*; the other name is *Yoyouvetima*. It grows to a height of about 10 feet, always on the border of the woods, in wood soil. The leaves are used for dyeing wool." (*Notes taken from the packet which contained seed.*)

26658 to 26665.

From Medan, Sumatra. Presented by Dr. L. R. de Bussy. Received February 3, 1910.

Seeds of the following:

26658. *NEPHELIUM* sp.

26659. *GARCINIA* sp.

26660. *VIGNA UNGUICULATA* (L.) Walp. Brown seeded. **Cowpea.**

26661 and 26662. *VIGNA SESQUIPEDALIS* (L.) W. F. Wight.

26661. Reddish-brown seeds.

26662. Reddish-brown and white seeds.

26663 to 26665. *STIZOLOBIUM* sp.

26663. Mottled black and brown seeds.

26664. Black seeded.

26665. Gray seeded.

26666 to 26688.

From Russia. Received through Mr. Frank N. Meyer, agricultural explorer, February 3 and 5, 1910.

Seeds and plants as follows:

26666. *MEDICAGO* sp.

From near Alupka, Crimea, Russia. "(No. 377 to 380, January 17, 1910.) Perennial alfalfas found growing in cliffs and on steep hill slopes in decomposed rock and in clayey soil. These plants will in all probability not bear heavy frosts. There are probably 2 or 3 species in this lot." (*Meyer.*)

26667. *MEDICAGO* sp.

From near Kirikinesh, Crimea, Russia. "(No. 381 and 382, January 17, 1910.) Perennial alfalfas growing in earth cliffs; have very long roots and are therefore drought resistant. Probably the same as the preceding number (S. P. I. No. 26666)." (*Meyer.*)

26666 to 26688—Continued.

26668. *ONONIS* sp.(?)

From near Kirikinesh, Crimea, Russia. "(No. 383, January 17, 1910.) An *Ononis* or perhaps a *Lotus* growing in earth cliffs together with *Medicagos*. Seems to be very drought resistant and may be of value as a perennial fodder plant in mild-wintered regions where dry, hot summers prevail." (*Meyer*.)

26669. *HEDYSARUM* sp.

From near Kirikinesh, Crimea, Russia. "(No. 384, January 17, 1910.) Found growing in the same localities as the preceding number (S. P. I. No. 26668), and the same remarks apply to it." (*Meyer*.)

26670. *FICUS CARICA* L.

Fig.

From near Sebastopol, Crimea, Russia. "(No. 385, January 14, 1910.) A form of the wild fig, with very deeply lobed leaves; growing in exposed rocks; freezing back in severe winters, as was shown by the root stumps. May be experimented with in the northern limits of fig-growing sections in the United States." (*Meyer*.)

26671. *SALIX VITELLINA* L.

From near Baidari, Crimea, Russia. "(No. 386, January 15, 1910.) Variety *aurea*. A handsome willow with golden-yellow twigs, growing into a tall shrub, or even a good-sized tree. Wood very brittle. Found wild in ravines and also cultivated in gardens. An ornamental garden and park tree for mild-wintered regions where dry and hot summers prevail." (*Meyer*.)

26672. *JASMINUM* sp.

From near Baidari, Crimea, Russia. "(No. 387, January 15, 1910.) The same as No. 375 (S. P. I. No. 26766), see this number for remarks." (*Meyer*.)

26673. *MEDICAGO ORBICULARIS* (L.) All.

From near Balaklava, Crimea, Russia. "(No. 1201a, January 14, 1910.) An annual alfalfa found growing upon hill slopes and on stony, rather sterile, plains. Germinates in early winter and ripens in early summer. Much liked by sheep that graze everywhere on the hills in the Crimea; also fed in the native hay to working horses and to bulls. May be of value as a winter forage plant in the mild-wintered regions of the United States and especially in California." (*Meyer*.)

Distribution.—The countries bordering on the Mediterranean, from Spain to Mesopotamia, and from Abyssinia to the Canary Islands.

26674 to 26676. *MEDICAGO* sp.

From near Balaklava, Crimea, Russia. "(No. 1202a to 1204a, January 14, 1910.) Same remarks apply to these as to the preceding (S. P. I. No. 26673)." (*Meyer*.)

26674. *MEDICAGO MINIMA* (L.) Grufb.

Distribution.—Western and southern Europe, from Sweden and Spain through middle and southern Russia to Greece, and through Asia to western India, and in northern Africa.

26675. *MEDICAGO RIGIDULA* (L.) Desr.

Distribution.—Same as No. 26673.

26676. *MEDICAGO RIGIDULA AGRESTIS* (Ten.) Burnat.

"A rare variety." (*Meyer*.)

Distribution.—Southern France, bordering on the Mediterranean, and in Italy, Sicily, Greece, and Syria.

26666 to 26688—Continued.

26677. *MEDICAGO ORBICULARIS MICROCARPA* Rouy & Fouc.

From near Alupka, Crimea, Russia. "(No. 1205a, January 17, 1910.) An annual alfalfa growing on hill slopes. The same remarks apply to this as to No. 1201a (S. P. I. No. 26673)." (Meyer.)

Distribution.—Same as No. 26673.

26678. *TRIGONELLA* sp.

From near Balaklava, Crimea, Russia. "(No. 1206a, January 14, 1910.) A leguminous plant, perhaps an annual. The pods were found on some stony fields near Balaklava and also in some wild native hay that was given, to horses. May be of value as a fodder plant in similar regions as mentioned for No. 1201a (S. P. I. No. 26673)." (Meyer.)

26679. *CORONILLA VARIA* L.

From near Kirikinesh, Crimea, Russia. "(No. 1207a, January 16, 1910.) A perennial leguminous plant, making somewhat woody stems, on which the foliage persists in winter when located in sheltered nooks. Grows in dry cliffs and between boulders and rocks. May be of value as a fodder plant in similar regions as mentioned under No. 1201a (S. P. I. No. 26673)." (Meyer.)

Plants of this were received under Meyer No. 404 (S. P. I. No. 26817).

26680. *PYRUS SALICIFOLIA* Pall.

From Balaklava, Crimea, Russia. "(No. 1208a, January 14, 1910.) The same remarks apply to this as to No. 372 (S. P. I. No. 26763)." (Meyer.)

Distribution.—Desert slopes of hills and mountains in the Caucasus, southern Russia and northern Persia.

26681. *MALUS BACCATA* (L.) Moench.

Crab apple.

From St. Petersburg, Russia. "(No. 1209a, December 10, 1910.) A few fruits of a form of *Malus baccata*, from Nertchinsk, Siberia, which are quite different from the ordinary form. Obtained from Prof. A. C. Doktorowitz-Grebntzky, pomologist of the Forestry Institute at Liesnoi, near St. Petersburg, who is using this crab apple to create hardier apples by hybridizing it with *Malus prunifolia* and others." (Meyer.)

26682. *MALUS BACCATA* × *PRUNIFOLIA*.

From St. Petersburg, Russia. "(No. 1210a, December 10, 1910.) Obtained from the same source as the preceding number (S. P. I. No. 26681). This hybrid has better keeping qualities than the ordinary American crab apples." (Meyer.)

26683. *RIBES PETRAEUM* Wulf.

From Liesnoi Forestry Institute, near St. Petersburg, Russia. "(No. 1211a, December 17, 1909.) Seeds from the same bushes from which cuttings were sent under No. 368 (S. P. I. No. 26617). See this number for remarks." (Meyer.)

Distribution.—Alpine and sub-Alpine slopes of mountains in Switzerland, northern Italy, Austria, and east to the Altai and Baikal Mountains in Siberia.

26684. *CERCIS SILIQUASTRUM* L.

From near Kirikinesh, Crimea, Russia. "(No. 1212a, January 16, 1910.) The so-called Judas tree; a rebud of the Southern European and North African regions. Highly ornamental. Grows in sterile, stony localities, where it remains shrubby, but when planted in a good locality it grows up to be a tree 25 to 30 feet in height. Strongly recommended as an ornamental garden and park tree in mild-wintered regions where hot, dry summers prevail." (Meyer.)

26666 to 26688—Continued.

Distribution.—Southern Europe and western Asia, from southern France through the Tyrol and Greece to northern Persia.

26685. *JASMINUM* sp.

From near Baidari, Crimea, Russia. "(No. 1213a, January 15, 1910.) The same remarks apply to this as to Nos. 375 and 387 (S. P. I. Nos. 26766 and 26672)." (*Meyer.*)

26686. *BERBERIS* sp.

From hills near Sebastopol, Crimea, Russia. "(No. 1214a, January 11, 1910.) A barberry growing in rocky cliffs, in gullies, and on stony mountain sides. Has very large spines, but is of ornamental habit. Suitable as an ornamental garden shrub in mild-wintered regions, where the summers are hot and dry." (*Meyer.*)

26687. *ROSA GALLICA* × ——?

From Liesnoi Forestry Institute, near St. Petersburg, Russia. "(No. 1215a, December 17, 1909.) Seeds collected from the same bushes from which cuttings were sent under No. 369 (S. P. I. No. 26618). See this number for remarks." (*Meyer.*)

26688. *JUNIPERUS EXCELSA* Willd.

From mountains near Souchaja Retska, Crimea, Russia. "(No. 1220a, January 15, 1910.) A very beautiful juniper, with bluish-green foliage, large berries of dark violet color, and covered with a white bloom. A tall bush, but sometimes it grows into a tree 20 feet in height. Loves rocky and stony localities. A fine ornamental evergreen for mild-wintered regions, where hot and dry summers prevail. This juniper seems to occur only in the Crimea and the Caucasus." (*Meyer.*)

Distribution.—Southeastern Russia, from the Crimea through the Caucasus to the vicinity of the Caspian Sea.

26689 to 26757.

Material grown at the Subtropical Garden, Miami, Fla. Numbered for convenience in recording distribution February 7, 1910.

Plants (unless otherwise noted) of the following; descriptive notes by Mr. P. J. Wester:

26689 to 26730. *PERSEA AMERICANA* Miller. Avocado.

26689. *Trapp.* "Seed presented by Prof. P. H. Rolfs, Miami, Fla., January 4, 1905, from a very late fruit of this variety."

26690. "Seed presented by Mr. C. W. Butler, St. Petersburg, Fla., October, 1904. Fruited in 1909 for the first time. The fruit is of medium size, pyriform, surface smooth; greenish yellow, skin thin; quality very good; seed medium to large, filling cavity. Season, September.

26691. "Bud wood obtained from Judge White's place, Buena Vista, Fla., by Mrs. P. H. Rolfs, May 4, 1905. Fruit said to be very good, ripening late in December and early in January."

26692. "Bud wood received April 2, 1906, from Dr. F. S. Earle, Santiago de las Vegas, Cuba. Said to be a very late variety of good quality."

26689 to 26757—Continued.

26689 to 26730—Continued.

26693. "Bud wood obtained by Mr. P. J. Wester from Capt. J. A. Thompson, Coconut Grove, Fla., June 25, 1906. The fruit is medium to large, pyriform; color of skin dark purple; seed medium large, firm in cavity; quality very good; season, October and November."
26694. "Bud wood received July 18, 1906, from Mr. S. M. Pettit, Marco, Fla., who wrote that it was one of the best avocados in that locality. Fruited at the Subtropical Garden in 1909. Fruit large, roundish, oblong, oblique; surface smooth, green with numerous small whitish dots at apex; skin thick, separating readily from meat; color of meat yellowish, greenish next to skin, buttery and melting, but rather lacking in flavor; seed comparatively small, filling cavity. Season, September."
26695. "Bud wood received July 18, 1906, from Mr. S. M. Pettit, Marco, Fla., as being one of the best varieties growing in that vicinity. Fruited at the Subtropical Garden in 1909. Fruit medium large, pyriform, surface medium rough, pale green with numerous small whitish lenticels; skin medium thick, separating readily from meat; color of meat mainly straw yellow, greenish near skin; rich and nutty and of excellent flavor; seed medium large, filling cavity. Season, October."
26696. "Bud wood obtained by Mr. P. J. Wester from Mr. F. Harrison, Coconut Grove, Fla., March 27, 1907. Fruit medium large, long, pyriform; surface medium rough, color red; skin thick; quality of meat very good; seed comparatively small, filling cavity. Season, October."
26697. "Bud wood obtained from Mr. F. Harrison, Coconut Grove, Fla., March 27, 1907. Fruit medium to large, obliquely pyriform; color of surface reddish maroon mottled with green; meat of good quality; seed rather large, filling cavity; very prolific. Season, October."
26698. "Bud wood obtained by Mr. P. J. Wester from Mr. W. F. Powell, Fort Myers, Fla., May 22, 1907. Fruit large, pyriform; surface smooth, green; skin thin; quality very good; seed medium large, loose in cavity; prolific. Season, September. Has the reputation of being the best flavored avocado in Fort Myers."
26699. "Bud wood obtained by Mr. P. J. Wester from Mr. C. W. Butler, St. Petersburg, Fla., May 17, 1907. Fruit pyriform to round; surface smooth, yellowish; skin thin; quality good; seed loose in cavity; very prolific. Season, September to October."
26700. "Bud wood obtained by Mr. P. J. Wester from Mr. C. W. Butler, St. Petersburg, Fla., May 17, 1907. Of very good quality; prolific. Season, December."
26701. "Bud wood presented by Rev. E. V. Blackman, Miami, Fla., June 19, 1907. Fruit roundish; weight about 700 grams; surface chocolate; skin thick and leathery; seed medium large, firm, or loose in cavity; quality good. Season, September."
26702. "Bud wood obtained by Mr. P. J. Wester from Mr. E. B. Douglas, Miami, Fla., August 10, 1907. Fruit large, pyriform; surface smooth, purple; skin thin; color of meat rich yellow, flavor good; seed loose in cavity; prolific. Season, December."

26689 to 26757—Continued.

26689 to 26730—Continued.

26703. "Bud wood received from Mrs. P. H. Rolfs, Buena Vista, Fla., August 10, 1907. Fruit roundish, oblique, small to medium; color rich maroon red, very attractive; skin thick and leathery; flavor rather inferior; seed loose in cavity; matures early, which is its strongest point. It is the earliest West Indian variety that has come to my attention."
26704. "Bud wood obtained by Mr. P. J. Wester from Mrs. A. M. King, Miami, Fla., September 18, 1907. Fruit large, pyriform; surface smooth, red. Season, September."
26705. "Bud wood obtained by Mr. P. J. Wester from Mrs. A. M. King, September 18, 1907. Fruit very large, oblong, irregular; surface rough, reddish; quality good. Season, September."
26706. "Seeds received from Mr. G. B. Brackett, pomologist, United States Department of Agriculture, October 8, 1907. These were received by him from Mr. M. A. Carriker, Boruca, Costa Rica. The skin is said to be thick and woody and the flavor of the meat rich and delicate."
26707. "Bud wood received from Mr. W. H. Fulford, Fulford, Fla., October 21, 1907. Fruit pyriform, bright red, of good quality, prolific. Said to be one of the best avocados in that locality."
26708. "Bud wood received from Mr. W. H. Fulford, Fulford, Fla., October 21, 1907. Fruit very large, red, of good quality; prolific. Bud wood from one of the best trees in that locality."
26709. "Bud wood received from Mr. W. H. Fulford, Fulford, Fla. Fruit very large; surface rough, green; of very good quality; prolific. One of the best avocados in the locality."
26710. "Seeds received from Mr. William A. Taylor, United States Department of Agriculture, March 9, 1908. The fruit from which this seed was taken had been received by Mr. Taylor from Los Angeles, Cal."
26711. "Fruit sent to Mr. William A. Taylor, United States Department of Agriculture, by Mr. J. H. Walker, Hollywood, Cal. Said by Mr. Taylor to be a fruit of exceptionally fine quality and to have a hard skin; seed sent by Mr. Taylor to the Subtropical Garden, March 9, 1908."
26712. "Bud wood obtained by Mr. P. J. Wester from Capt. Thomas Hardee, Coconut Grove, Fla., August 11, 1908. Fruit medium to large, pyriform, purple; of exceedingly good quality; seed firm or loose in cavity; very prolific. Parent tree said to produce among the best flavored avocados in Coconut Grove."
26713. "Bud wood obtained by Mr. P. J. Wester from Mr. W. H. H. Hobbs, Coconut Grove, Fla., September 5, 1908. Weight of fruit 1.020 grams, seed 130 grams, shape round oblique; ground color green turning to red and maroon, making it very attractive; skin thick and leathery; meat greenish 3 mm. from the skin, the rest yellowish, mottled with purple streaks; quality excellent; seed loose in cavity. Matures in the early part of September."

26689 to 26757—Continued.

26689 to 26730—Continued.

26714. "Bud wood obtained by Mr. P. J. Wester from Mr. W. H. H. Hobbs, Coconut Grove, Fla., September 5, 1908. Fruit very similar in appearance to No. 26713, but somewhat larger; quality said to be very good and the tree a prolific bearer. Season, early part of September."

26715. "Bud wood obtained by Mr. P. J. Wester from Mr. W. H. H. Hobbs, Coconut Grove, Fla., September 5, 1908. Fruit medium to large, pyriform, quality good; seed loose in cavity; fairly prolific. Season, early part of September."

"The parent trees of Nos. 26713, 26714, and 26715 spring from the ground at the same point and Mr. Hobbs believes that they come from the same seed, though the fruits from the trees vary from each other to some extent."

26716. "Bud wood obtained by Mr. P. J. Wester from a tree on Judge White's homestead, Buena Vista, Fla., September 10, 1908. Fruit medium large, oblong or roundish, purple with numerous small green lenticels; skin smooth, medium thick; meat green 3 to 4 mm. next to the skin, rest yellowish mottled with purple streaks; flavor average to good; seed firm in cavity, medium large; very prolific. Ripens in early part of August and September."

26717. "Bud wood obtained by Mr. P. J. Wester from Mr. Courley, Buena Vista, Fla., September 28, 1908. Fruit reputed to be of very good quality and the tree prolific. Season, October to December."

26718. "Bud wood obtained by Mr. P. J. Wester from Prof. T. W. Mather, Miami, Fla., November 3, 1908. Fruit medium large to large, obliquely pyriform, maroon red with numerous small greenish-yellow lenticels; skin thick and leathery; meat pale yellow tinted with green and green predominating near the skin, the rest mottled with purple veins in distal end of fruit, making it rather attractive; meat rather soft; flavor good, but lacking in richness; seed firm in cavity."

26719. "Bud wood received from Mr. Walter Waldin, Miami, Fla. Fruit said to be of exceedingly good quality; medium early."

26720. "Bud wood received from Mr. Orange Pound, Coconut Grove, Fla., from a tree owned by Mr. Peacock, of the same place, November 28, 1908. Fruit large, pyriform, surface smooth, maroon red, greenish toward apex, skin medium thick, separating readily from meat; color of meat mainly yellowish, greenish next to skin, rich, nutty, and very delicately flavored. Seed smaller in proportion to meat than in any avocado that has come to my attention; loose in cavity. Season, November."

26721. "Bud wood obtained by Mr. P. J. Wester, through Mr. J. B. Beach, West Palm Beach, Fla., from a tree on the place of Dr. G. W. Potter, of the same place, September 1, 1909. The fruit is large, oblong or roundish, surface rather rough; green skin medium thick; meat mainly yellowish, green close to skin, of good quality; seed comparatively small, loose in cavity. Season, September."

26689 to 26757—Continued.

26689 to 26730—Continued.

26722. "Bud wood obtained by Mr. P. J. Wester from Mr. J. U. Parker, West Palm Beach, Fla., September 1, 1909. Fruit of good quality and tree a good bearer."
26723. "Bud wood obtained by Mr. P. J. Wester from Mr. D. A. Allen, West Palm Beach, Fla., September 1, 1909. Fruit round, oblique, medium large; surface medium smooth, greenish yellow splashed with light red to poppy red, with streaks of dark red toward base; skin medium thick, separating readily from meat; meat yellowish, rich, nutty, and of a very good quality; seed rather large, filling cavity; prolific. Season, October to November."
26724. "Bud wood obtained by Mr. P. J. Wester from Mr. D. A. Allen, West Palm Beach, Fla., September 1, 1909. Fruit medium, roundish, pyriform, oblique; surface smooth, green; skin thick; meat yellowish of good quality; seed rather large, firm in cavity. The parent tree is prolific. Season, August and September."
26725. "Bud wood obtained by Mr. P. J. Wester from Mr. J. B. Douglass, Miami, Fla., September 14, 1909. Fruit medium to large, pyriform, oblong; surface smooth, red; lenticels numerous, whitish; skin medium thick, separating readily from meat; meat yellowish, veined with purple, pale green close to skin, rich and nutty; quality very good; seed medium large, firm in cavity. The tree is abundantly productive. Season, September."
26726. "Bud wood obtained by Mr. P. J. Wester from Mr. J. B. Douglass, Miami, Fla., September 14, 1909. Fruit medium large, pyriform; surface maroon red, lenticels numerous, greenish brown; skin thick, separating readily from meat; meat yellowish, greenish next to skin, moderately rich and nutty; quality good; seed medium large, nearly filling cavity, a constant and prolific bearer. Season, August."
26727. "Bud wood obtained by Mr. P. J. Wester, through Dr. John Gifford, Cocoanut Grove, Fla., from a tree on the place of Mrs. Florence P. Haden, of the same place. Fruit medium large, roundish, oblate, oblique; surface medium rough, dark red to coral red, tinged with green at apex, lenticels small, mostly at apex, whitish or greenish; skin medium thick, separating readily from meat; meat yellowish, green close to skin, exceedingly rich and nutty, of very good flavor; seed medium to large, nearly filling cavity. Season, October."
26728. "Bud wood obtained by Mr. P. J. Wester, from Mr. Orange Pound, Cocoanut Grove, Fla., September 16, 1909. Fruit medium large, obliquely long, pyriform; surface rough, dark maroon, lenticels numerous, small, reddish; skin very thick, separating readily from meat; meat yellowish with purple veins, green toward skin, rather lacking in flavor, with slight acidity near apex; seed medium to small, filling cavity; very prolific. Season, September. This variety colors up the most attractively of all varieties that have come to my notice."
26729. Seeds from fruits of No. 26695.
26730. Seeds from fruits of No. 26727.

26689 to 26757—Continued.

26731 to 26739. ANONA CHERIMOLA Miller.

Cherimoya.

26731. "Bud wood obtained by Mr. P. J. Wester, from Mr. Wm. Freeman, Little River, Fla., August 4, 1904, and budded at the Subtropical Garden on *Anona glabra*. Fruited by means of hand pollination, 1908, and again in 1909; the first plant of this species to fruit in Florida. The fruit is small, not exceeding 385 grams in weight, and the seeds are abundant; the flavor is good. The original seed was brought by Mr. Freeman from San Jose, Costa Rica, to Little River in 1895."

26732. "Bud wood obtained by Mr. P. J. Wester, from Mr. S. K. Brown, Lemon City, Fla. According to Mr. Brown, the seed was sent to him from Callao, Peru."

26733. Seedlings grown from S. P. I. No. 26731.

26734. "Seed presented by Dr. F. Franceschi, Santa Barbara, Cal., January 12, 1909."

26735. "Bud wood presented by Mr. E. Gottfried, Miami, Fla., April 16, 1909, from a tree grown on Key Largo, Fla., from seed sent to him from Peru."

26736. "Bud wood presented by Mr. E. Gottfried, Miami, Fla., April 16, 1909, from a tree grown on Key Largo, Fla., from seed sent to him from Peru."

26737. "Bud wood received from Dr. F. Franceschi, Santa Barbara, Cal., December 8, 1908. This variety has been introduced and grown under the name of *macrocarpa* in California, but it has no botanical standing as a separate species. It is evidently a very robust form of the *cherimola*."

26738. "Bud wood received from Dr. F. Franceschi, Santa Barbara, Cal., December 8, 1909. This variety was introduced and is grown in California under the name of *Anona suavissima*."

26739. "Bud wood received from Dr. F. Franceschi, Santa Barbara, Cal., December 8, 1908. This variety has been introduced and grown in California under the name of *Anona reniformis*."

26740 to 26746. ANONA SQUAMOSA L.

Sugar-apple.

26740. "Bud wood obtained by Mr. P. J. Wester, on Upper Metacumbe Key, Fla. From the earliest fruiting tree that has come to my attention."

26741. "Bud wood obtained by Mr. P. J. Wester, from Mr. J. B. Douglass, Miami, Fla. The fruit is of good quality and the tree a prolific bearer. Said to bear fruit very late."

26742. "Bud wood obtained by Mr. P. J. Wester, from Prof. P. H. Rolfs, Buena Vista, Fla. Fruit large, skin pinkish in color, quality very good, rather a shy bearer."

26743. "Bud wood obtained by Mr. P. J. Wester, from Prof. P. H. Rolfs, Buena Vista, Fla., September 10, 1908. Fruit medium large; skin pinkish, quality very good."

26744. "Bud wood obtained by Mr. P. J. Wester, from Prof. P. H. Rolfs, Buena Vista, Fla., September 19, 1908. Fruit small, of good quality, exceedingly prolific, a little later in season than the main crop."

26689 to 26757—Continued.

26740 to 26746—Continued.

26745. "Bud wood obtained by Mr. P. J. Wester, from the Rev. L. S. Rader, Miami, Fla., September 18, 1908. The fruit from this tree is the largest of this species that has come to my attention; of good quality."

26746. "Seed received at the Subtropical Garden, Miami, Fla., September 22, 1908, from Mr. Henry F. Schultz, Ancon, Canal Zone, Panama.

26747 and 26748. *ANONA RETICULATA* L. Custard-apple.

26747. "Bud wood obtained by Mr. P. J. Wester from Mr. Cephas Pinder, Upper Metacumbie Key, Fla., April, 1906."

26748. "Bud wood obtained by Mr. P. J. Wester from Mr. Cephas Pinder, Upper Metacumbie Key, Fla., April, 1906. The bud wood of this and the preceding number was taken from what Mr. Pinder considered his best custard-apple tree."

26749. *ANONA SENEGALENSIS* Pers.

"Seed received from Reasoner Bros., Oneco, Fla., September 18, 1908."

26750. *ANONA* sp. (?)

"Bud wood received from Mr. E. N. Reasoner, Oneco, Fla., April, 1908."

26751. *ANONA* sp. (?)

"Bud wood received from Mr. E. N. Reasoner, Oneco, Fla., April, 1908. The seed from which Mr. Reasoner's trees grew was sent to him many years ago by Mr. C. J. Harvey, Sanborn, Mexico, who wrote Mr. Reasoner that the fruit was very delicious."

26752. *ANONA* sp.

"Three plants received from Mr. O. F. Cook, February 12, 1909, who obtained the seed in Mexico."

26753. *ANONA* sp.

"*Soucoya*. Seed received from Dr. F. Franceschi, Santa Barbara, Cal., March 17, 1909."

26754. *ANONA SQUAMOSA* L.

"A tree that is very prolific, fruit of good quality."

26755. *PSIDIUM GUAJAVA* L. Guava.

Seed received from Dr. H. J. Webber, December 12, 1906. A few of the plants raised from this seed have fruited and proved to be very superior to the common sorts."

26756. *PSIDIUM FRIEDRICHSTHALIANUM* (Berg) Niedenzu.

Plants received from Mr. E. N. Reasoner, Oneco, Fla., December 4, 1908.

"From Costa Rica. Extremely acid fruit, similar to *P. araca*; of value in cookery." (*Reasoner.*)

Distribution.—Reported only from Guatemala, South America.

26757. *PSIDIUM ARAÇA* Raddi.

Plants received from Mr. E. N. Reasoner, Oneco, Fla., December 4, 1908.

"Native of Brazil. Fruit extremely acid, of medium size, not very seedy." (*Reasoner.*)

Distribution.—Spontaneous and cultivated in the Caribbean islands and the northern part of South America, occurring in Guatemala, Peru, English and Dutch Guiana, and in the provinces of Solimoes, Ciara, Bahia, Minas Geraes, and Rio de Janeiro, Brazil.

