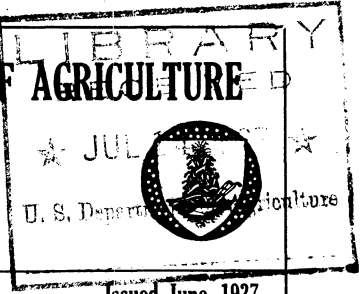


UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 82



Washington, D. C.

Issued June, 1927

SEEDS AND PLANTS IMPORTED BY THE OFFICE OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, DURING THE PERIOD FROM JANUARY 1 TO MARCH 31, 1925 (S. P. I. NOS. 62231 TO 63489)

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INTRODUCTORY STATEMENT

MORE THAN 1,200 lots of plant material were received during the three months represented by this inventory, a total well above the average maintained for the last few years. Much of this material was sent in by the four agricultural explorers who were pursuing their activities in eastern Asia, northern Africa, and western South America.

The Province of Chihli, China, and especially the vicinity of Peking, has continued to be a very fertile field for agricultural explorations, and from this region P. H. Dorsett has sent in a steady stream of promising plant immigrants. Of special interest are scions of a number of large-fruited varieties of the Chinese jujube (*Ziziphus jujuba*, Nos. 62352-62354, 62562, 63322, 63323, 63476), because of the increasing demand for this fruit among the growers in the Southwestern States and California. The jujube has shown itself to be adapted for growing in semiarid regions having long, hot summers and mild winters. As a candied fruit, processed in sugar sirup and dried, its popularity is steadily increasing.

Other fruits represented in Mr. Dorsett's collections are peaches, apricots, plums, cherries, pears, and persimmons. There are also included many locally developed strains of cereals and vegetables and a number of herbaceous and woody ornamentals.

From Ecuador a number of interesting lots of plant material were sent in by Wilson Popenoe. These include scions of a peach (*Amygdalus persica*, No. 62551), a medium-sized freestone which may prove adapted to subtropical climates, and scions of the capulin cherry (*Prunus scrotina*, No. 62553) from the old Gonzales tree at Catiglatá. This tree, famous throughout the Ecuadorian highlands, bears cherries of unusually large size. The capulin cherry is very closely related to the wild black cherry of the eastern United States and may prove suitable for growing in the Southeastern States, where other cherries do not thrive.

In southeastern China F. A. McClure continued his investigations of the economic flora of that region and sent in an interesting collection of scions of the Japanese apricot (*Prunus mume*, Nos. 62311-62318). Our previous experience with the ornamental forms of *Prunus mume* has been that a few of the double-flowering and large-flowered sorts may be of special value because of their habit of blooming in the spring even before the forsythias, but as they are doubtfully hardy as far north as Washington, D. C., it may be necessary to confine their cultivation to the southern United States. Mr. McClure's collection includes some very promising large-flowered forms.

While traveling through Europe, David Fairchild, in charge of this office, visited some of the leading nurseries and arboreta in France and England. As a result of his visits there has been sent in propagating material of a large number of rare and promising trees and shrubs, mostly from the cooler parts of eastern Asia. Doctor Fairchild also visited Algeria, sending in from that country, among other things, seeds of the argan (*Argania spinosa*, No. 62660), a large drought-resistant evergreen tree of western Morocco which grows in very rocky soil and bears an abundance of light-yellow plumlike fruits eaten by stock. The seeds yield an oil which can be used for cooking.

A firlike tree from western China (*Keteleeria davidiana*, No. 62254) should be of interest. It is a tree of pyramidal habit which sometimes becomes 100 feet tall, and it has glossy green foliage. Two excellent evergreens previously introduced from this region which have found a place in American horticulture are the Chinese juniper (*Juniperus chinensis*) and the white-barked pine (*Pinus bungeana*). Mention should also be made, in this connection, of the East African juniper (*Juniperus procera*, No. 62395), which Doctor Sargent, director of the Arnold Arboretum, Jamaica Plain, Mass., considers the handsomest juniper in the world. It may be sufficiently hardy to grow in Florida and southern California.

Gladiolus breeders will be especially interested in the introduction of a number of indigenous species from South Africa (*Gladiolus* spp., Nos. 62653, 62857-62860). The rapidly increasing interest in this group of ornamentals should stimulate attempts to create new varieties by crossbreeding.

A remarkable collection of rice varieties (*Oryza sativa*, Nos. 62523-62550) was presented by H. Ando, Director of the Imperial Agricultural Experiment Station at Nishigahara, Tokyo, Japan. These varieties, purebred through selection, had been grown at the station for several years and include both early and late maturing forms. Another rice collection consisting of nearly 200 varieties (*Oryza sativa*, Nos. 62962-63148), mostly crossbred, was presented by Yoshinori Takesaki, of the Imperial University at Kyoto, Japan.

The botanical determinations of these introductions have been made and the nomenclature determined by H. C. Skeels, and the descriptive matter has been prepared under the direction of Paul Russell, who has had general supervision of this inventory.

ROLAND MCKEE,

Acting Senior Agricultural Explorer in Charge.

OFFICE OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., November 22, 1926.

INVENTORY¹

62231. LYCOPERSICON ESCULENTUM Mill.
Solanaceae. Tomato.

From Lima, Peru. Seeds presented by Dr. A. Weberbauer. Received January 31, 1925.

Seeds of wild-grown tomatoes, collected during December between Lima and Ancon on the coastal plain on stony saline soil, in an almost rainless district. (Weberbauer.)

62232. ECDEIOCOLEA MONOSTACHYA F.
Muehl. Baloskionaceae.

From Perth, Western Australia. Seeds presented by W. M. Carne, botanist and plant pathologist, Department of Agriculture. Received January 31, 1925.

Collected at Wongan Hills, Western Australia, December, 1924, by C. A. Gardner. (Carne.)

A perennial, rushlike, herbaceous plant, introduced for testing as a possible source for paper-making material.

62233. ELAEOCARPUS OBLONGUS Gaertn.
Elaeocarpaceae.

From Guntur, Madras Presidency, India. Seeds presented by William Bembower. Received February 3, 1925.

The "Nilghiri mock olive" is a tree of domelike habit, with a white, well-branched trunk. The elliptic leaves are shining green, and the white flowers appear in slender, axillary racemes 2 to 6 inches long. The crimson color of the autumn foliage is very attractive, resembling that of the Virginia creeper. The tree appears to be a satisfactory ornamental for subtropical regions. (Bembower.)

62234. SACCHARUM OFFICINARUM L.
Poaceae. Sugar cane.

From Santiago de las Vegas, Cuba. Cuttings presented by the agricultural experiment station, through E. W. Brandes, Bureau of Plant Industry. Received March 25, 1925.

Hawaii 109.

62235. OLEARIA FORSTERI Hook. f.
Asteraceae.

From Dublin, Ireland. Plants and cuttings presented by J. W. Besant, Glasnevin Botanic Garden, at the request of Dr. Augustine Henry, College of Science. Received February 7, 1925.

A handsome, evergreen, New Zealand shrub, about 7 feet in height, which belongs to a group closely allied to the shrubby asters. The oblong leaves have wavy margins and are whitish below, and the insignificant but fragrant flowers appear late in the fall. While this plant is said to be able to endure rather low temperatures, it also requires a cool, moist summer.

62236 to 62238. VIOLA ODORATA L.
Violaceae. Violet.

From Killaloe, County Clare, Ireland. Plants purchased from Mrs. Stanistreet. Received February 7, 1925. Notes by Mrs. Stanistreet.

62236. Lady Hume Campbell. A variety with very large, long-stemmed flowers, which are a soft lavender-blue and very fragrant. Blooms freely and is valuable for its long flowering season.

62237. Mrs. David Lloyd George. The highly perfumed flowers, borne on long stems, are purple, with center petals shaded lavender, rose, and white.

62238. Souvenir de ma Fille. A new variety with enormous dark-violet, highly perfumed flowers, borne on long stems. Good for frames or open air.

62239. CISSUS STRIATA Ruiz and Pav.
(*Vitis striata* Miq.). Vitaceae.

From Paris, France. Plants purchased from Vilmorin-Andrieux & Co., through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received March 19, 1925.

A low, shrubby, evergreen vine, native to southern South America. The leaves are small with three to five leaflets; the yellowish flowers are in rather dense clusters. Probably tender except in the Southern States.

¹ It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Office of Foreign Plant Introduction, and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all, and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no samples of herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications therefore must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this office, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

62240. ZIZIPHUS JUJUBA Mill. (*Z. sativa* Gaertn.). Rhamnaceae. **Jujube.**

From Chihli, China. Suckers collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received January 14, 1925.

No. 1545. *Lou Tzu Chuang* and *Ta Shan Tzu*. December 1, 1924. Known as the "tooth jujube." (*Dorsett.*)

62241 to 62243.

From St. Quentin, Somme, France. Seeds presented by René Bourgeois. Received February 3, 1925. Notes by Mr. Bourgeois.

62241. BENINCASA HISPIDA (Thunb.) Cogn. Cucurbitaceae. **Wax gourd.**

A variety having a very long fruiting season, cultivated by the natives of Tonking for making sweetmeats.

62242. BRASSICA NAPIFORMIS (Pail. and Bois.) Bailey. Brassicaceae.

A tuberous mustard from China, the seeds of which are sown during July. The tubers are eaten during the winter season in the same manner as turnips.

62243. PHASEOLUS sp. Fabaceae.

A variety with edible seeds, cultivated in Tonking and remarkable for its vigorous growth.

62244. CISTUS ALBIDUS L. Cistaceae. **Rockrose.**

From London, England. Seeds presented by O. E. Warburg. Received February 4, 1925.

The typical form of this low European shrub bears lilac or rosy flowers; this horticultural variety is said to produce flowers which are white.

62245 to 62247. PASPALUM spp. Poaceae. **Grass.**

From Guayaquil, Ecuador. Presented by J. A. Cleveland. Received February 5, 1925.

62245. PASPALUM CONJUGATUM Berg.

Seeds of a creeping perennial grass with the flowering stems sometimes 3 feet tall. This species, originally from Dutch Guiana, is found in moist places in the Tropics of both hemispheres and forms extensive and close mats.

For previous introduction, see S. P. I. No. 55693.

62246. PASPALUM sp.

No. 1. Plants.

62247. PASPALUM sp.

No. 2. Plants.

62248. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

From Gien, Loiret, France. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received February 6, 1925.

I found strings of these melons on sale in Paris, and on sampling them I discovered that they were perfectly delicious in flavor. They seemed to be uniformly sweet and

were so juicy that they simply melted in our mouths. The melon is a rather small and typically melon-shaped one with grooves or furrows. Each fruit is tied up in a kind of basket made of straws, hung up and allowed to ripen. (*Fairchild.*)

62249. PYRUS sp. Malaceae. **Pear.**

From Peking, China. Seeds collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received February 6, 1925.

Nos. 1666 and 1695. December 20, 1924. Seeds of a domesticated peach secured in the market; may prove of value as stocks. (*Dorsett.*)

62250 to 62252.

From Avondale, Auckland, New Zealand. Seeds presented by H. R. Wright. Received January 21, 1925.

62250. ALECTRYON EXCELSUM Gaertn. Sapindaceae. **Titoki.**

A handsome evergreen tree, 30 to 60 feet high, native to New Zealand. The bark is almost black, and the young branches, under surfaces of the compound leaves, and inflorescences are covered with a very fine, silky pubescence, according to Cheeseman (*Manual of the New Zealand Flora*). The shining-black, oily seeds are half imbedded in a scarlet, fleshy, cup-shaped aril. The tough, elastic wood is used for tool handles.

62251. CUCURBITA MAXIMA Duchesne. Cucurbitaceae. **Squash.**

A small, gray variety, which keeps the year round; of good quality. (*Wright.*)

62252. ZEA MAYS L. Poaceae. **Corn.**

A variety especially recommended for green feed; stools well and is high in saccharine. Grown here as stock feed. (*Wright.*)

62253 and 62254.

From Ichang, China. Seeds purchased from Albert S. Cooper, American Church Mission. Received January 26, 1925.

62253. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki.**

Seeds of wild kakis, from the vicinity of Ichang. (*Cooper.*)

62254. KETELEERIA DAVIDIANA (Bertrand) Beissner. Pinaceae.

A coniferous tree from western China which is closely allied to the firs. It sometimes becomes 100 feet tall, is of pyramidal habit, and has handsome, glossy green, firlike foliage. The tree is said to be somewhat tender to frost, and therefore probably adapted for growing only in the southern half of the United States.

62255 and 62256. COTONEASTER spp. Malaceae.

From Orleans, France. Seeds presented by Leon Chenault, through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received January 27, 1925.

62255. COTONEASTER DAMMERI C. Schneid.

A prostrate, evergreen shrub, native to central China, with pure-white solitary flowers and coral-red fruits one-fourth of an inch wide.

62255 and 62256—Continued.

62256. COTONEASTER SALICIFOLIA FLOCCOSA
Rehd. and Wils.

A graceful shrub about 12 feet high, which bears dense corymbs of white flowers and roundish, light-red fruits. Native to western China at altitudes of 7,500 to 9,800 feet.

62257 to 62262.

From China. Scions presented through P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received February 4, 1925. Notes by Mr. Dorsett.

A collection of scions presented by the priest, Chueh Ming, from the Fa Hua Ssu temple, Silver Mountain, Changpinghsien, Chihli.

62257. CASTANEA sp. Fagaceae. **Chestnut.**

No. 1677. December 23, 1924. *Hu-chao-li Tzu* (tiger-paw chestnut). Seeds of this same chestnut were sent in under No. 790 [S. P. I. No. 61834].

62258. CASTANEA sp. Fagaceae. **Chestnut.**

No. 1678. December 23, 1924. *Li Tzu*. From a tree of the ordinary chestnut. Seeds were sent in under No. 791 [S. P. I. No. 61835].

62259 to 62262. PYRUS spp. Malaceae. **Pear.**

62259. PYRUS sp.
No. 1679. December 23, 1924. *Pai Li* (white pear), also known as "cold pear." Scions were sent in under No. 778 [S. P. I. No. 61848].

62260. PYRUS sp.
No. 1680. December 23, 1924. *Chin Pa Li* (golden handle pear). Scions were sent in under No. 780 [S. P. I. No. 61850].

62261. PYRUS sp.
No. 1681. December 23, 1924. *T'ang Li* (sugar pear). Scions sent in under No. 777 [S. P. I. No. 61847].

62262. PYRUS sp.
No. 1682. December 23, 1924. *Ya Li* (duck pear). This is a popular pear in the Peking market.

62263 to 62265. OLEA EUROPAEA L. **Olive.**

From Seville, Spain. Scions purchased through William C. Burdett, American consul. Received February 4, 1925.

According to W. V. Cruess, College of Agriculture, Berkeley, Calif., the following varieties are of possible value for ripe pickling in California and will be tested there for that purpose.

62263. *Cordori.* **62265.** *Rapasayo.*

62264. *Madrileño.*

62266 to 62270.

From Peking, Chihli, China. Collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received January 24, 1925. Notes by Mr. Dorsett.

62266. CATALPA OVATA Don. **Bignoniaceae.**
Japanese catalpa.

62266 to 62270—Continued.

No. 1584. December 12, 1924. Seeds of a variety called by the forestry station *Ch'iu Shu* (autumn tree) and said to bear pink flowers.

62267. JUNIPERUS sp. Pinaceae. **Juniper.**

No. 1583. Forestry station at the Temple of Heaven. December 12, 1924. Seeds.

62268. PYRUS sp. Malaceae. **Pear.**

No. 1577. December 4, 1924. Said to have come from the pear-growing region northwest of Peking, in the vicinity of Hsuhochuang. Seeds of a domesticated pear.

62269. ULMUS PUMILA L. **Ulmaceae.**
Chinese elm.

No. 1582. December 12, 1924. Seeds of a variety of the Chinese elm from the forestry station at the Temple of Heaven, Yi-shu.

62270. ZUZANIA LATIFOLIA (Griseb.) Stapf. **Poaceae.**
Wild rice.

No. 1579. December 11, 1924. *Chiao-pai Gaba*. These roots were secured from Tungchen, near Nanshimen. The Chinese make this variety grow by removing all but the strongest shoots in June. The crop is harvested in October.

62271. PINUS MERKUSII Jungh. and De Vr. **Pinaceae.**
Pine.

From Medan, Sumatra. Seeds presented by Sydney B. Redecker, American vice consul. Received February 5, 1925.

This tree, which is the only pine found south of the Equator, attains a height of 100 feet and forms a flat, umbrella-like crown. It is found in Burma, Borneo, Sumatra, and the Philippine Islands, chiefly at altitudes of 3,000 to 4,000 feet. The wood is very resinous, and the trunks are used for masts and spars.

62272. ORNITHOPUS SATIVUS Brot. **Fabaceae.**
Serradella.

From Hamburg, Germany. Seeds purchased from Ernst & Von Spreckelsen. Received February 10, 1925.

German-grown seeds.

62273. ASTREBLA LAPPACEA (Lindl.) **Domin. Poaceae.**
Mitchell grass.

From Kew, England. Seeds presented by Dr. Arthur W. Hill, director, Royal Botanic Gardens, through C. V. Piper, Bureau of Plant Industry. Received February 9, 1925.

The accompanying memorandum is from notes forwarded by F. Turner, of New South Wales, who supplied the seed to Doctor Hill.

"*Mitchell grass.*" This grass, which is of perennial duration, generally grows in tussocks from 2 to 3 feet high and occurs in the interior of New South Wales, Queensland, and Western Australia, and in many parts fairly plentifully. Its thick, wiry roots penetrating the earth to a great depth enable the grass to withstand an ordinary drought with impunity. When growing on fertile plain country it will, in ordinary seasons, yield a great amount of rich, succulent herbage on which stock thrive and fatten. Stock will travel farther and keep in better condition when fed solely on Mitchell grass than on any other

grasses that grow in the interior of Australia. When allowed to remain undisturbed for a time this grass produces an abundance of seeds, which usually ripen in summer and autumn. Although its natural habitat is in the arid interior, I have successfully cultivated it in the warmer districts on the eastern side of the Dividing Range. When cut just as the flower spikes appear it makes capital hay.

As you purpose distributing them in the hotter and drier tropical colonies of the British Empire, I should perhaps mention that under natural conditions seeds of the Mitchell grass germinate readily during summer and early autumn after thunderstorms or heavy rains. If sown under similar natural conditions in other parts of the world, the seeds should germinate readily. Failing that, artificial watering at the time of sowing will facilitate germination. Once the grass is established it luxuriates in deep, rich land during very dry and hot weather.

62274. PEROVSKIA ATRIPLICIFOLIA Benth.
Menthaceae.

From Chester, England. Plants purchased from the Dickson Nurseries. Received February 12, 1925.

A handsome, shrubby plant, allied to the sages (*Salvia* spp.) which is indigenous to the mountainous regions of Afghanistan. It is of erect habit, about 5 feet high, and emits an aromatic sagelike odor when bruised. Its chief ornamental value lies in the terminal panicles of blue flowers which appear in early autumn, forming a pleasing contrast with the silvery gray stems.

62275 and 62276. PISUM SATIVUM L.
Fabaceae. Pea.

From Trier, Germany. Seeds purchased from J. Lambert & Son. Received February 10, 1925.

Tall, medium late, round-seeded varieties. Pods very long, slender, slightly curved. Both, prolific varieties, classed as field peas by American users, but are used in Germany as green shelling peas. (*D. N. Shoemaker, Bureau of Plant Industry.*)

62275. *Grosser Victoria.* Larger than the following [S. P. I. No. 62276], otherwise very similar.

62276. *Grüncfolger.*

62277. CITRUS sp. Rutaceae.

From Johannesburg, Transvaal. Fruits presented by Col. A. J. Bester. Received February 7, 1925.

When I visited the great Symbabian ruins in central Africa in 1911 I discovered a new citrus fruit; I collected seeds and brought them back, and now the variety is distributed all over the Transvaal. The smooth-skinned fruits are much like a big lime in shape, and the abundant, fine-flavored juice is very sweet. (*Bester.*)

For previous introduction, see S. P. I. No. 55624.

62278. AVENA SATIVA L. Poaceae.

Oats.

From Edinburgh, Scotland. Seeds presented by Thomas Young, Edinburgh and East of Scotland College of Agriculture. Received February 12, 1925.

This is a black oat which has done very well in Scotland as a winter oat. (*Young.*)

62279 and 62280.

From Verrieres le Buisson, Seine et Oise, France. Plants presented by A. Meunissier. Received February 17, 1925.

62279. CRYPTOMERIA JAPONICA (L. f.) D. Don. Pinaceae.

Var. *Vilmoriniana*. A horticultural variety of the well-known Japanese conifer which is described (The Garden, vol. 88, p. 310) as a dwarf form of compact, bushy habit. It was discovered in 1923 in the Vilmorin nursery at Verrieres le Buisson, near Paris, France, where it makes a striking appearance in the rock garden.

62280. SCHIZOPHRAGMA INTEGRIFOLIA Oliver. Hydrangeaceae.

A climbing shrub, closely related to the hydrangeas, which is native to rocky places in central China. It reaches about 15 feet in height, and has broadly oval, bright-green leaves about 5 inches long. The inflorescence consists of loose terminal clusters of small, white flowers, with large and showy sterile flowers at the margins of these clusters. This shrub is hardy as far north as southern Massachusetts.

62281. HIBISCUS SADDARIFFA L. Malvaceae.
Roselle.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received February 16, 1925.

Risel. A new variety that has originated on the hacienda of R. M. McCrory, Novaliches, Rizal Province, and which I have named after the province in which it originated. This new variety is apparently a spontaneous hybrid between either the Rico or Victor and the Archer. The calyces are white at the base, the claws of the calyx green, and the remainder of the calyx tinged with pink to light red, giving the "fruit" a waxy pink appearance somewhat like the fruit of the makpoo, *Eugenia javanica*. Jelly made from the fruit probably would be pink in color. Because of the pretty coloring of the fruit, the plants of the Rizal make a more attractive ornamental than the ordinary kinds, and it ought to become popular, especially with hunters of novelties. (*Wester.*)

62282. CITRUS sp. Rutaceae.

From Fukuoka, Japan. Seeds presented by Dr. Tyozaburo Tanaka, in charge, Horticultural Institute, Department of Agriculture, Kyushu Imperial University. Received February 18, 1925.

Suecquasaa. A species of Citrus native to Nuchu Island. It is closely related to our *Koji* variety, but differs in its greater amount of pectin and in the puffiness and deep color of the rind. It is possibly a good citrus stock. Provisionally I have named it *Citrus pectinifera*, but I shall make further observations of the flowers before describing the species. (*Tanaka.*)

62283 to 62285.

From Orleans, France. Plants presented by Leon Chenault, through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received February 21, 1925.

62283. BUDDLEIA ALTERNIFOLIA Maxim.
Loganiaceae. Butterfly bush.

62283 to 62285—Continued.

According to Maximowicz (Bulletin de l'Académie Impériale, St. Petersburg, vol. 26, p. 494) this ornamental shrub is native to the valley of the Hwang River in Kansu, China. The narrow, very short leaves are alternate, and the violet flowers are in dense, nearly sessile clusters.

62284. FORSYTHIA OVATA Nakai. Oleaceae.

A new and distinct species native to Korea. It is a vigorous shrub, with cylindrical boughs and oval, green leaves. The numerous flowers, which are brilliant canary yellow, appear [in Orleans] during the first five days of February. (Chevalt.)

62285. MAGNOLIA WILSONII (Finet and Gagn.) Rehder. Magnoliaceae.
Wilson magnolia.

In habit this Chinese magnolia is a large shrub; it was first discovered in western Szechwan by E. H. Wilson, and appears to be a valuable horticultural addition to this already popular genus. The flowers, which are pure white, are deliciously fragrant and are produced freely during late May and early June.

62286 and 62287.

From Kew, England. Seeds presented by Dr. A. W. Hill, director, Royal Botanic Gardens. Received February 17, 1925.

62286. PERNETTYA MUCRONATA (L. f.) Gaud. Ericaceae.

According to W. J. Bean (Trees and Shrubs Hardy in the British Isles, vol. 2, p. 127) this is one of the finest ornamental shrubs, native to South America about the Straits of Magellan. It is one of the hardiest from that continent, and is rarely injured by frost in the neighborhood of London. The shrub is an evergreen, 2 to 5 feet high, and spreads freely by suckers, forming ultimately a dense, low thicket. The white, nodding flowers, one-fourth of an inch long, are produced singly in the axils of the leaves at the ends of the shoots. The round berries, up to half an inch in diameter, vary in color from white to pink, lilac, crimson, purple, or almost black and remain on the branches through the winter and following spring. At Kew the berries are untouched by birds.

62287. STYRAX WILSONII Rehder. Styracaceae.
Chinese snowbell.

A very attractive, compact little shrub 6 feet or less in height, which starts to bear its small clusters of white flowers when about 2 years old. The oval leaves are white tomentose beneath. The shrub is native to the mountains of western China, and is hardy as far north as the Arnold Arboretum, Jamaica Plain, Mass.

62288 and 62289.

From Edinburgh, Scotland. Seeds presented by William Wright Smith, regius keeper, Royal Botanic Garden. Received February 17, 1925.

62288. OPHIOPOGON JABURAN (Siebold) Lodd. Liliaceae.
Jaburan.

A perennial, stemless, Japanese plant, belonging to the lily family, with a stoloniferous rhizome and erect, narrowly linear leaves about 2 feet high. The flowers, varying in color from white to lilac, are in racemes 3 to 6 inches long,

62288 and 62289—Continued.

borne on a scape up to 2 feet in height. It is likely to prove tender for outside growing in the northern United States.

62289. SCHIZOPHRAGMA INTEGRIFOLIA Oliver. Hydrangeaceae.

For previous introduction and description see S. P. I. No. 62280.

62290. CASSIA DIDYMOBOTRYA Fres. Caesalpinaceae.

From Beverly Hills, Calif. Seeds presented by A. Stephen Vavra. Received February 21, 1925.

This plant is a native of British East Africa; it blooms within nine months from seeds, and the orange-yellow flowers are in spikes over a foot in length. (Vavra.)

62291 to 62294.

From Maison Carree, Algeria. Seeds presented by L. Ducellier, Algerian Agricultural School, through H. V. Harlan, Bureau of Plant Industry. Received February 21, 1925.

62291 to 62293. NICOTIANA TABACUM L. Solanaceae. Tobacco.

62291. Arbi.

62292. Cabot de Bone.

62293. Colon.

62294. ZEA MAYS L. Poaceae. Corn.
Navajo × Maïs du Languedoc.

62295. ALEURITES CORDATA (Thunb.) Muell. Arg. Euphorbiaceae.
Japanese tung-oil tree.

From Yokohama, Japan. Seeds purchased from the Yokohama Nursery Co. Received February 24, 1925.

The Kiri-oil tree is a close relative of the tung-oil tree (*Aleurites fordii*) and, like the latter, is cultivated, especially in Japan, for the sake of the oil obtained from the seeds. The tree grows to a height of about 25 feet, and the broadly ovate leaves are three to five lobed. The seeds are about the size and shape of large castor beans. The oil, which differs from tung oil in several important features, is used in Japan chiefly as an illuminant. This introduction is made for the purpose of testing this Japanese species in southern Florida, where the cultivation of the tung-oil tree has become of commercial importance.

62296 and 62297. HELIANTHUS TUBEROSUS L. Asteraceae.
Jerusalem artichoke.

From Edinburgh, Scotland. Tubers purchased from Peter Lawson & Son. Received March 9, 1925.

62296. Purple variety.

62297. White variety.

62298. PRUNUS BRIGANTINA Vill. Amygdalaceae.
Alpine plum.

From Paris, France. Budwood presented by Vilmorin-Andrieux & Co. Received January 16, 1925.

The Alpine plum is a shrub or small, spineless tree, native to the French Alps; the small, smooth subacid fruits are about the size of a small Green Gage plum.

62299. PRUNUS COCOMILIA Ten. Amygdalaceae. Italian plum.

From Paris, France. Scions presented by Vilmorin-Andrieux & Co. Received January 24, 1925.

The Italian plum, allied to the cherry plum (*Prunus cerasifera*), is a bush or small tree with thorny branches, oval sharply-toothed leaves, and small, globular fruits which are fairly good for eating.

62300 to 62306.

From Alnarp, Akarp, Sweden. Plants presented by Carl G. Dahl, superintendent. Föreståndare för Alnarps Trädgårdskola. Received January 7, 1925.

62300 to 62303. FRAGARIA spp. Rosaceae. Strawberry.

62300. FRAGARIA sp.

Abundance. An old French variety. (Dahl.)

62301. FRAGARIA sp.

Elsa von Hochberg.

62302. FRAGARIA sp.

Frau Direktor Echtermeyer.

62303. FRAGARIA sp.

Grüss aus Dahlem.

62304 to 62306. RUBUS spp. Rosaceae. Blackberry.

These varieties are much harder than the American or English types of blackberries introduced into this country. Last summer these fruited when all other (foreign) varieties gave only canes, the old growth being killed in the winter. The berries are sweet and well flavored, but are not so large as the American types. (Dahl.)

62304. RUBUS sp.

Torckov.

62305. RUBUS sp.

Ostra Karup.

62306. RUBUS sp.

Sunne.

62307. ANANAS SATIVUS Schult. f. Bromeliaceae. Pineapple.

From Monrovia, Liberia, West Africa. Offshoots presented by George F. Cope, Mühlenberg Mission. Received January 8, 1925.

These grow in a semiwild condition near the mission. I have been told that, when cultivated, they become as large as the cultivated varieties. (Cope.)

62308. PYRUS CALERYANA Decaisne. Malaceae. Pear.

From Nanking, China. Seeds purchased from Dr. John H. Reisner, College of Agriculture and Forestry, University of Nanking. Received February 5, 1925.

Introduced for testing as a stock for cultivated apple and pear varieties.

62309 and 62310. TRIFOLIUM PRATENSE L. Fabaceae. Red clover.

From Scheemda, Netherlands. Seeds purchased from the Hommo Ten Have's Seed Co. Received January 2, 1925.

Two local strains.

62309. Remontant. 62310. Roosendaal.

62311 to 62318. PRUNUS MUME Sieb. and Zucc. Amygdalaceae.

Japanese apricot.

From Canton, China. Scions collected by F. A. McClure, agricultural explorer. Bureau of Plant Industry. Received January 10, 1925. Notes by Mr. McClure.

62311 to 62316. Scions from trees in an orchard of Chung Hoh Ching, near Fohtsuen, Kwangtung.

62311. No. 10. December 5, 1924. Tai Mui. From a tree 3 to 4 meters high, with a wide-spreading habit, branching out from a point about half a meter above the ground. The fruits of this subvariety are said to be characterized by their large size.

62312. No. 11. December 5, 1924. Tai Mui and Teng Tai Mui (the biggest mui). From a tree 3 meters high, with a low-spreading habit. The fruits are especially large. This variety is one of the *Tsing Mui* group.

62313. No. 13. December 5, 1924. Tai Wat Tsing Mui (large-seeded green mui). From a tree 4 meters in height, and spreading from a point half a meter above the ground. In appearance this particular individual resembles a peach tree as to habit and color of bark. This tree is said to flower a little earlier than the other trees in this region.

62314. No. 14. December 5, 1924. Wang Wat Mui (transverse seeded mui). From a tree 3 to 4 meters in height and spreading in habit. This variety is said to have especially large flowers.

62315. No. 15. December 5, 1924. Hung Mui (red mui). From a tree 4 meters high. This variety is distinguished by a reddish bark, more slender branches, pink flowers, and red fruits. Its habit of growth is very much like that of the *Tsing Muis*.

62316. No. 16. December 5, 1924. Hang Mui. From a tree 4½ meters in height; distinctly more upright in habit than either *Tsing Mui* or *Hung Mui*.

62317. No. 17. December 6, 1924. Sheung Tok Mui (double-flowered mui). From the only double-flowered mui to be found in the neighborhood of Fohtsuen. This specimen was found growing under difficult conditions of shading, etc., on the ground of Chung Chi Chan. The place is called Sheunglingieilau. The tree was 5 to 6 meters in height. Its upright habit and unusual growth in height are probably due to the fact that it is shaded too much. This tree is said by the natives to belong to the *Tsing Mui* group. It is said to have been grafted, but I was not able to find out the source of the scion.

62318. No. 20. December 11, 1924. Sheung Tok Tsing Mui and Sheung Paan Mui. Secured from a tree at the Canton Christian College, originally from Wongkonghang, Kwangtung. The tree has a tendency to a more upright habit than most of the *Tsing Muis*.

62319 and 62320. SPENCERIA RAMALANA
Trimen. Rosaceae.

From Edinburgh, Scotland. Presented by Dr. William Wright Smith, regius keeper, Royal Botanic Garden. Received January 3, 1925.

A free-flowering and attractive rosaceous plant native to the dry upland pastures of western Szechwan and Yunnan, China. It is described (Curtis's Botanical Magazine, pl. 9007) as a perennial herbaceous plant about a foot high, with erect or ascending stems, which are covered with silvery hairs. The stem leaves are reduced to one or two pairs of narrowly oval leaflets, and the golden or reddish yellow flowers are in stiff, open racemes. In England tests made with this plant appear to show that it requires well-drained, calcareous soil for the best results.

62319. Seeds. **62320.** Plants.

62321. COTONEASTER SEROTINA Hutchin-
son. Malaceae.

From Flax Bourton, England. Seeds presented by G. H. Wollaston. Received January 3, 1925.

A small-sized tree, originally discovered in western China by the well-known collector, George Forrest, and described (Curtis's Botanical Magazine, pl. 8854) as having elliptic, papery leaves, small, white flowers, borne in many-flowered corymblike clusters, and attractive, bright-red berries which persist throughout most of the winter. It appears to be perfectly hardy in southeastern England, and thrives best in a sunny position.

62322 and 62323. RUBUS spp. Rosa-
ceae.

From Yenfangwan, Hupeh, China. Seeds presented by Rev. A. S. Cooper, American Church Mission. Received January 5, 1925.

"Corn berries" from Hupeh: collected at an altitude of about 3,500 feet. They mature in the fall. (Cooper.)

62322. RUBUS sp. **62323.** RUBUS sp.
Red variety. Yellow variety.

62324. ECHINOCHLOA CRUGALLI EDULIS
Hitche. Poaceae. **Barnyard millet.**

From Nanking, China. Seeds presented by George E. Ritchey, College of Agriculture and Forestry, University of Nanking. Received January 5, 1925.

Locally grown seeds.

62325. TRIFOLIUM REPENS L. Faba-
ceae. **White clover.**

From Scheemda, Netherlands. Seeds presented by the Hommo Ten Have's Seed Co. Received January 6, 1925.

A local strain, growing wild at Scheemda.

62326. DIOSCOREA MACROURA Harms.
Dioscoreaceae. **Yam.**

From Edinburgh, Scotland. Tubers presented by Dr. William Wright Smith, regius keeper, Royal Botanic Garden. Received January 7, 1925.

A tropical African vine with simple, heart-shaped leaves about a foot in width and inconspicuous flowers in large racemes 2 feet long. Introduced for specialists investigating nitrogen-fixing bacteria.

62327 and 62328. LESPEDEZA spp. Fa-
baceae.

From Fukuoka, Japan. Seeds presented by Mitsunaga Fujioka, Kyushu Imperial University. Received January 7, 1925.

62327. LESPEDEZA JUNCEA Pers.

Medahaqi. From the crop of 1924. (*Fujioka.*)

A Siberian bushclover which is semi-shrubby in habit, with slender branches and bright-yellow flowers marked with violet.

62328. LESPEDEZA STRIATA (Thunb.) Hook.
and Arn.

Yahazuso. From the crop of 1924. (*Fujioka.*)

62329 to 62338. CICER ARIETINUM L.
Fabaceae. **Chick-pea.**

From Dacca, Bengal, India. Seeds presented by D. Dutta, second economic botanist. Received January 8, 1925.

Introduced for trial as stock feed in the southwestern United States.

62329. No. 1.	62334. No. 6.
62330. No. 2.	62335. No. 7.
62331. No. 3.	62336. No. 8.
62332. No. 4.	62337. No. 9.
62333. No. 5.	62338. No. 10.

62339. ACTINIDIA PURPUREA Rehder.
Dilleniaceae.

From Nancy, France. Plants purchased from Victor Lemoine & Son. Received January 13, 1925.

A woody vine, native to western China, described by Rehder (Plantae Wilsonianae, vol. 2, p. 378) as 10 to 25 feet in height, with papery, elliptic leaves about 4 inches long, axillary clusters of small, white flowers, and edible ovoid purple berries about an inch long.

62340. ATTALEA sp. Phoenicaceae.
Palm.

From Palmira, Valle, Colombia. Seeds purchased from the director, Compañia Agrícola Caucana. Received January 9, 1925.

Corozo de puerco palm. This palm thrives abundantly in the Cauca Valley, especially in the neighborhood of Roldanillo, on the left bank of the Cauca River and about 7 miles north of Cali. (*Director.*)

62341. (Undetermined.)

From Nanking, China. Seeds presented by Dr. J. H. Reissner, College of Agriculture and Forestry, University of Nanking. Received January 16, 1925.

Seed of *Ku Tsao* which, translated, means "bitter grass." This is a legume grown in the northern part of this Province, Kiangsu, on land that is too alkaline to grow anything else. This crop is used for fuel, and after it has been grown on the land for several years the farmers plow it up and plant it to a regular crop. (*Reissner.*)

62342. ATRIPLEX PAMPARUM Griseb.
Chenopodiaceae. Saltbush.

From Cordoba, Argentina. Seeds presented by E. Tanago, Director General, Cordoba Department of Agriculture. Received February 3, 1925.

A much-branched bushy plant, which, according to Grisebach (*Plantae Lorentzianae*) forms a prominent feature of the vegetation in the saline desert areas of Santiago del Estero, Argentina. The plant is said to be useful as forage.

62343. PRUNUS MUME Sieb. and Zucc.
Amygdalaceae. Japanese apricot.

From Canton, China. Scions collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received January 13, 1925.

No. 12. December 5, 1924. *Tai Wat Tsing Mui* (large-seeded, green mui). From a tree in one of the orchards of Chung Hoh Ching, near the village of Fohtsuen, Kwangtung. This tree was 4 meters in height, with a wide spreading habit. (McClure.)

62344 and 62345.

From Taihoku, Japan. Seeds presented by Dr. R. Kanehira, director, Government Forest Experiment Station. Received January 16, 1925.

62344. DIOSPYROS MORRISIANA Hance.
Diospyraceae. Persimmon.

A relative of the Japanese persimmon (*Diospyros kaki*) which is described by Dr. Alfred Rehder (Arnold Arboretum, Jamaica Plain, Mass.) as an evergreen shrub or small tree, with oval leaves 3 inches long, whitish flowers, and roundish, yellow, edible fruits about three-fourths of an inch in diameter and ripening in December. Native to Taiwan and Hongkong.

62345. KOELREUTERIA FORMOSANA Hayata.
Sapindaceae.

One member of this genus (*Koelreuteria paniculata*) is widely grown as a hardy shade and ornamental tree in many parts of the United States. This species, native to Taiwan, is also a large handsome tree, with attractive, compound leaves and large terminal panicles of yellow flowers. It is likely, however, to prove tender to much frost and is therefore best suited for growing in the Southern States.

For previous introduction, see S. P. I. No. 43947.

62346 and 62347. PRUNUS MUME Sieb. and Zucc.
Amygdalaceae.

Japanese apricot.

From Canton, China. Scions collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received January 13, 1925.

62346. No. 18. December 11, 1924. *Hung Mui*. Secured from a tree at the Canton Christian College, originally from Wongkonghang, Kwangtung. This tree was 2½ meters high, with a spreading habit. (McClure.)

62347. No. 19. December 11, 1924. *Hung Mui*. From a tree at the Canton Christian College, originally from Wongkonghang, Kwangtung. Tree 3 meters high, with upright habit, branching from a point near the ground. (McClure.)

62348. AVENA SATIVA L. Poaceae. Oats.

From Svalof, Sweden. Seeds presented by A. Akerman, Sveriges Utsädesför. Received January 23, 1925.

Engelbrekt. According to the Sveriges Utsädesför. Tidskrift (vol. 34, p. 4) this is a new, high-yielding black variety originated at Svalof and adapted to southern and central Sweden.

62349 and 62350. CITRUS spp. Rutaceae.

From Nanking, China. Seeds presented by J. Lossing Buck, College of Agriculture and Forestry, University of Nanking. Received January 14, 1925.

62349. CITRUS ICHANGENSIS Swingle.
Ichang lemon.

A spiny shrub or small tree, 5 to 15 feet high, native to central and southwestern China. It differs from other members of the genus chiefly in its very large, thick seeds and its slender leaves, which are four to six times longer than broad. It is also one of the hardiest species of citrus known.

For previous introduction, see S. P. I. No. 58480.

62350. CITRUS sp. Orange.

A wild orange. (Buck.)

62351 to 62354.

From China. Collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received January 14, 1925. Notes by Mr. Dorsett.

62351. VITIS VINIFERA L. Vitaceae.
European grape.

No. 1546. Loutzchuang. December 1, 1924. Cuttings of what the Chinese call *Hung Pu Tao* (red grape).

62352 to 62354. ZIZIPHUS JUJUBA Mill.
(*Z. sativa* Gaertn.). Rhamnaceae.

62352. No. 447. Chenchiafen, Chihli. December 1, 1924. Scions of the "Apple jujube" from Mr. Lee's place.

62353. No. 1543. Loutzchuang, Chihli. December 1, 1924. Scions of the "Tooth jujube" from Mr. Fan's place. The mahogany-brown fruits are large at the base, and from about the center they taper rather abruptly to the apex. The flesh is firm, crisp, and quite sweet.

For previous introduction, see S. P. I. No. 62240.

62354. No. 1544. Loutzchuang, Chihli. December 1, 1924. Scions of the "Tooth jujube" from Mr. Fan's place.

For previous introduction, see S. P. I. No. 62353.

62355. TRIFOLIUM JOHNSTONI Oliver.
Fabaceae. Clover.

From Nairobi, Kenya Colony, Africa. Seeds presented by the Director, Kenya Colony Department of Agriculture. Received February 16, 1925.

This clover grows on the slopes of Mount Kenya at an altitude of 4,500 feet, where there is no frost and where the annual rainfall is about 40 inches. (*The Director*.)

A smooth perennial clover with the habit of white clover (*Trifolium repens*), found

at high altitudes in eastern Africa. The leaves are long stemmed, with membranous leaflets and globose flower heads about an inch in diameter.

62356 and 62357. GOSSYPIUM SPP.
Malvaceae. Cotton.

From Fuerte Olimpo, Paraguay. Seeds presented by C. Francisco Mead. Received January 8, 1925.

These were sent in response to a request for a shrubby cotton said to grow spontaneously west of the Paraguay River, Paraguay, where the fiber was spun and woven by wild tribes in prehistoric times.

62356. GOSSYPIUM sp.
Red form.

62357. GOSSYPIUM sp.
White form.

62358 to 62375.

From Caracas, Venezuela. Seeds presented by H. Pittier, director, Museo Commercial. Received January 8, 1925.

62358 and 62359. HORDEUM VULGARE PAL-LIDUM Seringe. Poaceae. Six-rowed barley.

From Tachira.

62358. No. 1. **62359.** No. 2.

62360 and 62361. NICOTIANA TABACUM L. Solanaceae. Tobacco.

From Barinas.

62360. Special. Used only in the manufacture of chimo or tobacco juice. (Pittier.)

62361. Varinas. Cultivated to-day on a small scale, but once celebrated in Europe under the name of *Kanister*. (Pittier.)

62362 to 62368. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. Common wheat.

From Tachira.

62362. No. 3. *Grande del Morte.*

62363. No. 5. *La clase.*

62364. No. 6. *Lebarata.*

62365. No. 4.

62366. No. 5.

62367. No. 4. *Pequeño.*

62368. No. 1.

62369 to 62375. ZEA MAYS L. Poaceae. Corn.

From Tachira.

62369. No. 4. *Bayuelo amarillo.*

62370. No. 5. *Bojo.*

62371. No. 2. *Chiquito amarillo.*

62372. No. 6. *Matizado.*

62373. No. 7. *Mazorcas.*

62374. No. 1. *Mortiño.*

62375. No. 3. *Piedrita blanco.*

62376. PERSEA AMERICANA Mill. (*P. gratissima* Gaertn. f.). Lauraceae. Avocado.

Fruits from a seedling of S. P. I. No. 19080, Collins, located 15 feet south-east of Gottfried tree, S. P. I. No. 46337,

62376—Continued.

at the Plant Introduction Garden, Miami, Fla. Received at Washington, D. C., January 8, 1925.

The original seeds from the old Collins tree were planted in the spring of 1916.

Form roundish oblate, oblique; stem short, thick, cavity small, very shallow, wrinkled; apex obliquely flattened, stigmatic point slightly raised; surface roughened by deeply set dots, dark brownish purple; dots rather numerous, large, light brown, mostly elongated, deeply set in the skin; skin quite thin, granular on inside, but separating readily from flesh; flesh deep yellow, green near skin, smooth buttery, no fiber, pleasant, rich flavor.

A good medium-sized fruit with a thin skin that peels readily from the flesh, which is of good texture and flavor, though not quite so rich as that of some other varieties.

The tree is tall and spreading.

62377. HORDEUM DISTICHON PALMELLA Harlan. Poaceae. Two-rowed barley.

From Caracas, Venezuela. Seeds presented by H. Pittier. Received January 8, 1925.

No. 3. From Tachira.

62378. LOTUS ULIGINOSUS Schkuhr. Fabaceae.

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received January 12, 1925.

A pasture plant of considerable importance in New Zealand, where it grows in wet, swampy ground. It is introduced for testing in similar situations in this country.

62379. ABIES MARIESII KAWAKAMII Hayata. Pinaceae.

From Taihoku, Japan. Seeds presented by Dr. R. Kanchira, director, Government Forest Experiment Station. Received January 12, 1925.

This is one of the rarest of the silver firs, according to Bean (Trees and Shrubs Hardy in the British Isles); it is a tree usually about 40, but sometimes 80, feet in height. The leaves are dark shining green, and the egg-shaped cones, 4 inches or more in length, are purple when young.

62380 to 62384.

From Meguro, Tokyo, Japan. Seeds presented by Motoo Ohsako, Central Forest Experiment Station, at the request of Mitsunaga Fujioka, Kyushu Imperial University, Fukuoka. Received January 12, 1925.