26758 and 26759. MEDICAGO SATIVA L.**Alfalfa.**

From Mitchell, S. Dak. Presented by Prof. W. A. Wheeler, through Mr. Charles J. Brand. Received February 10, 1910.

Seeds of the following:

26758. "(S. D. No. 240; acclimatized *Turkestan* alfalfa.) This seed is the 1909 progeny of S. P. I. No. 991, and was grown at Mitchell, S. Dak. It is one of the hardiest of all the alfalfas that have been tested by the department, ranking second only to the *Grimm* alfalfa of Minnesota. In an experiment at Dickinson, N. Dak., including 68 kinds, it was exceeded in hardness only by Minnesota and North Dakota *Grimm*." (Brand.)

26759. "(S. D. No. 167; so-called *Baltic* alfalfa.) This is one of the very promising alfalfas for cold climates, and at Dickinson, N. Dak., ranked fifth in winter hardness of 68 kinds. For detailed information as to its origin, see S. P. I. No. 25806." (Brand.)

26760. ZIZANIA LATIFOLIA (Griseb.) Stapf.

From Tamsui, Formosa. Presented by Mr. Samuel C. Reat, American consul. Received February 5, 1910.

"This plant, which is closely related botanically to American wild rice, is, however, a perennial, which perpetuates itself by underground rootstocks. It grows wild and is also cultivated in various parts of China, Japan, and Formosa, and is the source of three separate food products, which are: The seeds, a fungus growth produced in the inflorescence, and the succulent vegetative shoots, which are produced from the rootstocks. The plant has a number of Chinese names, the most common of which is 'Ku.' It is also known in the vicinity of Canton as 'Chiao sun,' at Shanghai as 'Chiao pai,' and at Peking as 'Chiao kwa.' According to Bretschneider, the fungus growth in the inflorescence (*Ustilago esculenta* P. Henn) is known as 'Ku shou.' This fungus, which is said to be edible when young, is probably not unlike the smut occurring in the inflorescence of Indian corn, which latter is sometimes eaten by the Mexican Indians. The seed of this plant is apparently not generally used for food in China, as are the other parts, though mention of their use as human food is made in very early Chinese literature. The plant is said to be cultivated extensively in the vicinity of Canton, China." (C. S. Scofield.)

26761 to 26767.

From Sebastopol, Crimea, Russia. Received through Mr. Frank N. Meyer, agricultural explorer, February 9, 1910.

Cuttings of the following:

26761. MORUS ALBA L.**White mulberry.**

From estate of Maximoff, near Sebastopol, Crimea, Russia. "(No. 360, January 11, 1910.) Variety *fastigiata*. A handsome fastigiate form of the Russian mulberry, resistant to drought and heat. Suitable as an ornamental garden and park tree, especially in the semiarid, hot-summered regions of the United States." (Meyer.)

26762. SALIX BABYLONICA L.**Willow.**

From estate of Maximoff, near Sebastopol, Crimea, Russia. "(No. 371, January 11, 1910.) Variety *aurea*. A willow with golden-yellow branches, which are very pliable. It is apparently drought and heat resistant, and can be grown, as a producer of tying material, in the semiarid, hot-summered regions of the United States." (Meyer.)

26761 to 26767—Continued.

26763. *PYRUS SALICIFOLIA* Pall. (?)

From hills near Sebastopol, Crimea, Russia. "(No. 372, January 11, 1910.) A wild pear growing on exposed, stony mountain sides and in cliffs and gullies. It grows up to 20 feet high, but is more generally seen as a tall bush, very variable as to shape and outlines; young branches and foliage very downy. Apparently very drought resistant. Will probably be of value as a stock for pears in the semiarid, hot-summered regions of the United States and especially for the Southwest." (*Meyer.*)

26764. *PYRUS SALICIFOLIA* Pall. (?)

From hills near Sebastopol, Crimea, Russia. "(No. 373, January 11, 1910.) A very compact-growing, round-headed variety of the preceding number (S. P. I. No. 26763). Of use as an ornamental garden tree of small dimensions in the semiarid, hot-summered regions of the United States." (*Meyer.*)

26765. *CRATAEGUS ORIENTALIS* Pall. (?)

From hills near Sebastopol, Crimea, Russia. "(No. 374, January 11, 1910.) A hawthorn growing on dry and stony places. Mostly seen as a shrub, but also growing into a small tree. Able to stand considerable drought, heat, and neglect. Of value as an ornamental garden tree and as a stock for pears in the semiarid, hot-summered regions of the United States." (*Meyer.*)

Distribution.—A tree or shrub, growing in the edges of the forests on the mountain slopes of Greece and Asia Minor.

26766. *JASMINUM* sp.

From hills near Sebastopol, Crimea, Russia. "(No. 375, January 11, 1910.) A jasmine, apparently closely allied to *J. nudiflorum*; has bright-green branches in winter, is of bushy growth, reaching a height of only a couple of feet. Found on stony mountain sides in somewhat shady places. May prove of value as a small ornamental garden shrub in the mild-wintered semiarid regions of the United States." (*Meyer.*)

26767. *LIGUSTRUM* sp.

From hills near Sebastopol, Crimea, Russia. "(No. 376, January 11, 1910.) A low, bushy, semi-evergreen privet, perhaps a variety of *L. vulgare*; grows on dry, rocky, mountain sides in somewhat shady places. Of use as a garden shrub in the semiarid regions of the United States." (*Meyer.*)

26768. *LUCUMA MULTIFLORA* DC.

"Jacana."

From Mayaguez, Porto Rico. Presented by Mr. W. E. Hess, Agricultural Experiment Station. Received February 9, 1910.

"Fruit $1\frac{1}{2}$ to 2 inches long and wide. Some are pointed, others almost round; seeds one-third inclosed in a sweet, mealy pulp. The pulp is edible, texture and color strongly suggesting the yolk of a hard-boiled egg.

"On account of its large, lustrous foliage and symmetrical growth this tree should be valuable as an ornamental avenue tree for south Florida and California. It might also prove a vigorous stock for the egg fruit (*Lucuma nervosa* DC.); the fruit of this species is delicious, but it seems to be a very slow grower.

"I found *Lucuma* seed very slow in germinating. The fresh seeds require 3 to 5 months for germination, but after germinating they grow very rapidly." (*Hess.*)

Distribution.—Porto Rico and other West Indian islands; cultivated in southern Florida and California.

26769. *HIBISCUS* sp.

From Tientsin, China. Presented by Mr. F. Bade, through Mr. Hamilton Butler, American vice consul-general in charge. Received January 25, 1910.

"Probably a Japanese single variety." (*Bade.*)

26771 to 26782. DIOSPYROS KAKI L. f. Persimmon.

From Yokohama, Japan. Purchased from the Yokohama Nursery Co. Received February 10, 1910.

Cuttings of the following:

26771. <i>Daidaimaru.</i>	26777. <i>Kurokuma.</i>
26772. <i>Emon.</i>	26778. <i>Minozuru.</i>
26773. <i>Fuyugaki.</i>	26779. <i>O-gosho.</i>
26774. <i>Gosho-gaki.</i>	26780. <i>Tanenashi</i> (seedless).
26775. <i>Hachiya.</i>	26781. <i>Tauba-gaki.</i>
26776. <i>Hiyakume.</i>	26782. <i>Tsuru-no-ko.</i>

26783. BRASSICA PEKINENSIS (Lour.) Skeels. Pe tsai cabbage.

Presented by Mr. Maurice de Vilmorin, Paris, France, through Mr. Walter T. Swingle. Received January 25, 1910.

"Seeds of Chinese Pe tsai which I got from Abbé Martin, Gan pin Koÿ, who says: 'I tried your improved Petsai but prefer the strain of this Province. Instead of extending many leaves this one makes a very white and tender head. It may be sown at the same time, but plant it much closer, as they do for salads. It is peculiarly good after the first hoarfrost.' " (*Vilmorin.*)

26784. CHLOROPHORA TINCTORIA (L.) Gaud.

From Paraguay. Procured by Mr. Cornelius Ferris, jr., American consul, Asuncion, Paraguay, from Mr. Conrado Kraus, horticulturist. Received February 17, 1910.

Tata-yuba. A tree with gray bark, and sometimes armed with thorns. The wood is yellow and furnishes a dye.

Distribution.—From the State of Vera Cruz, in southern Mexico, south through Central and South America to Paraguay; also in the West Indies.

26785. RHUS CORIARIA L. Sicilian sumac.

From Portici, Italy. Presented by Prof. L. Savastano, R. Scuola di Agricoltura. Received February 11, 1910.

"Seed of the well-known Sicilian sumac, a native of central Europe, occurring in Sicily, Spain, Portugal, Greece, and Cyprus. It has also been introduced into Algeria and some parts of Australia. The cultivation of this shrub and the marketing of the dried leaves, which are used for mordanting fabrics and tanning certain types of leather, forms an important industry in Sicily and Tuscany. In its native habitat this species succeeds well on dry and rather barren soil. It may be propagated either from seeds or cuttings, and its cultivation presents no special difficulties. Introduced for testing its possibilities as a cultivated crop." (*W. W. Stockberger.*)

26786. ALYSICARPUS VAGINALIS (L.) DC.

From the Island of Guam. Presented by Mr. J. B. Thompson, special agent in charge, Agricultural Experiment Station. Received February 8, 1910.

"This is an annual, upright legume, isolated plants growing to a height of 6 feet; when growing thickly, however, it attains a height of only 3 or 4 feet. Its economic possibilities were first recognized by Mr. J. B. Thompson, who found it growing extensively in certain parts of the Philippines. The plant is an annual, but under favorable circumstances grows again from the base, so that two or even three cuttings can be made. It should be extensively experimented with, especially in the Southern States where alfalfa can not be grown." (*C. V. Piper.*)

Distribution.—Throughout the tropics of the Old World, and naturalized in Jamaica, Antigua, and Trinidad.

26787. STIZOLOBIUM sp.

From Medan, Sumatra. Presented by Dr. L. R. de Bussy. Received February 3, 1910.

Seed gray mottled with brown.

NOTE.—This seed was picked out of the lot to which S. P. I. No. 26665 was assigned, by Prof. Piper.

26788 and 26789. CICER ARIETINUM L. Chick-pea.

From New York, N. Y. Purchased from Mr. J. Schindel. Received February 8, 1910.

Seeds of the following:

26788. *Spanish.*

26789. *California.*

26790. BRASSICA CAMPESTRIS L. Swedish turnip.

From New York, N. Y. Purchased from Messrs. J. M. Thorburn & Co. Received February 11, 1910.

Yellow Finland. To be grown at the Agricultural Experiment Station, Sitka, Alaska, in a comparative test with the *Petrowski* turnip, S. P. I. No. 19554, which has proved so well adapted to conditions there.

26791 and 26792. ROSA LAEVIGATA Michx.

From Redlands, Cal. Presented by Mr. Sydney Hockridge. Received at the Plant Introduction Garden, Chico, Cal., January, 1910.

Plants of the following:

26791. *Cherokee.*

26792. Variety *anemone*. The European pink hybrid, a rare and beautiful variety.

26793. PRUNUS PSEUDO-CERASUS Lindl.

From Yokohama, Japan. Purchased from the Yokohama Nursery Company. Received February 11, 1910.

See No. 25087 for description.

26794 to 26797. PUNICA GRANATUM L. Pomegranate.

From Hwai Yuan, China. Presented by Dr. Samuel Cochran, American Presbyterian Mission. Received February 9, 1910.

Cuttings of the following; notes by Dr. Samuel Cochran:

26794. "*Manao shihliu*, Carnelian pomegranate. The fruit is long instead of round, and the end attached to the twig is pointed. Kernels are large and the flavor good."

26795. "*Yushih tzu-tzu shihliu*, Jade seed pomegranate. White kernels, 'like rock candy,' my friend says. The flavor is good and does not cloy. The most valued variety we have."

26796. "*Peh-hwa shihliu*, white-flowered pomegranate. So called from the color of the blossom. The leaves are not red when first opened as are other varieties; the fruit is not ruddy like others and the kernels are white; the fruit is large, but rots easily and drops from the tree, so the yield is small. It is of good flavor."

26794 to 26797—Continued.

26797. "Cuttings from different trees of good unnamed sorts. I do not know if they really would constitute separate varieties. My friend, Mr. Sung Shao Ru, says they are good kinds he selected carefully."

"It is said that the Hwai Yuan pomegranates are the best in China, and I think it is very likely true. I believe they are sent from here for the Emperor's use. These cuttings were gathered for me by a friend who is a great tree lover and skilled in arboriculture so far as it is known in this part of the world. I have not seen the trees nor eaten the fruit of the particular ones from which these cuttings were taken, but I rely on what he says." (*Cochran.*)

26798. CYTISUS BIFLORUS L'Herit.

From Sarepta, Russia. Collected by Mr. K. B. Christies, presented by Mr. W. von Arapow, agronomist of Samara, Russia, through Mr. C. S. Scofield. Received January 26, 1910.

"This plant has a prostrate woody stem 1 to 3 decimeters long, with slightly oval leaves less than an inch long. It has been used somewhat in Europe as an ornamental, but from its description it does not appear to be promising as a forage plant." (*P. L. Ricker.*)

Distribution.—Southern Russia, and in Siberia, especially on the slopes of the Ural and Altai Mountains.

26799. ALEURITES FORDII Hemsl.**China wood-oil tree.**

From Audubon Park, New Orleans, La. Procured by Mr. Peter Bisset. Received February 14, 1910.

Grown from S. P. I. No. 13104. See S. P. I. No. 25081 for description.

26800. ROBINIA PSEUD-ACACIA L.

From Kew, England. Presented by the Royal Botanic Garden. Received February 17, 1910.

Variety *fastigiata*. "This curious tree, now seldom seen, is represented in the collection of Leguminosæ at Kew by a specimen 50 feet or so high. In habit it is one of the most erect and columnar of this class of trees, narrower, indeed, in proportion to its height than the Lombardy Poplar." (*W. J. Bean, Gardeners' Chronicle, March 9, 1907.*)

NOTE.—Linnæus in the *Species Plantarum*, 1753, vol. 2, p. 722, published the above specific name as two words, "*Robinia Pseudo Acacia*." In the second edition of the *Species Plantarum*, 1763, vol. 2, p. 1043, the name was changed to "*Robinia Pseud-Acacia*," and the latter is here accepted as the correct form.

26801 to 26817.

From Russia. Received through Mr. Frank N. Meyer, agricultural explorer, February 12, 1910.

Cuttings of the following:

26801. OLEA EUROPAEA L.**Olive.**

From Nikita, Crimea, Russia. "(No. 388, January 22, 1910.) Cuttings from a very large olive tree, several centuries old, growing in the Imperial Botanical Garden at Nikita, and bearing large fruits. This and following numbers (S. P. I. Nos. 26802 to 26811) are cuttings of olive trees that have withstood temperatures of about -2° F. unhurt when other olives were frozen to the

26801 to 26817—Continued.

ground. They can therefore be recommended for southern Texas and for the interior valleys of California, where heavy frosts are occasionally experienced." (*Meyer.*)

26802 to 26811. *OLEA EUROPAEA* L.**Olive.**

From Nikita, Crimea, Russia. "(Nos. 389 to 398, January 22, 1910.) These cuttings have been cut from trees between 60 and 70 years of age, otherwise the same remarks apply to them as to No. 388 (S. P. I. No. 26801). Each of these numbers is a different variety, but as yet they have not been named by the Russians." (*Meyer.*)

26812. *POPULUS* sp.**Poplar.**

From Orianda, Crimea, Russia. "(No. 399, January 25, 1910.) A variety of poplar with whitish trunk, growing remarkably pyramidal and tall. The young trees seem to shoot up until they are about 80 feet tall, and then when getting older they branch out somewhat and lose their spire-like shape. To be recommended for regions where hot and dry summers prevail, followed by fairly mild winters." (*Meyer.*)

26813 and 26814. *MEDICAGO* spp.**Alfalfa.**

From near Yalta, Crimea, Russia. "(Nos. 400 and 401, January 24, 1910.) An alfalfa growing in dry earth cliffs, having very long and strong roots. Perhaps a variety of the ordinary *M. sativa*. See also Nos. 377 to 382 (S. P. I. Nos. 26666 and 26667) for further remarks." (*Meyer.*)

26815. *MEDICAGO* sp.

From near Nikita, Crimea, Russia. "(No. 402, January 24, 1910.) Apparently like the preceding numbers (S. P. I. Nos. 26813 and 26814), but found in a different locality." (*Meyer.*)

26816. *MELILOTUS TAURICA* (Bieb.) Ser.

From near Nikita, Crimea, Russia. "(No. 403, January 24, 1910.) A melilotus found on hill slopes in decomposed rocks. May be of value as a fodder plant in regions with dry and hot summers and mild winters." (*Meyer.*)

26817. *CORONILLA VARIA* L.

From near Nikita, Crimea, Russia. "(No. 404, January 24, 1910.) Found covering a steep hill slope of decomposed rock. Seeds sent under No. 1207a (S. P. I. No. 26679). See this number for further particulars." (*Meyer.*)

26818 to 26820.

Grown at Pullman, Wash., by Mr. M. W. Evans, season of 1909. Received fall of 1909.

Seed of the following:

26818. *ONOBRYCHIS VICIAEFOLIA* Scop. 1772. (*Onobrychis sativa* Lam. 1778.)
Sainfoin.

26819. *PISUM ARVENSE* L.

Pea.

Field variety. Original seed received from Botanical Gardens, Dublany, Austria. Grown under Agrost. No. 0500.

26820. *FESTUCA RUBRA* L.

Red fescue.

"A variety grown on the campus of the Agricultural College, College Park, Md., in dense shade. It would not produce seed at College Park, so was sent to Pullman, where it seeded freely." (*Evans.*)

26821 to 26835.

Grown at the Plant Introduction Garden, Chico, Cal. Numbered for convenience in recording distribution February 21, 1910.

Plants of the following varieties of fruit budded on *Amygdalus davidiana* to test it for its commercial value and congeniality as a stock for these fruits:

26821 to 26834. Budded on S. P. I. No. 22009.

26821 to 26827. AMYGDALUS PERSICA L. **Peach.**

26821. *Salway.* 26825. *Levey's.*

26822. *Phillips Cling.* 26826. *Alexander.*

26823. *McKevitt's Cling.* 26827. *Heath Cling.*

26824. *Tuscan.*

26828 to 26831. PRUNUS DOMESTICA L. **Prune.**

26828. *Fellenberg.* 26830. *Sugar.*

26829. *French.* 26831. *Pond Seedling.*

26832. PRUNUS ARMENIACA L. **Apricot.**

Moorpark.

26833. PRUNUS TRIFLORA (X ———). **Plum.**

Wickson.

26834 and 26835. AMYGDALUS COMMUNIS L. **Almond.**

26834. *I. X. L.*

26835. Budded on S. P. I. No. 21227.

Nonpareil.

26839 and 26840. GLYCINE HISPIDA (Moench) Maxim. **Soy bean.**

From Kalgarh, Midnapur, India. Presented by Mr. A. L. Keenan. Received February 17, 1910.

Seeds of the following:

26839. Large black seeded.

26840. Small black seeded.

26841 and 26842.

From Hangchow, China. Presented by Mr. John L. Stuart, Southern Presbyterian Mission. Received February 11 and 12, 1910.

Seeds of the following:

26841. CANNABIS SATIVA L. **Hemp.**

26842. BOEHMERIA NIVEA (L.) Gaud. **Ramie.**

"The women use the bark of this for thread and strings and also make a coarse cloth from it." (Stuart.) Chinese name *Ch'u ma*, or *Tehou ma*.

26844. VIGNA UNGUICULATA (L.) Walp. **Cowpea.**

From Vinemont, Ala. Purchased from Mr. E. C. Townsend. Received February 19, 1910.

Townsend. "A smooth white-seeded pea with a medium brown eye. This pea bunches like the speckled or Whippoorwill pea and is good for the table or stock." (Townsend.)

26850. PHOENIX DACTYLIFERA X CANARIENSIS. (?)

From Audubon Park, New Orleans, La. Procured by Mr. Peter Bisset. Received February 12, 1910.

For the introduction of a cross similar to this see S. P. I. No. 3120.

26851. CHLORIS GAYANA Kunth. **Rhodes-grass.**

From Sydney, New South Wales, Australia. Purchased from Messrs. Anderson & Son. Received February 19, 1910.

Distribution.—Africa, from Abyssinia south to the Transvaal region.

26853 and 26854. GARCINIA spp.

From Buitenzorg, Java. Presented by Mr. H. Wigman, jr., Department of Agriculture. Received February 18, 1910

Seeds of the following:

26853. GARCINIA COWA Roxb.

For distribution of this species see No. 24769.

26854. GARCINIA DIOICA Blume.

Distribution.—Mountain slopes in the Provinces of Buitenzorg, Tjanjor, and Bantam, on the island of Java.

26855 and 26856.

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

26855. ANONA PALUSTRIS L.

"A small tree indigenous to tropical America, 24 to 30 feet high, the trunk reaching 10 or 12 inches in diameter, inhabiting swampy and marshy localities. The fruit is said to be inedible." (*Wester.*) (*Plants.*)

Distribution.—Native and cultivated from the State of Vera Cruz in southern Mexico southward to Brazil, in the West Indies, and in the Senegambia region of Upper Guinea, Africa.

26856. RHODOMYRTUS TOMENTOSA (Ait.) Wight.

See No. 25891 for description.

26857 and 26858.

From Shanghai, China. Presented by Rev. J. M. W. Farnham. Received January 31, 1910.

Seeds of the following:

26857. CHAETOCLOA ITALICA (L.) Scribn.

Siberian millet.

26858. GLYCINE HISPIDA (Moench) Maxim.

Soy bean.

Yellow.

26862 to 26865.

From Russia. Received through Mr. Frank N. Meyer, agricultural explorer, February 24, 1910.

Plants of the following:

26862. FAGUS sp.

From near Gagri, Caucasus, Russia. "(No. 406, February 2, 1910.) A tall tree in the forest, having a whitish trunk, like the native American beech. Seems to like somewhat shady, cool places. Of value as a shade and timber tree in the moist, mild-wintered sections of the United States." (*Meyer.*)

26863 and 26864. VIOLA sp.

Violet.

From near Gagri, Caucasus, Russia. "(Nos. 411 and 412, February 1, 1910.) A violet, found growing on semishady, rather dry places a few hundred feet above sea level. Bears small blue flowers which are quite fragrant. Is apparently more drought and heat resistant than the ordinary violets, some specimens even possessing more or less of a taproot. This may be of value in breeding a more drought and heat resistant strain of this favorite flower." (*Meyer.*)

26862 to 26865—Continued.**26865. MEDICAGO sp.**

From Novorossysk, Caucasus, Russia. "(No. 415, January 29, 1910.) Alfalfas growing on stony and clayey hillsides near Novorossysk. The summer is very hot and dry in this region, but the winter is mild and generally very wet." (*Meyer.*)

26866 to 26884.

From Russia. Received through Mr. Frank N. Meyer, agricultural explorer, February 5, 1910.

Seeds of the following:

26866. ROSA sp.

From near Sebastopol, Crimea, Russia. "(No. 1216a, January 11, 1910.) A wild rose found in gullies and at the bases of rocky hills. A very strong grower. May serve as a stock for fine varieties of roses in mild-wintered regions, where the summers are hot and dry." (*Meyer.*)

26867. ROSA sp.

From near Sebastopol, Crimea, Russia. "(No. 1217a, January 11, 1910.) A wild rose of medium strong growth, found on similar places as the preceding number (S. P. I. No. 26866) and perhaps of value as a stock." (*Meyer.*)

26868. ROSA sp.

From near Baidari, Crimea, Russia. "(No. 1218a, January 15, 1910.) A wild rose growing in abundance in thickets and semishady places, has few spines. May be of use in hybridizing work and as a stock like the preceding numbers (S. P. I. Nos. 26866 and 26867)." (*Meyer.*)

26869. ROSA sp.

From Balaklava, Crimea, Russia. "(No. 1219a, January 14, 1910.) A wild rose of very bushy habit, occurring on rather sterile and stony fields. May be of value as an ornamental shrub in regions where the winters are fairly mild and the summers hot and dry." (*Meyer.*)

26870. SORBUS sp.**Mountain ash.**

From near Baidari, Crimea, Russia. "(No. 1221a, January 15, 1910.) Found on dry and exposed places, remaining rather shrubby. Apparently able to withstand more heat and drought than the ordinary mountain ashes, and therefore recommended for regions with mild winters and hot and dry summers." (*Meyer.*)

26871. CRATAEGUS sp.

From near Sebastopol, Crimea, Russia. "(No. 1222a, January 11, 1910.) A tall shrub, growing sometimes into a tree. Found on rather stony and sterile places. Of value as an ornamental plant and as a stock for pears in mild-wintered regions, where hot and dry summers prevail." (*Meyer.*)

26872. CRATAEGUS sp.

From Balaklava, Crimea, Russia. "(No. 1223a, January 16, 1910.) A shrubby hawthorn bearing a few black, juicy berries. Found growing in a thicket. Of value as an ornamental shrub in regions like the preceding (S. P. I. No. 26871)." (*Meyer.*)

26873. CRATAEGUS sp.

From near Kirikinesh, Crimea, Siberia. "(No. 1224a, January 16, 1910.) A tall, shrubby hawthorn, found growing in fields. Of value like the preceding number (S. P. I. No. 26872)." (*Meyer.*)

26866 to 26884—Continued.

26874. COTONEASTER PYRACANTHA (L.) Spach.

From near Baidari, Crimea, Russia. "(No. 1225a, January 15, 1910.) This very ornamental evergreen hawthorn grows in its native habitat in rather sterile and exposed places, and where it is browsed upon by sheep and goats assumes very low, rounded shapes. Can probably be employed as a low evergreen for hedges and borders in fairly mild-wintered regions, with hot and dry summers." (*Meyer.*)

Distribution.—Southern Europe and western Asia, extending from Spain to Macedonia and eastward through Asia Minor to Syria. Naturalized in the United States from Pennsylvania to Tennessee and south to Alabama.

26875. CRATAEGUS sp.

From near Sebastopol, Crimea, Russia. "(No. 1226a, January 11, 1910.) A small tree, found at the foot of an embankment. Apparently quite rare. Of value as an ornamental, tall shrub or small tree in regions with dry and hot summers and fairly mild winters." (*Meyer.*)

26876. CRATAEGUS sp.

From near Baidari, Crimea, Russia. "(No. 1227a, January 14, 1910.) A low shrub, found growing in dry and stony places. Of value like the preceding number (S. P. I. No. 26875)." (*Meyer.*)

26877. LIGUSTRUM VULGARE L.**Privet.**

From near Baidari, Crimea, Russia. "(No. 1228a, January 15, 1910.) Collected from some shrubs, found growing on very dry and exposed places. This privet seems to be able to stand more drought and heat than is generally supposed. Of value as an ornamental shrub in regions with dry and hot summers and fairly mild winters." (*Meyer.*)

Distribution.—Europe, western Asia, and northern Africa; cultivated in the United States as a hedge plant, and naturalized locally from Maine to Ontario and south to North Carolina.

26878. CARPINUS BETULUS L.**European hornbeam.**

From near Sebastopol, Crimea, Russia. "(No. 1229a, January 11, 1910.) This well-known shrub, growing into a medium-sized tree, occasionally, is found in abundance on the hills and mountains of the Crimea, where it withstands heat and drought on even very sterile mountain sides remarkably well. Of value as an ornamental and as a hedge plant in similar regions as the preceding number (S. P. I. No. 26877)." (*Meyer.*)

Distribution.—Europe and western Asia; from southern England and Sweden to the Mediterranean, and east through southern Russia to Persia.

26879. PALIURUS SPINA-CHRISTI Mill.**Christ's-thorn.**

From near Sebastopol, Crimea, Russia. "(No. 1230a, January 9, 1910.) A Zizyphus-like shrub, with many hooked spines, growing in abundance here and there on dry stony places. A bad weed apparently. Of value as a botanical specimen in arboreta and botanical gardens." (*Meyer.*)

Distribution.—Southern Europe and Asia; from Switzerland through Hungary and Greece to Persia; also reported from the province of Shensi, northern China.