62380. CASSIA MIMOSOIDES DIMIDIATA (Buch.-Ham.) Baker. Caesalpinaceae.

A shrubby leguminous plant from the Himalayas, described (Hooker, Flora of British India, vol. 2) as a low, much-branched plant with very narrow, stiff leaflets and yellow flowers borne singly or in twos in the leaf axils.

62381. INDIGOFERA PSEUDOTINCTORIA Mats. Fabaceae. Indigo.

A shrubby, red-flowered plant, native to Japan.

62380 to 62384—Continued.

62382. *LESPEDEZA BICOLOR* Turcz. Fabaceae.

A bushy, herbaceous Japanese perennial which flowers in early autumn, bearing a profusion of rosy purple flowers which practically cover its drooping branches. These branches sometimes become 6 feet in length.

62383. *LESPEDEZA STRIATA* (Thumb.) Hook. and Arn. Fabaceae.

A local strain.

62384. *VICIA UNJUGA* A. Br. Fabaceae. Vetch.

A perennial vetch, native to Siberia, with an upright or ascending stem 8 to 16 inches long and rather large, purplish flowers. It is sometimes cultivated in European gardens as an ornamental.

62385. *STRANVAESIA DAVIDIANA* Decaisne. Malaceae.

From Kells, County Meath, Ireland. Seeds presented by Lord Headfort. Received January 13, 1925.

The handsome evergreen foliage, loose clusters of white flowers, and scarlet berries of this hardy Chinese shrub make it an attractive ornamental.

62386 to 62388.

From Maidstone, England. Plants presented by George Bunyard & Co. Received January 22, 1925. Notes taken from Bunyard's Catalogue of Fruit Trees, 1924-25.

62386. *PIRUS* sp. Malaceae. Pear.

Laxton's Superb, raised by Laxton Bros., from *Beurre Superfin* × *Williams*. A large pear with very tender and deliciously flavored flesh, ripens early, and is a good cropper.

62387 and 62388. *RUBUS* spp. Rosaceae. Raspberry.

62387. *RUBUS* sp.

Lloyd George. This variety is quite perpetual in habit and keeps a supply of fruit from the earliest season till late autumn. It is vigorous and productive and is in all respects a sterling novelty.

62388. *RUBUS* sp.

Royal. The enormous fruits, conical in shape, are solid and of good flavor, and are borne on short trusses. The canes are very stout and vigorous.

62389 to 62392.

From Kew, England. Seeds presented by Dr. A. W. Hill, director, Royal Botanic Garden. Received January 15, 1925.

62389. *CRATAEGUS WATTIANA* Hemsl. and Lace. Malaceae. Hawthorn.

According to Curtis's Botanical Magazine (pl. 8818) this attractive hawthorn was originally discovered by J. H. Lace, in the Urak Gorge, Baluchistan, at an altitude of about 7,000 feet. It is a rather small tree, unarmed, laxly spreading, with brownish purple young twigs. The white flowers are in many-flowered terminal clusters, and the globular fruits, half an inch in diameter, are translucent yellow and become ripe in August.

62389 to 62392—Continued.

62390. *DEUTZIA COMPACTA* Craib. Hydrangeaceae.

It is not known from just which part of China this handsome shrub originated, according to Curtis's Botanical Magazine (pl. 8795). It is described in that place as a bushy shrub about 6 feet high, with dull-green leaves and terminal clusters of flowers which are white fringed with pink when young.

62391. *LONICERA CHAETOCARPA* Rehder. Caprifoliaceae. Honeysuckle.

Lonicera chaetocarpa was collected in Kansu, western China, by E. H. Wilson. It is described (Curtis's Botanical Magazine, pl. 8804) as a shrub of compact habit and about 5 feet in height. The oblong leaves are bright green and more or less hairy, and the flowers, an inch or more in length, open early in June and are a pleasing primrose yellow.

62392. *STRANVAESIA SALICIFOLIA* Hutchinson. Malaceae.

A rosaceous, evergreen shrub, closely related to *Stranvaesia undulata*, from which, according to Curtis's Botanical Magazine (pl. 8862), it differs in its narrower, willowlike leaves and its fruits, which are red, and not orange like those of *S. undulata*. The small, white flowers are in terminal clusters. It comes from western China and is perfectly hardy in southeastern England.

62393. *CASTANEA MOLLISSIMA* Blume. Fagaceae. Hairy chestnut.

From Canton, China. Seeds collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received January 24, 1925.

No. 23, December 5, 1924. *Fung Lut*. Seeds secured from Chung Hung, a villager from Lungtin, Kwangtung. He gave the following information: Chestnuts are grown to a considerable extent in this region, the soil being sandy. The trees are grown only from seeds, and just one variety is cultivated. They begin to bear at 7 or 8 years of age and live to become 30 to 40 years old. The harvest is during September and October. The average crop is about 50 or 60 pounds husked fruits per tree, but crops of 150 to 250 pounds are not uncommon. Seeds for planting are stored in the husks in a cool dry place and planted during December or January in sand or sandy soil. (McClure.)

62394. *POPULUS* sp. Salicaceae. Poplar.

From Peking, Chihli, China. Cuttings collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received January 24, 1925.

No. 1581, December 12, 1924. *Hsiao Yih Yang* (small-leaved poplar). Secured from young trees at the forestry station at the Temple of Heaven. (Dorsett.)

62395 and 62396.

From Tripoli, Libia, Africa. Seeds presented by Miss Ernestina Fenzi. Received January 21, 1925.

62395. *JUNIPERUS PROCERA* Hochst. Pinaceae. East African juniper.

This is probably the largest and handsomest juniper in the world. It is native to the high mountains of eastern tropical Africa, and should prove an

62395 and 62396—Continued.

extremely valuable tree in the mountains of the West Indies; it may grow in the southern United States. (C. S. Sargent. *Arnold Arboretum, Jamaica Plain, Mass.*, in note under S. P. I. No. 5584.)

62396. PHOENIX DACTYLIFERA L. Phoeniceae. **Naked palm.**

From Nalut.

62397 to 62509.

From China. Seeds and corms collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received January 5, 1925. Notes by Mr. Dorsett.

62397. ARISAEMA sp. Araceae.

No. 1283. Eastern slope of One Hundred Flower Mountain, while en route from Shihchaying to Huangan, November 8, 1924. Our cook found this spike of small, bright-red, closely clustered fruits resembling an Indian turnip.

62398 and 62399. AVENA NUDA Hoefj. Poaceae. **Naked oats.**

62398. No. 1299. Huangan. November 8, 1924. A variety known here as "oil wheat" and said to be commonly grown 100 miles north of Peking, in Kalgan.

62399. No. 1477. November 25, 1924. "Oil wheat" secured from the Yu Mao Hao shop in Peking. It is said that this variety should be planted in the spring.

62400. BENINCASA HISPIDA (Thunb.) Cogn. Cucurbitaceae. **Wax gourd.**

No. 1444. Peking. November 20, 1924. A dark-green Chinese gourd about 10 inches in diameter and 24 inches or more long, having snow-white flesh. After peeling and cutting into pieces it is boiled with meat.

62401 to 62403. CANNABIS SATIVA L. Moraceae. **Hemp.**

62401. No. 1302. Huangan. November 8, 1924.

62402. No. 1360. Hsiamaling. November 10, 1924.

62403. No. 1498. Peking. November 26, 1924. This variety, which is used chiefly for bird seed, was secured in the market.

62404. CAPSICUM ANNUM L. Solanaceae. **Red pepper.**

No. 1051. October 27, 1924. *Yang Chiao Chin Chiao* (goat-horn pepper). These long, slender, bright-red peppers were grown in the vicinity of Peking.

62405. CHAENOMELES sp. Malaceae. **Chinese quince.**

No. 1438. Peking. November 19, 1924. A small to medium-sized, bright-yellow quince with a delightful fragrance; secured in the market.

62406 and 62407. CHAETOCHELOA ITALICA (L.) Scribn. (*Setaria italica* Beauv.). Poaceae. **Millet.**

62406. No. 1464. Peking. November 25, 1924. A small white-grained millet secured from Yung Ho Hseu.

62407. No. 1465. Peking. November 25, 1924. Red-seeded millet secured from Yung Ho Hseu.

62397 to 62509—Continued.

62408. CHRYSANTHEMUM MORIFOLIUM (Ramat.) Hemsl. Asteraceae.

No. 694. October 10, 1924. A pink-flowered chrysanthemum growing wild in the Western Hills between the Ming tombs and the Fa Hua Ssu temple.

62409. COLOCASIA sp. Araceae.

No. 1452. Peking. November 24, 1924. These corms, secured in the market and reported to be grown locally about Peking, are small compared with the ones produced in the United States.

62410 to 62413. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. **Cushaw.**

62410. No. 1092. Peking. October 31, 1924. A rather long-necked, winter squash, secured in the market; striped with terra cotta and green, and having a golden yellow flesh.

62411. No. 1093. Peking. October 31, 1924. A small, rather thin though attractive terra-cotta colored pumpkin purchased in the market.

62412. No. 1230. Neptune temple, Hlungkuau, November 6, 1924. A good-sized, flat, yellow pumpkin with golden yellow flesh of fair thickness, growing on a terraced mountain side.

62413. No. 1309. Huangan. November 8, 1924. A black-seeded winter squash.

62414. CUCURBITA PEPO L. Cucurbitaceae. **Gourd.**

No. 1450. Peking. November 21, 1924. This gourd is a peculiar shape and color, the color being scarlet with stripes of creamy white and blotched with grayish olive green. The flesh is yellow, and the seeds are medium large and white.

62415. DAUCUS CAROTA L. Apiaceae. **Carrot.**

No. 1069. Peking. October 30, 1924. A reddish carrot of good quality.

62416. DEUTZIA sp. Hydrangeaceae.

No. 1287. En route from Shihchaying to Huangan. November 8, 1924. A flowering shrub growing on the east slope of One Hundred Flower Mountain.

62417. DIOSPYROS LOTUS L. Diospyraceae. **Persimmon.**

No. 1440. Peking. November 20, 1924. Secured in the market. The so-called black date, the wild persimmon, universally used in this region as a stock upon which to graft the large Chinese varieties.

62418. EUONYMUS BUNGEANUS Maxim. Celastraceae.

No. 1134. Peking. November 1, 1924. A fine-looking specimen of *Euonymus* growing out of a stone wall of a canal about one of the buildings in the Temple of Heaven grounds. The yellowish green leaves with pink stems and bright-red berries with yellowish arils make a remarkably fine showing.

62419. FAGOPYRUM TATARICUM (L.) Gaertn. Polygonaceae. **Kangra buckwheat.**

No. 1300. Huangan. November 8, 1924. Seeds of a variety known here as "sweet buckwheat."

62397 to 62509—Continued.

62420 to 62425. *FAGOPYRUM VULGARE* Hill
(*F. esculentum* Moench). Polygonaceae.
Buckwheat.

62420. No. 1181. Fzuchiawu. November 4, 1924. Secured from the priest at the Neptune temple.

62421. No. 1236. Chihyukou. November 6, 1924. A representative of the type grown on the rather heavy clay soil, at an altitude of probably 3,000 to 4,000 feet.

62422. No. 1267. November 7, 1924. Secured in Shihchihiyng, located on the eastern slope of One Hundred Flower Mountain, in the Western Hills.

62423. No. 1301. Huangang. November 8, 1924. "Bitter buckwheat."

62424. No. 1365. Hsiamaling. November 10, 1924.

62425. No. 1475. Peking. November 25, 1924. Secured from the Hengsheng tea shop.

62426 and 62427. *HELIANTHUS ANNUUS* L.
Asteraceae. **Sunflower.**

62426. No. 1499. Peking. November 27, 1924. Large seeds sent in to the market from Kalgan.

62427. No. 1500. Peking. November 27, 1924. Smaller seeds than No. 1499 [S. P. I. No. 62426]. These were also shipped in from Kalgan.

62428. *HOLCUS SORGHUM* L. (*Sorghum vulgare* Pers.). Poaceae. **Sorghum.**

No. 1467. Peking. November 25, 1924. Red kaoliang secured from Yung-hohseu.

62429. *HORDEUM VULGARE COELESTE* L.
Poaceae. **Six-rowed barley.**

No. 1476. Peking. November 25, 1924. A broad-grained, hull-less barley from the Yu Mao Hao shop.

62430. *HORDEUM VULGARE PALLIUM* Seringe. Poaceae. **Six-rowed barley.**

No. 1473. Peking. November 25, 1924. A variety called "King barley" by the Chinese, secured from the Hengsheng tea shop.

62431. *JUNIPERUS CHINENSIS* L. Pinaceae. **Chinese juniper.**

No. 1401. Yenchia. November 11, 1924. Secured from trees growing in an old Chinese cemetery.

62432. *LACTUCA SATIVA* L. Cichoriaceae. **Lettuce.**

No. 1068. Peking. October 30, 1924. The stalk, after being peeled and cut into small pieces, is boiled with meat.

62433. *MALUS* sp. Malaceae. **Apple.**

No. 1099. Peking. October 31, 1924. These creamy yellow fruits with an occasional pink blush were purchased in the market.

62434. *PANICUM MILIACEUM* L. Poaceae. **Proso.**

No. 1235. Chihyukou. November 6, 1924. This millet is commonly grown in this region in rather heavy clay, at an altitude of 3,000 to 4,000 feet.

62397 to 62509—Continued.

62435. *PERILLA FRUTESCENS* (L.) Britton
(*P. ocyroides* L.). Menthaceae. **Perilla.**

No. 1466. Peking. November 25, 1924. Used for bird feed and for the oil contained in the seeds.

62436 to 62469. *PHASEOLUS* spp. Fabaceae.

62436 to 62440. *PHASEOLUS AUREUS* Roxb. **Mung bean.**

62436. No. 1182. Fzuchiawu. November 4, 1924. A yellow bean secured from the priest of the Neptune temple.

62437. No. 1185. Fzuchiawu. November 4, 1924. A green bean secured from the priest of the Neptune temple.

62438. No. 1237. Chihyukou. November 6, 1924. A brown bean growing in heavy clay soil in a mountainous region, at an altitude of 3,000 to 4,000 feet.

62439. No. 1367. Hsiamaling. November 10, 1924. A green bean growing on a terraced mountain side several hundred feet above the Hon River.

62440. No. 1461. Peking. November 25, 1924. A green bean secured from the shop of Yung Ho Hseu. Used extensively in the manufacture of vermicelli and for bean sprouts.

62441 and 62442. *PHASEOLUS CALCARATUS* Roxb. **Rice bean.**

62441. No. 1238. Chihyukou. November 6, 1924. A long, slender, white bean growing in rather heavy clay, at an altitude of 3,000 to 4,000 feet.

62442. No. 1362. November 10, 1924. Secured from Hsiamaling where it was growing on a terraced mountain side in a friable loam, several hundred feet above the Hon River. This variety is known here as "small southern bean" and in other places as "rice bean."

62443 to 62469. *PHASEOLUS VULGARIS* L. Fabaceae. **Common bean.**

62443. No. 1100. Peking. October 31, 1924. A large, red bean with a white hilum, secured in the market.

62444 to 62455. Chihyukou. November 6 and 7, 1924. These varieties of beans are large.

62444. No. 1240. Red.

62445. No. 1240a. White.

62446. No. 1240b. Creamy pink.

62447. No. 1240c. Black.

62448. No. 1240d. White with purple marking.

62449. No. 1240e. Purple.

62450. No. 1240f. Mottled pink and purple.

62451. No. 1240g. Creamy yellow.

62452. No. 1268. Red or pink.

62453. No. 1268a. Creamy pink.

62397 to 62509—Continued.

62454. No. 1268b. Creamy white with purplish cast and deep-purple blotches.
62455. No. 1268c. White.
- 62456 to 62463. Huangan. November 8, 1924.
62456. No. 1308a. White.
62457. No. 1308b. Red.
62458. No. 1308c. Creamy pink.
62459. No. 1308d. Creamy pink mottled with a darker pink.
62460. No. 1308e. Mottled with dark purple and purplish pink.
62461. No. 1308f. Brown.
62462. No. 1308g. Black.
62463. No. 1308h. Mottled black and brown.
- 62464 to 62466. Hsiamaling. November 10, 1924. Large, climbing beans secured several hundred feet above the Hon River.
62464. No. 1364. Red.
62465. No. 1364a. Brown and light pink.
62466. No. 1364b. Blotched grayish purple and brown.
62467. No. 1456. Peking. November 25, 1924. A large red garden bean secured from Yung Ho Hseu.
62468. No. 1457. Peking. November 25, 1924. A large white garden bean secured from Yung Ho Hseu.
62469. No. 1471. Peking. November 25, 1924. A yellow, garden bean, tinged with pink, secured in the Hengsheng tea shop.
62470. *PINUS BUNGEANA* Zucc. Pinaceae. Lacebark pine.
No. 1176. Tomb of Chuang Wang, near the village of Fzuchiawu, November 4, 1924. A white-barked pine.
- 62471 and 62472. *PINUS SINENSIS* Lambert. Pinaceae. Chinese pine.
62471. No. 1421. November 12, 1924. From Hsi Fen Shang, at the Su Chen Wang temple, located on the Hon River, a few miles above Meuloukou.
62472. No. 1175. Tomb of Chuang Wang, near the village of Fzuchiawu, November 4, 1924. A peculiarly flat-topped, yellow pine quite common about Peking.
62473. *PISUM SATIVUM* L. Fabaceae. Pea.
No. 1463. Peking. November 25, 1924. A round, creamy white, field pea, used chiefly for sprouts. Presented by Yung Ho Hseu.
62474. *ROSA* sp. Rosaceae. Rose.
No. 1290. November 8, 1924. Collected on Flower Mountain, which is said to have an altitude of 10,000 feet, while en route from Shihchiaying to Huangan. The hips are bright red, slender, and long, and the bark is light red.

62397 to 62509—Continued.

- 62475 to 62490. *SOJA MAX* (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. Soy bean.
62475. No. 1135. Peking. November 1, 1924. Yellow soy beans from the Temple of Heaven.
62476. No. 1178. Fzuchiawu. November 4, 1924. Black soy beans secured from the Neptune temple. This is a common variety grown in this section.
62477. No. 1179. Neptune temple, Fzuchiawu. November 4, 1924. A small, yellow soy bean.
62478. No. 1261. Shihchiaying. November 7, 1924. A yellow or creamy white soy bean grown in rather heavy gravelly soil, on a terraced mountain side.
62479. No. 1262. Shihchiaying. November 7, 1924. A black soy bean grown in rather heavy gravelly mountain soil.
62480. No. 1303. Huangan. November 8, 1924. A greenish soy bean grown in sandy or moderately light loam.
62481. No. 1306. Huangan. November 8, 1924. A yellow soy bean grown in gravelly friable loam.
62482. No. 1307. Huangan. November 8, 1924. A black soy bean which appears to be a different type from any we have yet secured.
62483. No. 1320. Chaitang, about 20 miles from Huangan. November 9, 1924. A yellow soy bean.
62484. No. 1321. Chaitang, about 20 miles from Huangan. November 9, 1924. A black soy bean.
62485. No. 1363. Hsiamaling. November 10, 1924. A yellow soy bean growing in friable loam.
62486. No. 1366. Hsiamaling. November 10, 1924. A black soy bean growing in friable loam.
62487. No. 1453. Peking. November 25, 1924. A black soy bean, white within, secured from Yung Ho Hseu.
62488. No. 1454. Peking. November 25, 1924. A rather rich-looking yellow soy bean secured from Yung Ho Hseu.
62489. No. 1455. Peking. November 25, 1924. A green soy bean secured from Yung Ho Hseu.
62490. No. 1474. Peking. November 25, 1924. A black soy bean, green within, secured from the Hengsheng tea shop.
62491. *SPIRAEA* sp. Rosaceae. Spirea.
No. 1289. November 8, 1924. Collected on the top of One Hundred Flower Mountain, while en route from Shihchiaying to Huangan. These seeds are from strong plants several feet in height, which appeared to be very free flowering.
62492. *SYRINGA* sp. Oleaceae. Lilac.
No. 1288. En route from Shihchiaying to Huangan. November 8, 1924. A flowering shrub, about 8 feet in height, growing on One Hundred Flower Mountain.

62397 to 62509—Continued.

62493 to 62495. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. Common wheat.

62493. No. 1177. Fzuchiawu. November 4, 1924. A winter wheat secured from the temple of Neptune.

62494. No. 1469. Peking. November 25, 1924. A winter wheat secured from Yung Ho Hseu.

62495. No. 1470. Peking. November 25, 1924. A spring wheat secured from Yung Ho Hseu.

62496 to 62504. VIGNA SINENSIS (Tornei) Savi. Fabaceae. Cowpea.

62496. No. 1180. Fzuchiawu. November 4, 1924. A red or pink cowpea secured from the Neptune temple.

62497. No. 1239. Chihyukou. November 6, 1924. A red or pink cowpea growing at an altitude of 3,000 to 4,000 feet in rather heavy clay.

62498. No. 1263. Shihchiaying. November 7, 1924. A brown-eyed cowpea growing in rather heavy gravelly loam.

62499. No. 1298. Huangan. November 8, 1924. A brown-eyed cowpea.

62500. No. 1305. Huangan. November 8, 1924. This cowpea is mottled a light pink.

62501. No. 1368. Hsiamaling. November 10, 1924. A purple-eyed cowpea growing in friable soil.

62502. No. 1369. Hsiamaling. November 10, 1924. A pink cowpea growing in friable loam.

62503. No. 1459. Peking. November 25, 1924. A pink and white blotched cowpea secured from Yung Ho Hseu.

62504. No. 1462. Peking. November 25, 1924. A creamy brown cowpea mottled a darker brown.

62505 to 62509. ZEA MAYS L. Poaceae. Corn.

62505. No. 1183. Fzuchiawu. November 4, 1924. A small, white flint corn showing a few grains of yellow; growing in a rather stiff clay loam.

62506. No. 1231. Chihyukou. November 6, 1924. A white flint corn growing in a rather heavy clay, at an altitude of 3,000 to 4,000 feet.

62507. No. 1232. Chihyukou. November 6, 1924. A heavy flint corn growing in a rather heavy clay, at an altitude of 3,000 to 4,000 feet.

62508. No. 1310. Huangan. November 8, 1924. A yellow flint corn growing in a friable loam.

62509. No. 1311. Huangan. November 8, 1924. A red flint corn. Three types, yellow, red, and white, are grown in this village.

62510 to 62512.

From Canton, China. Seeds collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received January 13, 1925. Notes by Mr. McClure.

62510. ALEURITES MONTANA (Lour.) Wilson. Euphorbiaceae. Mu-oil tree.

No. 3. October 25, 1924. *Tung Yau Shue* and *Muk Yau Shue*. Seeds col-

62510 to 62512—Continued.

lected from a tree growing in a public burying ground (Kung Yik Shan Chong), about 1½ miles from Wuchow, Kwangsi. There is said to be only one species of wood-oil tree grown in this region. The fruits of this species are obovate in form, with usually three ridges extending from the base, gaining in prominence as they approach the apex, where they join in a sharp point. The fruits are usually gathered in November and, after being husked and dried, are crushed in a crude ox-power grinder, consisting of a deep, circular stone gutter in which an iron wheel runs. The crushed nuts are then placed in a press, crudely fashioned from a log, and the oil expressed by means of wedges driven into place with a battering ram. The tree seems to grow equally well on all soils, from limestone to red sandy soil.

62511. PYRUS sp. Malaceae. Pear.

No. 21. Wuchow, Kwangsi. October 25, 1924. *Ka Sha Lei*, *Tong Lei Tsz*, and *Shan Cha Tsz*. Seeds from fruits brought to the market by natives who collected them in the wild. These rusty brown fruits, about the shape of a round apple and up to 3 centimeters in diameter, are pickled or eaten whole by the natives.

62512. THEA OLEIFERA (Abel) Rehd. and Wils. Theaceae.

No. 22. Tungon, Kwangtung. November 15, 1924. *Cha Tsai* and *Yau Cha*. Seeds secured by the assistance of Chan Hung On, who gives the following information: A tree 3 to 4 meters high, growing in the hills. It bears flowers and fruits all the year round, fruiting most abundantly in August. The flowers are white and fragrant. The oil, expressed from the seeds by the same process used to express the wood oil [see S. P. I. No. 62510], is used in cooking and by the women as a hair dressing, in which case perfume is often added.

62513 to 62518. ALEURITES MONTANA (Lour.) Wilson. Euphorbiaceae.

Mu-oil tree.

From Canton, China. Seeds collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received January 24, 1925. Notes by Mr. McClure.

62513. No. 4. October 25, 1924. *Tung Yau Shue* and *Muk Yau Shue*. Seeds from a tree found growing in a public burying ground (Kung Yik Shan Chong) about 1½ miles from Wuchow, Kwangsi. The same as No. 3 [S. P. I. No. 62510] in every respect except that the fruits were uniformly more pointed at the apex and the three ridges were sharper.

62514. No. 5. October 25, 1924. *Tung Yau Shue* and *Muk Yau Shue*. Seeds collected from a tree growing in a public burying ground (Kung Yik Shan Chong) about 1½ miles from Wuchow, Kwangsi. This tree was young, perhaps 4 years old, but was bearing very prolifically.

62515. No. 6. October 25, 1924. *Tung Yau Shue* and *Muk Yau Shue*. Seeds from a tree growing in the Christian Missionary Alliance compound across the river from Wuchow, Kwangsi. No record has ever been kept of the yield, but an estimate of 4 to 5 piculs (133 pounds) seems conservative.

62513 to 62518—Continued.

62516. No. 7. October 25, 1924. *Tung Yau Shue* and *Muk Yau Shue*. Seeds collected from a large tree in the Christian Missionary Alliance compound across the river from Wuchow, Kwangsi. This tree is said by the Chinese to occasionally bear staminate flowers.

62517. No. 8. October 25, 1924. *Tung Yau Shue* and *Muk Yau Shue*. Seeds from a large and prolific tree in the Baptist Mission compound at Wuchow, Kwangsi. These trees differ from the foregoing numbers of this species in having the leaves more uniformly three lobed and in greater prolificity of fruits, which are borne in clusters of 8 to 11.

62518. No. 9. October, 1924. *Tung Yau Shue* and *Muk Yau Shue*. Seeds secured through the Hongkong Botanic Gardens from Shihing, in Kwangtung Province.

62519 to 62521. FRAGARIA spp. Rosaceae. Strawberry.

From Orleans, France. Plants presented by Edmond Versin, St. Jean le Blanc. Received February 3, 1925. Notes by Mr. Versin.

62519. FRAGARIA sp.

Nomblot-brunceau. An early variety with enormous sweet-flavored fruits.

62520. FRAGARIA sp.

Géante rouge. A new, large-yielding variety, with very large rounded fruits; five or six fruits sometimes weigh a pound.

62521. FRAGARIA sp.

L'Indispensable. An everbearing, very prolific variety, quite hardy; the plant does not disappear in winter. The fruits are larger than those of *Docteur Morère*, juicy, sweet, with firm red flesh of fine quality, and stand shipping well. It bears from June until frost.

62522. RUBUS sp. Rosaceae.

From Bedford, England. Plants purchased from Laxton Bros. Received February 5, 1925.

The *Laxtonberry*. A hybrid between the raspberry and loganberry, but being rather self-sterile should be planted near other berries. (*Laxton Bros. catalogue*.)

62523 to 62550. ORYZA SATIVA L. Poaceae. Rice.

From Nishigahara, Tokyo, Japan. Seeds presented by H. Ando, director, Imperial Agricultural Experiment Station. Received February 17, 1925. Notes by Mr. Ando.

These varieties have been grown at our station and purebred through several years.

62523 to 62535. Early-maturing varieties.

62523. No. 1. *Nigôhan*.

62524. No. 2. *Homura*.

62525. No. 3. *Akage*.

62526. No. 4. *Mesibu*.

62527. No. 5. *Ôba*.

62528. No. 6. *Kamenoo*.

62523 to 62550—Continued.

62529. No. 7. *Turugi*.

62530. No. 8. *Fuji-wase*.

62531. No. 9. *Jyôsyû*.

62532. No. 10. *Sinagawa*.

62533. No. 11. *Sinsyû*.

62534. No. 12. *Sen'iti*.

62535. No. 13. *Yamatodikara*.

62536 to 62547. Medium-maturing varieties.

62536. No. 14. *Jôhô*.

62537. No. 15. *Aikoku*.

62538. No. 16. *Nakajima-bôju*.

62539. No. 17. *Kairyô-funkuyama*.

62540. No. 18. *Ômi*.

62541. No. 19. *Isijiro*.

62542. No. 20. *Kunitomi*.

62543. No. 21. *Tamanisiki*.

62544. No. 22. *Wasesinriki*.

62545. No. 23. *Sekitori*.

62546. No. 24. *Hozoroi*.

62547. No. 25. *Araki*.

62548 to 62550. Late-maturing varieties.

62548. No. 26. *Takenari*.

62549. No. 27. *Sugaippon*.

62550. No. 28. *Sirajihci*.

62551 to 62557.

From Ambato, Ecuador. Presented by Prof. Augusto Martinez, through Wilson Popenoe, agricultural explorer, Bureau of Plant Industry. Received February 28, 1925. Notes by Doctor Popenoe.

62551. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. Peach.

No. 703. Scions. Peaches have been grown for several centuries in the Ecuadorian highlands, particularly in the region of Ambato. Since propagation has been almost entirely by seed, there are as many varieties as there are trees in this region. The majority of them produce fruit of inferior quality, judged by our standard, but an occasional one is really good. Professor Martinez has searched for the best and has propagated them by budding. A few trees of selected varieties have thus been established at the Quinta Normal in Ambato.

The one represented by this number has been named *Juan Leon Mera* by Professor Martinez, honoring the well-known Ecuadorian poet and writer, in whose garden in Ambato the variety originated. This is a white freestone, of medium size and excellent flavor. It is interesting to us, principally because it may prove adapted to subtropical climates.

62552. CARICA PENTAGONA Heilborn. Papayaceae.

No. 700. Plants. This will stand several more degrees of frost than the papaya, while its fruits, nearly a foot in length, are excellent when stewed or preserved. This plant is fully described in my bulletin, Economic Fruit-Bearing Plants of Ecuador, Contributions from the United States National Herbarium, vol. 24, pt. 5, 1924.

62551 to 62557—Continued.

62553 and 62554. *PRUNUS SEROTINA* Ehrh.
Amygdalaceae. Capulin cherry.

62553. No. 701. Scions. It is worthy to note that the old Gonzales tree at Catiglatá, famous throughout the Ecuadorian highlands, is dying. Professor Martínez, however, has established young budded trees at the Quinta Normal and at his own quinta in Catiglatá, so the variety will not be lost. This variety is described and illustrated in the Journal of Heredity, February, 1922, and is also described in a previous inventory under S. P. I. No. 52720.

62554. No. 702. Scions. An excellent variety which originated in the quinta of Professor Martínez at Catiglatá, near Ambato. It may even be superior to the Gonzales; the fruit is of practically the same size and appearance, and the only difference is in the flavor, which seems a bit sweeter than that of the Gonzales.

62555. *PYRUS COMMUNIS* L. Malaceae.

Pear.

No. 710. Plants. The so-called *pera nacional*, or native pear, brought here by the Spanish in early colonial days. It is propagated by suckers, for the fruits rarely contain seeds. The fruits are small and of fair quality.

62556. *RUBUS GLAUCUS* Benth. Rosaceae.
Andes raspberry.

No. 711. Plants of the typical form of the Andes raspberry from the Quinta "La Lira" of Professor Martínez. The Andes berry, introduced by this office several years ago, promises to prove valuable for cultivation in the warm parts of the United States and in other subtropical regions.

For previous introduction, see S. P. I. No. 52717.

62557. *VITIS* sp. Vitaceae. Grape.

No. 712. Cuttings. From the garden of Professor Martínez, a species which he believes was brought from Santo Domingo de los Colorados, in the hot, moist lowlands on the western slopes of the Andes. Professor Martínez says this grape does not fruit in the climate of Ambato, though it vegetates vigorously and blossoms freely. He knows nothing regarding the quality of its fruit, but believes the latter to be edible and of fair size.

62558 and 62559. *VITIS VINIFERA* L.
Vitaceae. European grape.

From Key West, Fla. Cuttings presented by George E. Murrell, horticulturist of the Southern Railway. Received March 2, 1925.

Cuttings of the so-called "Key" grape, commonly grown in the Florida Keys.

62558. No. 1. 62559. No. 2.

62560 to 62562.

From Chihli, China. Collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received March 2, 1925. Notes by Mr. Dorsett.

62560. *POPULUS* sp. Salicaceae. Poplar.

No. 1915. Tsaochiao, near Fungtai, January 27, 1925. Cuttings of what is known here as the Chinese large-leaf poplar.

62560 to 62562—Continued.

62561. *ROSA* sp. Rosaceae. Rose.

No. 1913. Village of Keechiatsum, near Fungtai. January 27, 1925. Plant and cuttings of a small-leaved rose known as *Mu Hsiang*.

62562. *ZIZIPHUS JUJUBA* Mill. (*Z. sativa* Gaertn.). Rhamnaceae. Jujube.

No. 1916. Keechiatsum, near Fungtai, January 27, 1925. Scions of what is reported to be a large "apple" jujube. *P'ing Kuo Tsao*, secured by Mr. Li.

62563 and 62564. *SOLANUM TUBEROSUM* L. Solanaceae. Potato.

From Wolverhampton, England. Tubers presented by E. W. Keay. Received March 2, 1925.

62563. *Paterson Victoria* × *Magnum Bonum*. Hybrid seedling No. 373.

62564. *Catriona*. A second early variety grown to some extent in Great Britain and on the Continent. The tubers are supposed to be kidney-shaped, with blue sprouts and colored skin. (*William Stuart, Bureau of Plant Industry.*)

62565. *HYPHAENE* sp. Phoenicaceae. Palm.

From Dar es Salaam, Tanganyika Territory, Africa. Seeds presented by the director, Department of Agriculture. Received March 18, 1925.

The palms of this genus are all indigenous to Africa and are remarkable in having branched stems, a character not common among palms. Each branch terminates in a tuft of large, fan-shaped leaves. One species (*Hyphaene thebaica*) bears fruits with fibrous husks which are eaten in Upper Egypt.

Received as *H. macrocarpa* Gaertn., for which a place of publication has not been found.

62566 to 62590.

From Elstree, Herts, England. Seeds presented by Vicary Gibbs, Aldenham House Gardens. Received February 20, 1925.

62566. *CARAGANA BOISI* C. Schneid. Fabaceae.

A handsome bush 10 to 12 feet high, with long, arching branches, native to Szechwan and eastern Tibet, China. In May the light-green foliage and numerous yellow flowers make this an especially attractive ornamental.

For previous introduction, see S. P. I. No. 56808.

62567. *CEANOTHUS THYRSIFLORUS* Eschw. Rhamnaceae.

Var. *Griseus*. An English horticultural form of a native American shrub.

62568 to 62584. *COTONEASTER* spp. Malaceae.

62568. *COTONEASTER DIELSIANA* ELEGANS Rehd. and Wils.

A variety differing from the typical form in having thinner and more persistent leaves and smaller, pendulous, coral-red fruits. The shrub is 6 feet or less in height, with slender, arching branches. Native to western China.

62569. *COTONEASTER LACTEA* Hort.
Forrest No. 10419.

62566 to 62590—Continued.

62570. *COTONEASTER MOUPINENSIS* Franch.

A cotoneaster commonly found in the thickets and margins of woods throughout western Szechwan at altitudes of 4,000 to 7,000 feet. According to E. H. Wilson (Sargent, *Plantae Wilsonianae*, vol. 1, p. 163) it is 6 to 15 feet high, with white flowers and jet-black fruits.

For previous introduction, see S. P. I. No. 55081.

62571. *COTONEASTER NEWRYENSIS* Hort.

62572. *COTONEASTER SALICIFOLIA* Franch.

A half-evergreen shrub, sometimes 15 feet in height, with white flowers produced in dense corymbs about 2 inches across and roundish, bright-red fruits, which, ripening in October, make the shrub particularly ornamental. Native to western China.

62573. *COTONEASTER* sp.

Farrer No. 403.

62574. *COTONEASTER* sp.

Farrer No. 404.

62575. *COTONEASTER* sp.

Farrer No. 405b.

62576. *COTONEASTER* sp.

Forrest No. 14948.

62577. *COTONEASTER* sp.

Forrest No. 14960.

62578. *COTONEASTER* sp.

Forrest No. 14976.

62579. *COTONEASTER* sp.

Forrest No. 15376.

62580 to 62584. These numbers were affixed by the Royal Horticultural Society and are not Forrest's own numbers.

62580. *COTONEASTER* sp.

No. 273.

62581. *COTONEASTER* sp.

No. 402.

62582. *COTONEASTER* sp.

No. 488.

62583. *COTONEASTER* sp.

No. 489.

62584. *COTONEASTER* sp.

No. 562.

62585. *LEPTOSPERMUM PUBESCENS* Lam. Myrtaceae.

The chief attractions of this evergreen Australian shrub lie in the small, myrtle-like foliage and the copiously produced white flowers which cover the shrub in the spring.

62586. *SORBUS DOMESTICA* L. (*Pyrus sorbus* Gaertn.). Malaceae. Service tree.

A round-headed tree, 30 to 60 feet high, which is often confounded with the European mountain ash (*Sorbus aucuparia*) from which it is distinguished by having larger flowers and fruits. The

62566 to 62590—Continued.

leaflets are sharply and rather coarsely serrate, and the white flowers, half an inch wide, are in terminal, broadly pyramidal clusters. The fruits, roundish or pear shaped, vary in size from half an inch to an inch and a half. The service tree is distributed throughout southern Europe, northern Africa, and western Asia.

62587. *VERONICA CUPRESSOIDES* Hook. f. Scrophulariaceae. Speedwell.

The veronics, of which there are more than one hundred known species, constitute an important feature of the New Zealand flora, and many of them are popular ornamentals. This species belongs to a group known as the "whipcord" veronics; the mature leaves are reduced to scales, usually pressed close to the branch and completely hiding it. It is described by Cockayne (*Cultivation of New Zealand Plants*, p. 70) as a tall, erect, cypresslike bush, 3 feet or more high, with dense, dark-green foliage and abundant purple flowers appearing in summer. In New Zealand this plant is sufficiently hardy to withstand a few degrees of frost.

62588. *VIBURNUM HUPEHENSE* Rehder. Caprifoliaceae. Hupeh viburnum.

A fairly hardy deciduous shrub, allied to *Viburnum wrightii*, with coarsely toothed, long-pointed, dark-green leaves, white flowers and ovoid, dark-red fruits. Native to central China.

For previous introduction, see S. P. I. No. 59401.

62589. *VIBURNUM VEITCHI* C. H. Wright. Caprifoliaceae. Veitch viburnum.

One of the most ornamental of the Lantana group, about 5 feet high, with young branches, leafstalks, and under surfaces of the leaves densely clothed with starlike down; the white flowers are in cymes 4 to 5 inches across, and the red fruits later become black. Native to central China.

For previous introduction, see S. P. I. No. 53752.

62590. *XANTHOCERAS SORBIFOLIA* Bunge. Sapindaceae.

A shrub, occasionally growing into a small-sized tree, found in loose soil. The shiny pinnate foliage reminds one of an ash, but the drooping racemes of white flowers, with yellow stamens, produced in great masses in early summer, give the shrub quite a distinct appearance. The Chinese eat the kernels of the fruits and call the plant "Mu kua hua," meaning "quince flower," because the large fruits resemble those of the Japanese quince (*Chaenomeles lagenaria*). This shrub, closely related to the horse-chestnut, is decidedly ornamental and of special value as a garden shrub for the semiarid sections of the United States where the winters are not too severe. (*Frank N. Meyer, in note under S. P. I. No. 39431.*)

62591 to 62598. *GOSSYPIUM* spp. Malvaceae. Cotton.

From Paris, France. Seeds presented by Prof. A. Chevalier, Laboratoire d'Agro-ronomie Coloniale. Received February 26, 1925.

62591. *GOSSYPIUM ANOMALUM* Wawra.

This wild African cotton is described by Oliver (*Flora of Tropical Africa*, vol. 1, p. 211) as a shrub 5 to 10 feet in

62591 to 62598—Continued.

height, with rough branches, reddish flowers, and oval capsules about an inch in length.

For previous introduction, see S. P. I. No. 55410.

62592 to 62594. GOSSYPIUM HERBACEUM L.

62592. A brown variety.

62593. A white variety.

62594. A form with partly indehiscent capsules.

62595. GOSSYPIUM NANKING Meyen.

The "Chinese" cotton of commerce is, according to Watt (Wild and Cultivated Cottons of the World), an annual or perennial bush, with delicate, sparsely branched stems and imperfectly cordate leaves. The irregular-shaped seeds are densely coated with rufous velvet and bear a silky fiber, which, in all the better varieties, is white, but often shows a tendency to become reddish or khaki. This cotton is cultivated throughout tropical Asia.

62596. GOSSYPIUM OBTUSIFOLIUM AFRICANUM Watt.

From French Equatorial Africa.

An African variety which, according to Watt (Wild and Cultivated Cottons of the World), differs chiefly from the typical Indian species in having more copious and finer fiber.

62597. GOSSYPIUM PUNCTATUM Schum. and Thonn.

A wild cotton, found in tropical America and also in central and western Africa. It is described (Watt, Wild and Cultivated Cottons of the World) as a shrub with hairy, 3-lobed leaves, and yellow flowers spotted with purple. The fiber is pure white and silky.

62598. GOSSYPIUM PUNCTATUM × BARBADENSE.

Cultivated by the natives, but perhaps of recent introduction.

62599 to 62647.

From China. Collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received February, 1925. Notes by Mr. Dorsett.

62599. AMYGDALUS DAVIDIANA (Carr.) Zabel (*Prunus davidiana* Franch.). Amygdalaceae. Chinese wild peach.

No. 1733. Fa Hua Ssu temple, near Haitzu. December 31, 1924. Seeds of *Shan Mao T'ao* (wild mountain peach) which is used by the Chinese as stock for their peaches and plums.

62600 to 62602. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. Peach.

December 31, 1924. Scions from the Fa Hua Ssu temple.

62600. No. 1723. *Ma Nao Hung T'ao* (red agate peach). The freestone fruits, 3 to 4 inches in diameter, are red outside and white within, ripening during the early part of August. They are grafted on the wild peach.

62601. No. 1739. *Pai Tien T'ao* (white sweet peach). The fruits, 2 to 3 inches in diameter, are clingstones which ripen in early August. The wild peach is used as stock.

62599 to 62647—Continued.

62602. No. 1773. *Pi T'ao* (flowering peach). The twigs of blossoms, which fade from pink to white and then turn red, are sold here. The fruits, about 1½ inches in diameter and resembling apricots in shape, are freestone and ripen in September, becoming pink.

62603 and 62604. CHAETOCHELOA ITALICA (L.) Scribn. (*Setaria italica* Beauv.). Poaceae. Millet.

62603. No. 1597. *Lou Tai*. Seeds of a white millet collected in a large valley between Peking and Tientsin. December 16, 1924.

62604. No. 1737. Fa Hua Ssu temple. December 31, 1924. Seeds of the *Fo Shou Nien Ku* (Buddha's finger millet). A millet having yellow seeds.

62605. CRATAEGUS PINNATIFIDA Bunge. Malaceae. Chinese hawthorn.

No. 1746. Fa Hua Ssu temple. December 31, 1924. Scions of what is reported to be a large, red hawthorn, about 1 inch in diameter, and which ripens during the middle of October. It was growing on mountain sides and in narrow valleys at an altitude of 6,000 to 12,000 feet.

62606. ECHINOCHLOA CRUSGALLI EDULIS Hitchc. Poaceae. Barnyard millet.

No. 1600. Loutai. December 16, 1924. Seeds of the *Pai Tzu* (tare). When other foods are scarce this variety is ground into flour and used.

62607. FAGOPYRUM VULGARE Hill (*F. esculentum* Moench.). Polygonaceae. Buckwheat.

No. 1590. Loutai. December 16, 1924.

62608 to 62610. HOLCUS SORGHUM L. (*Sorghum vulgare* Pers.). Poaceae. Sorghum.

Loutai. December 16, 1924.

62608. No. 1591. *Nien Kaoliang* (sticky kaoliang).

62609. No. 1592. *Hung Kaoliang* (red kaoliang). Said to have long flower and seed stalks.

62610. No. 1593. *Pai Kaoliang* (white kaoliang).

62611. JUGLANS MANDSHURICA Maxim. Juglandaceae.

No. 1735. Fa Hua Ssu temple. December 31, 1924. *Shan Ho T'ao* (wild mountain walnut). Used for stock here when the walnut is grafted.

62612 to 62615. JUCLANS REGIA L. Juglandaceae. Persian walnut.

Fa Hua Ssu temple.

62612. No. 1736. December 31, 1924. Seeds of *Shan Ma Ho T'ao* (wild mountain walnut). The nuts are broader than long and have a heavy keel and are quite rough. Used for stock here.

62613. No. 1766. January 5, 1925. Scions of *Ying P'i Ho T'ao* (thick-shelled walnut) from a 10-year-old tree that has been bearing for three years.

62599 to 62647—Continued.

62614. No. 1767. January 5, 1925. Scions of *Pao P'i Ho T'ao* (thin-shelled walnut) from a tree 50 or 60 years old which ripens in early September. It is said that if these walnuts are allowed to fall from the trees they will break.

62615. No. 1778. January 5, 1925. Scions of *Pao P'i Hsiao Ho T'ao* (thin-shelled small walnut) about an inch in diameter. The fairly smooth nuts ripen in early September.

62616 to 62624. MALUS spp. Malaceae.
Apple.

Fa Hua Ssu temple.

62616. MALUS sp.

No. 1719. December 31, 1924. Seeds of *Shan Ting Tzu* (wild mountain crab apple) which may prove useful as a dwarfing stock. The fruits are very small and yellowish.

62617. MALUS sp.

No. 1720. December 31, 1924. *Hung Sha Kuo* (red crab apple). A sweet, sand crab apple, about 1 to 1½ inches in diameter, and which is a little longer than broad. Ripens about the middle of August.

62618. MALUS sp.

No. 1734. December 30, 1924. Offshoots of *Shan Ting Tzu* (wild mountain crab apple). Seeds were sent in under No. 1719 [S. P. I. No. 62616].

62619. MALUS sp.

No. 1741. December 3, 1924. Scions of *Hung Sha Kuo* (red crab apple) 1 to 1½ inches in diameter, which ripens the middle of August. It is grafted on the wild crab apple.

62620. MALUS sp.

No. 1745. December 31, 1924. Scions of *Pai Hai T'ang* (small white crab apple) which ripens in September. This crab apple was growing on terraced mountain sides and in narrow valleys at altitudes of 6,000 to 12,000 feet.