26880. VIBURNUM LANTANA L.**Wayfaring tree.**

From Baidari, Crimea, Russia. "(No. 1231a, January 15, 1910.) An ornamental Viburnum found in a thicket; this was the only specimen. Of value as an ornamental shrub in regions with hot and dry summers and fairly mild winters." (*Meyer.*)

26866 to 26884—Continued.

Distribution.—Southern Europe, western Asia, and northern Africa; cultivated in the United States as an ornamental shrub, and occasionally escaped along roadsides.

26881. HERACLEUM sp.

From near Kirikinesh, Crimea, Russia. "(No. 1232a, January 16, 1910.) A *Heracleum* with very large umbels. Found on a stony mountain side. Of value as an ornamental plant in parks and large gardens in mild-wintered regions where hot and dry summers prevail." (*Meyer.*)

26882. RUSCUS ACULEATUS L.**Butcher's-broom.**

From near Kirikinesh, Crimea, Russia. "(No. 1233a, January 16, 1910.) The well-known butcher's broom, growing wild in the Crimea in open woods and in thickets on the hillsides. Used locally for brooms to clean roads and courtyards. The plant is quite ornamental, being evergreen, only a foot or so in height, and bearing large scarlet berries. Of value as a ground cover underneath trees in gardens and parks in regions with hot and dry summers and fairly mild winters." (*Meyer.*)

Distribution.—From central and southern Europe east to Asia Minor, and also in northern Africa.

26883. ASPARAGUS sp.

From near Kirikinesh, Crimea, Russia. "(No. 1234a, January 16, 1910.) A climbing asparagus found once in awhile in an open thicket. Seems to be ornamental. Of value in regions like the preceding numbers." (*Meyer.*)

26884. JUNIPERUS OXYCEDRUS L.**Juniper.**

From near Sebastopol, Crimea, Russia. "(No. 1235a, January 11, 1910.) An ornamental juniper with light-green foliage, which is covered with a whitish bloom; it bears light-brown berries. Grows on very dry and sterile hill and mountain sides. Mostly seen as a spreading shrub, though occasionally reaching the size and appearance of a small tree. Of value as an ornamental evergreen in regions where hot and dry summers and fairly mild winters are experienced." (*Meyer.*)

Distribution.—Mountain slopes in the countries bordering on the Mediterranean from Spain to Persia and in northern Africa.

26885. CYCLAMEN PERSICUM Miller.

From near Gagri, Caucasus, Russia. Received through Mr. Frank N. Meyer, agricultural explorer, February 24, 1910.

"(No. 419, January 31, 1910.) Tubers of the beautiful wild *Cyclamen*, that is flowering profusely at this time of the year, in the Caucasus. It is quite variable even in the wild state. Deserves to be naturalized in the mild-wintered regions of the United States, and will do especially well in northern and central California." (*Meyer.*)

Distribution.—In shady woods throughout Macedonia and Greece, and east to Lebanon and Palestine.

26886. PRUNUS SIMONII Carr.

From Dongsì, China. Received through Mr. Frank N. Meyer, agricultural explorer, at the Plant Introduction Garden, Chico, Cal. Numbered February 25, 1910.

"(No. 735a, June 22, 1907.) Seeds of an apricot-plum. A rare fruit that looks like an apricot, but is sour like a plum. Very fragrant, with downy, dull-yellow skin; rather small-sized. Perhaps a natural hybrid between the apricot and the plum." (*Meyer.*)

26887 to 26890. ZEA MAYS L.**Corn.**

From near Tegucigalpa, Honduras. Presented by Mr. Samuel McClintock, American consul. Received February 4, 1910.

Seeds of the following; notes by Mr. McClintock:

26887. Yellow mountain corn, from the Santa Lucia region.

26888 to 26890. Corn grown on the plains, from the farm of Señor Constantino Fiallos:

26888. Bluish black.

26890. Reddish yellow.

26889. Red.

26891 to 26894.

From near Gagri, Caucasus, Russia. Received through Mr. Frank N. Meyer, agricultural explorer, February 24, 1910.

Plants of the following:

26891. ULMUS sp.

Elm.

"(No. 407, February 2, 1910.) An elm found on stony mountain sides. Of value like No. 406 (S. P. I. No. 26862)." (*Meyer.*)

26892. TILIA sp.

Linden.

"(No. 408, February 2, 1910.) A linden growing to very large dimensions. Found in ravines in the more elevated mountain regions. Of value as an ornamental tree in the mild-wintered regions of the United States." (*Meyer.*)

26893. FRAXINUS sp.

Ash.

"(No. 409, February 2, 1910.) A very tall species of ash, found mainly on moist mountain slopes in the more elevated regions. Of value as a timber tree in the mild-wintered regions of the United States." (*Meyer.*)

26894. (Undetermined.)

"(No. 410, February 2, 1910.) A low-growing shrub, found on cliffs in shady places; perhaps of ornamental value. In appearance between a *Lonicera* and a *Hypericum*." (*Meyer.*)

26895. VITIS VINIFERA L.**Grape.**

From Aghin, fourteen hours distant from Mamuretul-Aziz (Harput), Turkey.

Procured by Mr. Wm. W. Masterson, American consul, from Dr. Barnum, missionary. Received February 5 and 7, 1910.

"A kind of yellow grape of good size, which has been developed to such an extent that it is easily kept until the following May and even into June. I understand from our missionaries, who frequently visit the place, that the grapes are most excellent in flavor, and are noted throughout this country for their keeping qualities." (*Masterson.*)

26896. BROMELIA sp.

From Panama. Presented by Mr. Henry F. Schultz, Ancon, Canal Zone. Received February 23, 1910.

"A small plant, which may have some value as a fiber producer. It appears to be a species of *Bromelia*, and in fact resembles *B. pinguin* rather closely, except that it grows tall and upright, while *B. pinguin*, as I have seen it in the jungle in different parts of the Zone and Panama, develops a trailing habit. When grown in the open, as in Chiriqui, where it is used for fencing pastures, the leaves, of course, stand up stiffly, but seldom grow higher than 3 to 4 feet, rarely 5 feet; in the woods individual

26896—Continued.

leaves frequently trail and wind through the underbrush 10 to 12 feet in length. The species sent is armed with sharp and recurved spines and the leaves stood up straight 11 to 14 feet high (measured). The mother plants grow at Mariato, Province of Veraguas, R. P., on the property of the Boston-Panama Company, on rubber land (semiwild trees)." (*Schultz.*)

26897. DIOSPYROS SENEGALENSIS Perrott.

From Hartley and Melsetter districts, Rhodesia, South Africa. Presented by Mr. H. Godfrey Mundy, agriculturist and botanist, Department of Agriculture, Salisbury, Rhodesia. Received February 24, 1910.

"Native names: *M'shuma*, *M'chenji*, *Chechati* or *M'soko*. This tree is said to be of considerable size and the timber to be useful for building purposes. The fruit is described as resembling that of '*Mahobohobo*' (*Uapaca kirikiana* Mill.), though somewhat smaller and with a thinner skin. Three to five seeds in each fruit. Habitat, warm and sheltered river banks, and not found in dry, waterless localities." (*Mundy.*)

See No. 25634 for distribution of this species.

26898. CICER ARIETINUM L.**Chick-pea.**

From Brooklyn, N. Y. Purchased from Messrs. Labato & Lombroso. Received February 25, 1910.

Mexican.

26899. AVENA SATIVA L.**Oat.**

From Pretoria, Transvaal, South Africa. Presented by Mr. I. B. P. Evans, Transvaal Department of Agriculture. Received February 23, 1910.

Algerian. "With us, oats suffer very considerably from rust, and this variety is practically the only one that shows immunity to the pest." (*Evans.*)

To be used in breeding work for rust resistance.

26901 to 26907.

From Tientai, via Ningpo, China. Presented by Rev. A. O. Loosely, through Mr. B. Youngblood, Scientific Assistant, Farm Management Investigations, Oklahoma, Okla. Received February 28, 1910.

Seeds of the following; descriptive notes by Rev. A. O. Loosely:

26901. ERIOBOTRYA JAPONICA (Thunb.) Lindl.**Loquat.**

"*Bibo* (bee-bō). A delicious fruit growing in clusters, each fruit being smaller than a small-sized egg; it is splendid for eating raw, stewed, or made into jam or jelly. This tree produces abundantly, but the kernel is large in proportion to the size of the fruit. It may be possible to make the fruit larger by cultivation."

26902 and 26903. DIOSPYROS KAKI L. f.**Persimmon.**

26902. Seeds long and narrow.

26903. Seeds short and broad.

"I presume you have better persimmons in California, but I never saw them in the Middle West; these ought to grow in Oklahoma. The fruit of one is the size and shape of a large egg; the other is larger, round, and flat; they are a delicious fruit for eating raw or dried. They have a long season of about two months, are prolific, and a sure crop."

26901 to 26907—Continued.

26904. ACTINIDIA sp.

"*Deng li* (deng-lee), or vine pear, so called because resembling somewhat in appearance a Chinese pear, grows among the hills. The fruit is full of small seeds and slightly resembles a fig in taste. It is good for eating raw, stewed, or made into jam."

26905. MYRICA NAGI Thunb.

"*Yiangme* (yangmā), or tree strawberry. A round, bright-red, sweet, juicy fruit, growing on trees; construction similar to Osage orange or hedge apple. It is splendid for eating raw or stewed; the canned fruit must be kept in the dark, or it turns to vinegar. There is little to this fruit except juice, but it should become a favorite at once; aside from eating raw, its best use would probably be for making a drink by pressing out pulp and seeds. It will be a better shipper than the strawberry."

26906. RAPHANUS SATIVUS L.

Radish.

"Large white radish. We use these as a cooked vegetable on the table and also raw; they are best cooked with meat."

26907. TRACHYCARPUS EXCELSUS (Thunb.) Wendl.

"A beautiful palm, hardy even if the ground freezes slightly."

Distribution.—Cultivated, and probably indigenous, in the Provinces of Kiangsu, Chekiang, and Szechwan, of the Chinese Empire, in the Korean Archipelago, and in Japan and the island of Formosa."

26908 to 26910.

From Limon, Costa Rica. Presented by Mr. H. F. Schultz, Ancon, Canal Zone, Panama. Received February 26, 1910.

Seeds of the following:

26908. PASSIFLORA LIGULARIS Juss.

Granadilla.

"One of the best flavored of all the granadillas, sometimes called *Grandita de China* in southern Mexico, and often incorrectly identified as *Passiflora quadrangularis*. It has a parchment-like shell of a yellow or orange color, sometimes speckled with minute dots of a lighter color. Its pulp has a pleasant acidulous flavor and is used in many tropical countries for making a cooling drink, and also for frozen sherbets. For this purpose it is considered superior to the 'water-lemon' (*P. laurifolia*), which may be identified by its soft, flexible skin, and the 'passion fruit,' cultivated in Australia (*P. edulis*) which is characterized by its purple-dotted surface. The flowers are ornamental, and the plant grows rapidly, soon covering trellises and arbors in warm countries." *W. E. Safford.*)

Distribution.—From the southern part of Mexico southward to Colombia and Ecuador, and in Costa Rica.

26909. CHAYOTA EDULIS Jacq.

Chayote.

26910. ANONA sp.

26911. MEDICAGO SATIVA L.

Alfalfa.

From Samara Province, Russia. Received from Messrs. Vollmer & Co., Riga, Russia, through Mr. J. M. Westgate, February 28, 1910.

"This seed is of interest owing to the fact that introductions of *Medicago falcata* have been secured from this same section." (*Westgate.*)

26912. (Undetermined.)

From Macao, China. Presented by Mr. A. J. Perkins. Received February 17, 1910.

"Seeds of *San-quat*, an orange-like fruit in exterior, but having a soapy pulp and many seeds." (*Perkins*.)

26913. ZEA MAYS L.**Corn.**

From the Hacienda Maguey, situated on the Río Santiago, a branch of the Nazas, some 70 miles northwest of the city of Durango, Mexico, at an elevation of 6,100 feet. Procured by Mr. Charles L. Freeman, American consul, Durango, Mexico, from Mr. Marion C. Dyer, manager of the Hacienda. Received March 1, 1910.

"Mr. Dyer says that this corn will mature in less time and stand the lack of moisture better than any corn he has been able to procure." (*Freeman*.)

26914 to 26916. ZEA MAYS L.**Corn.**

From Guatemala. Presented by Mr. William Owen, vice and deputy consul general, Guatemala City. Received March 1, 1910.

Seeds of the following; notes by Mr. Owen:

26914. "Mixed lowland corn. Grown near Obispo, Department of Escuintla; altitude 700 feet; matures 90 days from date of planting."

26915. "Yellow highland corn. Grown at Eureka, Department of Guatemala; altitude 4,700 feet; matures 120 days from date of planting."

26916. "White highland corn. Grown at Zarzal, Department of Amatitlan; altitude 4,200 feet; matures 120 days from date of planting."

26917. TRIFOLIUM ALEXANDRINUM L.**Berseem.**

From Tripoli, Barbary, north Africa. Procured by Mr. A. E. Saunders, American vice and deputy consul, at the request of Mr. William Coffin, American consul. Received March 1, 1910.

"*Susfa*. The native kavass here says the seed should be sown sparingly in plats about 5 or 6 feet square, with a wall of soil about a foot high around it, and the seed sown from 1 to 2 inches deep, in ruts from 3 to 4 inches wide. It must be kept well watered. The *susfa* should grow to a height of 4 feet or more. Cut the plant the first year for fodder only, which can be done once a month, or oftener, taking care not to disturb the roots. For seed the second year's growth is better. As fodder it is very good for cows and horses, goats, etc., and need not be mixed with other food." (*Saunders*.)

Distribution.—The countries along the eastern part of the Mediterranean from Greece to Syria and Palestine, and in Egypt and Tripoli.

26918. CITRUS sp.**Sour orange.**

From Zimapan, Hidalgo, Mexico. Presented by Mr. Jorge J. White. Received March 2, 1910.

"Cuttings of what appears to me to be a very hardy and prolific orange. It has been under my observation for over a year and I have kept track of it for 1 year exactly. It is growing under adverse conditions, having only 2 feet of very poor soil, and receiving only the moisture from rains, which are scant here; under the soil is straight limestone, somewhat decomposed, for 2 or 3 feet, when it changes to the usual blue lime of this country. The tree is rather dwarf, being about 10 feet high; the head is 4 feet from the ground. It bore all the year and gave 1,378 oranges by actual count, and it has now 200 on the tree, of all sizes. The tree is very old, I should imagine about 50

26918—Continued.

years, as it is growing in the patio of the house in which I live, and was probably planted when the house was built. I believe this specimen is very hardy and very vigorous and perhaps will make a good stock for budding, where a hardy stock is needed." (*White.*)

26919. *PUNICA PROTOPUNICA* Balf. f.

From Edinburgh, Scotland. Presented by Dr. Isaac Bayley Balfour, director, Royal Botanic Garden. Received March 2, 1910.

See No. 26511 for description.

26920 to 26927.

From Kashmir, British India. Purchased from Mr. Rassul Galwan, Leh, Ladakh, Kashmir. Received January 27, 1910.

Seeds of the following. Unless otherwise noted the seed came from Leh:

26920. *HORDEUM* sp. Barley.

Several species are contained in this lot.

26921. *HORDEUM* sp. Barley.

26922. *HORDEUM* sp. Hull-less barley.

26923. *HORDEUM VULGARE* L. Barley.

26924. *FAGOPYRUM TATARICUM* (L.) Gaertn. Buckwheat.

26925. *PANICUM MILIACEUM* L. Proso or broom-corn millet.

The two preceding numbers are from Nubra, a village north of Leh, where it is warmer.

26926. *BRASSICA CAPESTRIS* L.

26927. *MEDICAGO FALCATA* L.

"Mr. Galwan states in substance that this species is valuable, especially for horses. It is seeded in drills 6 inches apart and covered to a depth of 1 inch and immediately irrigated. At least four years are required for the plants to reach their full maturity. The latitude of Leh is 34° 30' north latitude, 37° east longitude." (*J. M. Westgate.*)

26928. *DAHLIA COCCINEA* Cav.

From Lawang, Java. Presented by Mr. M. Buysman, Hortus Tenggerensis. Received March 3, 1910.

Flowers single, scarlet, orange, and yellow, plants dwarf. May be valuable for hybridizing with the taller, more showy varieties to obtain dwarf forms.

Distribution.—Southern Mexico; at Santa Fe, near the city of Mexico, at the foot of Mount San Felipe in the Province of Oaxaca, and near Orizaba, in the State of Vera Cruz.

26929. *KENNEDIA STIRLINGI* Lindley.

From Perth, West Australia. Presented by Mr. W. Catton Grasby, agricultural editor, West Australian Mail, through Mr. Charles J. Brand. Received March 4, 1910.

"In experiments conducted by Mr. Grasby this species has given unusual promise as a forage crop. It is a bulky perennial and makes a rapid growth. One of the obstacles to its utilization is its comparative poor seed-producing capacity." (*Brand.*)

Distribution.—The Valley of the Swan River in the southwestern part of West Australia.

26930. FRANKLINIA ALATAMAHA Bartram (*Gordonia pubescens* L'Herit.).

From Philadelphia, Pa. Purchased from Miss Elizabeth De Hart, corner Fifty-fourth and Woodland Avenue. Received March 5, 1910.

"This ornamental is so rarely seen in our gardens that there is some danger of its becoming extinct. It is worthy of a wider distribution and might well be handled by nursery firms." (*Fairchild*.)

Distribution.—Cultivated in the eastern United States as far north as Philadelphia, Pa., and also in western and central Europe.

26931. FRANKLINIA ALATAMAHA Bartram.

From Cheltenham, Pa. Purchased from the Robert B. Haines Company. Received April 14, 1910.

See No. 26930 for previous introduction.

26932. CROTALARIA PUMILA Ortega.

From Miami, Fla. Received through Mr. Edward Simmonds, Subtropical Garden, February 28, 1910.

"This is a perennial species of *Crotalaria*, native of Miami, Fla. The plant has much the habit and appearance of alfalfa, but is inclined to lodge. The foliage is sweet and palatable, and the plant is worthy of testing in the extreme South for its forage possibilities." (*C. V. Piper*.)

Distribution.—Southern Florida, and in Mexico from Sonora to Vera Cruz, and in the West Indies and Venezuela.

26933 to 26937.

From Buitenzorg, Java. Presented by Mr. A. J. Perkins. Received March 5, 1910.

Seeds of the following; notes by Mr. Perkins:

26933. CITRUS DECUMANA (L.) Murr. **Pomelo.**

"*Jeroek delima*. This is a very good variety of pomelo with pink flesh and few seeds."

26934 and 26935. SAPOTA ZAPOTILLA (Jacq.) Coville. **Sapodilla.**

26934. "Seed from a particularly fine variety."

26935. "Seed from a specially large-fruited variety, as large as a goose egg."

Distribution.—Central America from Yucatan southward to the northern part of South America, and in the West Indies. Cultivated as far north as Lake Worth, Florida, and also in India.

26936. ARTOCARPUS COMMUNIS Forst. **Bread fruit.**

"Seed from a fruit called 'Nangka,' large; spiny coat; yellow pulp."

Distribution.—The islands of the Pacific, and cultivated in India and the West Indies.

26937. SAGUERUS PINNATUS Wurm.

"Malay name *Kahwoon* or *Ahren*. The young leaves of this palm are much used as wrappers for the Malay cigarettes. The cigarettes have much the appearance of lamplights and are made from very strong tobacco. Sugar is obtained from the sap of this palm, as the name indicates, and it is used for thatch and for brooms."

Distribution.—Southeastern Asia and the Malayan islands; introduced into the West Indies.

26938. PTERYGOTA ALATA (Roxb.) R. Br.

From Nice, France. Presented by Dr. A. Robertson Proschowsky. Received March 4, 1910.

"The winged seeds of this tree are sometimes eaten by the natives of Burma; according to Roxburgh they are used in Sylhet as a cheap substitute for opium. The wood is light, coarsely fibrous, yellowish white, perishable." (*Watt, Dictionary of the Economic Products of India, vol. 6, pt. 3, p. 361.*)

Distribution.—The western peninsula of India and in the vicinities of Sylhet, Chittagong, Pegu, Martaban, and Tenasserim; also on the Andaman islands.

26939 to 26943. SOLANUM COMMERSONII Dun.

From Berlin, Germany. Presented by Mr. L. Wittmack, Royal School of Agriculture. Received March 4, 1910.

Tubers for use in potato-breeding investigations.

Distribution.—The vicinity of Montevideo, Uruguay.

26944. ZIZANIA LATIFOLIA (Griseb.) Stapf.

From Kew, England. Presented by the Royal Botanic Gardens, at the request of Mr. C. S. Scofield. Received March 3, 1910.

See No. 26760 for description.

26945. QUERCUS DENTATA Thunb.

From the Ming Tombs, near Nan Kou, China. Presented by Mr. F. Bade, through Mr. Hamilton Butler, vice consul-general in charge, Tientsin. Received January 25, 1910.

For previous introductions see Nos. 17842, 17879, and 18265.

Distribution.—Mountain slopes in the provinces of Chihli, Shingking, Shantung, Shensi, and Yunnan, China, in the vicinity of Port Hamilton, Korea, on Green Island, in the Korean Archipelago, and in the vicinities of Hakodate, Simoda, Yokohama, and Yokosuka, in Japan.

26946 to 26948. PHOENIX DACTYLIFERA L.**Date.**

From Panj Chur, Baluchistan. Procured by Mr. John A. Ray, American consul, Maskat, Oman, Arabia. Received January 29 and March 5, 1910.

Seeds of the following; notes by Mr. Ray:

26946. "The best dates; packed in little cases of straw and called '*pish baud*' from *pish* (straw) and *baud* (tied); that is, tied in straw."

26947. "Dates packed in a skin. Said to be the kind sold in jars in India. They are called '*mazabti*,' which is said to mean 'cleaned' in Baluchi. On reaching India they are taken from the skins and placed in jars, and they are then known as '*burni*' dates, from *burni* (meaning jar in Hindustani)."

26948. These dates are better than the preceding numbers. They are packed in jars and are called in the Baluchi language '*hoomb*' (I do not know how they write it). In Arabic they are called '*burni*,' meaning jar."

26949. DIOSPYROS KAKI L. f.**Persimmon.**

From Hwai Yuan, via Nanking, China, presented by Dr. Samuel Cochran, American Presbyterian Mission. Received February 26, 1910.

26950. ZEA MAYS L.**Corn.**

From the hacienda of Mr. A. E. Graham, of Forlon, Tamaulipas, Mexico, post-office address Cruz Station, Tamaulipas, Mexico. Procured by Mr. Clarence A. Miller, American consul, Matamoros, Mexico. Received March 8, 1910.

White seeded.

26951 to 26958. ZEA MAYS L.**Corn.**

From Mexico. Procured by Mr. Samuel E. Magill, American consul, Guadalajara, Mexico. Received March 8, 1910.

Seeds of the following; notes by Mr. Magill:

- 26951.** "*Tabloncillo.*" Produced in the vicinity of Zazoalco, Sayula, and Zapotlan.
- 26952.** "*Common.*" Produced near Guadalajara.
- 26953.** "*Common, broad.*" Produced near Guadalajara.
- 26954.** "*Broad.*" Produced near Cocula and some other points.
- 26955.** "*Liso.*" Produced near Ameca.
- 26956.** "*Chino or Pepitillo grueso.*" Produced near La Barca.
- 26957.** "*Jala.*" Produced in the Valley of Jala, Territory of Tepic.
- 26958.** "*Cabesoneña.*" Produced near Tequila, and is said to be the superior of any grown in the United States.

26980. PHOENIX DACTYLIFERA L.**Date.**

From the region of El Hasa, Arabia. Procured by Mr. John A. Ray, American consul, Maskat, Oman, Arabia. Received March 25, 1910.

"These dates are called '*khullas,*' meaning pure, extra fine. They have quite a reputation for sweetness, but the original flavor is unfortunately obscured by the addition of cumin seed." (*Ray.*)

26981 and 26982. EUCALYPTUS spp.

From Melbourne, Australia. Presented by Mr. W. R. Guilfoyle, director, Botanic and Domain Gardens. Received March 9, 1910.

Seeds of the following; procured for the Forest Service of this Department, to be used in experimental plantings in the South:

- 26981.** EUCALYPTUS BOTRYOIDES Smith.
- 26982.** EUCALYPTUS SIDEROXYLON A. Cunn.

26983. SAGITTARIA sp. (?)

Procured by Mr. David Fairchild in a Chinese restaurant, Washington, D. C. Received March 9, 1910.

"The *See Koo* is grown extensively around Canton, China, on wet land, very much as the dasheens and taros are grown in other parts of the world. It is to be found for sale on the streets in baskets and special tubs which are carried around by the vegetable dealers. These specimens were given to me by the manager of the Port Arthur restaurant, who informed me that he paid 12 cents a pound for the tubers and that he cut them up and boiled them much as he would potatoes." (*Fairchild.*)

26985 to 26987.

From the Himalayas, India. Presented by J. Mollison, Inspector General of Agriculture in India, Nagpur, India. Received March 10, 1910.

Seeds of the following; notes by Mr. Mollison:

- 26985.** AMYGDALUS PERSICA L. **Peach.**

"Native name *Aru*. A nursery of peach plants is raised in the months of January and February. The land is first dug, properly cleaned, and manured. Seeds are then sown 3 inches deep in trenches and germination takes place in the following March. About a year after, i. e., in February next, the seedlings

26985 to 26987—Continued.

are transplanted to their permanent homes. They are planted in pits dug 2 feet deep, at a distance of 9 feet from each other, and manured with cow or sheep dung. Watering is given every third or fourth day, if necessary. Superior varieties of peaches, apricots, and plums are grafted on these trees."

26986. AMYGDALUS PERSICA L.**Peach.**

"*Nectarine*, another variety of wild peach, native name *Munda Aru*. Same remarks apply to this as to the preceding number (S. P. I. No. 26985)."

26987. PYRUS PASHIA Hamilton.

"Native name *Shegal*. The methods used in raising a nursery and transplanting the seedlings of *Shegal* plants is the same as that described for peaches (S. P. I. No. 26985). On this tree are grafted superior varieties of pears which are known in the Kulu as '*Nakh*.' No other fruit can be grafted on it."

Distribution.—Temperate slopes of the Himalayas, at an elevation of 2,500 to 8,000 feet, from Kashmir to Bhotan and in the Kashia Mountains, northern India.

26989. CHRYSANTHEMUM STIPULACEUM (Moench) W. F. Wight.

From Yokohama, Japan. Purchased from the Yokohama Nursery Company. Received February 25, 1910.

"Best large mixed."

26990. CICER ARIETINUM L.**Chick-pea.**

From the vicinity of Safed, Palestine. Procured by Mr. Alex. Aaronsohn, Zichron-Jacob, near Haifa, Palestine. Received March 9, 1910.

"Safed is in upper Galilee, at an elevation of 2,000 feet above sea level. The chickpea is cultivated on very calcareous soil; it is sown the end of March and harvested the beginning of July; no rain falls during this time, so that the only moisture it receives is that which is stored in the soil.

"There are three varieties contained in this lot. One, which is considered a botanical variety, has rose-colored flowers and brownish seeds and when cooked turns black; this is a very inferior variety. The other two have white flowers, but one has very small seeds and a thick skin, and requires a long time in cooking; the other is large seeded and is considered better than either of the above-mentioned varieties; it is also much better when cooked." (*Aaron Aaronsohn*.)

26991 to 27000. ZEA MAYS L.**Corn.**

From Mexico. Procured by Mr. William W. Canada, American consul, Vera Cruz. Received March 8, 1910.