62621. MALUS sp.

No. 1750. December, 1924. Scions of *Sha Kuo* (sand crab apple). A red crab apple, 1 inch in diameter, which ripens in early August.

62622. MALUS sp.

No. 1762. December 30, 1924. Scions of a large apple, 2½ to 4½ inches in diameter, which ripens between the middle of July and the middle of August, becoming green with a pink or red blush. Grafted on the wild mountain crab apple.

62623. MALUS sp.

No. 1763. December 30, 1924. Scions of a very sweet, fragrant apple, 2½ to 3 inches in diameter, which is green with a red blush. Grafted on the wild crab apple.

62624. MALUS sp.

No. 1777. January 5, 1925. Scions of *Suan Pin Tzu* (sour purple crab apple). A white-fleshed crab apple, 1½ to 2 inches in diameter, which ripens in early September. Grafted on the wild crab apple.

62599 to 62647—Continued.

62625 to 62627. PANICUM MILIACEUM L.
Poaceae. Proso.

Loutai. December 16, 1924. Said to be used both for human food and for stock.

62625. No. 1596. A sticky, white-seeded variety.

62626. No. 1598. A dark-brown variety.

62627. No. 1599. A variety having light-colored seeds.

62628 to 62632. PRUNUS ARMENIACA L.
Amygdalaceae. Apricot.

Fa Hua Ssu temple.

62628. No. 1725. December 31, 1924. Scions of *Ta Huang Hsing* (large yellow apricot), the kernel of which is sweet; ripens about the end of June, becoming yellow with a red blush. Grafted on the wild peach and apricot.

62629. No. 1732. December 31, 1924. Scions of *Hung Lao Yieh Lien Hsing* (red-faced apricot). A freestone variety, 1 to 1½ inches in diameter, which ripens the last of June. The flesh is white and the kernel is sweet.

62630. No. 1740. December 3, 1924. Scions of the same variety as No. 1732 [S. P. I. No. 62629], but from a different tree.

62631. No. 1742. December 31, 1924. Scions of *Pien Tzu Hsing* (flat apricot). The broad fruits, which are sold only for the kernels, ripen at the end of June.

62632. No. 1764. January 5, 1925. Seeds of *Shan Mao Hsing* (wild mountain apricot), the trees of which grow to a good size. Used as stock upon which to work the commercial varieties, both fruiting and the sweet kernel. It is claimed that when this wild apricot is used as stock there is less trouble from worms in the fruits.

62633 to 62638. PRUNUS spp. Amygdalaceae.

Scions from the Fa Hua Ssu temple.

62633. PRUNUS sp. Plum.

No. 1712. December 30, 1924. *Shui Hung Li Tzu* (water red plum). The round fruits, 1 to 1½ inches in diameter, ripen the beginning of July. Grafted on the wild peach.

62634. PRUNUS sp. Plum.

No. 1744. December 31, 1924. *Tien Li Tzu* (sweet plum). A variety which ripens at the end of July, becoming purple and red. The fruits are round, about an inch in diameter.

62635. PRUNUS sp. Plum.

No. 1748. December 31, 1924. *Hsing Li Tzu* (red plum), 1½ to 2 inches in diameter, which ripens at the end of July. The flesh is yellow.

62636. PRUNUS sp. Cherry.

No. 1769. January 5, 1925. *Hung Shan Tou Tzu* (mountain bean red cherry). The trees are about 10 feet in height and 3 to 4 inches in diameter. The small fruits ripen during the middle of May. Grafted on the wild peach.

62599 to 62647—Continued.

62637. PRUNUS sp. Cherry.

No. 1770. January 5, 1925. *Pai Shan Tou Tzu Ying Tao* (mountain bean white cherry). The trees grow to a height of 10 or 12 feet and 3 to 4 inches in diameter. The small fruits ripen during the middle of May. Grafted on the wild peach.

62638. PRUNUS sp. Cherry.

No. 1772. January 5, 1925. *Nau Ying Tao* (southern sweet cherry). This particular tree was 30 years old. The fruits are of average size and ripen in May, becoming pink.

62639 to 62647. PYRUS spp. Malaceae. Pear.

Scions from the Fa Hua Ssu temple.

62639. PYRUS sp.

No. 1713. December 31, 1924. *Sha Kuo Li* (crab-apple pear). The fruits of this summer pear are about 1½ to 2 inches in diameter, and ripen at the end of August, becoming light yellow blushed with red.

62640. PYRUS sp.

No. 1726. December 31, 1924. *Chin Chin Pa Li* (autumn golden handle pear). The fruits, 2 to 3 inches in diameter, ripen about the middle of September, becoming yellow. Grafted on the wild mountain pear.

62641. PYRUS sp.

No. 1749. December 31, 1924. *Shih Ping Tang Li* (dry persimmon sugar pear). The yellow fruits, 3 or more inches in diameter, ripen during the middle of October.

62642. PYRUS sp.

No. 1751. December 31, 1924. *Ta Tzu Hsiang Li* (fragrant pear). A yellow pear, 2 to 3 inches in diameter, with a small core. Ripens late in August.

62643. PYRUS sp.

No. 1765. January 5, 1925. *Hung Hsiai Li* (red sour pear). The fruits, 2 to 3 inches in diameter, ripen in September, becoming yellow with a red or pink blush.

62644. PYRUS sp.

No. 1768. January 5, 1925. *Chin Chin Li* (golden handle pear).

62645. PYRUS sp.

No. 1774. January 5, 1925. *P'ing Kuo Li* (apple pear). The white-fleshed fruits, the size of large apples, are white with a pink blush. Ripens at the end of September.

62646. PYRUS sp.

No. 1775. January 5, 1925. *Ta Tzu Hsiang Li* (fragrant pear). A yellow pear, about 2 inches in diameter, which ripens at the end of September.

62647. PYRUS sp.

No. 1776. January 5, 1925. *Pan Chin Su Li* (half-catty brittle pear). The yellow fruits ripen during the early part of October. This is said to be the largest of the pears, being 2 to 3 inches or more in diameter.

62648. ARTEMISIA sp. Asteraceae. Wormwood.

From Peking, Chihli, China. Roots collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received February 25, 1925.

No. 1816. January 12, 1925. The small, fragrant, aromatic roots, after being cleaned, are chopped into small pieces, dipped in hot water, and eaten fresh with soy-bean sauce, vinegar, a little pepper and salt, sesame oil, and a little sugar. (*Dorsett.*)

62649 and 62650. SOJA MAX (L.) Piper (Glycine hispida Maxim.). Fabaceae. Soy bean.

From Buitenzorg, Java. Seeds presented by L. Koch, chief, Plant Breeding Station. Received February 14, 1925.

These varieties have given good results here during the past few years. (*Koch.*)

62649. Swarte Kedelee No. 3.

62650. Witte Kedelee No. 17.

62651. DENDROCALAMUS MACROCULMIS Hort. Poaceae. Bamboo.

From Algiers, Algeria. Cuttings collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received March 19, 1925.

One of the giant bamboos which was introduced from Cochín China by the Jardin des Plantes in Paris and sent here for trial. There is now a splendid avenue of it in the Jardin d'Essais, at Algiers. This is a clump species, very distinct and valuable. (*Fairchild.*)

62652. DIOSCOREA sp. Dioscoreaceae. Yam.

From Chihli, China. Seeds collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received January 5, 1925.

No. 1283. November 8, 1924. Collected on the eastern side of One Hundred Flower Mountain, en route from Shihchiaying to Huangán, at an altitude of 10,000 feet. (*Dorsett.*)

62653. GLADIOLUS HIRSUTUS Jacq. Iridaceae.

From Kirstenbosch, Cape Province, South Africa. Bulbs presented by Prof. R. H. Compton, National Botanic Gardens. Received March 27, 1925.

About a foot in height, this species has bright-red flowers borne in a very lax, few-flowered, secund spike. The sword-shaped leaves are strongly ribbed.

According to Dr. Rudolph Marloth, Cape Town, South Africa, this plant grows in sandy stretches which are moist only during the winter.

62654 to 62656. PISUM SATIVUM L. Fabaceae. Pea.

From Stirling, Scotland. Seeds purchased from W. Drummond & Sons, through D. N. Shoemaker, Bureau of Plant Industry. Received March 27, 1925.

Introduced for horticulturists testing pea varieties.

62654. Drummond's Early Multiple.

62655. New Main Crop Chancelot.

62656. The Bell.

62657. HELIANTHUS TUBEROSUS L. Asteraceae. Jerusalem artichoke.

From Saonara, Padova, Italy. Tubers purchased from Fratelli Sgaravatti. Received March 29, 1925.

Locally grown tubers.

62658. CITRUS WEBBERII Wester. Rutaceae. Alsem.

From Manila, Philippine Islands. Seeds presented by P. J. Wester. Received March 30, 1925.

A small, handsome tree, 15 to 30 feet high, which is particularly abundant in the mountain Province, Nueva Viscaya, and southern Luzon. The better forms have oblate, very juicy, acid fruits somewhat like the mandarin in appearance and up to 2½ inches in diameter; these may be used like the lemon. The species is very variable and appears promising as a citrus stock. (Wester.)

62659. VIOLA ODORATA L. Violaceae. Violet.

From Killalow, County Clare, Ireland. Plants purchased from Mrs. Stanistreet. Received February 7, 1925.

King of the Belgians (synonym, Kaiser Wilhelm). The large, rich, deep-purple flowers, very highly perfumed, are borne on long firm stems. This is a magnificent violet, probably the best single variety, and it is very rare. (Stanistreet.)

62660 to 62674.

From Algeria. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received March 21, 1925. Notes by Doctor Fairchild.

62660. ARGANIA SPINOSA (L.) Skeels (A. *sideroxyylon* Roem. and Schult.). Sapotaceae. Argan.

The argan tree of western Morocco is very limited in its range, occurring only in that part of the African continent. It grows to a large size and bears an abundance of light-yellow fruits somewhat resembling in shape small plums. Cattle and goats are said to feed upon these fruits, which contain a large amount of nourishment, although the fruits are exceedingly acrid to the taste. The seeds are very thick walled and go through the intestines of the animals undigested. These seeds are also used for the oil contained in them. Apparently the tree is not injured by frost, and it may thrive wherever hardy citrus grows.

62661. ATROPA BAETICA Willk. Solanaceae.

A species related to belladonna and of possible interest to drug-plant specialists. Presented by Professor Maire, of the University of Algiers.

62662. CAPPARIS SPINOSA L. Capparidaceae. Caper.

Var. *inermis*. A spineless form of the caper of commerce, presented by the Botanic Gardens, University of Algiers.

62663. CASUARINA SUBEROSA Otto and Dietr. Casuarinaceae.

A species with very large fruits (4 centimeters) and long, coarse, pendent branchlets, very distinct from *Casuarina equisetifolia*. This species is evidently hardier, for the trees from which these

62660 to 62674—Continued.

seeds were gathered have stood temperatures of 26° F. Presented by Doctor Trabut from his Jardin d'Essais at Maison Carree, Algeria.

62664. CASUARINA sp. Casuarinaceae.

Probably *Casuarina suberosa* × *C. cunninghamiana*. A form which appeared at the Jardin d'Essais of Maison Carree, Algeria. By judicious clipping it has produced a beautiful hedge which resembles closely those produced in Florida with *C. equisetifolia*. This form is apparently hardier, for Maison Carree has been visited by temperatures below 26° F., and it has never been injured.

62665. CORDIA OBLIQUA Willd. Boraginaceae.

A handsome shade tree from Cochinchina which has proved hardy in the Botanic Gardens of Mustapha, where the temperature sometimes goes below freezing. Because of its handsome foliage and good habit of growth, this may be worth considering as an avenue tree. Presented by Prof. R. Maire, director of the botanic gardens, University of Algiers.

62666. × EUCALYPTUS ALGERIENSIS Trabut. Myrtaceae.

A hybrid between *Eucalyptus rostrata* and *E. rudis* which has become naturalized in North Africa and now covers considerable areas of the hills around Algeria. It differs from *E. rudis* by its smooth trunk, its small flowers with the hemispherical operculum not beaked, and from *E. rostrata* by its buds, which are white like those of *E. rudis*. *Eucalyptus rudis* flowers in the month of December, *E. algeriensis* flowers in the spring, while *E. rostrata* flowers in July and August. Presented by Professor Maire, of the University of Algiers.

62667. HYOSCYAMUS FALEZLEZ Cos. Solanaceae.

This is known to the Touarregs as "Afahehlé." It is common in the southern part of the Sahara, where its toxic properties are well known to the natives. It can be eaten by camels, goats, and sheep, but is very poisonous to horses and donkeys. It is believed that Afahehlé fattens ruminants and also women, copulency among the latter being considered a mark of beauty. (*L. Trabut, in note under S. P. I. No. 60257.*)

62668. LENTILIA LENS (L.) W. F. Wight (*Lens esculenta* Moench.). Fabaceae. Lentil.

Var. *nigricans*. A very delicate variety of this genus which furnishes the lentil of commerce.

62669. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

An early variety of tomato called *Précocès Côtélées* (early ribbed) which is being grown along the seacoast of North Africa under the protection of wind-breaks made of the canes of *Arundo mauritanica* and which may prove unusually early when grown in southern Florida. The plants are trained to a single stem and pinched back.

62670. ONOPORDON DISSECTUM Murbeck Asteraceae. Cotton thistle.

Var. *costatum*. A composite which may prove as attractive for borders as the Arabian species, *Onopordon arabicum*. This variety, occurring in the sandy clearings in the forests of Mamora.

62660 to 62674—Continued.

at Kenitra, and between Sale and Tiflet, Morocco, was presented by its discoverer, Professor Maire, of the University of Algiers, Mustapha.

62671. PÆONIA CORIACEA Boiss. Ranunculaceae. **Peony.**

A Spanish peony, allied to *Pæonia albiflora*, with nearly unbranched, reddish stems and leathery leaves. The flowers are bright crimson.

62672. PILOCARPUS PENNATIFOLIUS Lcm. Rutaceae.

A handsome Brazilian tree with beautiful foliage and striking pendent spikes of pinkish red flowers. It is interesting in that the terminal flowers in the spike open before the basal ones, quite the opposite to the habit of ordinary flower spikes in which the first-formed flower buds on the spike open first. The leaves of this poisonous tree furnish the pilocarpin of the pharmacopœia.

62673. SCHINUS TEREBINTHIFOLIUS Raddi. Anacardiaceae. **Brazilian pepper tree.**

A particularly handsome tree growing beside the road to Ain Taiya, Algeria. I think it is quite possible that this form, grown as a shade tree in Algiers, is different from the bushlike form which is being used so extensively in southern Florida.

62674. STYRAX OFFICINALE L. Styracaceae. **Snowbell.**

A small, handsome tree, suitable for parks, with attractive white flowers, presented by Professor Maire, of the University of Algiers.

62675. ARECASTRUM sp. Phoenicaceae. **Palm.**

From South America. Seeds collected by Wilson Popenoe, agricultural explorer, Bureau of Plant Industry. Received February 28, 1925.

No. 714. Cumbi. A common ornamental palm in towns and villages of the Ecuadorian highlands. It has a slender trunk, attaining to 25 or 30 feet in height, surmounted by a crown of pinnate, strongly arcuate, grayish green leaves. As it grows at altitudes of 8,000 to 9,000 feet in Ecuador, I would expect it to be sufficiently frost resistant for cultivation in parts of California and Florida. So far as I have learned, it has little economic value; the leaves may be used for thatch, but the oval, dry fruits, each about 2 inches long, are not used for food. As a new ornamental palm for the warmest portions of the United States it is of more than passing interest. (*Popnoe.*)

62676. AXONOPUS SCOPARIUS (Fluegge) Hitchc. Poaceae. **Grass.**

From Guayaquil, Ecuador. Plants presented by J. A. Cleveland, through Wilson Popenoe, agricultural explorer, Bureau of Plant Industry. Received February 28, 1925.

No. 713. When Dr. A. S. Hitchcock was in Ecuador last year he secured seeds of a promising forage grass from the Hacienda La Teresita, near Bucay. His notes on this plant, which was called *Paspalum scoparium* at that time, are given under S. P. I. No. 58966. The seeds failed to grow, and at Doctor Hitchcock's request I have secured from La Teresita, through Mr. Cleveland, the owner of the hacienda, live plants of this grass, which will be tested in Florida and other subtropical regions. (*Popnoe.*)

62677 to 62691.

From South America. Collected by Wilson Popenoe, agricultural explorer, Bureau of Plant Industry. Received February 28, 1925. Notes by Doctor Popenoe.

62677 and 62678. DELOSTOMA ROSEUM (Karst. and Tr.) Schum. Bignoniaceae.

Ambato, Ecuador. *Cholán*. Seeds of a small tree, native to certain regions of Ecuador, and occasionally cultivated in parks and gardens. It is rather susceptible to frost, but will probably withstand the winters of southern Florida. Its lilac flowers resemble those of the catalpa in form and size.

62677. No. 704. A variety with pale-lilac flowers.

62678. No. 705. A variety with deep-lilac flowers.

62679. FRAGARIA CHILOENSIS (L.) Duchesne. Rosaceae. **Chiloe strawberry.**

No. 707. Ambato, Ecuador. Plants of the *frutilla*, or Chilean strawberry, which is cultivated extensively at Guachi, near Ambato. The character of this fruit and its culture in Ecuador is described under S. P. I. No. 52731, and more fully in the Journal of Heredity for December, 1921.

62680. GOSSYPIUM sp. Malvaceae. **Cotton.**

No. 693. Chota Valley, Ecuador. In recent years the cultivation of cotton has assumed considerable importance in northern Ecuador. The Chota Valley in particular has proved well suited to this crop. Though a few introduced varieties have been tested, the only one successfully grown at present is the so-called native cotton, presumably the same type as that cultivated in Peru. These seeds were obtained from the Hacienda San Rafael.

62681. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

Seeds presented by Prof. Julio Gaudron, Jardín Botánico de la Escuela Nacional de Agricultura, Lima, Peru. This is a primitive form of the tomato which grows wild in the vicinity of Lima. The plant is of vigorous habit and produces an abundance of tiny tomatoes, each about the size of a Concord grape.

62682. ONOSERIS HYSSOPIFOLIA H. B. K. Asteraceae.

No. 698. Chota Valley, Ecuador. While traveling in the high Andes of Ecuador three years ago my fancy was taken by an attractive daisylike flower which I often saw along the trail. I was unable at that time to obtain many seeds, and what few I secured failed to grow when planted at Washington. On this second visit, however, I found an abundance of seeds available.

I have seen this plant at elevations between 5,000 and 10,000 feet. It grows in the rockiest, most forbidding places, usually where few other plants are able to obtain a foothold. Apparently it requires very little moisture. When fully developed it forms a low, spreading clump 1 or 2 feet in breadth, with grayish foliage, reaching not more than 6 inches above the ground. The flowers are borne on slender stems 4 to 8 inches above the foliage; they are an inch and a half in diameter and vary from pale lilac-pink to deep rose-pink. Some of the

62677 to 62691—Continued.

shades are extremely pretty, others a bit pallid. It should be easy through selection to develop a strain producing nothing but bright-pink flowers. The plant seems to be a perennial in this climate, but I suspect it will stand no frost.

62683 to 62687. PERSEA AMERICANA Mill. (*P. gratissima* Gaertn. f.). Lauraceae. Avocado.

The avocados of the Chota Valley are an interesting group. The majority of them belong to the Mexican race, but quite a few are obviously of the lowland type which we call West Indian. Some of the trees seem almost intermediate in character between these two races, which leads to the belief that they may be of hybrid origin. The Mexican varieties of the Chota Valley are a superior lot, perhaps the finest which we have found during our explorations in tropical America.

The five varieties originally introduced in 1921, plus the five now obtained, give us a collection comprising some of the best forms grown in the Chota Valley.

62683. No. 688. Hacienda Carpuela. Avocado No. 1. This avocado is an oblong, light-green fruit, weighing about 12 ounces. It is probably not a Mexican; it may be a cross between this race and the West Indian; the characteristics of the fruit suggest this possibility. Since I was unable to see a mature specimen, I can not report upon the quality of the fruit, though I am assured by the owner of the tree that it is excellent. The seed cavity is large and the seed loose within. The foliage has no odor of anise when crushed.

62684. No. 689. Hacienda Carpuela. Avocado No. 2. This is a pear-shaped fruit with a distinct neck, pointed where it joins the stem. The weight is about 12 ounces; the color dull yellowish green. Since the leaves are distinctly anise scented, it seems probable that the variety belongs to the Mexican race. The seed is moderately large and tight in the cavity. I was unable to examine a mature specimen, hence I can not vouch for the quality of the flesh.

62685. No. 690. Hacienda Chalhua. Avocado No. 3. This avocado is said by the owner of the hacienda to produce fruits of a large size and excellent quality, but I was unable to see mature specimens and am not able to vouch for this personally. The foliage is not anise scented, hence I suspect the variety to be of the West Indian race, though it may be a cross between this and the Mexican. The fruit is pyriform, rather slender, broadly necked; maroon-purple; the weight uncertain, perhaps 1 pound in well-developed specimens. The skin is rather thick, but not so much so as in many varieties of the West Indian race. The flesh is a rich yellow; the seed is large and tight in the cavity.

62686. No. 691. The Huerta de los Dolores. Avocado No. 4. This and the following variety come from an orchard which has an interesting history. Over a hundred years ago the owner of the grove died, leaving the property to the Virgin of Dolores. The Bishop of Ibarra was named administrator.

62677 to 62691—Continued.

Some of the trees on this property are extremely old; I suspect, in fact, that they may have been planted by the Spanish monks who originally owned the haciendas of the Chota Valley. It is not unlikely that certain of these trees date from the eighteenth century. The largest have trunks 8 to 10 feet thick.

The avocado represented by this number is undoubtedly of the Mexican race. The fruit is broadly pyriform; green skinned, and weighs about 8 ounces; the seed is of medium size and tight in the cavity. The flesh is rich yellow and of excellent quality.

62687. No. 692. The Huerta de los Dolores. Avocado No. 5. This avocado, having the same interesting history as No. 691 [S. P. I. No. 62686], is not a true Mexican, since the leaves are not strongly anise scented. Most probably it is a cross between this race and the West Indian. The fruit is oblong-ovoid, about 12 ounces in weight, and maroon-purple; the seed is rather large and loose in the cavity; the skin is thick for a Mexican, thin for a West Indian; the flesh is creamy yellow and is said to be of excellent flavor.

62688. PRUNUS SEROTINA Ehrh. Amygdalaceae. Capulin.

No. 706. Ambato, Ecuador. Seeds of a large-fruited capulin obtained in the market. For a description of the capulin, see S. P. I. No. 52597 and the Journal of Heredity for February, 1922.

62689 and 62690. RUBUS GLAUCUS Benth. Rosaceae. Andes raspberry.

62689. No. 699. Ibarra, Ecuador. Plants of a rare albino, or white-fruited, form of the Andes raspberry. It was discovered by José Felix Tamayo and brought by him to the Hacienda la Victoria in Ibarra, where it is now growing vigorously.

The typical form of the Andes raspberry has maroon-colored fruits. They will be found described in the inventories under S. P. I. Nos. 55788 and 62014, and in the Journal of Heredity, vol. 12, No. 9, November, 1921. According to Señor Tamayo, the albino form yields fruits of excellent quality, differing from those of the typical *Rubus glaucus* only in color.

62690. No. 708. Ambato, Ecuador. Seeds of the typical form of this excellent berry obtained from fruits purchased in the market.

For previous introduction, see S. P. I. No. 52717.

62691. SOLANUM MEDIANS Bitter.

No. 681. Lima, Peru. Tubers presented by Prof. Julio Gaudron, Jardín Botánico de la Escuela Nacional de Agricultura. This is a potato-like species brought into the Botanic Garden of the School of Agriculture some years ago by Nicolas Esposito. It occurs wild on the coast of Peru, and Professor Gaudron believes it may prove of interest in connection with potato-breeding experiments, since it is exceedingly productive of tubers which are smaller than potatoes, being commonly 1 or 2 inches in length and not more than an inch in diameter. They have white, crisp flesh of very firm texture, but are not considered good to eat.

62692. DIOSPYROS LOTUS L. Diospyraceae. Persimmon.

From Taelingyeen, Chihli, China. Seeds collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received January 24, 1925.

No. 837. November 28, 1924. *Hei Tsao* (black date). (*Dorsett*.)

Introduced for trial as stock for cultivated varieties of oriental persimmons.

62693 to 62699.

From South America. Collected by Wilson Popenoe, agricultural explorer, Bureau of Plant Industry. Received February 28, 1925. Notes by Doctor Popenoe.

62693 to 62696. SOLANUM TUBEROSUM L. Solanaceae. Potato.

62693 and 62694. Tubers purchased in the market at Lima, Peru, said to have been grown in the vicinity of Huancayo, high up in the Andes, east of Lima.

If the yellow-fleshed potatoes of the Andes can be successfully grown in the United States, I believe they will prove a distinct addition to our list of foodstuffs. The eyes are deep, however, and the tubers are not as large as those of standard varieties now grown in the United States. In quality they excel all other potatoes. This is not alone my opinion but that of numerous other Americans who have eaten them in the Andean countries.

62693. No. 679. These tubers are irregularly round, 2 to 3 inches in diameter; dull magenta-red externally, with very deep eyes. The flesh is rich yellow, mealy when cut, and of a rich nutty flavor quite unknown in North American potatoes.

62694. No. 680. The tubers of the variety are small, free from objectionably small eyes, and the flesh is even deeper yellow than that of No. 679 [S. P. I. No. 62693].

62695 and 62696. When in Ecuador in 1921 I secured and forwarded to the United States tubers of the Chaucha potato from the Province of Carchi in northern Ecuador. The potato specialists of the Bureau of Plant Industry, who are working with this crop, have found the Chaucha type distinct from other potatoes in that the tubers do not require to be stored before planting, but can be dug and replanted the same day. This characteristic gives the Chaucha type a certain importance in Ecuador, because it enables the farmer to maintain a constant succession of crops, and in the United States because plant breeders are desirous of having all possible new characters for use in breeding.

For previous introduction, see S. P. I. No. 53216.

62695. No. 694. The tubers listed under this number include several varieties. They were presented by J. F. Tamayo, of Ibarra, Ecuador.

62696. No. 695. These tubers are from the vicinity of Mira, Province of Carchi, Ecuador, and were presented by Jorge Benites. This

62693 to 62699—Continued.

variety differs from most other chauchas in having tubers which are long and slender, suggesting small sweet potatoes.

62697. SOLANUM sp.

No. 682. Tubers presented by Prof. Julio Gaudron, Jardín Botánico de la Escuela Nacional de Agricultura, Lima, Peru. Though this plant is grown at the Botanic Garden under the name *Solanum maglia*, Dr. W. E. Safford believes it is not this species. Its tubers, which are more or less round in form and 1 or 2 inches in diameter, are of no value as food. The plant, however, is of interest to breeders for hybridizing with the true potato.

62698. VALLEA STIPULARIS L. f. Elaeocarpaceae.

No. 709. Plants presented by Prof. Augusto Martínez, Ambato, Ecuador. This handsome Andean tree, native to high, cool regions in Ecuador and Colombia, seems worthy of cultivation in other regions. It grows to a height of 20 or 25 feet, forming a broad, compact crown of attractive foliage. The flowers, which are borne in clusters about 2 inches long, are half an inch in diameter and deep pink. I first saw this plant in Colombia three years ago and sent seeds of it from that country. I do not believe, however, that it has yet been established in the United States, and I therefore secured this lot of plants from the garden of Professor Martínez, where there is one old specimen, brought from the mountains many years ago. The tree produces abundant suckers, by which means it is easily propagated.

For previous introduction, see S. P. I. No. 51800.

62699. ZEPHYRANTHES sp. Amaryllidaceae.

No. 683. Bulbs presented by Julio Gaudron, Jardín Botánico de la Escuela Nacional de Agricultura, Lima, Peru. While walking through the test orchard of the School of Agriculture I noticed a number of bright-yellow flowers peeping up here and there through the grass. Professor Gaudron informed me that these belonged to two species, *Pyrolirion flavum* and *P. aureum*, and he offered to have some bulbs collected for trial in the United States. The lot represented by this number was supplied in consequence of this promise.

The flower strongly resembles in form and size the common Zephyranthes of the United States (*Z. atamasco*), but it varies in color from bright yellow to golden yellow.

62700 to 62744.

From Elstree, Herts, England. Plants presented by Vicary Gibbs, Aldenham House Gardens. Received March 3, 1925. Notes by Edwin Beckett, superintendent, Aldenham House Gardens.

62700. ASTER sp. Asteraceae.

Var. *Mrs. Pierpont Morgan*. A new aster which we raised last year.

62701. BERBERIS AQUIFOLIUM Pursh. Berberidaceae. Oregon hollygrape.

Var. *grandifolium*. A new introduction with strikingly handsome foliage. Raised at Aldenham.

62702. BUDDLEIA DAVIDII Franch. Loganiaceae. Butterfly bush.

62700 to 62744—Continued.

Var. *Nanhoensis*. A Chinese variety of spreading habit and free blooming, bearing bright rosy mauve flowers.

62703. *CARYOPTERIS TANGUTICA* Maxim. Bluebeard. Verbenaceae.

Farrer No. 350. A deciduous semi-shrub from China, superior to *Caryopteris nastacanthus*, bearing profusely, bright violet-blue flowers.

62704. *CEANOTHUS HYBRIDUS* Hort. Rhamnaceae.

Var. *Marie Simon*. A lovely lilac-pink hybrid.

62705. *CLEMATIS MONTANA WILSONII* Sprague. Ranunculaceae.

A hardy climbing clematis, native to western China, which often attains a height of 20 feet or more. The very abundant, sweet-scented flowers, about an inch long, are white with occasionally yellowish or rosy tinges, and are produced in June and July with generally a second flowering in the autumn.

62706. *CHAMAECYPARIS LAWSONIANA* (Murray) Parl. Pinaceae.

Lawson cypress.

Var. *Fletcherii*. This is a very distinct and dainty variety with glaucous foliage.

62707. *DEUTZIA TAIWANENSIS* (Maxim.) C. Schneid. Hydrangeaceae.

A new species from the mountains of Formosa, with white or pinkish white flowers, belonging to the same group as *Deutzia scabra*.

62708. *DEUTZIA* sp. Hydrangeaceae.

Farrer No. 109. A striking and distinct medium-growing shrub with white, wavy-edged flowers; introduced from China by the late Reginald Farrer.

62709 to 62712. *DIERVILLA FLORIBUNDA* Sieb. and Zucc. Caprifoliaceae.

Crimson weigela.

62709. *Aldenham Glow*. A choice deep-scarlet flowered form resembling "Eva Rathke."

62710. *Avante Garde*. An early flowering, rich pink variety.

62711. *Emile Galle*. A very fine, dark-pink form.

62712. *Gloire de Bosquets*. The corolla without is carmine and purplish pink within; very effective.

62713. *DIERVILLA JAPONICA SINICA* Rehder. Caprifoliaceae.

Weigela.

A Chinese variety with campanulate, pale-pink flowers. The shrub is 6 feet or less high, with slender-stemmed, oval leaves hairy beneath; the flowers are in small, terminal clusters.

62714. *ESCALLONIA* sp. Escalloniaceae.

C. F. Ball. A beautiful pink hybrid raised by the late Mr. Ball at the Botanic Gardens, Glasnevin.

62715. *ESCALLONIA* sp. Escalloniaceae.

Var. *rubra nana*. This is a charming dwarf form of the red-flowered species and is suitable for rockeries.

62716 to 62718. *EUONYMUS JAPONICUS* L. f. Celastraceae.

62716. *President Gauthier*. A strikingly variegated variety of the trailing evergreen, "spindle wood."

62700 to 62744—Continued.

62717. An evergreen with variegated foliage and dwarf compact habit, which is a real gem.

62718. A tiny-leaved, very distinct dwarf form.

62719 and 62720. *EUONYMUS RADICANS* Siebold. Celastraceae.

62719. *Little Gem*. A pretty, white-variegated form of dwarf habit.

62720. A distinct, rather stiff-habited variety.

62721. *EUONYMUS EUROPAEUS* L. Celastraceae.

Spindle tree.

A most distinct form of *Euonymus europaeus*, with large foliage and handsome pink fruit.

62722. *EUONYMUS* sp. Celastraceae.

Vilmorin No. 5521. A handsome, free-flowering, tall, pyramidal form of the *Euonymus japonicus* group. A really excellent evergreen introduction from China.

62723. *ILEX FARGESII* Franch. Aquifoliaceae.

Holly.

A Chinese holly which is described (Journal de Botanique, vol. 12, p. 255) as a shrub with black bark and dull-green, narrowly oblong leaves about 5 inches long, indistinctly toothed. The globose, red berries are in small axillary clusters.

62724. *LAVANDULA VERA* DC. Menthaceae.

Lavender.

Munstead Blue. This form is of bushy habit and flowers early, carrying its bright-blue spikes most freely.

62725. *LAUROCERASUS OFFICINALIS* Roemer (*Prunus laurocerasus* L.). Amygdalaceae.

Cherry laurel.

A form with curiously curled leaves.

62726. *LAUROCERASUS LUSTANICA* (L.) Roemer (*Prunus lusitanica* L.). Amygdalaceae.

Portugal laurel.

An interesting variegated form of the Portugal laurel which first occurred at Aldenham.

62727. *LAUROCERASUS OFFICINALIS* Roemer (*Prunus laurocerasus* L.). Amygdalaceae.

Cherry laurel.

This makes a very handsome low-spreading evergreen shrub with narrow, flat-growing foliage.

62728 and 62729. *LAVANDULA VERA* DC. Menthaceae.

Lavender.

62728. *Twickel Purple*. A form having fine, bold foliage with good heads of deep-purple flowers.

62729. *Nana*; *Glasnevin* variety. A quite distinct form.

62730. *LONICERA PILEATA* Oliver. Caprifoliaceae.

Privet honeysuckle.

Forma *yunnanensis*. According to Curtis's Botanical Magazine (pl. 8060) this form differs from the species only in the very small, thick, roundish leaves. *Lonicera pileata* is a much-branched, low, evergreen shrub from central and western China, about 1 foot high, with slender branches, oblong-lanceolate, dark-green leaves, half an inch to 1 inch long, and pale-yellow flowers in almost sessile pairs.

62700 to 62744—Continued.

62731 to 62733. *MALUS SYLVESTRIS* Mill. (*Pyrus malus* L.). Malaceae. Apple.

62731. *Dartmouth Crab* (grafted). The flowers and large, deep reddish purple fruits make this a very attractive tree. The fruits are most suitable for making preserves.

62732. *Eleyi* (grafted). This is a new and very beautiful crab apple raised by Charles Eley and is a lovely flowering and fruiting form.

62733. *Gibbs' Golden Gage* (grafted). The tree bears many medium-sized waxy, almost translucent yellow fruits which give a very attractive appearance.

62734. *POPULUS RASMOWSKIANA* Schroed. Poplar. Solanaceae.

A supposed hybrid between *Populus nigra* and *P. suaveolens* which, according to the Gardeners' Chronicle (ser. 3, vol. 18, p. 108), is a large tree with cylindrical shoots and roundish leaves; the latter are smaller than those of *P. petrowskiana*, which this hybrid resembles very closely.

62735. *POPULUS SZECHUANICA* C. Schneid. Salicaceae. Szechwan poplar.

This large poplar is said to be a common tree in the forests of Szechwan, China. In habit and general appearance it resembles *Populus suaveolens*, but the branches are more massive and the branchlets are stouter. It has proved hardy at the Arnold Arboretum, Jamaica Plain, Mass., and also at Rochester, N. Y. The foliage is colored red and bronze in early spring.

62736. *SKIMMIA FORTUNEI* RUBELLA (Carr.) Rehder. Rutaceae.

This is similar to *Skimmia japonica*, but is more dwarfed in habit and, furthermore, native to China. The dark-green leaves are narrow and acuminate, the white flowers are in oblong panicles, and the fruits are dull crimson. The variety differs from the species in having reddish peduncles, pedicels, and buds.

62737. *SKIMMIA JAPONICA VEITCHII* (Carr.) Rehder. Rutaceae.

A densely branched low shrub, native to Japan, with obovate yellowish green leaves crowded at the ends of the branchlets, yellowish white flowers, and bright-scarlet berries about a third of an inch in diameter. This is probably not hardy north of Washington, D. C.

62738. *STRANVAESIA DAVIDIANA* Decaisne. Malaceae.

This may be trained as a small, standard tree, otherwise of bush form. The foliage is evergreen, and the terminal corymbs of white flowers are soon followed by the handsome bunches of scarlet fruits.

For previous introduction, see S. P. I. No. 56695.

62739. *VIBURNUM DAVIDI* Franch. Caprifoliaceae.

This Chinese viburnum is one of the most distinct and most remarkable of the genus. It is a low plant, entirely hardy, with large persistent, shining leaves resembling those of a rhododendron, the

62700 to 62744—Continued.

shoots of the year terminating in an umbel of white flowers, appearing in April. These flowers are succeeded by steel-blue fruits, ripening in autumn. It attains a height of from 25 to 50 centimeters and flourishes in shady peaty soil.

62740. *VIBURNUM FOETIDUM RECTANGULATUM* (Graebn.) Rehder. Caprifoliaceae.

This western Chinese variety is described by Alfred Rehder of the Arnold Arboretum, as a spreading shrub ultimately about 12 feet high, with oblong or narrower leaves, white flowers in cymes 2 to 4 inches wide, and scarlet ovoid berries.

62741. *VIBURNUM FRAGRANS* Bunge. Caprifoliaceae.

A rare species introduced from China by Farrer. This will undoubtedly prove one of our very best early-flowering shrubs (flowering during March and April) of high merit like *Viburnum carlesii*. The flowers are deliciously fragrant and are white with a rose tint.

62742. *VIBURNUM HARRYANUM* Rehder. Caprifoliaceae.

An evergreen bearing quaint, small, round leaves and long, black fruits; very distinct. Native to China.

62743. *VIBURNUM HENRYI* Hemsl. Caprifoliaceae.

An evergreen, a most distinct species, with long, narrow leaves and white flowers in pyramidal panicles followed by beautiful fruits, first red and then turning black.

62744. *VIBURNUM PROPINQUUM* Hemsl. Caprifoliaceae.

A distinct evergreen shrub from China, bearing greenish white flowers in good-sized cymes which are followed by bluish black fruits.

62745. *HELICANTHUS TUBEROSUS* L. Asteraceae. Jerusalem artichoke.

From Toronto, Canada. Tubers purchased from George Keith & Sons. Received March 5, 1925.

Canadian-grown Jerusalem artichokes.

62746 to 62749. *HELICANTHUS TUBEROSUS* L. Asteraceae. Jerusalem artichoke.

From Paris, France. Tubers purchased from Vilmorin-Andrieux & Co. Received March 5, 1925. French-grown tubers.

62746. A spindle-shaped form.

62747. An ordinary, white form.

62748. A pink form.

62749. An improved, white form.

62750. *OLEA EUROPAEA* L. Oleaceae. Olive.

From Pistoia, Florence, Italy. Plants purchased from Giannino Giannini. Received March 7, 1925.

Grossa di Spagna. Very large olives, especially suited for preserving and drying. (1925 *Catalog of Giardino Allegra, Catania, Sicily.*)

Introduced for olive breeders.

62751 to 62753.

From Chihli, China. Scions collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received March 6, 1925. Notes by Mr. Dorsett.

January 15, 1925. From the Fa Hua Ssu temple, Silver Mountain, near Haitzu, at an altitude of 1,200 feet.

62751. AMYGDALUS PERSICA PLATYCARPA (Decaisne) Ricker. Amygdalaceae.
Flat peach.

No. 1869. The fruit, which ripens in early August, is creamy white with a pink blush and is about 2 inches in diameter.

62752. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae.
Peach.

No. 1870. A large Chinese freestone peach, about 3 to 3½ inches in diameter, which ripens in August. The fruits are white with a pink blush.

62753. PRUNUS sp. Amygdalaceae. Plum.

No. 1868. The fruits ripen in July and are about 1 to 1½ inches in diameter. The skin and flesh are both yellow.

62754. XANTHOSOMA CARACU KOCH and Bouche. Araceae. **Yautia.**

From San Juan, Porto Rico. Cormels presented by O. W. Barrett, agricultural adviser, Department of Agriculture and Labor. Received March 6, 1925.

Rollica. This is the best variety native to Porto Rico. It may be grown on a variety of soils. The yield is 2 to 4 pounds per hill. The tubers are of large size, white, mealy, and smooth. The rhizome is also eaten. It occurs in Belize, Trinidad, and Cuba. A very similar form produces larger (?) tubers in Venezuela. (*Barrett.*)

62755 to 62761.

From Orleans, France. Plants presented by Leon Chénault, through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received March 9, 1925.

62755. BERBERIS RUGICANS Hort. Berberidaceae. **Barberry.**

A striking, new species having a peculiarly handsome red foliage. (*Fairchild.*)

62756. × BERBERIS STENOPHYLLA Lindl. Berberidaceae. **Barberry.**

Var. *Irwini*. A plant of compact habit; excellent for the rock garden. (*Chénault.*)

A hybrid between *Berberis darwini* and *B. stenophylla*. (*Fairchild.*)

62757. COTONEASTER SALICIFOLIA FLOCCOSA Rehd. and Wils. Malvaceae.

A graceful shrub, up to 13 feet high, which bears dense corymbs of white flowers and light-red, roundish fruits. Native to western China at altitudes of 7,500 to 9,800 feet.

For previous introduction, see S. P. I. No. 60649.

62758 to 62760. PAEONIA spp. Ranunculaceae.

62755 to 62761—Continued.

62758. PAEONIA LUTEA Delavay. **Golden peony.**

A shrubby Chinese peony, with a short, woody stem 1 or 2 feet high and deep-green, leathery, 3-parted leaves, white beneath, and about a foot in length. The golden yellow, single or slightly double flowers are 2½ inches across.

For previous introduction, see S. P. I. No. 59425.

62759 and 62760. PAEONIA LUTEA × ? **Peony.**

62759. Madame Louis Henry. A hybrid of *Paeonia lutea* bearing large, semidouble flowers which are a brilliant deep carmine, shaded with coppery yellow, sometimes bronzed buff yellow; the numerous stamens are a unique orange yellow. (*Chénault.*)

62760. Souvenir du Professeur Maxime Cornu, a hybrid of *Paeonia lutea*. The very large, fragrant full flowers of perfect form are bright yellow, the edges of the petals being carmine pink. (*Chénault.*)

62761. PRUNUS CERASIFERA Ehrh. Amygdalaceae.

Var. *Blicicana flore-pleno*. A variety bearing large, double, pink flowers, of a beautiful shape. (*Chénault.*)

62762. PYRUS sp. Malvaceae. **Pear.**

From Chihli, China. Scions collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received March 31, 1925.

No. 2116. Chiu-chou, February 13, 1925. *Ya Li* (duck pear). This pear is light yellow, about 3 inches in diameter, and ripens about the middle of September. (*Dorsett.*)

For previous introduction, see S. P. I. No. 62262.

62763. VIBURNUM DAVIDI Franch. Caprifoliaceae.

From Orleans, France. Seedlings presented by Leon Chénault, through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received March 9, 1925.

This hardy Chinese viburnum, one of the most distinct of the genus, grows 10 to 30 inches high and flourishes in the shade on peaty soil. It has large, persistent, shining green leaves resembling those of a rhododendron. The current year's shoots terminate in umbels of white flowers, which appear in April. These flowers are succeeded by steel-blue fruits which ripen during the autumn.

62764. CASTANEA sp. Fagaceae. **Chestnut.**

From Chihli, China. Seeds collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received March 10, 1925.

No. 1871. Fa Hua Ssu temple, Silver Mountain, near Haitzu, January 15, 1925. These chestnuts are said to ripen later than those sent in under Nos. 790 and 791 [S. P. I. Nos. 61834 and 61835]. (*Dorsett.*)

62765 to 62769.

From Kew, England. Plants presented by Dr. A. W. Hill, director, Royal Botanic Gardens. Received March 9, 1925.

62765. *AESCULUS CHINENSIS* Bunge. Aesculaceae.

A hardy Chinese horse-chestnut, sometimes 60 feet high, with finely toothed, short-stalked leaflets and elongated cylindrical spikes of small, white flowers. It has proved hardy at the Arnold Arboretum, Jamaica Plain, Mass.

62766. *GLEDITSIA TRIACANTHOS* L. Caesalpiniaceae. Honey locust.

Var. *fastigiata*. A fastigate variety of the honey locust.

62767. *PRUNUS ZABELIANA* Hort. Amygdalaceae.

62768. *ROBINIA PSEUDACACIA* L. Fabaceae. Common locust.

Var. *fastigiata*. A fastigate variety of the black locust.

62769. *TILIA INTONSA* Wilson. Tiliaceae. Linden.

An Asiatic linden, closely related to *Tilia chinensis* and described (Plantae Wilsonianae, vol. 2, p. 365) as a large tree, up to 75 feet in height, which grows commonly in the forests of western Szechwan, China. The bark is brownish gray, and the broadly oval, membranous leaves, about 5 inches long, are light yellowish green above, with ashy green lower surfaces.

62770 and 62771. *TRIFOLIUM PRATENSE* L. Fabaceae. Red clover.

From Danzig, Danzig Free State. Seeds purchased from John Hussey, Schwedisch-Danziger Saathandels Gesellschaft, "Sativa." Received March 2, 1925.

Locally grown Polish strains.

62770. A. **62771.** B.

62772 to 62774. *SOJA MAX* (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. Soy bean.

From Kaying, via Swatow, China. Seeds presented by Miss Louise Campbell. Received March 6, 1925.

62772. Big yellow bean.

62773. Small black bean.

62774. Small yellow bean.

62775 and 62776. *HELIANTHUS TUBEROSUS* L. Asteraceae. Jerusalem artichoke.

From Reading, England. Tubers purchased from Sutton & Sons. Received March 12, 1925.

English-grown tubers.

62775. Purple. **62776.** White.

62777 to 62780. *FIGUS CARICA* L. Moraceae. Fig.

From Granada, Spain. Cuttings presented by Señor Juan Leyva, through Austin C. Brady, American consul, Malaga. Received March 13, 1925. Notes by Ira J. Condit, of the University of California.

62777. *Brebal*. A black fig very similar to our Mission.

62777 to 62780—Continued.

62778. *Castellana*. A black fig similar to *Brebal* but having a sweeter, finer pulp which is of better quality.