Seeds of the following:

26991. From San Cristobal Lave, Vera Cruz Co.

26992. From Hacienda de Tula, Tuxtla Co.

26993. From Cosamaloapan, Cosamaloapan Co.

26994. From Cordoba, Cordoba Co.

26995. From Huatusco, Huatusco Co.

26996. From Huiloapan, Orizaba Co.

26997. From Zongolica, Zongolica Co. (Appears to be mixed.)

26998. From Jalapa, Jalapa Co.

26999. From Papantla, Papantla Co.

27000. From Tlacotalpan, Vera Cruz Co.

27006. TERAMNUS sp.

From San Jose, Costa Rica. Presented by Mr. C. Wercklé, through Mr. H. Pittier.
Received March 14, 1910.

"A plant that maintains the fertility of the soil in the cool highlands. It is also a forage plant very much relished by cattle." (*Wercklé.*)

27007 to 27010. VITIS VINIFERA L.**Grape.**

From Guadalajara, Mexico. Presented by Sr. Louis Barbieri, Calle del Carro, No. 27, through Mr. Frederick Chisolm. Received August 22, 1908. Numbered for convenience in recording distribution March 14, 1910.

Cuttings of unnamed varieties.

27011. HYPHAENE GUINEENSIS Schum. (?)**Ivory nut.**

From Grand Bassa, Liberia. Presented by Mr. E. L. Parker, Commissioner of Agriculture, Monrovia, Liberia, at the request of Mr. F. A. Flower. Received March 12, 1910.

"This nut develops at the root of the plant. The natives use the leaves for thatching or covering the roofs of their houses." (*S. G. Harmon.*)

See No. 13136 for previous introduction.

Distribution.—Along the west coast of Africa from the mouth of the Kongo south to the valley of the Kuanza River.

27013. VIOLA SEBIFERA Aubl.**Bicuiba.**

From Bahia, Brazil. Presented by Mr. Omar E. Mueller, American vice consul. Received February 16, 1910.

"The oil from the seed of this tree is used for making candles, and the inner bark is used for medicinal purposes." (*Extract from Engler and Prantl, Natürlichen Pflanzenfamilien, vol. 3, pt. 2, p. 42.*)

Distribution.—Damp woods along streams and on the mountains in Guiana and the valley of the Amazon in Brazil.

27014 to 27016.

From Pretoria, Transvaal, South Africa. Presented by Prof. J. Burt Davy, Government agrostologist and botanist, Transvaal Department of Agriculture. Received March 11 and 12, 1910.

Seeds of the following:

27014. PACOURIA CAPENSIS (Oliver) S. Moore. (*Landolphia capensis* Oliver.)

"This fruit is sometimes called the wild apricot, wild peach, or in Dutch, wilde perske; the Setsu name is 'Maraapa.' It is a low, scrambling shrub common on the kopjes and randjes north of Pretoria, producing an abundance of fragrant white flowers in spring, and numerous large reddish-yellow fruits in January and February. These fruits are edible, with a pleasantly acid flavor, and are said to make good brandy, jelly and vinegar." (*Transvaal Agricultural Journal, April, 1906, p. 617.*)

See 22530 for previous introduction.

27015. XIMENIA CAFFRA Sond.**Kafir plum.**

"This is a small tree, native of the dry bush veldt country at an altitude of about 3,500 feet in districts practically free from frost. The drupe is fairly large, 1 to 1½ inches long, fleshy and very acid, and is much appreciated by the Kafirs. It is said the fruit can be made into excellent jelly." (*Davy.*)

Distribution.—A shrub found in woods in the vicinities of Macallisberg and of Port Natal, in South Africa.

27014 to 27016—Continued.

27016. *VANGUERIA INFAUSTA* Burch.

Mispel.

"The 'mispel,' miscalled 'wild medlar,' and known as moupoula or mobola by the natives, is common on kopjes and randjes in the Bosh veldt, and is also met with occasionally on kopjes on the Hoogveld.

"The fruit of the mispel is sometimes described as the best native fruit of the Transvaal. It has an excellent flavor and is large enough to be worth eating, being over an inch in diameter. The flavor reminds one a little of that of the medlar." (*Transvaal Agricultural Journal, October, 1904, p. 125.*)

See No. 25171 for previous introduction.

27017 to 27019.

From Cape Colony, South Africa. Procured by Mr. Charles P. Lounsbury, Government entomologist. Received March 12, 1910.

Seeds of the following:

27017. *BAROSMA CRENULATA* (L.) Hook.

True buchu.

See No. 25817 for previous introduction.

27018. *EMPLEURUM UNICAPSULARIS* (L.) Skeels.

False buchu.

(*Diosma uncapsularis* L. Suppl., pl. 155. 1781. *Empleurum serrulatum* Soland. in Ait on, Hort. Kew., vol. 3, p. 340. 1789.)

This species was referred to the genus *Diosma* when originally described by Linnæus, but when Solander in 1789, recognizing its generic distinctness, established the genus *Empleurum* for it he changed the specific designation, as was frequently done in transferring a species from one genus to another. The original specific name has not previously been used in connection with the above generic name.

Distribution.—The extreme southern part of Cape Colony in Africa from mountain valleys in the Tulbagh district eastward to the Zwartberg.

27019. *BAROSMA SERRATIFOLIA* (Curt.) Willd.

Long-leaved buchu.

Procured through Rev. R. Schmidt, of the Moravian Mission at Genadendal, Caledon.

Distribution.—Mountain slopes in the southern part of Cape Colony.

27020. *PYRUS* sp.

Pear.

From St. Anthony Park, St. Paul, Minn. Presented by Prof. Samuel B. Green, Division of Horticulture and Forestry, University of Minnesota. Received March 14, 1910.

"Plants grown from seed received from Professor Parker, Manchuria." (*Green.*)

27025. *PICEA OBOVATA SCHRENKIANA* (Fisch. and Mey.) Carr.

From Orleans, France. Purchased from Messrs. Barbier & Co. Received March 16, 1910.

"This variety is closely related in appearance to *Picea excelsa*, but it differs from it in the bracts at the base of the cones, which are much longer, and in its leaves, which are farther apart, thicker, and longer, often 25 to 30 mm. The cones are cylindrical, 8 cm. long by 22 mm. in diameter. Here (Paris), the plants are bushy; the branches generally frail, spreading, deflected, and although it comes from the cold parts of Europe, is, nevertheless, delicate, grows badly, and often freezes, being injured by the spring frosts, which come after they have started to grow. This form particularly,

27025—Continued.

which comes out very early in the springtime, freezes almost every year." (*Extract from Carrière, Traité générale des Conifères, p. 338.*)

See No. 22909 for previous introduction.

Distribution.—The slopes of the Alatau Mountains in southern Siberia, and the Tien Shan Mountains in Dzungaria, in the western part of the Chinese Empire. (Plants.)

27026. MEDICAGO SATIVA L.**Alfalfa.**

From Gabes, Tunis. Procured by Mr. M. Victor Dumas, Controleur Civil, Sousse, Tunis, from El Habib ben Trab, Amin des vivres á Menzel, for Mr. J. M. Westgate, at the suggestion of Mr. T. H. Kearney. Received March 12, 1910.

Tripoli.

27027. OLEA EUROPAEA L.**Olive.**

From the foothills of the Amanus Mountains, Turkey. Presented by Mr. F. D. Shepard, Aintab, Turkey. Received March 11, 1910.

"These olives were collected on the landward side of the Amanus Mountains, where the climate is semiarid. The olive is more at home on the seaward side of these mountains, where the tree, or shrub (for in the wild state it is more like a shrub than a tree) is larger and the fruit nearly twice as large. It does not grow wild on the Kurd Dagh (Kurdish Mountains), the parallel range farther inland, and still more arid, although the cultivated olive thrives there." (*Shepard.*)

27028 to 27031.

From Baumschulenweg, bei Berlin, Germany. Purchased from Mr. L. Späth. Received March 17, 1910.

Plants of the following; descriptions taken from Späth's catalogue for 1909-10:

27028 to 27030. SORBUS AUCUPARIA L.**Mountain ash.**

27028. "Variety *moravica* Zengerling. From northern Austria. The fruits are put up like red whortleberries and make a very refreshing preserve; they can also be used in the making of wine. The scarlet-berried berries are larger than the Russian ones, but decidedly sharper in taste. The tree thrives on the poorest soil."

27029 and 27030. "According to information from a Russian business friend, these edible mountain ashes are much cultivated in southern Russia, partly eaten fresh, but more used in the preserve manufactory at Kief. The berries, the size of peas, are powdered with sugar, dried, and shipped in boxes. I tasted these fruits prepared in this way and found that they had a pleasantly acid taste, a little bitter, but not at all unpleasant. The fruits are used as dessert fruits, for the making of tarts, etc., and like the Moravian edible mountain ashes, make a very nice preserve. Found in two forms as follows:

27029. "Variety *rossica* L. Späth, 1898.

"Berries the size of the ordinary mountain ash, round, coral red. Taste acid sweet, slightly astringent, but without any bitter aftertaste."

27030. "Variety *rossica major* L. Späth, 1903.

"Berries somewhat larger than those of the preceding form (S. P. I. No. 27029), short, oval, scarlet red, without any bitter taste."

27028 to 27031—Continued.

27031. × *PRUNUS DASYCARPA* Ehrh. **Plum-apricot.**

Considered to be a hybrid between *Prunus cerasifera myrobalana* and *P. armeniaca*.

“This tree has white blooms in the early spring, and the fruit ripens at the beginning of August. It is medium sized, blackish purple, with fine hairs; the flesh is blood red, turning to orange near the stone, juicy, sweet, and of apricot taste.”

27032 and 27033. CITRUS spp.

From Tanabe, Wakayamaken, Japan. Presented by Mr. Sietaro Matsuba, at the request of Mr. A. J. Perkins. Received March 14, 1910.

27032. *CITRUS AURANTIUM* L. **Orange.**

Natsu-mikan. See No. 22670 for description. (Cuttings.)

27033. *CITRUS* sp. (Seeds.)
Uchi murasaki.

27034. DIOSPYROS KAKI L. f. Persimmon.

From Gifu, Japan. Procured from the Gifu Agricultural Experimental Station, through the Yokohama Nursery Company, Yokohama, Japan, at the suggestion of Mr. A. J. Perkins. Received March 9, 1910.

Suyugaki. (Plants.)

27035 to 27042. DIOSPYROS KAKI L. f. Persimmon.

Presented by Rev. H. Loomis, American Bible Society, Yokohama, Japan. Received February 21, 1910.

Cuttings of the following:

27035–27041. From Sendai, Japan, 237 miles from Yokohama, 217 miles north of Tokyo.

27035. *Tsurunoko.* (Ana.) **27039.** *Hegaki.* (Shibu.)

27036. *Tanenashi.* (Shibu.) **27040.** *Toyama.* (Shibu.)

27037. *Hachiya.* (Shibu.) **27041.** *Okame.* (Shibu.)

27038. *Heyakume.* (Ana.)

“Nos. 27035 and 27038 are not astringent.”

27042. From Korea. “This fruit is not astringent and is of excellent flavor. It grows in a climate that is like that of Philadelphia.” (*Loomis.*)

27043. DIOSPYROS KAKI L. f. Persimmon.

From Tokyo, Japan. Procured by Rev. H. Loomis, American Bible Society, Yokohama, Japan, from the garden of Count Date. Received March 12, 1910.

“I think these persimmons are of rare value, being very sweet, not astringent, quite large, and almost seedless, probably a distinctly new variety.” (*Loomis.*)

27044. DIOSCOREA ALATA L. Yam.

From Miami, Florida. Grown at the Subtropical Garden, sent in by Mr. P. J. Wester. Received March 15, 1910.

“One of the most promising of the yams.” (*Wester.*)

27045 to 27048.

From Orleans, France. Presented by Mr. Leon Chenault, at the request of Mr. Philippe Vilmorin.
Received March 14, 1910.

Plants of the following:

27045. × *BERBERIS STENOPHYLLA* Lindl.

"Seedlings of this hybrid between *B. darwinii* and *B. empetrifolia*. The seedlings break up in all intermediate types and the whole plant serves as an excellent illustration that even if the immediate result of a hybridization does not give what is wanted, the seedlings of such a plant may." (*F. N. Meyer.*)

27046. *PINUS ARMANDI* Franch.

"A new rather dwarf pine from western China." (*F. N. Meyer.*)

Distribution.—On the Tsingling Mountains in the Province of Shensi, and in the Provinces of Szechwan and Yunnan, western China.

27047. *LONICERA PILEATA* Oliver.

"This is a good plant for rockeries and at the ends of beds of shrubbery; it is of cespitose habit like the *Cotoneaster horizontalis*." (*F. N. Meyer.*)

Distribution.—Only known from the vicinity of Ichang in the Province of Hupeh, China.

27048. *MORUS ALBA* L.

White mulberry.

"Variety *fastigiata*. Quite rare, and may be of value in the Southern States as a pyramidal tree." (*F. N. Meyer.*)

27049 to 27072.

From Russia. Received through Mr. Frank N. Meyer, agricultural explorer, March 12, 1910.

Cuttings of the following:

27049 to 27057. *PUNICA GRANATUM* L.

Pomegranate.

From near Sukhum-Kale, Caucasus, Russia. "(No. 421 to 429, February 10, 1910.) A collection of named pomegranates obtained from the experimental station near Sukhum. As the plants were only recently received at the station, no definite information could be obtained regarding them at present." (*Meyer.*)

27049. "*Krylezy-Kabuk.* (No. 421.)"

27050. "*Seville a gros grain.* (No. 422.)"

27051. "*Alopar.* (No. 423.)"

27052. "*Sushinski rannyi.* (No. 424.)"

27053. "*Di Brindishi.* (No. 425.)"

27054. "*A frutto grosso.* (No. 426.)"

27055. "*Yelisavetpolski sladkii.* (No. 427.) A large-fruited variety having red flesh and of sour taste. A local Caucasian variety, obtained originally from the vicinity of Yelisavetpol (Caucasus)." (*Meyer.*)

27056. "*Shirinar.* (No. 428.)"

27057. "*Nain des Antilles.* (No. 429.)"

27058. *CITRUS MEDICA* L.

Lemon (?)

From near Sukhum-Kale, Caucasus, Russia. "(No. 435, February 11, 1910.) A large-fruited lemon, very juicy, and with few seeds. Has proved to be a heavy fruiter and to be more frost resistant than any other lemon in this locality. Found originally among a bunch of other citrus stock in the garden of Mr. Smitskoi, near Sukhum, where these cuttings were obtained." (*Meyer.*)

27049 to 27072—Continued.

27059. PRUNUS sp.

Plum.

From near Sukhum-Kale, Caucasus, Russia. "(No. 436, February 10, 1910.) A native plum, from the Caucasus, of bluish color, medium size, found wild in the mountains but also sparingly cultivated by the natives. Probably suitable for the Gulf region and for northern Florida. Obtained from the Experimental Station near Sukhum." (Meyer.)

27060. MALUS SYLVESTRIS Mill.

Apple.

From Dioscuria, near Sukhum-Kale, Caucasus, Russia. "(No. 437, February 16, 1910.) A native variety of apple, generally called *Afghasian* apple, grown by the natives for centuries. The fruits are large, of a grayish-green color except on the side exposed to the sun, where they are adorned with narrow, vertical, red stripes; of a fresh, sour taste; picked from the trees in the latter part of October or early November, they have to lie some time before being ripe; can be kept until late in spring. A good apple for the warmer sections of the United States and especially for the Gulf region. The young trees of this variety of apple are characterized by the very upright growth of the branches and the clean bark; when the trees get to be older, however, they become spreading and the bark begins to be rough. In the Caucasus, this variety is not very quickly attacked by woolly aphids, but when once this pest gets a hold on them, they become full of lumps and knots like the ordinary European varieties." (Meyer.)

27061. MALUS SYLVESTRIS Mill.

Apple.

From Dioscuria, near Sukhum-Kale, Caucasus, Russia. "(No. 438, February 16, 1910.) A Circassian apple indigenous to the Caucasus, said to be very fine, obtained originally from a native prince. Fit for the mild-wintered regions of the United States." (Meyer.)

27062. PYRUS COMMUNIS L.

Pear.

From Dioscuria, near Sukhum-Kale, Caucasus, Russia. "(No. 439, February 16, 1910.) A very early ripening variety of pear, called '*Duchesse de Sukhum*.' Of medium size and melting taste, ripens in June. Probably a good variety for the Southern States and especially the Gulf region." (Meyer.)

27063. PYRUS COMMUNIS L.

Pear.

From Dioscuria, near Sukhum-Kale, Caucasus, Russia. "(No. 440, February 16, 1910.) A variety of pear locally known as the '*Turkish pear*.' Fruits medium large, of beautiful shape, ripening in August. Trees very strong growers when young and producing heavy crops. Probably a good variety for the mild-wintered regions of the United States." (Meyer.)

27064. MORUS ALBA L.

White mulberry.

From Dioscuria, near Sukhum-Kale, Caucasus, Russia. "(No. 452, February 16, 1910.) Variety *tortuosa*. A strange ornamental mulberry, having branches that run zigzag. Of use as a decorative garden tree in regions where the winters are mild and the summers hot and dry." (Meyer.)

27065. OLEA EUROPAEA L.

Olive.

From Sukhum-Kale, Caucasus, Russia. "(No. 454, February 17, 1910.) A very large-fruited variety of olive, named '*Cucchi*,' bears black fruits the size of a small plum. Although the climate of this part of the Caucasus is rather unsuited to olives, being too moist, this variety fruits regularly here. Obtained from the Botanical Garden at Sukhum-Kale." (Meyer.)

27049 to 27072—Continued.

27066. CITRUS AURANTIUM SINENSIS L.

Orange.

From Sukhum-Kale, Caucasus, Russia. "(No. 455, February 17, 1910.) A seedling orange, originated at the Botanical Garden at Sukhum-Kale. Of very strong growth, somewhat spiny, especially on strong shoots. Fruits medium sized, not over sweet and with rather numerous seeds. The trees, however, are hardier here in this locality of the Caucasus than any other variety according to Mr. A. Van de Velde, the head gardener in charge of the Botanic Garden, from whom these cuttings were obtained." (Meyer.)

27067. CITRUS AURANTIUM SINENSIS L.

Orange.

From Sukhum-Kale, Caucasus, Russia. "(No. 456, February 17, 1910.) A seedling orange, originated a few years ago in the garden of Mr. Shwetsoff, at Sukhum-Kale. Fruit large, juicy, and sweet, with few seeds. Trees of medium-strong growth, with very dark-green foliage. Quite hardy in this part of the Caucasus. Obtained from the same source as No. 455 (S. P. I. No. 27066) and, like it, may be tested in the northern limits of successful orange culture in the United States." (Meyer.)

27068. PRIMULA VULGARIS Hill.

Primrose.

From near Sukhum-Kale, Caucasus, Russia. "(No. 457, February 10, 1910.) Variety *sibthorpii*. A beautiful wild primrose growing along moist embankments, producing masses of rather large flowers of a very beautiful purplish-blue color. A handsome spring-flowering plant for the mild-wintered sections of the United States." (Meyer.)

27069. FRAGARIA sp.

Strawberry.

From near Sukhum-Kale, Caucasus, Russia. "(No. 458, February 10, 1910.) A wild strawberry, occurring here and there along embankments, open woodlands, and even in dry calcareous cliffs. Flowers in early February and sometimes produces ripe fruits at the end of February; these fruits are said to be small but sweet. I suggest that this strawberry be used as a factor in creating a more drought and heat resistant strain of this favorite fruit than we have at the present." (Meyer.)

27070. VIOLA sp.

Violet.

From near Sukhum-Kale, Caucasus, Russia. "(No. 459, February 10, 1910.) A wild violet occurring at the edges of woodlands and on open places. Has large flowers of a beautiful dark-violet color, not very fragrant. Of value as an ornamental garden perennial in the mild-wintered sections of the United States and as an element in breeding more heat-resistant strains of this flower." (Meyer.)

27071. FICARIA sp.

From near Sukhum-Kale, Caucasus, Russia. "(No. 460, February 16, 1910.) A *Ficaria* in looks and habits between *F. ranunculoides* and *Caltha palustris*. Found growing in moist, open woodlands; flowers in February; the individual flowers often measure more than an inch in diameter, are of a bright-yellow color and stand out above the shining foliage. Recommended as an ornamental spring-flowering plant in the mild-wintered sections of the United States." (Meyer.)

27072. MEDICAGO sp.

From near Sukhum-Kale, Caucasus, Russia. "(No. 461, February 7, 1910.) Plants found in earth cliffs. To be tested in a mild climate." (Meyer.)

27073 to 27082. ZEA MAYS L.**Corn.**

From Mexico. Procured by Mr. Arnold Shanklin, American consul, Mexico City, Mexico. Received March 11, 1910.

Seeds of the following:

27073. From Puebla. Grown on the property of Mr. Pablo Petersen. Height of stalk, 19½ feet. Yield 135 bushels per acre.

27074. From Valley of Mexico. Black seeded.

27075. From Oaxaca. Yellow seeded.

27076. From Oaxaca. White seeded.

27077. From Oaxaca. Black seeded.

27078. From Puebla, District of Chalchicomula.

This has a small cob. Grows in a cold climate, at an altitude of 8,000 feet.

27079. From Oaxaca. Mixed corn.

27080. From Puebla, District of Matamoras.

Dry, hot climate.

27081. From Guanajuato. Grown near Silao.

27082. NOTE.—The corn listed under this number was of three different varieties, the tags had become detached and the ears were mixed. The notes on the tags were as follows:

From Valley of Mexico.

From City of Puebla. Yield 76 bushels per acre. Matures in 6 months.

From near City of Puebla. Yield 40 bushels per acre.

27086 to 27088. DIOSPYROS KAKI L. f.**Persimmon.**

From Okitsu, Japan. Presented by Dr. Ouda, at the request of Mr. A. J. Perkins. Received March 19, 1910.

Cuttings of the following:

27086. *Fuyu.*

27088. *Yokono.*

27087. *Jiro.*

27089 to 27095.

From Gagri, Russia. Received through Mr. Frank N. Meyer, agricultural explorer, March 17, 1910.

Cuttings and plants as follows:

27089. PHILADELPHUS sp.

From near Gagri, Caucasus, Russia. "(No. 405, February 2, 1910.) A mock orange, found on stony mountain slopes and in cliffs. Apparently very floriferous. Of value as an ornamental flowering shrub in mild-wintered regions." (*Meyer.*)

27090 and 27091. MEDICAGO sp.

From near Gagri, Caucasus, Russia. "(No. 413 and 414, January 31, 1910.) Alfalfas growing on the south side of cliffs. Apparently several species among this lot. As the winter in this part of the Caucasus is very mild these plants will probably not be able to stand any hard frost." (*Meyer.*)

27092. MELILOTUS sp.

From near Gagri, Caucasus, Russia. "(No. 416, January 31, 1910.) Found along a road in stony débris; perhaps of value as a fodder plant." (*Meyer.*)

27089 to 27095—Continued.

27093. PSORALEA sp.

From near Gagri, Caucasus, Russia. "(No. 417, January 31, 1910.) Found growing on dry places in decomposed rock. This legume may be of value as a fodder plant in mild-wintered regions where hot summers prevail." (*Meyer.*)

27094. VINCA sp.

From near Gagri, Caucasus, Russia. "(No. 418, January 31, 1910.) A Vinca found in shady nooks in the mountains, often hanging down between rocks. Apparently distinct from the ordinary *Vinca major*. Of value as a ground cover or basket plant in mild-wintered regions." (*Meyer.*)

27095. (Undetermined.)

From near Gagri, Caucasus, Russia. "(No. 420, February 1, 1910.) A grass growing plentifully here and there between boulders and rocks on mountain sides. Perhaps of value as a fodder grass in mild-wintered regions." (*Meyer.*)

27097 and 27098. PYRUS spp.

From Kew, England. Presented by Dr. David Prain, director, Royal Botanic Garden. Received March 21, 1910.

Cuttings of the following:

27097. PYRUS CHINENSIS Lindl.

Sand pear.

27098. PYRUS SIMONI Carr.

Distribution.—The Provinces of Chihli, Shingking, and Kiangsi, in China, and in Korea, Manchuria, and Japan.

27099. RAVENSARA AROMATICA Sonner.

From Port Louis, Mauritius. Presented by Mr. G. Regnard. Received March 14, 1910.

"A fairly interesting spice tree." (*Regnard.*)

This species of *Ravensara* is a large, bushy tree with a pyramidal head, entire leaves, small flowers, and pear-shaped fruits the size of a small hickory nut. The leaves and fruit are prepared by rolling into a ball which is allowed to hang in the air for a month; then placed in boiling water for five minutes, and afterwards dried in the sun or before a fire. This process preserves the leaves and fruits so that they keep for several years. (*Adapted from Sonnerat, Voyage aux Indes Orientales, vol. 2, p. 226.*)

Distribution.—The island of Madagascar.

27101 to 27105. MEDICAGO SATIVA L.

Alfalfa.

From Victoria, Minn. Obtained by Mr. J. M. Westgate from the farm of Mr. Henry Gerdson, August 11, 1909. Numbered for convenience in recording distribution March 21, 1910.

"These five selected plants were presumably 40 years old, as the field from which they were taken was seeded in 1868 or 1869, according to Mr. Gerdson, and there has been no apparent reseeding since. The crowns of all the plants were very large and apparently uniform in age; the individual crowns were often 2 feet in diameter and were occasionally broken up into two or more separate but adjacent plants." (*Westgate.*)

27106. CARICA PAPAYA L.

Papaya.

From Bangalore, Mysore, India. Presented by Rev. N. L. Rockey, Gonda, United Provinces, India. Received March 21, 1910.

Seed supposedly of this same variety received under No. 25692.

27107 to 27111.

Presented by Mr. E. C. Parker, agriculturist, Bureau of Agriculture, Industry and Commerce, Mukden, Manchuria. Received March 19, 1910.

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

27107. *PRUNUS* sp.

Cherry.

"Chinese name *Ying tao*. Common in the hills of Manchuria as far north as 44° to 45° north latitude. Growth resembles the sand cherry of America, almost shrubby. Sometimes attains a height of 10 feet. Fruit borne along main stalks similar to sand cherry and gooseberry. Valuable in America for ornamental purposes, for grafting, and for cookery. The fruit is tart and well flavored."

27108. *MALUS* sp.

Crab apple.

"Chinese name *Shan ting tsze*. Common in the hills of Manchuria as far north as 44° to 45° north latitude. Very hardy and healthy growth. Fruit about one-half to three-fourths inch in diameter, resembling a thorn apple. Trees attain a height of 10 to 15 feet. Valuable in America for grafting purposes only."

27109. *PRUNUS ARMENIACA* L.

Apricot.

"Chinese name *Hing*. Common in the hills of Manchuria as far north as 43° north latitude. A small, spreading tree. Fruit small and fibrous, poor quality. Valuable in America for grafting and budding purposes only."

27110. *AMYGDALUS PERSICA* L.

Peach.

"Chinese name *Tao*. Same description as the preceding (S. P. I. No. 27109)."

27111. *AMYGDALUS PERSICA* L.

Peach.

"Chinese name *Ta po tao*. A large white peach, native in Shantung Province, China (Chefoo district). Quality of fruit, fair; growth of tree not known."

27112 to 27150.

From Kew, England. Presented by Dr. David Prain, director, Royal Botanic Gardens. Received February 4, 1910.

Seeds of the following:

27112. *ACTAEA RUBRA* (Ait.) Willd.

Distribution.—Nova Scotia to New Jersey and Pennsylvania, and west to the Rocky Mountains.

27113. *ARONIA ARBUTIFOLIA* (L.) Pers.

Distribution.—In swamps and wet woods, from Nova Scotia to Minnesota, and south to Florida and Louisiana.

27114. *ARONIA MELANOCARPA* (Michx.) Ell.

Distribution.—In swamps and low woods, or occasionally on rocks, from Nova Scotia to Florida, and west to Michigan.

27115. *BERBERIS ANGULOSA* Wall.

Distribution.—The temperate slopes of the Himalayas, at an altitude of 11,000 to 13,000 feet, in the Provinces of Nepal and Sikkim, northern India.

27116. *BERBERIS ARISTATA* DC.

Distribution.—Temperate slopes of the Himalayas, at an altitude of 6,000 to 10,000 feet, between Bhotan and Kunawar; also in the Nilgiri Hills in southern India, and in the mountains of Ceylon, at an altitude of 6,000 to 7,000 feet.

27112 to 27150—Continued.

27117. *BERBERIS CONCINNA* Hook. f.

Distribution.—Interior valleys of the Himalayas, at an elevation of 12,000 to 13,000 feet, in the Province of Sikkim, northern India.

27118. *BERBERIS DICTYOPHYLLA* Franch.

Distribution.—Slopes of the mountains in the Province of Yunnan, southern China, at an elevation of 10,000 feet.

27119. *BERBERIS PACHYACANTHA* Koehne.

Distribution.—Slopes of the Himalayas, at an altitude of 10,000 feet, in the Province of Kashmir, northern India.

27120. *BERBERIS THUNBERGII* DC.

Distribution.—Slopes of the mountains on the island of Kiushu, Japan. Generally cultivated as an ornamental.

27121. *BERBERIS UMBELLATA* Wall.

Distribution.—Temperate slopes of the Himalayas at an elevation of 9,000 to 11,000 feet, from Kumaon to Bhotan, India.

27122. *BERBERIS VIRESCENS* Hook. f.

Distribution.—Slopes of the Himalayas at an elevation of 9,000 feet, in the provinces of Sikkim and Bhotan, northern India.

27123. *MALUS MEDWIETZKYANA* Dieck.

NOTE.—These seeds were received under the name *Pyrus niedzwetzkyana*. The first name given to this apple, *Malus medwietzkyana*, appears in the Neuheiten-Offerte des National-Arboretums zu Zoeschen bei Merseburg, for 1891, page 16. Dr. Dieck here states that it was collected by "Herrn Gerichtspräsidenten Medwietsky." In the same catalogue for 1892-3, Dr. Dieck gives the collector's name as "Herrn Gerichtspräsidenten Niedzwetsky," and calls the apple "*Malus niedzwetzkyana*." Being trade catalogues, a description printed therein is not considered as botanical publication of these names. Another notice of this apple appears in the Wiener Garten Zeitung for April, 1891, page 164. Here, under the name *Malus Medwietzkyana*, are given the statements found in Dieck's 1891 catalogue, and the description being sufficient for identification, it is regarded as the place of botanical publication. Also, in the Gardeners' Chronicle for April 11, 1891, page 461, under the name *Malus medwietzkyana*, the same notes and descriptions are given, evidently taken from Dieck's catalogue.

Koehne, Deutsche Dendrologie 259, 1893, under *Malus paradisiaca*, mentions *M. niedzwetzkyana*, stating that he is not sure it is a form of *M. paradisiaca*. Hemsley, Curtis's Botanical Magazine, plate 7975, 1904, under the name *Pyrus niedzwetzkyana*, gives a figure and a detailed description of the plant and cites all the above-mentioned publications. Regarding the specific name he remarks: "As to the spelling of the distinctive name, we have adopted the one used by the author in his second account of the plant, where, however, he gives no explanation of the deviation from the first."

As to the correct spelling of the name of Dr. Dieck's patron, Mr. A. V. Babine, assistant in charge of the Slavic section of the Library of Congress, in reply to an inquiry as to the correct spelling of the name, states: "I have looked up the name you mention. The second form given by you (Medwietzky) is more nearly correct." There seems, therefore, to be no reason for the change of spelling adopted by Hemsley, and the correct name for this apple remains *Malus medwietzkyana*, as first used by Dieck and as published in the Wiener Garten Zeitung, above cited. (*H. C. Skeels.*)

27112 to 27150—Continued.

Distribution.—The valley of the Kashgar River in eastern Turkestan, both wild and cultivated, and also cultivated throughout southwestern Siberia and central Asia.

27124. *MALUS PRUNIFOLIA* (Willd.) Borkh.

Distribution.—Considered by some authors to be a hybrid between *Malus sylvestris* and *M. baccata*, probably arising in Siberia.

27125. *MALUS RINGO* Sieb.

Distribution.—Central Japan, especially in the vicinity of Fujiyama Mountain.

27126. × *MALUS SCHEIDECKERI* Spaeth.

A hybrid of garden origin between *Malus floribunda* and *M. prunifolia*.

27127. *MALUS SIKKIMENSIS* (Hook.) Koehne.

Distribution.—Slopes of the Himalayas in the province of Sikkim, north-eastern India.

27128. *MALUS TORINGO* Sieb.

Distribution.—Originally from Japan; cultivated in European and American gardens as an ornamental tree.

27129. *PYRUS BALANSAE* Decaisne.

Distribution.—Wooded slopes of the hills in the province of Laristan, southern Persia, at an elevation of 5,200 feet.

27130. × *PYRUS IRREGULARIS* Moench.

Distribution.—A hybrid between *Pyrus communis* and *Sorbus aria*, arising in a garden in France, and first described by Bauhin in the year 1650.

27131. *PYRUS LONGIPES* Coss. and Dur.

Distribution.—Forests on the slopes of the Atlas Mountains in the province of Batna and on the Aures Hills in western Algeria.

27132. *PYRUS MICHAUXII* Bosc.

Probably a hybrid between *Pyrus amygdaliformis* and *P. nivalis*.

27133. *PYRUS NIVALIS* Jacq.

Distribution.—Slopes of the mountains in southern Germany, France, and northern Italy, and in the Austrian Alps.

27134. *PYRUS NIVALIS ELAEAGRIFOLIA* (Pall.) Schneider.

Distribution.—Throughout Asia Minor and in Armenia.

27135. *PYRUS SINAI* Desf.

Distribution.—The slopes of Mount Sinai, Arabia.

27136. × *SORBUS ALPINA* (Willd.) Heynh.

This form is supposed to be a hybrid between *Sorbus aria* and *Aronia arbutifolia*.

27137. *SORBUS AMERICANA* Marsh.

Distribution.—Mountain slopes from Labrador to North Carolina and west to Michigan.

27138. *SORBUS ARIA GRAECA* (Lodd.) Boiss.

Distribution.—Slopes of the mountains in Greece, Crete, Crimea, and Syria.

27139. *SORBUS ACUPARIA LANUGINOSA* (Kit.) Beck.

Distribution.—This form occurs with the species in the south-central and southeastern part of Europe.

27112 to 27150—Continued.

27140. × *SORBUS HETEROPHYLLA* (Du Roi) Reichenb.

This form is supposed to be a hybrid between *Sorbus aucuparia* and *Aronia arbutifolia*.

27141. × *SORBUS LATIFOLIA* (Lam.) Pers.

Distribution.—Considered to be a hybrid between *Sorbus torminalis* and *S. aria*, arising in the forests of Fontainebleau, France.

27142. *TRICHOLAENA ROSEA* Nees.

Distribution.—Throughout tropical Africa and extending south to the Cape; also Madagascar and in southern Arabia.

27143. *TRIFOLIUM JOHNSTONI* Oliver.

Distribution.—The slopes of Mount Kilimanjaro at an elevation of 10,000 feet, in the southern part of British East Africa.

27144. *TRIFOLIUM SCABRUM* L.

Distribution.—Dry, stony, and grassy places in central Europe, extending from Holland, Belgium, and the eastern provinces of France, through Germany, Switzerland, and Austria, to Bosnia and Montenegro.

27145. *TRIFOLIUM PERREYMONDI* Gren.

Distribution.—Apparently known only from the vicinities of Roquebrune and Frejus in the province of Var, southeastern France.

27146. *TRIGONELLA COERULEA* (L.) Ser.

Distribution.—The mountain slopes of the northern part of Spain, the southern provinces of Russia, and in the region of the Caucasus Mountains.

27147. *TRIGONELLA CORNICULATA* L.

Distribution.—The countries along the Mediterranean from Spain and southern France through Italy and Greece to Asia Minor and in northern Africa.

27148. *TRIGONELLA CRETICA* Boiss.

Distribution.—The island of Crete, and in Asia Minor and northern Africa.

27149. *TRIGONELLA OVALIS* Boiss.

Distribution.—Southern Spain, sandy banks of the Guadalhorce River in the province of Malaga, and in waste places near cultivated fields in the vicinity of Riopar, province of Murcia.

27150. *TRIGONELLA POLYCRATA* L.

Distribution.—Borders of cultivated fields and waste places in central and northern Spain and in northern Africa; introduced into France in the vicinity of Marseille; and near Verviers, Belgium, and Darmstadt, Germany.

27151 to 27157.

From Russia. Received through Mr. Frank N. Meyer, agricultural explorer, March 19, 1910.

Cuttings of the following:

27151. *MALUS SYLVESTRIS* Mill.

Apple.

From near Kopetnari, Caucasus, Russia. "(No. 462, March 1, 1910.) A yellow winter apple of medium size and fairly firm flesh. The trees are able to stand high summer temperatures, but require mild winters. Obtained from a native Mingrelian orchard. To be tested in the southern sections of the United States." (Meyer.)

27151 to 27157—Continued.**27152.** MALUS SYLVESTRIS Mill.**Apple.**

From near Kopetnari, Caucasus, Russia. "(No. 463, March 1, 1910.) A red apple, said to be large and fine looking. For other remarks see preceding number (S. P. I. No. 27151.)" (*Meyer.*)

27153. MALUS SYLVESTRIS Mill.**Apple.**

From near Kopetnari, Caucasus, Russia, "(No. 464, March 1, 1910.) A white apple said to grow very large; according to a native fruit grower, some fruits weigh several pounds each. For other remarks see preceding numbers (S. P. I. Nos. 27151 and 27152.)" (*Meyer.*)

27154. PRUNUS AVIUM L.**Cherry.**

From near Kopetnari, Caucasus, Russia. "(No. 465, March 1, 1910.) A sweet, white cherry, having large fruits and ripening in early June. Able to stand high summer temperatures. Said to be a very fine variety. Obtained from a native Mingrelian orchard." (*Meyer.*)

27155. PRUNUS AVIUM L.**Cherry.**

From near Kopetnari, Caucasus, Russia. "(No. 466, March 1, 1910.) A sweet, white cherry ripening in early June, fruits not as large as those of the preceding number (S. P. I. No. 27154). Obtained from a native Mingrelian orchard." (*Meyer.*)

27156. PRUNUS AVIUM L.**Cherry.**

From near Kopetnari, Caucasus, Russia. "(No. 467, March 1, 1910.) A sweet, red cherry, ripening very early, the end of April or beginning of May. Fruit not very large, but popular on account of its earliness. For other remarks see No. 465 (S. P. I. No. 27154)." (*Meyer.*)

27157. PRUNUS AVIUM L.**Cherry.**

From Quirili, Caucasus, Russia. "(No. 468, March 1, 1910.) A sweet, black, early, native Caucasian variety of cherry, ripening toward the end of May and able to stand high summer temperatures." (*Meyer.*)

27158. SOLANUM JAMESII TOFF.**Potato.**

From Prescott, Ariz. Presented by Mr. Daniel Hatz. Received March 23, 1910. "Tubers of a native potato, grown in old willow land, without irrigation." (*Hatz.*)

Distribution.—On the slopes of the mountains at an elevation of 4,000 to 7,000 feet, from Colorado southward to Texas and Arizona.

27159 and 27160.

Presented by Mr. O. W. Barrett, Director of Agriculture, Lourenço Marquez, Portuguese East Africa. Received March 21, 1910.

Seeds of the following:

27159. BAUHINIA MONANDRA Kurz. (?)

From Deli, Portuguese Timor, East Indies. "(No. 32, February 18, 1910.) Ornamental shrub. Pod 20 to 22 cm. long. Probably new or very rare in America. Adapted to California, Gulf States, Porto Rico, etc." (*Barrett.*)

27160. ADANSONIA DIGITATA L.

From territory of Tete, Zambesia, Portuguese East Africa, "(No. 33, February 18, 1910.) Shisena name 'Chiwooia.' One of the largest if not the very largest variety (species?) of African Baobab, or 'Cream-of-Tartar' tree. Height 15 to 25 meters; diameter 2 to 10 meters. A most striking tree for frostless regions." (*Barrett.*)

27159 to 27160—Continued.

Distribution.—The Senegambia region in upper Guinea on the west coast of Africa, and along the eastern coast from Abyssinia south to the Mozambique district. Cultivated in India and Ceylon.

"This is the famous Baobab or Monkey-bread tree, known also in India as the Cork tree. The trunk attains a height of 40 to 60 feet and a diameter of 30 feet. Its bark furnishes cordage, and the pulp of the fruit is slightly acid and refrigerant." (*Oliver, Flora Tropical Africa, vol. 1, p. 213.*)

27161 to 27163.

From Algeria. Presented by Dr. L. Trabut, Algiers, Algeria. Received March 14 and 18, 1910.

Seeds of the following:

27161. ANDROPOGON SORGHUM (L.) Brot. **Durra.**

"Variety *tinctorium*. Used for coloring hides red, at Insalah, in Arabia Tafsut hamra." (*Trabut.*)

"I have compared this with G. I. No. 103 which was received directly from Dr. Trabut in 1904. It originated on the Oasis de Couat, below 30° north latitude. The two varieties though both durras, are not closely related. The long, rather thin, reddish glumes of No. 27161, and the medium-sized, obovate, yellowish-white seeds are quite different from the leathery, black glumes and very large seeds of G. I. No. 103." (*Carleton R. Ball.*)

27162. ZIZIPHUS LOTUS (L.) Lam.

See No. 21995 for previous introduction.

27163. ASPARAGUS STIPULARIS Forsk.

Distribution.—In dry places along roads and in vineyards, in Portugal and southern Spain, in Sicily, the Canary Islands, and in the northern part of Africa.

27164. STIZOLOBIUM sp.

From Yokohama, Japan. Purchased from the Yokohama Nursery Company. Received March 22, 1910.

27165. ROSA sp.**Rose.**

From Shanghai, China. Presented by Rev. J. M. W. Farnham. Received March 15, 1910.

"Cuttings from bushes growing wild on the mountain. It is a Rambler, and, from the description, seems to me to resemble the *Cherokee*." (*Farnham.*)

27166 to 27170.

From Buitenzorg, Java. Presented by the Director of the Botanic Garden. Received March 21, 1910.

Seeds of the following:

27166 to 27168. NEPHELIUM LAPPACEUM L. **Ramboetan.**

27166. Variety *si matjan*.

27167. Variety *sinjouja*.

27168. Variety *lebak boeloes*.

See Nos. 25163 to 25165 for description.

27169. DURIO ZIBETHINUS Murr.

Distribution.—The Malayan Islands; cultivated in the Malay Peninsula.

27166 to 27170—Continued.

27170. *ARTOCARPUS INTEGRA* (Thunb.) L. f. [*integrifolia*].

The earliest spelling, 1776, of the specific name is *integra* as given above, the change to *integrifolia* having been made by Linnæus f. in 1781.

Distribution.—Cultivated throughout the warmer parts of India and eastern Asia; probably native in the forests of the Western Ghats in India.

27172 to 27193.

From Russia. Received through Mr. Frank N. Meyer, agricultural explorer, March 4, 1910.

Seeds of the following:

27172. *OLEA EUROPAEA* L.

Olive.

From Nikita, Crimea, Russia. "(No. 1236a, January 24, 1910.) Collected from trees that have successfully withstood freezes of 15° Reaumur below zero (about -2° F.). To be tested in the regions recommended for Nos. 388 to 398 (S. P. I. Nos. 26801 to 26811)." (*Meyer.*)

27173. *OLEA EUROPAEA* L.

Olive.

From near Gagri, Caucasus, Russia. "(No. 1237a, January 31, 1910.) Collected from wild growing trees which occur quite plentifully on dry mountain slopes and on cliffs along the Caucasian shore of the Black Sea; they might have escaped from cultivation in the far past, as formerly this region was the center of a great civilization. These wild olive trees are very bushy and apparently very drought resistant and may be used in similar regions as recommended for Nos. 388 to 389 (S. P. I. Nos. 26801 to 26811)." (*Meyer.*)

27174. *NICOTIANA TABACUM* L.

Tobacco.

From near Sukhum-Kale, Caucasus, Russia. "(No. 1238a, February 12, 1910.) '*Trebizond.*' A very good variety of Turkish cigarette tobacco, producing medium-sized, long, oblong leaves, which assume a beautiful light-amber color when properly cured. This tobacco is grown in great quantities in this region and much exported. It is planted rather late in the season and needs a somewhat gravelly, warm soil to succeed well. Will probably be adapted to certain sections of northern Florida and southern Georgia." (*Meyer.*)

27175. *NICOTIANA TABACUM* L.

Tobacco.

From near Sukhum-Kale, Caucasus, Russia. "(No. 1239a, February 11, 1910.) '*Samsun.*' A good variety of Turkish cigarette tobacco, producing many rather small leaves (6 to 8 inches long) of pointed, oblong shape, which, when cured well, have a medium-dark chocolate-brown color. Grown and exported like the preceding variety in great quantities, although it is considered locally not to be as fine a product as the '*Trebizond.*' Likes a warm soil, rich in vegetable matter, and stands the sea air quite well, as some plantations are situated almost on the edge of the Black Sea." (*Meyer.*)

27176. *NICOTIANA TABACUM* L.

Tobacco.

From Cherg, Caucasus, Russia. "(No. 1240a, February 7, 1910.) A form of Turkish cigarette tobacco, apparently between '*Trebizond*' and '*Samsun.*' Much planted on burned-over forest land, somewhat away from the sea-coast. For other remarks see Nos. 1238a and 1239a (S. P. I. Nos. 27174 and 27175)." (*Meyer.*)

27172 to 27193—Continued.

27177. CRATAEGUS sp.

From near Gagri, Caucasus, Russia. "(No. 1241a, January 31, 1910.) A hawthorn growing in stony cliffs and on dry places. Mostly seen as a small shrub; has small leaves and bears small, scarlet berries, which persist throughout the winter on the bushes. Of value as an ornamental shrub in the southern parts of the United States." (Meyer.)

27178. CRATAEGUS sp.

From near Novai, Avon, Caucasus, Russia. "(No. 1242a, February 6, 1910.) A hawthorn, much resembling the preceding number, but of more robust habit, which may be accounted for by a different location. For further remarks see No. 1241a (S. P. I. No. 27177)." (Meyer.)

27179. CRATAEGUS sp.

From River Zjjeep, Caucasus, Russia. "(No. 1243a, February 4, 1910.) A hawthorn growing into a tall shrub or small tree, having black, juicy berries, which persist through the winter. Found growing on dry and stony places. Of value like the preceding numbers (S. P. I. Nos. 27177 and 27178)." (Meyer.)

27180. ROSA sp.

Rose.

From near Gagri, Caucasus, Russia. "(No. 1244a, January 31, 1910.) A very strong-growing wild rose, bearing many large fruits; found in rather dry, rocky locations. Probably a good stock in semitropical regions and for greenhouse forcing." (Meyer.)

27181. ROSA sp.

Rose.

From near Gagri, Caucasus, Russia. "(No. 1245a, January 31, 1910.) A rose found in dry, exposed cliffs; of very vigorous growth, having many small fruits. Probably a good stock like the preceding number (S. P. I. No. 27180)." (Meyer.)

27182. ROSA sp.

Rose.

From near Gagri, Caucasus, Russia. "(No. 1246a, January 31, 1910.) A wild rose, perhaps *Rosa cinnamomea*, found growing on a stony slope along a road. Has very long branches, which are nearly spineless. Of value in breeding experiments and as a stock like the preceding numbers." (Meyer.)

27183. CORONILLA VARIA L.

From Orianda, Crimea, Russia. "(No. 1247a, January 25, 1910.) A leguminous shrub, from 2 to 3 feet high, found growing on dry and stony places near the seaside. Perhaps of value as a fodder and also as an ornamental plant in semi-arid, mild-wintered regions." (Meyer.)

27184. SORBUS DOMESTICA L.

Mountain ash.

From Yalta, Crimea, Russia. "(No. 1248a, January 25, 1910.) A mountain ash with large, edible fruits. The fruits are sold in fruit shops in Yalta as a delicacy, they are eaten when somewhat decomposed, like medlars, and taste very good. Of value as a fruit tree in mild-wintered regions, where the summers are warm and dry." (Meyer.)

Distribution.—Southern Europe, extending from southern France through the Balkans to Asia Minor, and occurring also in northern Africa.

27185. SORBUS sp.

From Orianda, Crimea, Russia. "(No. 1249a, January 25, 1910.) A small tree or large shrub, growing in shady places on the slopes of hills, apparently rare. Of value, perhaps, as an ornamental shrub in mild-wintered regions." (Meyer.)

27172 to 27193—Continued.

27186. PUNICA GRANATUM L.

Pomegranate.

From near Gagri, Caucasus, Russia. "(No. 1250a, January 31, 1910.) A pomegranate occurring wild in stony cliffs near the seashore. Of no particular value, save as an interesting wild plant, as the fruits are rather small and sour." (Meyer.)

27187. ARBUTUS ANDRACHNE L.

From Nikita, Crimea, Russia. "(No. 1251a, January 24, 1910.) A very interesting, ornamental, native tree of the Crimea, being evergreen and bearing scarlet edible berries, which vary much in size. Grows in stony cliffs and at the very brinks of precipices, where its gnarled, barkless, white or reddish trunks often give one the impression of some prehistoric creature. Of value as an ornamental tree or tall shrub in mild-wintered regions, where dry and hot summers prevail." (Meyer.)

Distribution.—In the woods on the lower slopes of the mountains of Greece and the Crimea and eastward through Asia Minor to Syria; also in the islands of the Grecian archipelago and in Crete and Cyprus.

27188. PHOTINIA VILLOSA LAEVIS (Thunb.) Dippel.

From near Berlin, Germany. "(No. 1252a, October 27, 1909.) A tall bush with dark-green, long-persistent foliage, covered in late summer and autumn with scarlet berries. Of ornamental value in gardens and parks. Collected from a specimen in the Späth nurseries near Berlin, Germany." (Meyer.)

Distribution.—The provinces of Chekiang, Kiangsi, and Hupeh in south-eastern China, Port Chusan in Korea, and in Formosa and Japan.

27189. BUPLEURUM FRUTICOSUM L.

From Orianda, Crimea, Russia. "(No. 1253a, January 25, 1910.) Seeds of an umbelliferous evergreen shrub, found growing on shady places, often quite near the seashore. Appears to stand clipping quite well and is sparingly seen as a clipped hedge. Of value as a seaside shrub in mild-wintered regions, beneath trees and on shady places." (Meyer.)

Distribution.—Along the shores of the Mediterranean from Spain and Portugal to Syria and in northern Africa.

27190. MEDICAGO RIGIDULA (L.) Desr.

From near Nikita, Crimea, Russia. "(No. 1254a, January 24, 1910.) An annual alfalfa growing here and there on gravelly hill slopes. Of value as a spring forage plant in mild-wintered regions, where hot and dry summers prevail." (Meyer.)

27191. ASPARAGUS sp.

From Orianda, Crimea, Russia. "(No. 1255a, January 25, 1910.) A wild herbaceous asparagus, of climbing habits, found between shrubs near the seaside. Perhaps ornamental. Probably the same as No. 1234a (S. P. I. No. 26883). See this number for further remarks." (Meyer.)

27192. VIOLA sp.

Violet.

From near Gagri, Caucasus, Russia. "(No. 1256a, February 1, 1910.) The same as Nos. 411 and 412 (S. P. I. Nos. 26863 and 26864), under which numbers live plants were sent. See these numbers for remarks." (Meyer.)

27193. RUSCUS HYPOGLOSSUM L.

From near Gagri, Caucasus, Russia. "(No. 1257a, February 1, 1910.) The beautiful, large-leaved butcher's-broom found on shady, somewhat moist

27172 to 27193—Continued.

places in the forest and between shrubbery and rocks. Very ornamental with its large, glossy, dark-green leaves, especially when bearing its large, orange-scarlet berries. Of value as a cover plant on shady places in parks and gardens in the southern United States." (*Meyer.*)

Distribution.—Shady banks among the mountains of southern Europe, extending from Spain, Italy, and southern Germany southeastward to Macedonia.

27194 to 27198.

From Shanghai, China. Presented by Rev. J. M. W. Farnham. Received March 25, 1910.

Seeds of the following:

27194. CANNABIS SATIVA L. Hemp.

27195. DOLICHOS LABLAB L. Bonavist bean.

27196 to 27198. GLYCINE HISPIDA (Moench) Maxim. Soy bean.

27196. Large yellow seeded. **27198.** Black seeded.

27197. Large green seeded.

27199. VIGNA UNGUICULATA (L.) Walp. Cowpea.

From Philadelphia, Pa. Procured from Mr. Wm. Henry Maule. Received March 25, 1910.

Panmure Early Wonder.

"This is a valuable early and productive variety, yields enormously of shelled peas, which are excellent for table use during the winter. It makes an ordinary vine, not so rank as some other varieties; the stems that support the pods stand erect, 6 to 10 inches above all the vines, having 3 to 6 pods to each stem, and some pods contain as many as 20 peas, making them very easy to gather by hand picking, producing an average yield of 40 bushels of shelled peas per acre. A good soil improver, and relished by all farm stock." (*Maule.*)

27200. AGROSTIS ALBA L. Creeping bent-grass.

From Darmstadt, Germany. Received through Mr. Conrad Appel, March, 1910. *South German.* Said to be the true creeping bent-grass.

27201 to 27288.

Grown during the season of 1909 at the experimental substation at Dickinson, N. Dak., for Mr. Charles J. Brand,¹ under the supervision of Prof. L. R. Waldron, and transmitted through Mr. Charles H. Clark. Numbered March, 1910.

Seed of the following; notes by Mr. Charles J. Brand.

27201 to 27257. MEDICAGO SATIVA L. Alfalfa.

Seed of open-pollinated plants grown from seed sown in 1908.

27201. *Grimm.* Grown from P. L. H. No. 3235. Source of parent seed, Fargo, N. Dak. (1900-1904). Introduced from Baden, Germany (1858). Sixty plants yielded 3½ pounds of seed. Average per plant 23.7 grams; 560 seeds per gram.

¹ See Bulletin 185, Bureau of Plant Industry.

27201 to 27288—Continued.

27201 to 27257—Continued.