62779. *Isabelle*. This is a common fig at Granada. It is used there for fresh-fruit purposes and in the Turon district for drying. The trees are very productive, producing thin-skinned figs which are borne on stems of medium length.

62780. *Partridge Eye*. A common variety around Turon. The trees are vigorous, producing dark figs which turn to straw yellow; good for drying.

62781. *SORBUS HYBRIDA* L. (*Pyrus pinnatifida* Ehrh.). Malaceae.

From Edinburgh, Scotland. Seeds presented by William Wright Smith, regius keeper, Royal Botanic Garden. Received March 6, 1925.

It is generally believed that this tree, which is found wild in central and northern Europe, is a natural hybrid between *Sorbus aucuparia* and *S. intermedia*. It becomes 40 feet or more in height, with ascending branches and handsome, narrowly oval leaves. The white flowers, half an inch wide, are produced in May in corymbs 3 to 5 inches across, and the roundish, bright-red fruits are nearly half an inch in length.

62782 to 62788. *MUSA TEXTILIS* Nee. Musaceae. Abacá.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received March 13, 1925.

A collection of Philippine abacá varieties.

62782. *Bisaya*.

62783. *Inusa*.

62784. *Itom C. A. 10302*.

62785. *Libuton C. A. 100*.

62786. *Lono*.

62787. *Lono sucker*.

62788. *Sinanta Cruz*.

62789 and 62790.

From Oaxaca de Juarez, Oaxaca, Mexico. Seeds presented by Prof. C. Conzatti. Received February 21, 1925.

From the canyon of Tomellin, about 90 miles north of this city. (*Conzatti*.)

62789. *GOSSYPIUM* sp. Malvaceae. Cotton.

62790. *SELERA GOSSYPIOIDES* Ulbrich. Malvaceae.

A shrub, native to Oaxaca, with heart-shaped, 3-lobed leaves and purplish flowers.

62791. *SACCHARUM OFFICINARUM* L. Poaceae. Sugar cane.

From Mayaguez, P. R. Cuttings presented by the agricultural experiment station, through E. W. Brandes, Bureau of Plant Industry. Received March 14, 1925.

Java Unknown. This variety was located in a field of sugar cane near Mayaguez, P. R., in 1919. It was apparently distributed by the Federal experiment station there, but the label was lost, and it has since been known in literature by the above

name. It is a slender variety, very similar to Uba, and is immune to mosaic of sugar cane. It is rather slow in maturing, very high in fiber, and, on account of the clinging leaf sheaths, is difficult to harvest. Yields in the presence of mosaic disease are, however, very high. (*Brandes.*)

62792 and 62793. HELIANTHUS spp. Asteraceae.

From Milan, Italy. Tubers purchased from Fratelli Ingegnoli. Received March 14, 1925. Notes by Fratelli Ingegnoli.

Italian strains of native American sunflowers used as food in Italy.

62792. HELIANTHUS DECAPETALUS L. Thin-leaf sunflower.

Produces tender, sweet-flavored roots which are eaten fried, boiled, etc.

62793. HELIANTHUS SCABERRIMUS ELL. Prairie sunflower.

The small tubers, when fried, resemble the artichoke in flavor.

62794 to 62796.

From China. Collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received March 2, 1925. Notes by Mr. Dorsett.

62794. BRASSICA sp. Brassicaceae.

No. 1898. January 19, 1925. Seeds of a small, oil vegetable, purchased from Nau Yu Shing, of Nauhshimen. The plant after being chopped up is fried with meat.

62795. RAPHANUS SATIVUS L. Brassicaceae. Radish.

No. 1897. January 19, 1925. Seeds of a large radish, purchased from Nau Yu Shing, Nauhshimen. This radish, green outside and light green within, is used as a rule only for pickling.

62796. ZEPHYRANTHES CARINATA Herbert. Amaryllidaceae.

No. 1914. January 27, 1925. Bulbs secured from Mr. Li, of the village of Kechiatsu, near Feingtai, Chihli. The Chinese call these *tsang pu lien* (grass lily).

62797. ALLIUM CEPA L. Liliaceae. Onion.

From Peking, Chihli, China. Bulbs collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received March 6, 1925.

No. 1873. January 15, 1925. Secured in the Peking market, where they are known as "Small foreign onion." (*Dorsett.*)

62798. VIOLA ODORATA L. Violaceae. Violet.

From Killalaw, County Clare, Ireland. Plants purchased from Mrs. Stanistreet. Received February 7, 1925.

Rosea Delicatissima. A new French violet which is delicate rose and white and very hardy. It flowers abundantly in the spring and is very pretty and uncommon. (*Stanistreet.*)

62799 and 62800.

From Cape Town, Union of South Africa. Seeds presented by W. S. Duke & Co. Received March 11, 1925.

62799 and 62800—Continued.

62799. ANTHOLYZA REVOLUTA Burm. f. Iridaceae.

A slender-stemmed plant, closely allied to gladiolus. The bright-red flowers are produced in a few-flowered, very lax spike. Native to southwestern South Africa.

62800. ORNITHOGALUM THYRSOIDES Jacq. Liliaceae.

Flowers with a dark-brown central blotch. (*Duke.*)

In South Africa, where this bulbous ornamental is native, it is known as one of the "chinkerichees." The globose bulb is about 2 inches thick, and the five or six very narrow leaves are 6 to 12 inches in length. The flowers, sometimes an inch long under cultivation, are borne in rather dense racemes on a scape about a foot high. In a dried condition these make excellent "everlasting" flowers.

62801. PYRUS sp. Malaceae. Pear.

From Simla Hills, Punjab, India. Seeds presented by S. E. Stokes. Received March 11, 1925.

This Himalayan wild pear is called "shegal," or "kanth," by the natives. The fruit is bronze colored, perfectly round, and the size of a large cherry. The tree grows extensively in the mountains at altitudes of 4,000 to 8,000 feet. (*Stokes.*)

For previous introduction, see S. P. I. No. 58512.

62802. CYMBOPOGON MARTINI (Roxb.) Stapf. (Andropogon martini Roxb.). Poaceae. Rusa-oil grass.

From Dehra Dun, United Provinces, India. Seeds presented by R. N. Parker, forest botanist. Received March 16, 1925.

A stout, perennial grass, native to northern India, which grows to a height of about 6 feet and has long, very smooth leaves of a rich green color and delicate texture. The perfume known commercially as Rusa oil is obtained from this plant, and this introduction has been made for specialists experimenting with perfume-yielding plants.

62803. JASMINUM sp. Oleaceae. Jasmine.

From Grasse, France. Plants presented by Bruno Court, through Warren E. Burns, New York City, N. Y. Received March 17, 1925.

To be tested as a source of perfume.

62804. HELIANTHUS TUBEROSUS L. Asteraceae. Jerusalem artichoke.

From Goteborg, Sweden. Tubers purchased from Goteborgs Trädgårdsförening. Received March 17, 1925.

Swedish grown Jerusalem artichokes.

62805. LILIUM TIGRINUM Ker. Liliaceae. Tiger lily.

From Tottori, Japan. Bulbs presented by Prof. Akio Kikuchi, Tottori Agricultural College. Received March 18, 1925.

Japanese-grown bulbs.

62806 and 62807. FICUS spp. Moraceae.

From Amani, Tanganyika Territory, Africa. Seeds presented by A. H. Kirby, Director of Agriculture. Received March 6, 1925.

62806. FICUS BUSSEI Warb.

A large, handsome tropical tree, described (Engler, Botanische Jahrbücher, vol. 46, p. 213) as 50 feet in height with a broad, flat crown exceeding in diameter the height of the tree. The leathery leaves are oblong or oblong-oval. Native to the coast of Zanzibar.

62807. FICUS VOLKENSHI Warb.

According to Hutchinson (Flora of Tropical Africa, vol. 6, sect. 2) this is a shrub or small tree, with narrow, papery, dull-green leaves and axillary receptacles about half an inch long. It is reported to yield the best "bark cloth" known in Uganda, where this shrub is native.

62808 to 62814.

From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. Received March 7, 1925.

62808. ACER OBLONGUM Wall. Aceraceae. Maple.

A subtropical maple described by Hiern (Hooker, Flora of British India, vol. 1) as a tree 40 to 50 feet tall, with a trunk 1 or 2 feet in diameter, and dark-green, oblong, entire leaves up to 7 inches long. The reddish wood is used for making agricultural implements.

62809. ACER THOMSONI Miquel. Aceraceae. Maple.

A large, handsome tree, with thin gray bark and very large shallow-lobed leaves up to 10 inches long. Native to Sikkim and Bhutan, India, at about 8,000 feet altitude.

62810. ILEX SIKKIMENSIS Kurz. Aquifoliaceae. Holly.

A Himalayan holly described by Kurz (Journal of the Asiatic Society of Bengal, vol. 44, pt. 2) as a moderately tall tree with stout branches; broadly oblong, leathery leaves 5 or 6 inches long and globular yellow berries.

62811. LAUROCERASUS ACUMINATA (Wall.) Roemer (Prunus acuminata Hook. f.). Amygdalaceae.

A slender-branched tree 30 to 40 feet in height, with narrow leaves up to 7 inches long and many-flowered racemes of yellowish white flowers. The fruit is a small, ovoid drupe. The tree is found in the central and eastern Himalayas at altitudes of 5,000 to 7,000 feet.

For previous introduction, see S. P. I. No. 55685.

62812. LITSEA ZEYLANICA Nees. Lauraceae.

An evergreen tree of moderate height, with leathery leaves about 6 inches long, dense clusters of yellowish white flowers, and subglobose berries a third of an inch in diameter. Native to southern India.

62813. MICHELIA CATHCARTH Hook. f. and Thoms. Magnoliaceae.

A lofty tree with magnolialike foliage and terminal white flowers about an inch in diameter. It is native in the temperate forests of the Sikkim Himalayas,

62808 to 62814—Continued.

where the moderately hard, dark-brown heartwood is used for planking and for making tea boxes.

For previous introduction, see S. P. I. No. 58908.

62814. MICHELIA LANUGINOSA Wall. Magnoliaceae.

This species is characterized by the white, woolly lower surfaces of its long, narrow, magnolialike leaves. The white, solitary flowers are 3 to 4 inches across. Although this species is a spring-flowering tree in northern India, where it is native, in Sikkim it is said to form an autumn-flowering bush.

For previous introduction, see S. P. I. No. 58910.

62815 to 62846. SOJA MAX (L.) Piper (Glycine hispida Maxim.). Fabaceae. Soy bean.

From Nanking, China. Seeds presented by George E. Ritchey, University of Nanking, through John H. Reiser, University of Nanking. Received March 11, 1925. Notes by Mr. Ritchey.

62815. No. 400. Originally from Shantung. Plant about 80 centimeters high; leaves large, round, and yellowish green; flowers white or pink; growing season about 165 days.

62816. No. 401. Originally from Shantung. A bushy plant about 55 centimeters high; the leaves are large, deep green, and egg shaped; the flowers are white; growing season about 150 days.

62817. No. 406. Originally from Kashing. This plant grows to a height of 110 centimeters. The leaves are large, deep green, and egg-shaped, and the flowers are purple. The growing season is about 170 days.

62818. No. 408. This bushy plant, about 60 centimeters in height, bears medium-sized, rather round green leaves and white flowers. The growing season is about 150 days.

62819. No. 435. A bushy plant, about 47 centimeters in height, with small, deep-green, egg-shaped leaves, and white flowers. The growing season is about 150 days.

62820. No. 443. Originally from Hupeh. This plant is bushy and about 50 centimeters in height; the leaves are small, round, and deep green; the flowers are white and purple. Growing season about 150 days.

62821. No. 445. Originally from Shantung. Bushy plant about 40 centimeters high, with medium-sized, egg-shaped, yellowish green leaves, and white or purple flowers. Growing season about 130 days.

62822. No. 446. Originally from Kashing. Bushy plant about 90 centimeters high; leaves large, egg-shaped, and deep green; flowers purple; growing season about 150 days.

62823. No. 485. Originally from Kaifeng, Honan. This plant is about 90 centimeters high and has few branches; the leaves are medium sized, round, and green; the flowers are white; growing season about 130 days.

62815 to 62846—Continued.

62824. No. 488. Originally from Kash- ing. Plant about 90 centimeters high; leaves medium sized, elongated, and deep green; the flowers are purple; growing season about 150 days.

62825. No. 493. Originally from Shan- tung. This plant is about 97 cent- imeters in height; the leaves are me- dium sized, roundish, and green; the flowers are white or purple; growing season about 130 days.

62826. No. 497. Originally from Kash- ing. Plant about 87 centimeters high; leaves large, egg-shaped, and green; flowers purple; growing season about 130 days.

62827. No. 4024. Plant about 127 centi- meters high; leaves large and elon- gated, and yellowish green; flowers white; growing season about 130 days. Resistant to pod worms.

62828. No. 4102. Originally from Peking. Plant about 47 centimeters high; leaves small and elongated, and deep green; flowers purple; growing season about 90 days.

62829. No. 4103. Originally from Peking. Plant bushy and about 50 centimeters high; leaves roundish acuminate, deep green; flowers purple or white; grow- ing season about 90 days.

62830. No. 4104. Originally from Peking. This bushy plant is about 48 centi- meters high; the leaves are medium sized, egg-shaped, and yellowish green; the flowers are purple or white; grow- ing season about 90 days.

62831. No. 4105. Yien Shan, Chihli.

62832. No. 4106. Yien Shan, Chihli.

62833. No. 4107. Patung, Hupeh.

62834. No. 4108. From the market, Nan- king.

62835. No. 4109. Nanking. From the mar- ket.

62836. No. 4110. From the market in Nan- king.

62837. No. 4111. From Shantung.

62838. No. 4112. This plant is about 103 centimeters in height; the leaves are large, roundish, and a yellow-green; the flowers are white or purple; grow- ing season about 130 days.

62839. No. 4113. This plant bears medium- sized, elongated green leaves and white flowers; growing season 130 days.

62840. No. 4114. This plant is about 84 centimeters high; the leaves are of medium size, elongated and green; the flowers are pink or white; growing sea- son about 130 days.

62841 to 62846. These samples which have been selected from the general fields of the university have not been as- signed identification numbers.

62841. A. 62844. D.

62842. B. 62845. E.

62843. C. 62846. F.

62847. ZEA MAYS L. Poaceae. Corn.

From Argentina. Seeds collected by H. L. Westover, Bureau of Plant Industry. Re- ceived March 13, 1925.

Collected near Choele Choele, Rio Negro. (Westover.)

62848 to 62854.

From Paris, France. Purchased from Vil- morin-Andrieux & Co., through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received March 19, 1925. Notes by Doctor Fairchild.

62848. AMPELOPSIS MEGALOPHYLLA Diels and Gilg. Vitaceae.

Plants of a Chinese vine with im- mense leaves, which should make it par- ticularly valuable for decorative purposes in the covering of outbuildings.

62849. × JUGLANS INTERMEDIA VILMORE- ANA Carr. Juglandaceae.

Cuttings of a tree 80 feet high, a hy- brid between the European and American black walnut, with branches more up- right than those of the European walnut, grayish bark, and bronze-colored young shoots. The slightly coriaceous, smooth, dark-green, oval leaflets remain on the branches until killed by frost. The fruit is not produced every year and never in large quantities; it is smooth, and the nut is more deeply furrowed than that of the European species.

For previous introduction, see S. P. I. No. 52681.

62850 and 62851. (PRUNUS CERASIFERA × AMYGDALUS COMMUNIS) × AMYGDALUS PERSICA. Amygdalaceae.

A hybrid between *Prunus cerasifera* and *Amygdalus communis* back crossed with *Amygdalus persica*.

62850. Scions. 62851. Grafted plant.

62852. PRUNUS CERASUS L. Amygdala- ceae. Sour cherry.

Var. *semperflorens*. Plants of the *Cerasier de la Toussaint*, which is said to be a pretty little shrub or tree, flowering in the spring and again in the fall, and bearing small, acid fruits.

62853. VIBURNUM DAVIDI Franch. Capri- foliaceae.

Plants of one of the handsomest small shrubs I have ever seen. The leaves have a grace of form, a texture, and color which is remarkable, and the bright-blue berries add a touch of style to the plant. This shrub, an introduc- tion from Szechwan, China, made in 1910, grows well in the shade and re- quires plenty of moisture.

62854. VIBURNUM THEIFERUM Rehder. Caprifoliaceae. Tea viburnum.

Plants of one of the more recent intro- ductions from China, made by E. H. Wilson, which is especially beautiful be- cause of its brilliant-red fruits.

62855 and 62856.

From Algiers, Algeria. Collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received March 21, 1925. Notes by Doctor Fairchild.

62855. CITRUS LIMETTA Risso. Ruta- ceae. Sweet lime.

Cuttings of the "limoncello" lime of Palermo, Italy, brought here by Doctor Trabut. A large, juicy, seedless lime of good quality and a good producer. It may be harder than the lime now grown in southern Florida.

62855 and 62856—Continued.

62856. *RUMEX TUBEROSUS* L. Polygonaceae.

Plants of a frost-resistant variety from Constantine, Algeria, presented by Professor Maire, of the University of Algiers. The broad, round leaves, used for making sorrel or "oseille" soup, should be studied by amateurs who are interested in the amelioration of potherbs. This variety has been bred with S. P. I. No. 63425 and produces vigorous seedlings intermediate in character between the two forms.

62857 to 62860. *GLADIOLUS* spp. Iridaceae.

From Cape Town, Union of South Africa. Corms presented by Dr. Rudolph Marloth. Received March 16, 1925.

Native South African gladioli introduced for gladiolus breeders.

62857. *GLADIOLUS HIRSUTUS* Jacq.

Grows in sandy stretches which are moist only during the winter.

About a foot in height, this species has bright-red flowers borne in a very lax, few-flowered, secund spike. The sword-shaped leaves are strongly ribbed.

62858. *GLADIOLUS PRIMULINUS* Baker.
Primrose gladiolus.

Var. *maculatus*. This species, flowering in May, grows on the hillsides.

A more tropical species than the preceding; the stem is a foot and a half high, and the basal leaves, three in number, are somewhat leathery, about a foot long. The reflexed segments of the primrose-yellow flowers are each marked with a maroon spot.

62859. *GLADIOLUS RECURVUS* L.

Grows in boggy sandy places; flowers during August.

A slender-stemmed species, up to 2 feet high, with two to six very fragrant flowers in a very lax spike. The flowers are flushed pink with minute blackish lilac spots.

62860. *GLADIOLUS TRISTIS* L.

Found in damp, sandy places; flowers in October.

The flowers of this species are yellowish white and fragrant, and are borne in a very lax spike. The slender stems are up to 2 feet high, and the subterete leaves are strongly three to five ribbed.

62861 to 62864. *LESPEDEZA* spp. Fabaceae.

From Fukuoka, Japan. Seeds presented by Mitsunaga Fujioka, Kyushu Imperial University. Received March 16, 1925.

62861. *LESPEDEZA BICOLOR* Turcz.

Var. *Japonica*. *Natus-hagi*.

62862. *LESPEDEZA BICOLOR INTERMEDIA* Maxim.

Yama-hagi.

62863. *LESPEDEZA CYRTOBOTRYA* Miquel.

Miyagino-hagi. A shrub about 6 feet high, resembling *L. bicolor* in habit, with oval-oblong leaflets and dense clusters of purple flowers. Native to Japan.

62864. *LESPEDEZA OLDHAMI* Miquel.

Chōsen-kihagi.

62865. *GETJERA PARVIFLORA* Lindl. Rutaceae.

From Sydney, New South Wales, Australia. Seeds presented by George Valder, undersecretary and director, Department of Agriculture. Received March 18, 1925.

The *wilga* is a tall shrub or tree, native to the interior of New South Wales, where it reaches a height of about 30 feet. It has slender pendulous branches, narrow leaves 3 to 6 inches long, and when well developed has a highly ornamental appearance with something of the aspect of a weeping willow. It has remarkable drought-enduring qualities, and the leaves are often fed to sheep, which are very fond of them.

62866. *DIOSCOREA* sp. Dioscoreaceae.

Yam.

From St. Croix, Virgin Islands. Tubers presented by W. M. Perry, horticulturist, Agricultural Experiment Station. Received March 18, 1925.

Sealtop yam. A distinct advantage of this variety is that it does not burrow its way deeply into the ground, hence it is easy to dig. It may be necessary to throw some soil over the roots if they push themselves upwards out of the ground. We have harvested yams weighing 11 pounds each, but the average weight is about 5 pounds. It is considered a superior yam. I do not know the origin of the word "Sealtop," as it appears to be purely a local name. (Perry.)

62867 to 62870.

From Ariana, near Tunis, Tunisia, Africa.

Seeds presented by the chief of the Botanical Service. Received March 9, 1925.

62867. *ACACIA PENDULA* A. Cunn. Mimosaceae.

A handsome evergreen tree, native to Australia, where the leaves and young branches are eagerly eaten by cattle and sheep. In times of drought the *myall*, as the tree is called in Australia, is frequently cut down and fed to stock, which seem to thrive on this fodder. Horses do not care for it.

62868. *PROSOPIS DULCIS* Kunth. Mimosaceae.

A thorny shrub or tree, 60 feet or less in height, native to tropical and subtropical Mexico, which bears sweetish pods, rich in protein and sometimes fed to cattle. The wood is strong and durable, and, when polished, resembles mahogany. The bark, leaves, and pods contain tannin.

62869. *PROSOPIS HORRIDA* Kunth. Mimosaceae.

A thorny shrub, native to tropical America, introduced for testing the fodder value of its sweetish pods. It is said to be very drought resistant.

62870. *TRIGONELLA ENSIFERA* Trautv. Fabaceae.

An annual leguminous plant, very closely allied to the feugreek (*F. foenum-graecum*), from which it differs chiefly in having hairy pods. Its native country is unknown.

62871 and 62872. *COLOCASIA ESCULENTA* (L.) Schott. Araceae. Dasheen.

From Yokohama, Japan. Tubers purchased from the Yokohama Nursery Co. Received March 23, 1925. Notes by R. A. Young, Bureau of Plant Industry.

62871 and 62872—Continued.

62871. *Kinukatsugi*. A Japanese taro, of the dasheen type, producing a considerable number of small cormels, or tubers. It is considered by the Japanese to be one of their finest varieties. The cormels are similar in appearance to those of other Japanese taros tested in this country; but though small, they are of better quality.

For previous introduction, see S. P. I. No. 45481.

62872. *Yatsugashira*. One of the small-growing, short-season taros. Leaf stems blackish maroon except near the blade. In Japan, this is rated as one of the best varieties. The corm is small, multiple headed, and very irregular in shape, but the quality is good. The tubers are small, but snowy white and of very good quality; they are somewhat moist when cooked soon after harvesting, but become drier and mealier in storage. A desirable variety and an excellent keeper.

For previous introduction, see S. P. I. No. 40805.

62873 to 62896.

From Chihli, China. Scions and tubers collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received March 19, 1923. Notes by Mr. Dorsett.

Numbers 62873 to 62892 are from Tung-hoshankou, near Huailai. The fruit area in this region is at the edge of the northern foothills, at an altitude of about 1,500 feet.

62873. *AMYGDALUS PERSICA* L. (*Prunus persica* Stokes). Amygdalaceae. Peach.

No. 1983. February 3, 1925. *Ch'iu Tao* (autumn peach). The creamy white fruits, 2 to 3 inches in diameter, ripen in September.

62874 to 62882. *MALUS* spp. Malaceae. Apple.

62874. *MALUS* sp.