27202. *Grimm*. Grown from S. P. I. No. 21938. Source of parent seed, Excelsior, Minn. (1894-1907). Introduced from Baden, Germany. Fifty-four plants yielded $2\frac{3}{4}$ pounds of seed. Average per plant 20 grams; 527 seeds per gram.
27203. Acclimatized *Turkestan*. Grown from P. L. H. No. 3252. Source of parent seed, Highmore, S. Dak. (1899-1906). Introduced from Tashkend, Turkestan (1898). Fifty-eight plants yielded $1\frac{1}{2}$ pounds of seed. Average per plant 8.8 grams; 649 seeds per gram.
27204. *Mongolian*. Grown from S. P. I. No. 21232. Source of parent seed, Mongolia (small seed, imported 1907). Sixty-eight plants yielded $2\frac{1}{2}$ pounds of seed. Average per plant 16.8 grams; 476 seeds per gram.
27205. *Turkestan*. Grown from S. P. I. No. 21032. Source of parent seed, Turkestan (imported 1907). Forty-two plants yielded $1\frac{1}{2}$ pounds of seed. Average per plant 16 grams; 589 seeds per gram.
27206. *South Dakota 167 (Baltic)*. Grown from P. L. H. No. 3251. Source of parent seed, Highmore, S. Dak. (1905-1906). Grown at Baltic, S. Dak., 1894-1904. Forty-five plants yielded $4\frac{1}{4}$ pounds of seed. Average per plant 42 grams; 506 seeds per gram.
27207. *Mongolian*. Grown from P. L. H. No. 2125. Source of parent seed, Mongolia (medium seed, imported 1907). Forty-four plants yielded $1\frac{1}{2}$ pounds of seed. Average per plant 11 grams; 459 seeds per gram.
27208. *Canadian*. Grown from S. P. I. No. 13436. Source of parent seed, Canada (imported 1904). Forty-one plants yielded $1\frac{1}{4}$ pounds of seed. Average per plant 14 grams; 579 seeds per gram.
27209. *Montana*. Grown from S. P. I. No. 12747. Source of parent seed, Billings, Mont. (crop of 1904). Thirty-eight plants yielded 1 pound of seed. Average per plant 11.8 grams; 606 seeds per gram.
27210. *Mongolian*. Grown from P. L. H. No. 2124. Source of parent seed, Mongolia (large seed, imported 1907). Forty-two plants yielded $1\frac{1}{4}$ pounds of seed. Average per plant 13 grams; 470 seeds per gram.
27211. Commercial *Turkestan*. Grown from S. P. I. No. 20988. Source of parent seed, Turkestan (imported 1907). Thirty-four plants yielded 1 pound of seed. Average per plant 13 grams; 615 seeds per gram.
27212. *Canadian*. Grown from S. P. I. No. 21247. Source of parent seed, Canada (imported 1907). Twenty-six plants yielded three-fourths pound of seed. Average per plant 12.9 grams; 545 seeds per gram.
27213. *Turkestan*. Grown from S. P. I. No. 9453. Source of parent seed, Bokhara, Turkestan (imported 1903). Thirty plants yielded 1 pound of seed. Average per plant 15 grams; 582 seeds per gram.
27214. Commercial *Turkestan*. Grown from S. P. I. No. 18751. Source of parent seed, Turkestan (imported 1906). Twenty-seven plants yielded one-half pound of seed. Average per plant 8 grams; 627 seeds per gram.

27201 to 27288—Continued.

27201 to 27257—Continued.

- 27215.** *French.* Grown from S. P. I. No. 21187. Source of parent seed, France (imported 1907). Twenty-seven plants yielded $1\frac{3}{4}$ pounds of seed. Average per plant 29 grams; 508 seeds per gram. (Commercial sand lucern.)
- 27216.** *German.* Grown from S. P. I. No. 21217. Source of parent seed, Germany (imported 1907). Twenty-three plants yielded $1\frac{3}{8}$ pounds of seed. Average per plant 22 grams; 537 seeds per gram. (Commercial sand lucern.)
- 27217.** *Turkestan.* Grown from S. P. I. No. 19968. Source of parent seed, Samarkand, Turkestan (grown in Kansas). Seventeen plants yielded five-eighths pound of seed. Average per plant 16 grams; 611 seeds per gram.
- 27218.** *Turkestan.* Grown from S. P. I. No. 9452. Source of parent seed, Karabulak, Turkestan (imported 1903). Twenty plants yielded three-fourths pound of seed. Average per plant 17 grams; 612 seeds per gram.
- 27219.** *Nebraska.* Grown from S. P. I. No. 12820. Source of parent seed, Clearwater, Nebr. (crop of 1904). Twenty plants yielded $1\frac{3}{8}$ pounds of seed. Average per plant 25 grams; 531 seeds per gram.
- 27220.** *Montana.* Grown from S. P. I. No. 12816. Source of parent seed, Chinook, Mont. (crop of 1904). Nineteen plants yielded $1\frac{1}{2}$ pounds of seed. Average per plant 35 grams; 565 seeds per gram.
- 27221.** *Nebraska, dry land.* Grown from S. P. I. No. 21945. Source of parent seed, Sextorp, Nebr. (crop of 1907). Sixteen plants yielded three-fourths pound of seed. Average per plant 21 grams; 535 seeds per gram.
- 27222.** *Alt-Deutsche Fränkische Luzerne.* Grown from P. L. H. No. 3321. Source of parent seed Baden, Germany (imported 1908). Eighteen plants yielded 1 pound of seed. Average per plant 25 grams; 495 seeds per gram.
- 27223.** *First quality commercial.* Grown from S. P. I. No. 11275. Source of parent seed, purchased in Chicago, 1904. Fifteen plants yielded one-half pound of seed. Average per plant 15 grams; 545 seeds per gram.
- 27224.** *Russia.* Grown from S. P. I. No. 13857. Source of parent seed, Simbirsk, Russia (imported 1905). Twelve plants yielded one-half pound of seed. Average per plant 18 grams; 502 seeds per gram.
- 27225.** *Turkestan.* Grown from S. P. I. No. 14786. Source of parent seed, Tashkend, Turkestan (imported 1905). Thirteen plants yielded one-half pound of seed. Average per plant 17 grams; 576 seeds per gram.
- 27226.** *Algerian.* Grown from S. P. I. No. 12803. Source of parent seed, Setif, Algeria (imported 1905). Fourteen plants yielded five-eighths pound of seed. Average per plant 20 grams; 538 seeds per gram.
- 27227.** *Mexican.* Grown from S. P. I. No. 11652. Source of parent seed, Guanajuato, Mexico (imported 1904). Seven plants yielded three-sixteenths pound of seed. Average per plant 12 grams; 548 seeds per gram.

27201 to 27288—Continued.

27201 to 27257—Continued.

27228. Kansas. Grown from S. P. I. No. 12671. Source of parent seed, Lawrence, Kans. (crop of 1904). Ten plants yielded three-fourths pound of seed. Average per plant 37 grams; 505 seeds per gram.
27229. *German*. Grown from S. P. I. No. 22418. Source of parent seed, Germany (imported 1908). Eleven plants yielded three-fourths pound of seed. Average per plant 31 grams; 519 seeds per gram. (Commercial sand lucern.)
27230. Utah, irrigated. Grown from S. P. I. No. 21828. Source of parent seed, Deseret, Utah (crop of 1907). Eleven plants yielded three-fourths pound of seed. Average per plant 31 grams; 581 seeds per gram.
27231. Montana. Grown from S. P. I. No. 13237. Source of parent seed, Chinook, Mont. (crop of 1904). Twelve plants yielded $1\frac{1}{3}$ pounds of seed. Average per plant 42 grams; 530 seeds per gram.
27232. Colorado. Grown from S. P. I. No. 12398. Source of parent seed, Fort Collins, Colo. (crop of 1904). Nine plants yielded three-eighths pound of seed. Average per plant 19 grams; 530 seeds per gram.
27233. Nebraska. Grown from S. P. I. No. 13259. Source of parent seed, Milburn, Nebr. (crop of 1904). Ten plants yielded one-half pound of seed. Average per plant 22 grams; 512 seeds per gram.
27234. Utah, dry land. Grown from P. L. H. No. 3255. Source of parent seed, Nephi, Utah (crop of 1907). Nine plants yielded one-half pound of seed. Average per plant 25 grams; 582 seeds per gram.
27235. *Turkestan*. Grown from S. P. I. No. 9359. Source of parent seed, Erivan, Russia (imported 1903). Seven plants yielded one-fourth pound of seed. Average per plant 16 grams; 511 seeds per gram.
27236. Mexican. Grown from S. P. I. No. 11651. Source of parent seed, Pueblo, Mexico (imported 1904). Seven plants yielded one-eighth pound of seed. Average per plant 8 grams; 530 seeds per gram.
27237. Utah, irrigated. Grown from S. P. I. No. 12784. Source of parent seed, Emery, Utah (crop of 1904). Nine plants yielded one-fourth pound of seed. Average per plant 12.4 grams; 560 seeds per gram.
27238. *German*. Grown from S. P. I. No. 21269. Source of parent seed, Germany (imported 1908). Eight plants yielded 1 pound of seed. Average per plant 56 grams; 537 seeds per gram. (Commercial sand lucern.)
27239. Utah, dry land. Grown from P. L. H. No. 3256. Source of parent seed, Nephi, Utah (crop of 1907). Eight plants yielded three-fourths pound of seed. Average per plant 42 grams; 508 seeds per gram.
27240. Ordinary American. Grown from P. L. H. No. 3346. Source of parent seed, Richardton, N. Dak. (crop of 1907). Six plants yielded one-fourth pound of seed. Average per plant 18 grams; 603 seeds per gram.

27201 to 27288—Continued.

27201 to 27257—Continued.

27241. *Turkestan*. Grown from S. P. I. No. 991. Source of parent seed, Tashkend, Turkestan (imported 1898). Six plants yielded one-half pound of seed. Average per plant 37 grams; 606 seeds per gram.
27242. *Turkestan*. Grown from S. P. I. No. 20437. Source of parent seed, Tashkend, Turkestan (grown in Utah 1900-1906). Seven plants yielded three-sixteenths pound of seed. Average per plant 12 grams; 524 seeds per gram.
27243. *Turkestan*. Grown from S. P. I. No. 9450. Source of parent seed, Askabad, Turkestan (imported 1903). Four plants yielded three-sixteenths pound of seed. Average per plant 21 grams; 632 seeds per gram.
27244. Utah, irrigated. Grown from S. P. I. No. 21829. Source of parent seed, Deseret, Utah (crop of 1907). Seven plants yielded one-fourth pound of seed. Average per plant 16 grams; 534 seeds per gram.
27245. *French*. Grown from S. P. I. No. 20896. Source of parent seed, France (imported 1907). Five plants yielded one-fourth pound of seed. Average per plant 22.4 grams; 540 seeds per gram. (Commercial sand lucern.)
27246. Utah, dry land. Grown from S. P. I. No. 21867. Source of parent seed, Nephi, Utah (crop of 1907). Five plants yielded one-fourth pound of seed. Average per plant 22.4 grams; 550 seeds per gram.
27247. Utah, dry land. Grown from S. P. I. No. 22559. Source of parent seed, Gunnison, Utah (crop of 1907). Four plants yielded one-fourth pound of seed. Average per plant 28 grams; 581 seeds per gram.
27248. Commercial *Turkestan*. Grown from S. P. I. No. 18425. Source of parent seed, Turkestan (imported 1906). Three plants yielded 14 grams of seed. Average per plant 5 grams; 524 seeds per gram.
27249. *Poitou*. Grown from S. P. I. No. 12695. Source of parent seed, France (imported 1905). Four plants yielded three-eighths pound of seed. Average per plant 42 grams; 504 seeds per gram.
27250. Utah, dry land. Grown from S. P. I. No. 12409. Source of parent seed, Diamond Fork, Utah (crop of 1904). Three plants yielded one-fourth pound of seed. Average per plant 37 grams; 489 seeds per gram.
27251. *Italian*. Grown from S. P. I. No. 22416. Source of parent seed, Piedmont, Italy (imported 1908). One plant survived the winter of 1908-9, but its exact yield was lost; 459 seeds per gram.
27252. *Turkestan*. Grown from S. P. I. No. 13999. Source of parent seed, Tashkend, Turkestan (grown in Utah, 1900-1904). One plant yielded 12 grams of seed.
27253. *Argentine*. Grown from S. P. I. No. 3508. Source of parent seed, Mendoza, Argentina (imported in 1899). One plant yielded no seed.
27254. *Provence*. Grown from S. P. I. No. 22417. Source of parent seed, Germany (imported 1908). One plant yielded 28 grams of seed; 501 seeds per gram.

27201 to 27288—Continued.

27201 to 27257—Continued.

27255. *Argentine*. Grown from S. P. I. No. 3507. Source of parent seed Buenos Aires, Argentina (imported in 1899). One plant yielded 10 grams of seed.

27256. Utah, irrigated. Grown from S. P. I. No. 22558. Source of parent seed, Gunnison, Utah (crop of 1907). Eight plants yielded three-fourths pound of seed. Average per plant 42 grams; 530 seeds per gram.

27257. *Argentine*. Grown from S. P. I. No. 12549. Source of parent seed, Buenos Aires, Argentina (imported in 1905). One plant yielded 56 grams of seed; 567 seeds per gram.

"In making comparison as to yield of seed careful notice must be taken of the number of plants from which the yield was obtained. A large number indicates a thicker stand in the rows, hence less opportunity for full development. Fair comparisons may be made in most cases between strains represented by approximately the same number of plants."

27258 and 27259. *MEDICAGO SATIVA L.*

Alfalfa.

27258. Commercial sand lucern. Grown from potted plants of S. P. I. No. 25110, which were started in the greenhouse at Washington and sent to Dickinson, N. Dak. Original seed received from Zurich, Switzerland. Fifty-five plants yielded $2\frac{3}{4}$ pounds of seed, an average yield per plant of 20 grams.

NOTE.—This number and Nos. 27261 and 27262 below were not grown from seed produced at Zurich, but from samples that were submitted by seedsmen of Darmstadt, Germany, to the seed-control station for test.

27259. Grown from P. L. H. No. 3411, which is inbred *Grimm* alfalfa produced in 1908 at Dickinson, N. Dak., by a selected plant from the same parent seed as P. L. H. No. 3235 (see No. 27201 above). Present sample grown in 1909. Sixteen plants yielded 1 pound of seed, an average yield per plant of 29 grams. Mr. Waldron reports that the winter of 1909-10 killed a much larger percentage of this inbred strain than the open-pollinated *Grimm* included in various experiments. Whether this killing was due to deterioration or whether the selected parent happened to be a nonhardy one can not be said, but it suggests an interesting experiment.

27260. *MEDICAGO SATIVA VARIA* (Mart.) Urb.

Sand lucern.

Grown from P. L. H. No. 3386, which is true sand lucern produced by S. P. I. No. 20571, obtained by Prof. N. E. Hansen from Ultuna, Sweden. Forty-nine plants yielded $2\frac{1}{4}$ pounds of seed, an average per plant of 23 grams.

27261 to 27266. *MEDICAGO SATIVA L.*

Alfalfa.

27261. *Commercial sand lucern*. Grown at Dickinson, N. Dak., from S. P. I. No. 25111 (see No. 27258 above). Fifty-two plants yielded $1\frac{3}{4}$ pounds of seed, an average per plant of 12 grams.

27262. *Commercial sand lucern*. Grown at Dickinson, N. Dak., from S. P. I. No. 25112 (see No. 27258). Fifty-five plants yielded $2\frac{1}{2}$ pounds of seed, an average per plant of 21 grams.

27263. Seed from volunteer plants that have persisted for several years on the site of an old experimental plat that was possibly *Grimm*.

27201 to 27288—Continued.

27261 to 27266—Continued.

27264. Utah alfalfa seed from transplanted plants mixed with seed of the volunteer plants mentioned under No. 27263.

27265. Utah alfalfa seed produced by plants of S. P. I. No. 12784, which has been transplanted at definite distances in a study of the soil-moisture requirements of stands of different thickness.

27266. *Grimm* alfalfa grown in cultivated rows 3 feet apart (plat 16). From seed produced by Mr. Gustav Rasche of Westbrook, Cottonwood Co., Minn. The seed used on plat 16 was produced in the thirteenth year from seeding, from seed obtained by Mr. Rasche near Waconia, Carver Co., Minn. (see No. 27481). A $\frac{1}{10}$ -acre plat yielded at the rate of $5\frac{5}{8}$ bushels per acre.

27267. *MEDICAGO RUTHENICA* (L.) Trautv.

Seed collected in the first or seeding year from a $\frac{1}{4}$ -acre plat (in cultivated rows) of Hansen's introduction of this species, S. P. I. No. 24451, from Charonte, Siberia.

27268. *MEDICAGO FALCATA* L.

Seed collected in the first or seeding year from a $\frac{1}{4}$ -acre plat (in cultivated rows) of Hansen's introduction No. 24452, from Ob, Tomsk Province, Siberia. Photographs of the plats which produced this and the preceding number may be found in the second annual report of the Dickinson substation for 1909.

27269 to 27287. *MEDICAGO SATIVA* L.

Alfalfa.

Seed from individual plants that were inclosed in wire cages to prevent cross-fertilization and were hand pollinated from time to time while in blossom:

27269. *Mongolian*. An individual plant of P. L. H. No. 2125 (see No. 27207 above). One plant yielded $1\frac{1}{2}$ grams of seed.

NOTE.—Inasmuch as covering with wire cages reduces materially the yield of seed, plants that have been caged and hand pollinated must not be considered typical of what these plants would do under normal conditions.

27270. *Mongolian*. An individual plant of P. L. H. No. 2125 (see No. 27207). This plant yielded $8\frac{3}{4}$ grams of seed.

27271 to 27273. *Turkestan*. Individual plants of S. P. I. No. 9453 (see No. 27213). The first yielded $3\frac{1}{2}$ grams of seed; the second $9\frac{3}{4}$ grams; the third 11 grams.

27274. *Turkestan*. An individual plant of No. 13999 (see No. 27252). One plant produced $4\frac{1}{2}$ grams of seed.

27275 to 27277. *Acclimatized Turkestan*. Grown from P. L. H. No. 3252 South Dakota No. 240 (see No. 27203). The first plant yielded $2\frac{3}{4}$ grams of seed; the second plant 1 gram; the third plant $3\frac{1}{2}$ grams.

27278. Grown from an individual plant of *Canadian* alfalfa, No. 13436, which yielded $3\frac{3}{4}$ grams of seed. (See No. 27208.)

27279. *Mexican*. Grown from an individual plant of No. 11652, which produced $35\frac{3}{4}$ grams of seed (See No. 27227.)

27280 and 27281. *Minnesota Grimm*. Grown from No. 21938 (see No. 27202). The first plant yielded $25\frac{1}{4}$ grams of seed; the second $25\frac{1}{2}$ grams.

27201 to 27288—Continued.**27269 to 27287—Continued.**

27282 to 27284. North Dakota *Grimm*. Grown from P. L. H. No. 3235, which is identical with S. P. I. No. 13358. The first plant yielded $9\frac{1}{4}$ grams of seed; the second $12\frac{1}{4}$ grams; the third 14 grams. (See No. 27201.)

27285. *Commercial sand lucern*. Grown from an individual plant of No. 21217, from Darmstadt, Germany, which yielded $18\frac{1}{4}$ grams of seed. (See No. 27216.)

27286. Origin of parent seed unknown. One plant yielded 4 grams of seed.

27287. Origin of parent seed unknown. One plant yielded $5\frac{1}{2}$ grams of seed.

NOTE.—The two preceding numbers are believed to be transplanted plants of *Peruvian alfalfa* No. 9303, which survived an earlier experiment.

27288. *MEDICAGO SATIVA VARIA* (Mart.) Urb. **Sand lucern.**

Grown from cuttings of No. 20571 (see No. 27260). Nineteen plants yielded $1\frac{1}{2}$ pounds of seed. Average per plant 21 grams.

27289 to 27296.

From Bremen, Germany. Presented by Dr. Geo. Bitter, director, Botanical Garden. Received March 4, 1910.

Seeds of the following:

27289. *AGROPYRON SEMICOSTATUM* Nees.

Distribution.—Slopes of the Himalayas at an elevation of 6,000 to 12,000 feet, between Kashmir and Sikkim, India, and extending to Afghanistan and Turkestan.

27290. *ELEUSINE TRISTACHYA* Lam.

Distribution.—In the vicinity of Montevideo, Uruguay, and in Argentina, South America; introduced in the Azores, and in Spain and Italy.

27291. *MELILOTUS SUAVEOLENS* Ledeb.

27292. *MELILOTUS WOLGICA* Poir.

Distribution.—The southern part of Russia in the valley of the Volga River and the vicinity of the Caspian Sea.

27293. *PHLEUM JAPONICUM* Franch. & Sav.

Distribution.—Along sandy shores in the vicinity of Yokosuka, Japan.

27294. *TRIGONELLA CALLICERAS* Fisch.

Distribution.—The provinces around the Caspian Sea and in the Caucasus Mountains, southeastern Russia.

27295. *TRIGONELLA CRETICA* Boiss.

See No. 27148 for distribution of this species.

27296. *TRIGONELLA GLADIATA* Stev.

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

27297 and 27298. COLOCASIA sp.**Dasheen.**

From China. Presented by Mr. Geo. Campbell, Kia-ying chau, China. Received March 29, 1910.

Tubers of the following; notes by Mr. Campbell:

27297. "Chinese name *Pak ho*, meaning white water lily. This should be planted anywhere from the end of the first month of the Chinese calendar to the second month (February). Take each tuber and cut off about a third of the root end before planting (this third is the perquisite of the hogs). It will do well in either loam or clay soil if one only gives it plenty of human urine by way of manure. (The Chinese attach the greatest value to urine as manure but always dilute it freely before applying.)"
The sprouts of these are white.

27298. "Chinese name *Chong chu*. It is named, I suppose, after the great city of Changchow fu, west of Amoy. The directions for planting this are the same as for the above (S. P. I. No. 27297), save that the time of planting corresponds to about the last week in January and first week in February." The tips of the sprouts of these are pink.

27299 and 27300. CITRULLUS VULGARIS Schrad.**Watermelon.**

From Hockanum, Conn. Presented by Mr. N. H. Brewer. Received March, 1910.

Princess Marie. Seed grown from S. P. I. No. 22657:

27299. "Dark seeds from melons whose flesh was a gray white and not as sweet as the yellow (S. P. I. No. 27300)." (*Brewer.*)

27300. "White seeds from a yellow-fleshed melon which was very sweet." (*Brewer.*)

In size these were larger than described, "being oblong like an ice-cream melon." (*Brewer.*)

27301. ROSA GIGANTEA Collett.**Rose.**

From Oporto, Portugal. Presented by Baron de Soutellino, 115 Entre Quintas, who procured his original plants from the Royal Botanic Gardens, Kew, England. Received March 29, 1910.

"It is now twenty-five years since Dr. (now Sir George) Watt discovered this king of wild roses in Manipur (India), and nineteen years since the late Sir Henry Collett sent seeds of it to Kew.

"Here is an account of it by Mr. Hildebrand, who knew and grew the rose in Burma; indeed, I believe he helped Sir Henry Collett to get it home to England: '*Rosa gigantea* grows in profusion immediately opposite the window I am now writing at, and for 100 yards or more away. The boles of some of the plants are as thick as a man's thigh. It is a creeper, and does not flower until it gets over or beyond the tree it climbs. These specimens are on large evergreen trees, and their roots are in limestone and vegetable mold, through which run innumerable springs of pure water. The boles never get the sun, and they are always in the neighborhood of the water, which, no doubt, the roots find. The whole of a large group of trees on the southern and western side is covered up to 50 or 80 feet with the rose's shoots, and when in full bloom they look like a sheet of white, and the air all round is most deliciously scented. It is certainly a glorious sight. The ground all round is strewn with the seeds of the rose in July.'" (*Extract from The Garden, February 9, 1907, p. 67.*)

27302 to 27304.

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

27302. AMYGDALUS FENZLIANA (Fritsch) Korsh.

From Tiflis, Caucasus, Russia. "(No. 472, March 7, 1910.) A shrubby ornamental almond, flowering in early spring, with white flowers; growing in semiarid sections in eastern Caucasus. Suggested as a stock for almonds and other stone fruits in mild-wintered, semiarid sections, also of value, possibly, in breeding a bushy, drought-resistant strain of almonds for semiarid regions. Obtained from the Tiflis Botanical Garden." (*Meyer.*) (Plants.)

Distribution.—Arid mountain slopes of the transcaucasian provinces of Russia, at Phalernum in Greece, and on the islands of Crete and Sicily.

27303. PRUNUS MICROCARPA Meyer.

From Tiflis, Caucasus, Russia. "(No. 473, March 7, 1910.) A shrubby, small-fruited cherry, flowering early in spring. Coming from the semiarid sections of southeastern Caucasus. To be tested as an ornamental flowering shrub and perhaps also as a stock for stone fruits in the semiarid sections of the United States. Obtained from the Tiflis Botanical Garden." (*Meyer.*) (Plants.)

Distribution.—The slopes of the Beshbarmak Mountains near the Caspian Sea, and in the province of Astrabad, northwestern Persia.

27304. COLCHICUM SPECIOSUM Stev.

From Tiflis, Caucasus, Russia. "(No. 474, March 7, 1910.) A bulbous plant, flowering in autumn with large showy flowers of dark rose color. The strong foliage appears in spring, but dies off in midsummer and after some weeks of rest the flowers appear. It likes semishady places. Of value as an ornamental garden plant in the mild-wintered sections of the United States. Obtained from the Tiflis Botanical Garden." (*Meyer.*) (Bulbs.)

Distribution.—On the slopes of the Caucasus Mountains in southeastern Russia, and in northern Persia. Generally cultivated as an ornamental.

27305 to 27309.

From Paris, France. Presented by Mr. Maurice L. de Vilmorin, 13 Quai d'Orsay. Received March 25, 1910.

Plants of the following:

27305. BERBERIS SINENSIS Desf.

"(Vilm. No. 4456.)"

Distribution.—The Provinces of Chihli, Shingking, and Kansu in China; near Laoling, Korea; and in Japan.

27306. BERBERIS sp.

"(Vilm. No. 3927.)"

27307. BERBERIS SANGUINEA Franch.

See No. 25942 for previous introduction.

27308. CLEMATIS DELAVAYI Franch.

Distribution.—On mountain slopes in the Province of Yunnan in southern China.

27309. ROSA SERICEA Lindl.

Variety *fructu rubro*.

27310. AMYGDALUS DAVIDIANA (Carr.) Beiss., Sch. and Zab.**Wild peach.**

From Tientsin, China. Presented by Captain Tsao, through Mr. Yung Kwai, first secretary of the Chinese Embassy in Washington, D. C. Received March 30, 1910.

"Mr. Yung Kwai informs us that these seeds were collected by Captain Tsao from a wild tree in the neighborhood of his plantation at Tientsin, China. Captain Tsao informed Mr. Yung Kwai that this wild peach is the form upon which are grafted all the ordinary varieties of peaches around Tientsin." (*Fairchild.*)

See No. 22009 for other description.

27311. GARCINIA sp.

From Lawang, Java. Presented by Mr. M. Buysman. Received March 25, 1910.

27312 to 27320. RUBUS FRUTICOSUS L.**Blackberry.**

From Chile. Received through Mr. José D. Husbands, Limavida, via Molina, Chile. Received March 26, 1910.

Seeds of the following:

27312 to 27315. "Round varieties of wild blackberries. These show slight differences; all are good fruits and are extremely productive. The plants are of the excessive-growth class." (*Husbands.*)

27316 to 27320. "Wild blackberries from near the seacoast, grown dry in the driest part of central Chile, still sufficiently near the sea to receive some benefit from the heavy marine dews. The plant growth is small, conical in form. The fruits are large (for wild fruits), fleshy, round sorts of extremely fine flavors and extra sweet. These are equally productive to any and some are even greater yielders." (*Husbands.*)

27321 to 27332. ORYZA SATIVA L.**Rice.**

From Philippine Islands. Received through Mr. Wm. S. Lyon, Manila. Received March 24 and 25, 1910.

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

27321. *Kiabo.* Glutinous, remarkably fragrant.

27322. *Malakit-dure.* Black rice, but most prolific known, always estimated 100 to 1 and up.

27323. *Tuguis.*

27324. *Macan-pulat.* Late variety.

27325. *Quinalibo-Quinamalg.*

27326. *Guering-guering,* or properly *Kering-kering.*

27327. *Eputebem.*

27328. *Mimis.*

27329. *Calibo;* not *Calebo.*

27330. *Milagrosa.*

27331. *Macan.* Very early variety.

27332. *Macan Mimi.* Specifically meaning exceptionally white.

27333 and 27334. ORYZA SATIVA L. Rice.

From Cairo, Egypt. Presented by Mr. George P. Foaden, secretary, Khedivial Agricultural Society. Received March 31, 1910.

Seeds of the following:

27333. *Sultani*, known as *Ein el Bint*.

27334. *Sabeini*.

27335 to 27343.

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

Seeds of the following:

27335. *GLEDITSIA CASPICA* Desf.

From Tiflis, Caucasus, Russia. "(No. 1264a, March 7, 1910.) A honey locust growing into a rather spreading, densely branched, low tree, bearing a multitude of heavy, fleshy pods. Of value as a shade and park tree in the semiarid regions of the United States. Obtained from the Tiflis Botanical Garden." (*Meyer*.)

27336. *AMYGDALUS FENZLIANA* (Fritsch) Korsh.

From Tiflis, Caucasus, Russia. "(No. 12653, March 7, 1910.) For detailed description see No. 472 (S. P. I. No. 27302). Obtained from the Tiflis Botanical Garden." (*Meyer*.)

27337. *PRUNUS MICROCARPA* Meyer.

From Tiflis, Caucasus, Russia. "(No. 1266a, March 7, 1910.) For detailed description see No. 473 (S. P. I. No. 27303). Obtained from the Tiflis Botanical Garden." (*Meyer*.)

27338. *COLCHICUM SPECIOSUM* Stev.

From Tiflis, Caucasus, Russia. "(No. 1267a, March 7, 1910.) For detailed description see No. 474 (S. P. I. No. 27304). Obtained from the Tiflis Botanical Garden." (*Meyer*.)

27339. *CRATAEGUS* sp.

From Sukhum-Kale, Caucasus, Russia. "(No. 1268a, February 14, 1910.) An evergreen ornamental hawthorn, probably a form of *C. pyracantha*. Of strong-growing habits, but somewhat irregular growth. Of value as an ornamental evergreen in the mild-wintered sections of the United States. Obtained from the Botanical Garden at Sukhum." (*Meyer*.)

27340. *CITRULLUS VULGARIS* Schrad.

Watermelon.

From near Kopetnari, Caucasus, Russia. "(No. 1269a, March 1, 1910.) A native Mingrelian variety of watermelon, having red flesh and said to be very sweet. To be tested in California or the southern Rocky Mountain region, where the climate approaches that of this section of the Caucasus." (*Meyer*.)

27341. *CUCUMIS MELO* L.

Muskmelon.

From near Kopetnari, Caucasus, Russia. "(No. 1270a, March 1, 1910.) A native Mingrelian variety of muskmelon of small size, but said to be very sweet. To be tried in similar regions as the preceding numbers." (*Meyer*.)

27342. *INODES* sp.

From Sukhum-Kale, Caucasus, Russia. "(No. 1271a, February 11, 1910.) A low-growing palm, suitable for planting along driveways, paths in orchards, or in places where tall palms are not wanted. This palm does not form a real trunk, but has its leaves come from a rosette. Obtained from Mr. Smitskoi's place near Sukhum, where the climate is mild enough to grow oranges and other citrus fruits." (*Meyer*.)

27335 to 27343—Continued.

27343. *MEDICAGO HISPIDA DENTICULATA* (Willd.) Urban. **Bur clover.**

From Sukhum-Kale, Caucasus, Russia. "(No. 1272a, February 12, 1910.) An annual bur clover, found growing along an embankment. For remarks as to probable uses see No. 1201a (S. P. I. No. 26673)." (*Meyer.*)

NOTE.—For other species picked out of this lot see No. 27675.

27344 to 27360.

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

Cuttings, unless otherwise noted, were received of the following:

27344. *CORYLUS MAXIMA* Miller. **Filbert.**

From near Sukhum-Kale, Caucasus, Russia. "(No. 430, February 10, 1910.) A filbert bearing the name *Badem fondook*, a native of the Caucasus. Much grown for its fine, oblong nuts, which find a ready sale. Obtained from the experimental station near Sukhum. Suitable for the Gulf region and the southeastern sections of the United States." (*Meyer.*) (Plants and cuttings.)

Distribution.—Southern Europe, extending from the Istrian peninsula of Austria eastward to Macedonia.

27345. *CORYLUS AVELLANA* L. **Hazelnut.**

From near Sukhum-Kale, Caucasus, Russia. "(No. 431, February 10, 1910.) A hazelnut bearing the name *Zaksy fondook*, a native of the Caucasus. Nuts medium sized. See No. 430 (S. P. I. No. 27344) for source and regions to which it will be best adapted." (*Meyer.*) (Plants and cuttings.)

27346. *CORYLUS AVELLANA* L. **Hazelnut.**

From near Sukhum-Kale, Caucasus, Russia. "(No. 432, February 10, 1910.) A hazelnut bearing the name *Trapezond fondook*, a native of the Caucasus. Nuts very large and generally well filled. The most widely grown variety here in the Caucasus. See No. 430 (S. P. I. No. 27344) for source and regions to which it will be best adapted." (*Meyer.*)

27347. *CORYLUS AVELLANA* L. **Hazelnut.**

From near Sukhum-Kale, Caucasus, Russia. "(No. 433, February 10, 1910.) A hazelnut bearing the name *Kerasund fondook*, a native of the Caucasus. Nuts medium sized. See No. 430 (S. P. I. No. 27344) for source and regions to which it will be best adapted." (*Meyer.*) (Plants and cuttings.)

27348. *CORYLUS AVELLANA* L. **Hazelnut.**

From near Sukhum-Kale, Caucasus, Russia. "(No. 434, February 10, 1910.) A native hazelnut of the Caucasus, called *Basset*. It bears medium-sized nuts. See No. 430 (S. P. I. No. 27344) for source and regions to which it will be best adapted." (*Meyer.*)

27349. *VITIS VINIFERA* L. **Grape.**

From near Sukhum-Kale, Caucasus, Russia. "(No. 441, February 15, 1910.) *Aturk ash* (translated Turkish grape). This produces medium-sized clusters of white grapes which ripen late in the season and are suitable for table use as well as for wine. A strong grower; has to be pruned with long wood, like all Caucasian grapes, to insure good harvests. Obtained from the vineyard of Mr. Smitskoi, near Sukhum." (*Meyer.*)

27350. *VITIS VINIFERA* L. **Grape.**

From near Sukhum-Kale, Caucasus, Russia. "(No. 442, February 15, 1910.) *Ash Khuta*. This produces a medium-sized bunch of whitish-colored berries,

27344 to 27360—Continued.

which are rosy when fully ripe, and have soft, juicy flesh; they are not very good as a table grape, but fine for wine production. A strong grower; has to be pruned with long wood to insure good crops. Obtained from the same source as the preceding number (S. P. I. No. 27349)." (*Meyer.*)

27351. VITIS VINIFERA L.**Grape.**

From near Sukhum-Kale, Caucasus, Russia. "(No. 443, February 15, 1910.) *Agra Ash.* A grape of dark-red color which produces a very dark-red wine. Not fit for table use, only a wine producer. Of medium-strong growth; has to be pruned with long wood to insure good crops. Obtained from the same source as No. 441 (S. P. I. No. 27349)." (*Meyer.*)

27352. VITIS VINIFERA L.**Grape.**

From near Sukhum-Kale, Caucasus, Russia. "(No. 444, February 15, 1910.) *Achgau.* A grape of dark-purple color, ripening late. Good for wine production. Very long internodes. Has to be pruned with long wood to insure good crops. Obtained from the same source as No. 441 (S. P. I. No. 27349)." (*Meyer.*)

27353. VITIS VINIFERA L.**Grape.**

From near Sukhum-Kale, Caucasus, Russia. "(No. 445, February 15, 1910.) *Achkiek.* A grape of bluish-red color, long, oblong berries, late ripener, and a fine table variety. A strong grower, making very long twigs; to be pruned with long wood to insure good crops. Obtained from the same source as No. 441 (S. P. I. No. 27349)." (*Meyer.*)

27354. VITIS VINIFERA L.**Grape.**

From near Sukhum-Kale, Caucasus, Russia. "(No. 446, February 15, 1910.) *Kachich.* A grape of blue-black color, late in ripening, only fit for wine making. A strong grower, making long twigs; should be pruned long to insure good crops. Obtained from the same source as No. 441 (S. P. I. No. 27349)." (*Meyer.*)

27355. VITIS VINIFERA L.**Grape.**

From near Sukhum-Kale, Caucasus, Russia. "(No. 447, February 15, 1910.) *Amlachu.* A grape of light-red color, late in ripening. Produces a rather good wine, not a table variety. Of medium-strong growth. As to pruning and locality where obtained see No. 441 (S. P. I. No. 27349)." (*Meyer.*)

27356. VITIS VINIFERA L.**Grape.**

From near Sukhum-Kale, Caucasus, Russia. "(No. 448, February 15, 1910.) *Awasarghua.* A fine table grape of Caucasian origin, medium-sized bunches, rather small berries, white in color, hard fleshed, of sweet taste. A very late ripener (end of November, beginning of December). A medium-strong grower; should be pruned with long wood to insure good crops. Obtained from the same source as No. 441 (S. P. I. No. 27349). This grape also produces a good wine." (*Meyer.*)

27357. VITIS VINIFERA L.**Grape.**

From near Sukhum-Kale, Caucasus, Russia. "(No. 449, February 15, 1910.) A native Caucasian grape, coming originally from Derbent (Caucasus). Producing heavy bunches of round berries, large size and of white color; taste, not very sweet, but offset by extraordinarily long-keeping qualities. Considered a fine table grape, especially good for shipping. A strong grower; has to be pruned with long wood to insure good crops. Native name of this grape *Agadai.* From the same locality as No. 441 (S. P. I. No. 27349)." (*Meyer.*)

27344 to 27360—Continued.

27358. VITIS VINIFERA L.

Grape.

From near Sukhum-Kale, Caucasus, Russia. "(No. 450, February 15, 1910.) *Schachisum*. A native Caucasian grape, coming originally from Derbent. Considered a fine table grape; berries long, finger-shaped, with hard flesh; color whitish, but rose when fully ripe; very late in ripening, not very sweet, but having excellent keeping qualities, a good grape for shipping. To be pruned with long wood to insure good crops. Obtained from the same source as No. 441 (S. P. I. No. 27349)." (*Meyer*.)

27359. VITIS VINIFERA L.

Grape.

From near Sukhum-Kale, Caucasus, Russia. "(No. 451, February 15, 1910.) *Achisum*. A Turkish table grape, having round berries of a white color, somewhat striped, sweet taste, hard flesh, and good keeping and shipping qualities. Obtained from the same source as No. 441 (S. P. I. No. 27349)." (*Meyer*.)

27360. LAUROCERASUS OFFICINALIS Roem.

Laurel cherry.

From Dioscuria, near Sukhum-Kale, Caucasus, Russia. "(No. 453, February 16, 1910.) A very handsome variety of the laurel cherry, having very dense, glossy foliage. Comes from the high mountains of the Caucasus, and is able to stand 20° Reaumur below zero (-13° F.) For this reason it is suitable for regions where heretofore we have been unable to grow this handsome evergreen. Obtained through Mr. E. H. Albrecht, head gardener of the estates Sings and Dioscuria, near Sukhum." (*Meyer*.)

Distribution.—In the woods on the lower slopes of the mountains in Greece, in the transcaucasian provinces of Russia, and in the northern part of Persia.

27361. DYSOXYLUM sp.

From Buitenzorg, Java. Procured by Mr. A. J. Perkins. Received March 11, 1910.

Seed of a forest tree.

27362 and 27363. VITIS VINIFERA L.

Grape.

From Almeria, Spain. Procured by Mr. Edward J. Norton, American consul, Malaga, Spain. Received March 31, 1910.

Cuttings of the following:

27362. *Ohanez*. Procured for growing in California in order to determine definitely whether what is now grown quite extensively there as the *Ohanez* is in reality this variety.

27363. *Castiza* or black grape and *Castiza especial*.

NOTE.—The letter received from the consul on April 11, 1910, discloses the fact that there were two varieties in this lot; as there was no way of distinguishing this at the time, they were given the one number and distributed; it will be impossible to distinguish them now until the vines fruit, at which time they will be separated and given different numbers.

"*Ohanez* grape, synonym *Casta de Ohanez* or *Uva de Lonja*. Though several different grapes are met with near Almeria, this is by far the most important one, and the extraordinary carrying and keeping qualities of its fruit has led to the establishment of the shipping industry for which Almerias are now so well known. Some confusion seems to exist as to this variety, various varieties being sometimes called Almeria which have nothing in common with the true *Ohanez*. It will need to be grown in the warmer localities of the *Vinifera* regions as it is a very late grape and would not ripen in the cooler sections. As the fertile buds

27362 and 27363—Continued.

are located some distance from the base of the canes it will require long pruning. Usually the vines are pruned to several long canes, with occasional spurs to enable keeping the shape of the vine. The variety is only partly self-fertile and artificial fertilization is therefore necessary. A wild staminate *Vinifera* known as *Flor* has been largely grown with it to supply the deficiency of pollen. Another table variety known as *Castiza* having red grapes is also used as a pollinizer. Bees are scarce in the Almerian parras owing to the absence of flowering plants. No doubt bees would greatly assist in the pollenization." (*Geo. C. Husmann.*)

27364 to 27399.

From Dickinson, N. Dak. Grown under the supervision of Mr. Charles J. Brand in collaboration with Prof. L. R. Waldron at Dickinson during the season of 1909. Seed from cuttings and seed from various sources grown in pots in the Department greenhouse at Washington and sent to the experimental substation at Dickinson.

Seed of the following; notes by Mr. Charles J. Brand:

27364. MEDICAGO SATIVA L.**Alfalfa.**

Seed from cuttings of a woody, semiupright plant with dusky-purple flowers and small, obovate leaves. Dickinson seed produced from cuttings of a plant grown at Lanham, Md., from seed received under this name from the Botanical Gardens, Madrid, Spain. Two plants yielded 3 ounces of seed.

27365. MEDICAGO SATIVA L.**Alfalfa.**

Dickinson seed from cuttings of a plant grown at Lanham, Md., from seed secured from the Botanical Gardens, Madrid, Spain. The parent plant had small, loose pods coiled from one to two turns, few flowers in the head, and those of lavender color. Six plants yielded 4 ounces of seed.

27366. MEDICAGO SATIVA VARIA (Mart.) Urban.**Sand lucern.**

Grown from seed taken from a coiled pod having three turns, found on a plant of No. 20571, normally bearing sickle-shaped pods and variegated flowers. Progeny from seed of sickle-shaped pods of this same plant is represented by No. 27370, below. Four plants yielded 3 ounces of seed.

27367. MEDICAGO SATIVA L.**Alfalfa.**

Produced at Dickinson from seed of a plant grown at Lanham, Md., from seed secured from the Botanical Gardens of Madrid, Spain. Four plants yielded 7 ounces of seed.

27368 and 27369. MEDICAGO SATIVA L.**Alfalfa.**

27368. *Mielga*. Grown from a plant of wild alfalfa secured by Mr. M. Fraile, of the Bureau of Plant Industry, near Salamanca, Spain. This plant was grown in the department greenhouse at Washington and sent by mail to Dickinson. One plant yielded 1 ounce of seed. (The name "Mielga" is never applied to cultivated alfalfa).

27369. Grown at Dickinson from cuttings obtained at Lanham, Md. Original seed from Botanical Gardens, Madrid, Spain.

27370. MEDICAGO SATIVA VARIA (Mart.) Urban.**Sand lucern.**

Grown from seed of a sickle-shaped pod taken from an individual plant of No. 20571, which came from Ultuna, Sweden. The mother plant normally bore sickle-shaped pods. The progeny of a coiled pod of the same plant is listed under No. 27366. The mother plant had variegated flowers showing the smoky yellow-violet combination of colors typical of true sand lucern.

27364 to 27399—Continued.**27371.** *MEDICAGO SATIVA* L.**Alfalfa.**

Propagated from a few seed of wild alfalfa collected by Mr. M. Fraile, of the Bureau of Plant Industry, near Villamayor, Spain.

27372. *MEDICAGO SATIVA* L.**Alfalfa.**

Grown from cuttings secured at Lanham, Md. Original seed from Botanical Gardens, Madrid, Spain. Six plants yielded 7 ounces of seed.

27373 and 27374. *MEDICAGO SATIVA VARIA* (Mart.) Urban. **Sand lucern.**

27373. Produced from cuttings of a plant of No. 20571. The parent plant bore typically variegated flower heads, has small leaves, loosely coiled pods, with one-half to one and one-half turns, and very woody stems. Six plants yielded 3 ounces of seed.

27374. Seed from cuttings of a plant of No. 20571, which bore faded bluish-colored flowers with violet veins. Three plants yielded 4 ounces of seed.

27375. *MEDICAGO FALCATA* L.**Sickle lucern.**

Seed from cuttings of No. 20717, collected by Prof. N. E. Hansen near Khar-kof, Russia. The parent plant was low spreading and vigorous. Five plants grown from cuttings yielded 4 ounces of seed. The plants that produced the present seed were grown in close proximity to *M. sativa*, hence a *sativa* × *falcata* cross may have resulted.

27376 to 27378. *MEDICAGO SATIVA* L.**Alfalfa.**

27376. Seed produced from cuttings of a plant grown at Lanham, Md., from seed presented by the Botanical Gardens, Madrid, Spain. The parent plant was exceedingly vigorous and rapid of growth, upright in habit and produced unusually large leaves. Five plants yielded 5 ounces of seed.

27377. *Mielga*. Progeny of a wild alfalfa plant collected by Mr. M. Fraile, of the Bureau of Plant Industry, near Villares de la Reina, Spain. (See No. 23391.) Five plants yielded 3 ounces of seed.

27378. Seed grown from cuttings of two selected individuals that yielded 1 ounce of seed.

27379. *MEDICAGO SATIVA* L.**Alfalfa.**

Grown at Dickinson from cuttings of a plant produced at Lanham, Md. Original seed from Botanical Gardens, Madrid, Spain. Pods of good size, loosely coiled from one to three times; leaves small, flowers dusky purple. Three plants yielded 4 ounces of seed.

27380. *MEDICAGO SATIVA* L.**Alfalfa.**

Grown from S. P. I. No. 22949, which represents seed of the wild alfalfa plant collected by Mr. José D. Husbands near Limavida, Chile. Four plants yielded 4 ounces of seed.

27381. *MEDICAGO SATIVA* L.**Alfalfa.**

Grown from seed produced at Lanham, Md. Original seed from Botanical Gardens, Madrid, Spain. Parent plant was vigorous and woody, has small leaves and white flowers. It was grown in association with other species and varieties so that crossing may have occurred readily. Two plants yielded 4 ounces of seed at Dickinson.

27364 to 27399—Continued.

27382 to 27399.

Seed from selected plants that were open pollinated:

27382 to 27384. *MEDICAGO SATIVA VARIA* (Mart.) Urban. **Sand lucern.**

27382 and 27383. Grown from cuttings of S. P. I. No. 20571 (see No. 27260, above). The first plant yielded $37\frac{3}{4}$ grams of seed; the second $25\frac{3}{4}$ grams.

27384. Grown from P. L. H. No. 3386, which represents seed of No. 20571. As both 3386 and the present lot were produced in association with ordinary alfalfa, unlimited opportunity for crossing existed. One plant yielded 36 grams of seed.

27385 to 27391. *MEDICAGO SATIVA* L. **Alfalfa.**

27385 and 27386. Grown from two plants of S. P. I. No. 25112 (see No. 27262, above). The first plant yielded 29 grams; the second 27 grams of seed.

27387. Grown from an individual plant of S. P. I. No. 25111 (see No. 27261). One plant yielded 42 grams of seed.

27388 to 27391. Grown from four selected plants of S. P. I. No. 25110 (see No. 27258). The first plant yielded 2 grams of seed; the second $44\frac{1}{2}$ grams; the third $19\frac{1}{2}$; the fourth 7 grams; showing admirably the great diversity in value as to seed production of the individuals composing the stand of alfalfa.

27392 and 27393.

NOTE.—When the material to which these numbers were assigned was thrashed, no seed was found, so they were not used.

27394. *MEDICAGO FALCATA* L. **Sickle lucern.**

Grown at Dickinson from cuttings of Hansen's introduction of this species No. 20721, from Samara, Russia. One plant yielded one-fourth gram of seed. As this was grown in association with true alfalfa the present number may represent the immediate hybrid between *sativa* and *falcata*—*Medicago sativa varia* (Mart.) Urban, or true sand lucern.

27395 to 27397. *MEDICAGO SATIVA* L. **Alfalfa.**

27395. Grown from a cutting which yielded 10 grams of seed.

27396. Grown from a cutting which yielded 17 grams of seed.

27397. Grown from seed of this species produced at Lanham, Md. Original seed from Madrid, Spain. Parent plant had loose, open pods, many of them broadly falcate. At Dickinson one plant yielded $36\frac{1}{2}$ grams of seed.

27398. *MEDICAGO SATIVA VARIA* (Mart.) Urban. **Sand lucern.**

Grown from cuttings of S. P. I. No. 20571 (see No. 27260). One plant yielded $46\frac{1}{2}$ grams of seed.

27399. *MEDICAGO SATIVA* L. **Alfalfa.**

Grown from seed produced at Lanham, Md. Original seed from Madrid, Spain. One plant yielded 9 grams of seed.

27400 to 27417.

From Paris, France. Presented by Mr. Maurice L. de Vilmorin. Received March 21, 1910.

Seeds of the following:

27400 and 27401. BERBERIS DICTYOPHYLLA Franch.

27400. Variety *albicaulis*.

27401. Variety *petiole rose*. (Vilm. No. 4.113.)

27402. BERBERIS HENRYANA Schneider (?).

Distribution.—Discovered in the Province of Hupeh, central China.

27403 and 27404. BERBERIS TIBETICA Hort. (?)

27403. (Vilm. No. 3.939.)

27404. (Vilm. No. 4.681.)

27405. BERBERIS YUNNANENSIS Franch.

Distribution.—On the mountains at an altitude of about 10,000 feet in the Province of Yunnan, southern China.

27406. BERBERIS sp.

(Vilm. No. 3.448.)

27407. COTONEASTER ADDRESSA Bois.

Distribution.—This species is reported from China without any definite locality. It was grown in the Vilmorin nurseries near Paris.

27408. CORYLUS FEROX TIBETICA (Bat.) Franch.

Distribution.—Along the banks of Tshagon River in the Province of Kansu, and in the Provinces of Hupeh, Shensi, and Szechwan, China.

27409. JUGLANS MANDSHURICA Maxim.

Distribution.—Among the mountains in the Provinces of Chihli, Hupeh, Szechwan, and Yunnan, in China, and in Manchuria and Amur, eastern Siberia.

27410. LONICERA SYRINGANTHA Maxim.

Distribution.—Known only from the Province of Kansu in northwestern China.

27411. PRUNUS CANESCENS Bois.

Distribution.—Known only from the Province of Szechwan in central China.

27412. PRUNUS MANDSHURICA (Maxim.) Koehne.

Distribution.—Southern Manchuria in the vicinity of Lake Khanka and along Sungari River.

27413. PRUNUS sp.

(Vilm. No. 1037.)

27414. ROSA SERICEA Lindl.

Variety *fructo luteo*.

27415. VITIS PAGNUCCI Rom.

Distribution.—The Provinces of Shensi and Hupeh in central China.

27416. VITIS TITANEA Ndn. (?)

27417. ZANTHOXYLUM CHENSI Hort. (?)

27418 to 27462.

From Chile. Received through Mr. José D. Husbands, Limavida, via Molina, Chile, March 18, 1910.

Seeds of the following. Descriptive notes by Mr. Husbands:

27418. *ACACIA CAVENIA* (Mol.) Bert.

See No. 24309 for description.

27419. *BERBERIS CHILENSIS* Gill.

"*Michay*. A yellow-flowered, thorned, dark-leaved, evergreen bush about 6 feet high, suitable for live fences and ornament. The Indians eat the fruit."

27420. *CAESALPINIA BREVIFOLIA* (Clos) Bail.

"*Algarrobillo*. A wild bush from the dry rainless north, near Huasco. This is a valuable industrial plant, grown for its tannin, of which it has 40 per cent. It is also a beautiful flowering ornamental."

27421. *CEREUS QUISCO* Gay.

"*Guillaves*. A cactus which grows very tall and perfectly straight, with an extra-large, double, fragrant white flower and comestible fruit."

27422. *CUCURBITA* sp.

Squash.

"A field variety."

27423 to 27429. *FRAGARIA CHILOENSIS* (L.) Duchesne. **Strawberry.**

27423. "Light red, pink flesh, fine flavor, medium to large size, early."

27424. "Flesh pink outside and white inside, very sweet and fine flavored, short stems, prolific."

27425. "Fresh pink outside and white inside, very sweet and fine flavored, softens quickly, long stems, prolific."

27426. "Outside yellow; flesh white, extra firm; good keeper; lacks flavor and sweetness; extra large; prolific; short stems."

27427. "Light red or crimson tops with the bottom tip white; flesh pink near the outside, white center, good flavor."

27428. "White and pink, firm flesh, not much flavor; good shippers."

27429. "White inside and outside; extra-firm flesh; good shipper; less flavor than red varieties."

"The medium-sized red varieties are softer fleshed, sweeter, and better flavored than the white kinds; they do not keep long when picked, and must be used fresh. The large white and yellow classes have solid flesh, are good keepers and shippers. While they lack the exquisite flavor of American varieties, they are good eating and are highly esteemed as desirable sorts. The demand is largely in excess of the supply."

27430 and 27431. *HELIANTHUS ANNUUS* L.

Sunflower.

27430. "This variety flowers at every leaf, and afterwards flowers again."

27431. "This variety has 27 flowers on 1 stalk."

27432. *LAURELIA SEMPERVIRENS* (Ruiz and Pav.) Tul.

Laurel.

"From the island of Maucera, near Corral, the port of Valdivia."

27433 and 27434. *LITHREA CAUSTICA* (Mol.) Hook. and Arn.

27433. "From the dry inland coast country."

27434. From the Cordilleras.

27418 to 27462—Continued.

27435. *LOLIUM MULTIFLORUM* Lam. Italian rye-grass.

"Probably Chile's best all-round wild pasture grass. May be classed as equal to timothy. Annual."

27436. *MAYTENUS MAGELLANICUS* (Lam.) Hook. f.

"*Maiten*."

27437. *MEDICAGO LUPULINA* L.

"*Gualputa*. A new sort from the highlands of the Cordilleras."

27438. *MEDICAGO SATIVA* L. Alfalfa.

"Seed from a wild alfalfa plant found in the virgin forest of the inner Cordilleras at a high altitude."

27439. *MELILOTUS INDICA* (L.) All.

"A wild sweet clover, yellow flowered, highly esteemed for fodder; eaten by all animals."

27440. *NOTHOFAGUS* sp. "White oak."

"A fine timber tree for any industrial use."

27441 to 27450. *RUBUS FRUTICOSUS* L. Blackberry.

"The fruits of these are round, uniform size, from five-eighths to three-fourths of an inch in diameter; they are all sweet and good flavored, some especially so. All of them may be considered as early sorts. The later kinds are the same, except as to their fruiting time. The fruits are good and not overseeded, and have an abundance of sweet, agreeably flavored flesh and juice. In their wild state they would serve well for commercial and domestic uses if the people had learned to esteem them. The only objection is their excessive plant growth, for they are extra productive. The plant growth of all the strains is about equal; 15 feet would be an average height; they spread quickly, birds eat the fruit and sow the seeds, or if a tiny bit of root be left in the ground they soon thrive again under any conditions. They make an effective hedge or impassable barricade, but need annual pruning to keep them in their required place, or they will spread, fill irrigating canals, usurp adjoining land, and become a pest. The southern classes have less plant growth, different-shaped fruit, and smaller bunches, with flavors of their own. I consider the blackberries of the south as superior to those of central Chile (Nos. 27442, 27443, and 27446), but incomparably less productive. If by crossing you can obtain their flavors and great productiveness upon dwarf plants, you have made a progressive advance."

27451. *SPARTIUM JUNCEUM* L.

"*Retama*. A beautiful leafless bush or treelet, 6 to 8 feet high, with large, yellow, delightfully fragrant flowers, which remain in bloom a long time."

27452 and 27453. *SOLANUM* sp. Potato.

27452. "From the far South." 27453. (No note.)

27454. *SOPHORA MACROCARPA* Smith.

"A beautiful tree, whose fruit is comestible."

27455. *STRYCHNOS* sp.

"A beautiful dwarf ornamental tree, from the innermost Cordilleras near the perpetual-snow line."

27456. *TRACHYCARPUS EXCELSUS* (Thumb.) Wendl.

"A dwarf palm, trunk covered with hair. For lawn decoration or garden."

27418 to 27462—Continued.

27457. TRIFOLIUM PRATENSE L. Red clover.

27458. TRITICUM DURUM Desf. Wheat.

“A sample of black-bearded wheat found growing among other sorts.”

27459. (Undetermined.)

“*Guilli-Patagua* or *Naranjillo*. A splendid evergreen tree. When in flower the entire wood and branches are covered with blooms, which give the tree the appearance of being trimmed with yellow lace.”

27460. (Undetermined.)

27461. (Undetermined.)

“A flowering forest tree that has yellow flowers.”

27462. (Undetermined.)

“*Alberjillas*.” Same remarks apply to this as to No 27455.

27463 to 27477. MELILOTUS spp.

From Madrid, Spain. Presented by the Madrid Botanical Garden. Received March 25, 1910.

Seeds of the following:

27463. MELILOTUS ALBA Desr.

27464 and 27465. MELILOTUS DENTATA (Waldst. & Kit.) Pers.

Distribution.—Europe and western Asia, extending from Sweden and the British islands eastward through Russia, Servia, Roumania, and Asia Minor to Siberia and Turkestan.

27466 to 27468. MELILOTUS INDICA (L.) All.

27469. MELILOTUS INDICA TOMMASINI (Jord.) Schultz.

Distribution.—The Sinai peninsula, Arabia.

27470. MELILOTUS ITALICA (L.) Lam.

Distribution.—Along the northern shore of the Mediterranean from southern France eastward through Italy, Corsica, Sardinia, Sicily, and Greece to Asia Minor.

27471. MELILOTUS MESSANENSIS (L.) All.

See No. 25213 for distribution of this species.

27472. MELILOTUS SPECIOSA Durieu.

Distribution.—Cool rocky slopes of the hills in the vicinity of Oran and La Calle, in Algeria, and also on the island of Mauritius.

27473. MELILOTUS SEGETALIS (Brot.) Ser.

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

27474. MELILOTUS SUAVEOLENS Ledeb.

Distribution.—Eastern Asia, extending from Siberia, Turkestan, and India eastward to Korea, China, and Japan.

27475 to 27477. MELILOTUS TAURICA (Bieb.) Ser.

Distribution.—Sterile mountain slopes in the Crimea, and in Asia Minor and Kurdistan.

27478 and 27479.

From Japan. Presented by the Japan Nursery Company (Ltd.), Settsu, Japan, at the request of Mr. Albert J. Perkins. Received March 29, 1910.

Seeds of the following:

27478. CITRUS sp.

Yuzu.

See No. 26568 for description.

27479. DIOSPYROS KAKI L. f.

Persimmon.

Mixed seed.

27480. PHYSALIS IXOCARPA Brot.

Husk-tomato.

From Chico, Cal. Grown at the Plant Introduction Garden from seed which was presented by Mr. Elmer Stearns, Ciudad Juarez, Chihuahua, Mexico. Received March 17, 1910.

“Fruit the size of an English walnut, without shuck. It is very extensively eaten in all parts of the Republic (meaning Mexico). Sow same as any tomato. Plants grow erect, 3 to 4 feet high.” (*Stearns.*)

PUBLICATION OF NEW NAMES.

The following names are published in this issue:

- 26653.** *CHAETOCHLOA NIGRIROSTRIS* (Nees) Skeels.
27018. *EMPLEURUM UNICAPSULARIS* (L.) Skeels.

207

94

INDEX OF COMMON AND SCIENTIFIC NAMES, ETC.

- Acacia cavenia*, 27418.
Actaea rubra, 27112.
Actinidia sp., 26904.
Adansonia digitata, 27160.
Agropyron semicostatatum, 27289.
Agrostis alba, 27200.
Aleurites fordii, 26799.
 Alfalfa, Algerian, 26640, 27226.
 Alt-Deutsche Fränkische Lu-
 zerne, 27222.
 Argentine, 27253, 27255, 27257.
 (Arizona), 26634, 26537 to 26539.
 Baltic, 26636, 26759, 27206.
 (California), 26536.
 Canadian, 27208, 27212, 27278.
 (Chile), 27380, 27438.
 (Colorado), 26621, 27232.
 (Ecuador), 26629, 26638.
 (France), 26642.
 French, 27215, 27245.
 German, 27216, 27229, 27238.
 (Germany), 26623.
 Grimm, 26540, 27201, 27202,
 27259, 27266, 27280 to 27284.
 Guaranda, 26629, 26638.
 Italian, 27251.
 (Kansas), 26630, 26635, 27228.
 Mexican, 27227, 27236, 27279.
 Mielga, 27368, 27377.
 (Minnesota), 27101 to 27105.
 Mongolian, 27204, 27207, 27210,
 27269, 27270.
 (Montana), 26622, 27209, 27220,
 27231.
 (Nebraska), 26631, 27219, 27233.
 dry land, 27221.
 (New York), 26625, 26632.
 North Dakota grown, 27201 to
 27288, 27364 to 27399.
 Oasis, 26641.
 Peruvian, 27286, 27287.
 Poitou, 27249.
 Provence, 27254.
 (Russia), 26637, 26666, 26667,
 26673 to 26677, 26813 to 26815,
 26865, 26911, 27090, 27091,
 27190, 27224.
 Sand lucern. See *Medicago sativa*
 varia.
 South Dakota No. 167, 26636,
 26759, 27206.
 No. 240, 26758.
 (Spain), 27368, 27369, 27371,
 27372, 27376, 27377, 27379,
 27381, 27397, 27399.
 Alfalfa (Sweden), 27370, 27382, 27383,
 27398.
 (Texas), 26633.
 Tripoli, 27026.
 (Tunis), 26641, 27026.
 Turkestan, 26626, 26628, 26639,
 26758, 27203, 27205, 27211,
 27213, 27214, 27217, 27218,
 27225, 27235, 27241 to 27243,
 27248, 27252, 27271 to 27277.
 (Utah), 26627, 27264, 27265.
 dry land, 27234, 27239,
 27246, 27247, 27250.
 irrigated, 27230, 27237,
 27244, 27256.
 (Wyoming), 26624.
 See also *Medicago* spp.
 Almond (Algeria), 26543.
 (Russia), 27302, 27336.
 See also *Amygdalus communis*.
 Aloe transvalensis, 26601.
 Alysicarpus vaginalis, 26786.
 Amygdalus communis, 26543, 26834, 26835.
 davidiana, 26604, 27310.
 fenzhiana, 27302, 27336.
 persica, 26472, 26503, 26593,
 26821 to 26827, 26985, 26986,
 27110, 27111.
 Andropogon caricosus, 26581.
 sorghum, 27161.
 Anona sp., 26750 to 26753, 26910.
 cherimola, 26603, 26731 to 26739.
 palustris, 26855.
 reticulata, 26747, 26748.
 senegalensis, 26749.
 squamosa, 26740 to 26746, 26754.
 Apple (India), 26475.
 (Russia), 27060, 27061, 27151 to
 27153.
 Apricot (Chinese Turkestan), 26502.
 (India), 26473.
 (Manchuria), 27109.
 See also *Prunus armeniaca*.
 Arbutus andrachne, 27187.
 Aronia arbutifolia, 27113.
 melanocarpa, 27114.
 Artocarpus communis, 26936.
 integra, 27170.
 Ash (Russia), 26893.
 Mountain (Germany), 27028 to 27030.
 (Russia), 26870, 27184.
 Asparagus sp., 26883, 27191.
 stipularis, 27163.
 Avena sativa, 26570, 26899.
 Avocado, Trapp, 26689.
 See also *Persea americana*.

- Barley, hull-less, 26922.
(Kashmir), 26920 to 26923.
- Barosma crenulata*, 27017.
serratifolia, 27019.
- Bauhinia monandra*, 26561, 27159.
- Bean, Bonavist. See *Dolichos lablab*.
Horse, 26596.
Jack. See *Canavali ensiforme*.
- Berberis* sp., 26686, 27306, 27406.
angulosa, 27115.
aristata, 27116.
chilensis, 27419.
concinna, 27117.
dictyophylla, 27118, 27400, 27401.
henryana, 27402.
pachycantha, 27119.
sanguinea, 27307.
sinensis, 27305.
stenophylla, 27045.
thunbergii, 27120.
tibetica, 27403, 27404.
umbellata, 27121.
virescens, 27122.
yunnanensis, 27405.
- Berseem. See *Trifolium alexandrinum*.
- Bicuiba. See *Virola sebifera*.
- Blackberry (Chile), 27312 to 27320, 27441 to 27450.
- Boehmeria nivea*, 26842.
- Brassica campestris*, 26790, 26926.
oleracea capitata, 26563, 26564.
pekinensis, 26783.
- Breadfruit. See *Artocarpus communis*.
- Bromelia* sp., 26896.
- Buchu, False. See *Empleurum uncapularis*.
Long leaf. See *Barosma serratifolia*.
True. See *Barosma crenulata*.
- Buckwheat. See *Fagopyrum tataricum*.
"Bumbulu," 26656.
- Bupleurum fruticosum*, 27189.
- Butcher's broom. See *Ruscus* spp.
- "Caahu," 26657.
- Cabbage (Manchuria), 26563, 26564.
Pe tsai. See *Brassica pekinensis*.
- Caesalpinia brevifolia*, 27420.
Canavali ensiforme, 26647.
- Cannabis sativa*, 26841, 27194.
- Carica papaya*, 27106.
- Carpinus betulus*, 26878.
- Cercis siliquastrum*, 26684.
- Cereus quisco*, 27421.
- Chaetochloa nigrirostris*, 26653.
italica, 26857.
- Chayota edulis*, 26909.
- Cherimoya, Golden Russet, 26603.
See also *Anona cherimola*.
- Cherry (India), 26471.
(Manchuria), 27107.
(Russia), 27154 to 27157, 27303, 27337.
Laurel (Russia), 27360.
- Chick-pea, California, 26789.
Mexican, 26898.
- Chick-pea (Palestine), 26990.
Spanish, 26788.
See also *Cicer arietinum*.
- Chloris gayana*, 26851.
- Chlorophora tinctoria*, 26784.
- Christ's thorn. See *Paliurus spinachristi*.
- Chrysanthemum* (Japan), 26989.
Chrysanthemum stipulaceum, 26989.
- Cicer arietinum*, 26788, 26789, 26898, 26990.
- Citrullus vulgaris*, 26504, 27299, 27300, 27340.
- Citrus* sp., 26568, 26918, 27033, 27478.
aurantium, 26494, 27032.
sinensis, 27066, 27067.
decumana, 26933.
medica, 27058.
trifoliata, 26567.
- Clematis delavayi*, 27308.
- Clover, Bur (Russia), 27343.
Red (Chile), 27457.
- Colchicum speciosum*, 27304, 27338.
- Colocasia* sp., 27297, 27298.
- Corn (Guatemala), 26914 to 26916.
(Honduras), 26887 to 26890.
(Mexico), 26913, 26950 to 26958, 26991 to 27000, 27073 to 27082.
Coronilla varia, 26679, 26817, 27183.
- Corylus avellana*, 27345 to 27348.
ferox tibetica, 27408.
maxima, 27344.
- Cotoneaster adpressa*, 27407.
pyracantha, 26874.
- Cowpea, brown, 26660.
Panmure Early Wonder, 27199.
Poona, 26580.
(Sumatra), 26660.
Townsend, 26844.
- Crab apple (Manchuria), 27108.
(Russia), 26681, 26682.
- Crataegus* sp., 26871 to 26873, 26875, 26876, 27177 to 27179, 27339.
orientalis, 26765.
- Crotalaria pumila*, 26932.
- Cucumis melo*, 27341.
- Cucurbita* sp., 27422.
- Custard-apple. See *Anona reticulata*.
- Currant (Russia), 26617.
- Cyclamen persicum*, 26885.
- Cydonia* sp., 26562.
- Cytisus biflorus*, 26798.
- Dahlia (Java), 26928.
Dahlia coccinea, 26928.
- Dasheen (China), 27297, 27298.
- Date (Baluchistan), 26946 to 26948.
Bayoudi, 26477.
Brunsi, 26478.
Burni, 26948.
Cabouni, 26479.
Hadhuri, 26480.
Hallaoui, 26481.
Hammuri, 26482.
Hoomb, 26948.
Hurra, 26483.
Khullas, 26980.

- Date, Linsi, 26484.
 Mazabti, 26947.
 Pish baud, 26946.
- Dioscorea alata*, 27044.
Diospyros sp., 26490, 26491.
kaki, 26771 to 26782, 26902,
 26903, 26949, 27034 to 27043,
 27086 to 27088, 27479.
senegalensis, 26599, 26897.
- Dolichos lablab*, 27195.
Durio zibethinus, 27169.
Dysoxylum sp., 27361.
- Elaeagnus angustifolia*, 26594, 26595.
Eleusine tristachya, 27290.
Elionurus argenteus, 26652.
 Elm (Russia), 26891.
Empleurum unicapsularis, 27018.
Eriobotrya japonica, 26901.
Erythrina indica, 26499.
Eucalyptus botryoides, 26981.
sideroxylon, 26982.
Eupatorium sp., 26657.
- Fagopyrum tataricum*, 26924.
Fagus sp., 26862.
 Fescue, red. See *Festuca rubra*.
Festuca rubra, 26820.
Ficaria sp., 27071.
Ficus carica, 26670.
 Fig (Russia), 26670.
 Filbert (Russia), 27344.
Flacourtia ramontchi, 26655.
Fragaria sp., 27069.
chiloensis, 27423 to 27429.
Franklinia alatamaha, 26930, 26931.
Fraxinus sp., 26893.
- Garcinia* sp., 26659, 27311.
cowa, 26853.
dioica, 26854.
- Gleditsia caspica*, 27335.
Glycine hispida, 26643 to 26646, 26839,
 26840, 26858, 27196 to 27198.
- Granadilla. See *Passiflora ligularis*.
- Grape, Besni, 26566.
 Black Monukka, 26605, 26606.
 Castiza, 27363.
 (Harput), 26895.
 (Mexico), 27007 to 27010.
 Ohanez, 27362.
 (Russia), 27349 to 27359.
 yellow, 26895.
- Grass, Creeping bent (South German),
 27200.
 Italian rye (Chile), 27435.
 Rhodes. See *Chloris gayana*.
- Guava. See *Psidium guajava*.
- Hazelnut (Russia), 27345 to 27348.
Hedysarum sp., 26669.
Helianthus annuus, 27430, 27431.
 Hemp (China), 26841, 27194.
Heracleum sp., 26881.
Hibiscus sp., 26769.
sabdariffa, 26619, 26620.
- Hordeum* sp., 26920 to 26922.
vulgare, 26923.
- Hornbeam, European. See *Carpinus
 betulus*.
- Husk-tomato. See *Physalis irocarpa*.
Hyphaene guineensis, 27011.
- Indigofera* sp., 26598.
Inodes sp., 27342.
 Ivory nut, 27011.
- “Jacana.” See *Lucuma multiflora*.
Jasminum sp., 26672, 26685, 26766.
 Judas tree. See *Cercis siliquastrum*.
Juglans mandshurica, 27409.
 Juniper (Russia), 26688, 26884.
Juniperus excelsa, 26688.
oxycedrus, 26884.
- Kafir plum. See *Ximenia caffra*.
 “Karooobush.” See *Pentzia incana*.
Kennedia stirlingii, 26929.
- Lathyrus* sp., 26572.
parvifolius, 26607.
sativus, 26612.
- Laurel (Chile), 27432.
 Laurel cherry (Russia), 27360.
Laurelia sempervirens, 27432.
Laurocerasus officinalis, 27360.
 Lemon (Russia), 27058.
Ligustrum sp., 26767.
vulgare, 26877.
- Limonia acidissima*, 26496.
 Linden (Russia), 26892.
Lithrea caustica, 27433, 27434.
Lolium multiflorum, 27435.
Lonicera pileata, 27047.
syringantha, 27410.
- Loquat (China), 26901.
Lucuma multiflora, 26768.
- Malus* sp., 27108.
baccata, 26681.
 × *prunifolia*, 26682.
medwietzkyana, 27123.
prunifolia, 27124.
ringo, 27125.
scheideckeri, 27126.
sikkimensis, 27127.
sylvestris, 26475, 27060, 27061,
 27151 to 27153.
toringo, 27128.
- Mangifera indica*, 26509, 26510.
 Mango, Maharajah, 26509.
 Mangalore, 26510.
- Maytenus magellanicus*, 27436.
Medicago sp., 26666, 26667, 26674 to 26676,
 26813, 26814, 26815, 26865,
 27072, 27090, 27091.
falcata, 26927, 27268, 27375,
 27394.
hispida denticulata, 27343.
lupulina, 27437.
minima, 26674.

- Medicago orbicularis*, 26673.
 marginata, 26573.
 microcarpa, 26677.
rigidula, 26675, 27190.
 agrestis, 26676.
ruthenica, 27267.
sativa, 26536 to 26540, 26621 to 26642, 26758, 26759, 26911, 27026, 27101 to 27105, 27201 to 27259, 27261 to 27266, 27269 to 27287, 27364, 27365, 27367 to 27369, 27371, 27372, 27376 to 27381, 27385 to 27391, 27395 to 27397, 27399, 27438.
sativa gaetula, 26590.
 varia, 27215, 27216, 27229, 27238, 27245, 27258, 27260, 27261, 27262, 27285, 27288, 27366, 27370, 27373, 27374, 27382 to 27384, 27394, 27398.
- Melia azedarach*, 26500.
 Melilot (Russia), 26816, 27092.
 (Spain), 27463 to 27477.
Melilotus sp., 27092.
 alba, 27463.
 dentata, 27464, 27465.
 indica, 27439, 27466 to 27468.
 tommasinii, 27469.
 italica, 27470.
 messanensis, 27471.
 segetalis, 27473.
 speciosa, 27472.
 suaveolens, 27291, 27474.
 taurica, 26816, 27475 to 27477.
 volgica, 27292.
- Meyer, Frank N., seeds and plants obtained, 26613 to 26618, 26666 to 26688, 26761 to 26767, 26801 to 26817, 26862 to 26886, 26891 to 26894, 27049 to 27072, 27089 to 27095, 27151 to 27157, 27172 to 27193, 27302 to 27304, 27335 to 27360.
- Millet (Kashmir), 26925.
 Proso or Broom-corn. See *Panicum miliaceum*.
 Siberian, 26857.
- Mispel. See *Vangueria infausta*.
Morus alba, 26761, 27048, 27064.
 Mulberry, white. See *Morus alba*.
 Muskmelon (Russia), 27341.
Myrica nagi, 26905.
- Nephtelium* sp., 26658.
 lappaceum, 27166 to 27168.
- Nicotiana tabacum*, 27174 to 27176.
Nothofagus sp., 27440.
- Oak, white (Chile), 27440.
 Oat, Algerian, 26899.
 (Turkey in Asia), 26570.
- Olea europaea*, 26801 to 26811, 27027, 27065, 27172, 27173.
- Olive (Russia), 26801 to 26811, 27065, 27172, 27173.
 Wild (Turkey), 27027.
- Onobrychis viciaefolia*, 26818.
- Ononis* sp., 26668.
 Orange (Mexico), 26918.
 Natsu-mikan, 26494, 27032.
 (Russia), 27066, 27067.
Oryza sativa, 27321 to 27334.
- Pacouria capensis*, 27014.
Paliurus spina-christi, 26879.
Panicum miliaceum, 26925.
 Papaya (India), 27106.
Papyrius sp., 26492.
 papyrifera, 26493.
Passiflora ligularis, 26908.
 Pea, field, 26819.
 Peach (Chinese Turkestan), 26503.
 (India), 26472, 26985, 26986.
 (Manchuria), 27110, 27111.
 Nectarine, 26986.
 (Turkey), 26593.
 Wild. See *Amygdalus davidiana*.
 See also *Amygdalus* spp.
- Pear, Himalayan, 26987.
 (India), 26474.
 (Manchuria), 26485 to 26489, 26591, 27020.
 (Russia), 26763, 26764, 27062, 27063.
 See also *Pyrus* spp.
- Pennisetum pedicellatum*, 26476.
Pentzia incana, 26650.
Persea americana, 26689 to 26730.
 Persimmon (China), 26902, 26903, 26949.
 (Japan), 26490, 26491, 27034 to 27043, 27086 to 27088, 27479.
- Philadelphus* sp., 27089.
Phleum japonicum, 27293.
Phoenix dactylifera, 26477 to 26484, 26946 to 26948, 26980.
 × *canariensis*, 26850.
- Photinia villosa laevis*, 27188.
Physalis ixocarpa, 27480.
Picea obovata schrenkiana, 27025.
Pinus armandi, 27046.
Pistacia terebinthus, 26571.
Pisum arvense, 26819.
Pittosporum viridiflorum, 26600.
 Plum (Russia), 27059.
 Wickson, 26833.
- Plum-apricot, 27031.
 Pomegranate (China), 26794 to 26797.
 (Russia), 27049 to 27057, 27186.
- Pomelo (Java), 26933.
 Poplar (Russia), 26613, 26614, 26812.
Populus sp., 26812.
 balsamifera suaveolens, 26613.
 berolinensis, 26614.
- Potato (Arizona), 27158.
 (Chile), 27452, 27453.
 Chilean, 26517 to 26535.
- Primrose (Russia), 27068.
Primula vulgaris, 27068.
 Privet (Russia), 26877.
 Prune. See *Prunus domestica*.
Prunus sp., 27059, 27107, 27413.
 armeniaca, 26473, 26502, 26832, 27109.

- Prunus avium*, 27154 to 27157.
canescens, 27411.
cerasus, 26471.
dasycarpa, 27031.
domestica, 26828 to 26831.
mandshurica, 27412.
microcarpa, 27303, 27337.
pseudo-cerasus, 26793.
sibirica, 26648, 26649.
simonii, 26886.
triflora × ?, 26833.
- Psidium araca*, 26757.
friedrichsthalianum, 26756.
guajava, 26755.
- Psoralea* sp., 27093.
Pterygota alata, 26938.
Punica granatum, 26794 to 26797, 27049 to 27057, 27186.
protopunica, 26511, 26919.
- Pyrus* sp., 26485 to 26489, 26591, 27020.
balansae, 27129.
chinensis, 27097.
communis, 26474, 27062, 27063.
irregularis, 27130.
longipes, 27131.
michauxii, 27132.
nivalis, 27133.
elaeagrifolia, 27134.
pashia, 26987.
salicifolia, 26680, 26763, 26764.
simoni, 27098.
sinaï, 27135.
- Quercus dentata*, 26945.
 Quince (China), 26562.
- Radish (China), 26906.
 Ramie. See *Boehmeria nivea*.
Raphanus sativus, 26906.
Ravensara aromatica, 27099.
Rheum nobile, 26501.
 Rhodes-grass, 26851.
 "Rhodesian teak," 26602.
Rhodomyrtus tomentosa, 26856.
Rhus coriaria, 26785.
Ribes petraeum, 26617, 26683.
 Rice (Egypt), 27333, 27334.
 (Philippine Islands), 27321 to 27332.
Robinia pseud-acacia, 26800.
Rosa sp., 26866 to 26869, 27165, 27180 to 27182.
gallica × ?, 26618, 26687.
gigantea, 27301.
laevigata, 26791, 26792.
sericea, 27309, 27414.
- Rose, Cherokee, 26791.
 variety anemone, 26792.
 (China), 27165.
 (Portugal), 27301.
 (Russia), 26618, 26687, 26866 to 26869, 27180 to 27182.
- Roselle, Victor, 26620.
 See also *Hibiscus sabdariffa*.
Rubus fruticosus, 27312 to 27320, 27441 to 27450.
Ruscus aculeatus, 26882.
hypoglossum, 27193.
- Sagittaria* sp., 26983.
Saguerus pinnatus, 26937.
 Sainfoin. See *Onobrychis viciaefolia*.
Salix babylonica, 26762.
vinimalis pallida, 26616.
splendens songarica, 26615.
vitellina, 26671.
- Sand lucern. See *Medicago sativa varia*.
 "San-quat," 26912.
 Sapodilla. See *Sapota zapotilla*.
Sapota zapotilla, 26934, 26935.
 "See Koo," 26983.
- Sesame, black, 26505.
 white, 26506.
- Sesamum orientale*, 26505, 26506.
Sclerocarya caffra, 26654.
Sideroxylon sp., 26656.
Solanum sp., 26517 to 26535, 27452, 27453.
commersonii, 26939 to 26943.
jamesii, 27158.
- Sophora macrocarpa*, 27454.
Sorbus sp., 26870, 27185.
alpina, 27136.
americana, 27137.
aria graeca, 27138.
aucuparia, 27028 to 27030.
lanuginosa, 27139.
domestica, 27184.
heterophylla, 27140.
latifolia, 27141.
- Sorghum, Durra var. *tinctorium*, 27161.
 Soy bean, black, 26643, 26839, 26840, 27198.
 (China), 27196 to 27198.
 green, 26645, 27197.
 (India), 26839, 26840.
 (Manchuria), 26643 to 26646.
 olive brown, 26644.
 yellow, 26646, 26858, 27196.
- Spartium junceum*, 27451.
 Squash (Chile), 27422.
Stizolobium sp., 26663 to 26665, 26787, 27164.
 Strawberry (Chile), 27423 to 27429.
 (Russia), 27069.
 tree. See *Myrica nagi*.
- Strychnos* sp., 27455.
 Sugar apple. See *Anona squamosa*.
 Sumac, Sicilian, 26785.
 Sunflower (Chile), 27430, 27431.
 "Susia." See *Trifolium alexandrinum*.
- Teramnus* sp., 27006.
Tilia sp., 26892.
 Tobacco (Russia), 27174 to 27176.
Trachycarpus excelsus, 26907, 27456.
 Trebizond date. See *Elaeagnus angustifolia*.
Trichloris mendocina, 26651.
Tricholaena rosea, 27142.
Trifolium sp., 26575 to 26578.
alexandrinum, 26917.
johnstoni, 27143.
perreymondi, 27145.
pilulare, 26574.
pratense, 27457.
scabrum, 27144.

- Trigonella* sp., 26678.
calliceras, 27294.
coerulea, 27146.
corniculata, 27147.
cretica, 27148, 27295.
gladiata, 27296.
ovalis, 27149.
polycerata, 27150.
Triticum durum, 27458.
 Turnip, Yellow Finland, 26790.

Ulmus sp., 26891.
 Undetermined, 26602, 26894, 26912,
 27095, 27459 to 27462.

Vangueria infausta, 27016.
Viburnum lantana, 26880.
Vicia sp., 26579.
fabia, 26596.
Vigna catjang, 26580.
sesquipedalis, 26661, 26662.
unguiculata, 26592, 26660, 26844,
 27199.
Vinca sp., 27094.
Viola sp., 26863, 26864, 27070, 27192.
 Violet (Russia), 26863, 26864, 27070,
 27192.

Viola sebifera, 27013.
Vitis pagnuccii, 27415.
titanea, 27416.
vinifera, 26566, 26605, 26606, 26895,
 27007 to 27010, 27349 to 27359,
 27362, 27363.

 Watermelon (Chinese Turkestan), 26504.
 Princess Marie, 27299, 27300.
 (Russia), 27340.
 Wayfaring tree. See *Viburnum lantana*.
 Wheat (Chile), 27458.
 Willow (Russia), 26615, 26616, 26671,
 26762.
 Wood-oil tree, China. See *Aleurites fordii*.

Ximenia caffra, 27015.

 Yam. See *Dioscorea alata*.
 "Yoyouvetima," 26657.
 Yuzu, 26568, 27478.

Zanthoxylum chensi, 27417.
Zea mays, 26887 to 26890, 26913 to 26916,
 26950 to 26958, 26991 to 27000, 27073 to
 27082.
Zizania latifolia, 26760, 26944.
Ziziphus lotus, 27162.