No. 1965. February 2, 1925. A variety called "sand crab apple" because of the resemblance of the flesh to grains of sand. The fruits are yellowish green, red, and 1½ inches in diameter. They ripen at the end of August.

62875. *MALUS* sp.

No. 1968. February 2, 1925. *Hsiang Kuo* (fragrant apple). A Chinese apple, 3 or more inches in diameter, which is green with a pink or red blush. Ripens in August.

62876. *MALUS* sp.

No. 1981. February 3, 1925. *Hung Sha Kuo* (red crab apple). A variety 1 to 1½ inches in diameter which ripens in August.

62877. *MALUS* sp.

No. 1992. February 3, 1925. *Pai Ping Kuo* (white apple). The fruits of this large Chinese apple ripen in September and are said to be 3 to 4 inches in diameter.

62878. *MALUS* sp.

No. 1994. February 3, 1925. *Pin Tze* (sour crab apple). A variety about 2 inches in diameter, which ripens during the middle of September.

62873 to 62896—Continued.

62879. *MALUS* sp.

No. 1995. February 3, 1925. *Pai Sha Kuo* (white crab apple). This apple ripens in August and is said to produce fruits 2 to 3 inches in diameter.

62880. *MALUS* sp.

No. 2011. February 4, 1925. A variety called *Pai Ping Kuo* (white apple). The fruits, reported to be 3 to 4 inches in diameter, ripen in September, becoming light green to nearly white.

62881. *MALUS* sp.

No. 2015. February 4, 1925. *Ch'iu Kuo* (autumn fruit). A crab apple producing red fruits 1 to 1½ inches in diameter, which ripens in September.

62882. *MALUS* sp.

No. 2018. February 4, 1925. *Hsia Hung Hai Tang Kuo* (small red crab apple). Fruits three-fourths to 1 inch in diameter, which ripen in September.

62883 to 62885. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

62883. No. 1989. February 3, 1925. *Ta Hung Hsing* (large red apricot). Yellow-fleshed fruits 1½ to 2 inches in diameter which ripen the latter part of June and the first part of July.

62884. No. 1990. February 3, 1925. A variety known as *Mai Huang Hsing* (straw-yellow apricot). The fruits, yellow outside and white within, ripen in June and are about 1½ to 2 inches in diameter.

62885. No. 3016. February 4, 1925. *Ta Pien Hsing* (large flat apricot). The yellow fruits are about 1 to 1½ inches in diameter and ripen in July. The buds appear to be abnormally large; this may be characteristic.

62886 to 62889. *PRUNUS* spp. Amygdalaceae. Plum.

62886. *PRUNUS* sp.

No. 1967. February 2, 1925. *Hung Li Tze* (red plum). A variety 1 to 1½ inches in diameter, which ripens in July.

62887. *PRUNUS* sp.

No. 1984. February 3, 1925. *Hung Li Tze* (red plum). Deep red when ripe and 1½ to 2 inches in diameter. Ripens in July.

62888. *PRUNUS* sp.

No. 2009. February 4, 1925. *Ping Ting Hsiang Li Tze* (flat-topped fragrant plum). The red fruits are 1½ to 2 inches in diameter and ripen in July.

62889. *PRUNUS* sp.

No. 2010. February 4, 1925. *Shui Ling Tang Li Tze* (water bell plum). The fruits are 1 to 1½ inches in diameter and green and red when ripe, which is in July.

62890 to 62894. *PYRUS* spp. Malaceae. Pear.

62273 to 62896—Continued.

62890. PYRUS sp.

No. 1963. February 2, 1925. *Ch'iu Li* (autumn pear), a very good keeper. The pale-yellow fruits, 3 or more inches in diameter, ripen in September.

62891. PYRUS sp.

No. 1966. February 2, 1925. *Hsiang Shui Li* (fragrant water pear). The fruits become yellow when ripe, which is during August, and are 3 or more inches in diameter.

62892. PYRUS sp.

No. 1977. February 3, 1925. *Pau Chiu Su Li* (half-catty brittle pear). A yellow-fruited variety, 2½ to 3 inches in diameter, which ripens during the middle of September. The fruits sometimes have a pink blush.

62893. PYRUS sp.

No. 1979. Tsanfengying, near Huailai. February 3, 1925. A variety called *Ch'iu Li* (autumn pear). The fruits are yellow with dark-colored spots and are 2 to 3 inches in diameter. Ripens in September.

62894. PYRUS sp.

No. 2017. Tung Hua Ssu temple, near Huailai. February 4, 1925. *Huai Lai Ya Kuang Li* (broad duck pear of Huailai). Yellow fruits which ripen in September.

62895 and 62896. SOLANUM TUBEROSUM L.
Solanaceae. Potato.

62895. No. 1958. Huailai. February 3, 1925. *Pai P'i Tu Tou*. Tubers of a rather small potato grown in this vicinity. Planting is done early in April and harvesting in September.

62896. No. 1959. Huailai. February 3, 1925. *Tze P'i Tu Tou*. Tubers of a potato which is planted in April and harvested in September.

62897 to 62920.

From Eala, Belgian Congo, Africa. Seeds presented by V. Goossens, director, Botanic Garden. Received March 10, 1925.

62897. ALBIZZIA ADIANTHIFOLIA (Schum.)
W. F. Wight (*A. fastigiata* E. Mey.).
Mimosaceae.

A tropical African tree, of fastigiate habit, with finely divided foliage. According to Holland (Useful Plants of Nigeria, pt. 2) this tree yields a gum somewhat similar to gum arabic. The seeds, after maceration, are eaten as a sauce by the natives of West Africa.

For previous introduction, see S. P. I. No. 61479.

62898. ARTANEMA SESAMOIDES Benth.
Scrophulariaceae.

A tall, sparingly branched herbaceous plant, 2 to 3 feet high, with large, bluish lilac flowers. Native to the East Indies and distributed through tropical Africa.

62899. BARYXYLUM AFRICANUM (Sond.)
Pierre (*Peltophorum africanum* Sond.).
Caesalpiniaceae.

A handsome, yellow-flowered tree, with a habit like a Mimosa, native to tropical and subtropical Africa. It becomes 20 to 30 feet in height, and should be tested in southern Florida and also in southern California as an ornamental shade tree.

62897 to 62920—Continued.

62900. BOSQUIEA ANGOLENSIS Ficalho.
Moraceae.

This is described (Flora of Tropical Africa, vol. 6, sec. 2) as a handsome tree 50 feet or less in height, with a loosely pyramidal head, and a trunk often free of branches to nearly half its height. The rigidly leathery leaves are elliptic and 2 to 6 inches long. Native to western tropical Africa.

62901. CARICA PAPAYA L. Papayaceae.
Papaya.

Var. *elegantissima*.

62902. CEPHALONEMA POLYANDRUM Schum.
Tiliaceae.

A tropical relative of our basswood, which is a shrub with broadly oval leaves and yellow flowers about an inch across. Native to the Belgian Congo and Cameroon.

62903. CHAETOCCHLOA SULCATA (Aubl.)
Hitche. (*Setaria sulcata* Raddi). Poa-
ceae. Grass.

A perennial, tropical grass with rather dense panicles.

62904. CLITORIA LAURIFOLIA Poir. (*C. ca-
janifolia* Benth.). Fabaceae.

A pink-flowered, erect, herbaceous plant, with hairy stems and leaves, indigenous to the West Indies and northern South America.

62905 to 62907. CORCULUM LEPTOPUS
(Hook. and Arn.) Stuntz (*Antigonon
leptopus* Hook. and Arn.). Polygo-
naceae.

The Rosa de montana is a handsome, summer-blooming climber, distributed from Mexico to Chile, where it grows in the cooler highland regions. The flowers with colored sepals are in many-flowered racemes.

62905. Variety *alba*. A white-flowered form.

62906. Variety *rosca*. A pink-flowered form.

62907. Variety *rubra*. A red-flowered form.

62908. CRACCA VILLOSA HIRTA (Buch-
Ham.) Kuntze. Fabaceae.

A woody perennial, with reddish flowers, native to the East Indies.

62909. CRACCA VILLOSA PURPUREA (L.)
Kuntze (*Tephrosia purpurea* Pers.).
Fabaceae.

An herbaceous perennial, native to tropical Africa, with purple flowers.

62910. HONCKENYA FICIFOLIA Willd. Tili-
aceae.

A very striking ornamental shrub, native to western tropical Africa. According to M. T. Masters (Flora of Tropical Africa, vol. 1) the branches are purplish and covered with yellowish hairs, and the hairy leaves are more or less deeply three to seven lobed. The large purple flowers, 2 to 4 inches wide, are in terminal racemes.

62911. LIMONIA POGGEEI LATIALATA Wildem.
Rutaceae.

A spiny shrub or small tree, native to Uganda, with pinnate leaves having winged stems and large white flowers borne in clusters of 4 to 10 in the axils of the leaves.

62897 to 62920—Continued.

62912. *MILETTIA MANNII* Baker. Fabaceae.

A tropical African relative of the wisteria, which is described by Baker (Flora of Tropical Africa, vol. 1) as a shrub or small tree with compound leaves about 9 inches long with 15 or more pale-green leaflets. The reddish flowers appear in long-stalked, slightly compound panicles about as long as the leaves.

62913. *OUROUPARIA GAMEIR* (Hunter) Baill. (*Uncaria gambir* Roxb.). Rubiaceae.

A climbing shrub or bush which is found wild or cultivated throughout the Malay Archipelago and the East Indies. From the leaves is obtained the extract known as gambir, which is highly valued for tanning purposes; it is said to impart a softness to leather not obtainable from other tanning agents.

62914. *PASPALUM SCROBICULATUM COMMERSONII* (Lam.) Stapf. Poaceae.
Grass.

This is regarded as a fodder grass of some value in parts of tropical Africa, according to Stapf (Flora of Tropical Africa, vol. 9, pt. 3). It is perennial, 1 to 2 feet or more in height, and usually scantily tufted from a short rhizome. The simple or sparingly branched culms are erect or ascending.

62915. *PENNISETUM BENTHAMII* Steud. Poaceae. Grass.

A tropical African perennial grass, used as fodder in Rhodesia and Uganda, according to Holland (Useful Plants of Nigeria, p. 842).

62916. *PENTACLETHRA MACROPHYLLA* Benth. Mimosaceae.

A large, handsome tree, belonging to the Mimosa family, which appears of promise as a shade tree for the more tropical portions of the United States. According to Holland (Useful Plants of Nigeria, pt. 2), in tropical Africa, where the tree is native, the oily seeds are used as food by the natives, and the hard, durable wood is excellent for cabinet-work.

62917. *PITADENIA AFRICANA* Hook. f. Mimosaceae.

A wide-spreading tree, 15 to 20 feet high, with finely pinnate leaves 6 inches or more long, small spikes of whitish flowers which appear before the leaves, and straight, flat pods about a foot in length. Native to tropical Africa.

62918. *TETRAPLEURA TETRAPTERA* (Schum.) Taub. (*T. thonningii* Benth.). Mimosaceae.

A tall, unarmed tree, described by Oliver (Flora of Tropical Africa) as having alternate compound leaves with leathery leaflets and small leaves with spikelike clusters. According to Holland (Useful Plants of Nigeria, pt. 2), the pods are roasted and ground to make a "black soup," a common native dish in parts of tropical Africa. The soft pulp of these pods contains sugar, tannin, and a small quantity of saponin. The presence of saponin enables the natives to use the pods for washing purposes also.

62897 to 62920—Continued.

62919. *TRICMEFETA SEMITRILoba* Jacq. Tiliaceae.

Variety *tomentosa*. A bushy, herbaceous, hairy plant widely distributed in the Tropics, with bright-yellow flowers produced in long leafy racemes.

62920. *URENA LOBATA* L. Malvaceae.

Variety *reticulata*. An erect, shrubby, hairy, herbaceous plant, widely distributed throughout the Tropics, which is valued in India and also in parts of tropical Africa for the fiber obtained from the bark. This fiber is suitable for the manufacture of bags and twine and is regarded as a good substitute for jute, according to Holland (Useful Plants of Nigeria, pt. 1).

62921 and 62922.

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co., through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received March 19, 1925. Notes by Doctor Fairchild.

62921. *AMPELOPSIS WATSONIANA* Wilson. Vitaceae.

A Chinese species, introduced in 1908, with large, 3-parted leaves, of an attractive green, and bunches of red fruits which become black. The flowers appear during July. This should be an attractive vine for walls.

62922. *DECAISNEA FARGESII* Franch. Lardizabalaceae.

One of the Vilmorin introductions from China, 1895, which is not very hardy here. This handsome shrub is distinguished by beautiful foliage in the summer and curious blue fruits, the size of one's finger, in the autumn.

62923 to 62934. *ORYZA SATIVA* L. Poaceae. Rice.

From Tottori, Japan. Seeds presented by Prof. Akio Kikuchi, Tottori Agricultural College. Received March 18, 1925.

Locally developed varieties.

62923. No. 1. *Wase Shinriki* No. 7.

62924. No. 2. *Wase Shinriki*.

62925. No. 3. *Oshiu*.

62926. No. 4. *Wase Kitabu*.

62927. No. 5. *Goriki* No. 7.

62928. No. 6. *Fukuyama* No. 7.

62929. No. 7. *Imogama* No. 2.

62930. No. 8. *Marygama* No. 1.

62931. No. 9. *Hayaoseki* No. 1.

62932. No. 10. *Hayaoseki* No. 3.

62933. No. 11. *Akagemochi*.

62934. No. 12. *Shimofruimochi*.

62935. *HELIANTHUS TUBEROSUS* L. Asteraceae. Jerusalem artichoke.

From London, England. Tubers purchased from James Carter & Co. Received March 27, 1925.

Red-skinned artichoke. An English variety.

62936 to 62939.

From Caracas, Venezuela. Seeds presented by Dr. Henry Pittier. Received March 6, 1925.

62936. *DOLICHOS LABLAB* L. Fabaceae.
Hyacinth bean.

No. 4. From Tachira.

62937. *PHASEOLUS LUNATUS* L. Fabaceae.
Lima bean.

No. 45. From Los Guayos, Carabobo.

62938 and 62939. *PHASEOLUS VULGARIS* L. Fabaceae.
Common bean.

62938. No. 44. A black variety from La Punta, Merida.

62939. No. 46. A black variety from Carache, Trujillo.

62940 to 62943. *MUSA PARADISIACA SAPIENTUM* (L.) Kuntze. Musaceae. Banana.

From San Juan, P. R. Suckers presented by O. W. Barrett, agricultural adviser, Department of Agriculture and Labor. Received March, 1925.

Introduced for special experimental work.

62940 and 62941. *Manzano*. The fruits of this variety are very bright yellow, with a thin and delicate skin and flesh of fine texture and applelike flavor. The bunches of this variety are generally small, seldom reaching 100 fruits.

62940. No. 1.

62941. No. 2.

62942 and 62943. *Datil*. The fruit of this "date" banana is very small, not over an inch or so long, it is said, but of unusual sweetness, though inclined to be dry. This may be of use for breeding purposes. The plants are small and do not seem very vigorous. (David Fairchild.)

62942. No. 1.

62943. No. 2.

62944 to 62959.

From Caracas, Venezuela. Seeds presented by Dr. Henry Pittier. Received March 11, 1925.

62944. *LATHYRUS SATIVUS* L. Fabaceae.
Bitter vetch.

No. 33. From Lobatera, Tachira.

62945 to 62954. *PHASEOLUS VULGARIS* L. Fabaceae.
Common bean.

62945. No. 3 [7]. A cream-colored variety from Tachira.

62946. No. 5a. From San Miguel, Trujillo.

62947. No. 5b. From San Miguel, Trujillo.

62948. No. 18.

62949. No. 26. A pink variety.

62950. No. 30. A black variety from Tachira.

62951. No. 35. From Tachira.

62952. No. 37.

62953. No. 38a. From Valera, Trujillo.

62954. No. 39a. From Valera, Trujillo.

62955. *PISUM SATIVUM* L. Fabaceae. Pea.
No. 43. From Merida.

62944 to 62959—Continued.

62956. *VICIA FABA* L. Fabaceae.

Broad bean.

No. 32. From Tachira.

62957. *VIGNA CYLINDRICA* (Stickm.) Skeels. Fabaceae.

Catjang.

No. 42. A white variety from Mercado de Caracas.

62958 and 62959. *VIGNA SINENSIS* (Toner) Savi. Fabaceae.

Cowpea.

62958. No. 40. A chestnut-colored variety found in Miranda.

62959. No. 41. A pink variety from Cojedes.

62960 and 62961. *ACACIA* spp. Mimosaceae.

From Richmond, Victoria, Australia. Seeds presented by F. H. Baker. Received March 20, 1925.

62960. *ACACIA DISCOLOR* Willd.

A tall, unarmed shrub or small tree, native to southeastern Australia and Tasmania, which bears, in autumn, terminal and axillary clusters of yellow flowers.

62961. *ACACIA PENNINERVIS* Sieber.

The bark of this Australian acacia contains 18 per cent of tannic acid, according to Maiden (Useful Native Plants of Australia); furthermore, it is said to endure comparatively low temperatures. It is a tall shrub or tree, with narrow sickle-shaped phyllodia and short racemes of pale-yellow flowers.

62962 to 63148. *ORYZA SATIVA* L. Poaceae. Rice.

From Kyoto, Japan. Seeds presented by Yoshinori Takesaki, assistant professor of plant breeding, Kyoto Imperial University. Received March 24, 1925.

62962 to 62963. Pure breed, originated by pure-line selection at the Kinai branch station. (Takesaki.)

62962. No. 1. *Oba Kinai*.

62963. No. 2. *Oba Kinai*.

62964. No. 1. *Aikoku Kinai*.

62965. No. 2. *Aikoku Kinai*.

62966. No. 3. *Aikoku Kinai*.

62967. No. 4. *Aikoku Kinai*.

62968. *Mubo Aikoku*.

62969 to 63042. Crossbreed originated at the Kinai branch station. (Takesaki.)

62969 to 63033. Kinai Early.

62969. No. 1. *Oba* × *Shinshukaneko*.

62970. No. 2. *Oba* × *Shinshukaneko*.

62971. No. 3. *Oba* × *Shinshukaneko*.

62972. No. 4. *Fukuyama* × *Kameji*.

62973. No. 5. *Sekitori* × *Shinriki*.

62974. No. 6. *Shinriki* × *Omachi*.

62975. No. 7. *Sekitori* × *Shinriki*.

62976. No. 8. *Fukuyama* × *Kameji*.

62977. No. 9. *Gokawase* × *Shinriki*.

62978. No. 11. *Waseshinriki* × *Oba*.

62979. No. 12. *Shinriki* × *Aikoku*.

62962 to 63148—Continued.

62980. No. 13. *Waseshinriki* × *Oba*.
 62981. No. 14. *Shinriki* × *Okushirozasa*.
 62982. No. 15. *Waseshinriki* × *Oba*.
 62983. No. 16. *Oba* × *Aikoku*.
 62984. No. 21. *Shinshukaneko* × *Aikoku*.
 62985. No. 22. *Shinshukaneko* × *Aikoku*.
 62986. No. 23. *Kokuryomiyako* × *Aikoku*.
 62987. No. 24. *Fukuyama* × *Kameji*.
 62988. No. 25. *Kokuryomiyako* × *Aikoku*.
 62989. No. 26. *Oba* × *Shinshukaneko*.
 62990. No. 27. *Shinshukaneko* × *Aikoku*.
 62991. No. 28. *Guneki* × *Shinshukaneko*.
 62992. No. 29. *Kameji* × *Guneki*.
 62993. No. 30. *Kokuryomiyako* × *Aikoku*.
 62994. No. 31. *Waseshinriki* × *Aikoku*.
 62995. No. 32. *Waseshinriki* × *Shinkinaikoku*.
 62996. No. 33. *Waseshinriki* × *Oba*.
 62997. No. 36. *Oba* × *Shinshukaneko*.
 62998. No. 37. *Fukuyama* × *Guneki*.
 62999. No. 38. *Shinshukaneko* × *Aikoku*.
 63000. No. 39. *Kokuryomiyako* × *Aikoku*.
 63001. No. 40. *Fukuyama* × *Guneki*.
 63002. No. 41. *Kamenoo* × *Oba*.
 63003. No. 42. *Waseshinriki* × *Oba*.
 63004. No. 43. *Kamenoo* × *Oba*.
 63005. No. 44. *Kokuryomiyako* × *Shodochi*.
 63006. No. 56. *Shinshukaneko* × *Aikoku*.
 63007. No. 57. *Shinshukaneko* × *Aikoku*.
 63008. No. 58. *Gokawase* × *Shinriki*.
 63009. No. 59. *Takenari* × *Nimikawa*.
 63010. No. 60. *Oba* × *Shinshukaneko*.
 63011. No. 61. *Shinriki* × *Aikoku*.
 63012. No. 62. *Shinshukaneko* × *Aikoku*.
 63013. No. 64. *Shinshukaneko* × *Aikoku*.
 63014. No. 65. *Shinriki* × *Aikoku*.
 63015. No. 66. *Shinshukaneko* × *Aikoku*.
 63016. No. 67. *Waseshinriki* × *Oba*.
 63017. No. 69. *Shinriki* × *Aikoku*.
 63018. No. 70. *Shinriki* × *Aikoku*.
 63019. No. 71. *Shinshukaneko* × *Aikoku*.

62962 to 63148—Continued.

63020. No. 73. *Shinriki* × *Aikoku*.
 63021. No. 74. *Kokuryomiyako* × *Aikoku*.
 63022. No. 76. *Kamenoo* × *Sekitori*.
 63023. No. 77. *Waseshinriki* × *Aikoku*.
 63024. No. 78. *Arakishinriki* × *Araki*.
 63025. No. 90. *Shinkin* × *Aikoku*.
 63026. No. 91. *Shinriki* × *Aikoku*.
 63027. No. 92. *Kokuryomiyako* × *Aikoku*.
 63028. No. 93. *Kamenoo* × *Sekiyama*.
 63029. No. 94. *Kamenoo* × *Sekiyama*.
 63030. No. 95. *Kamenoo* × *Sekiyama*.
 63031. No. 96. *Kamenoo* × *Tataso*.
 63032. No. 156. *Waseshinriki* × *Oba*.
 63033. No. 157. *Waseshinriki* × *Oba*.
 63034 to 63042. Kinai.
 63034. No. 158. *Shinriki* × *Oba*.
 63035. No. 159. *Oba* × *Shinriki*.
 63036. No. 160. *Shinriki* × *Oba*.
 63037. No. 181. *Kokuryomiyako* × *Chujukushinriki*.
 63038. No. 182. *Omachi* No. 3 × *Chujukushinriki*.
 63039. No. 183. *Omachi* × *Chujukushinriki*.
 63040. No. 195. *Kokuryomiyako* × *Chujukushinriki*.
 63041. No. 196. *Kokuryomiyako* × *Chujukushinriki*.
 63042. No. 197. *Kokuryomiyako* × *Chujukushinriki*.
 63043 to 63131. A collection of seed from various parts of Japan. (*Takesaki*.)
 63043. No. 294. *Akage*.
 63044. No. 295. *Kinugasawase*.
 63045. No. 296. *Homura*.
 63046. No. 297. *Obaso*.
 63047. No. 298. *Bungo*.
 63048. No. 299. *Sekiyama*.
 63049. No. 300. *Kanbarabozu*.
 63050. No. 301. *Shikishima*.
 63051. No. 302. *Obachu*.
 63052. No. 303. *Oba*.
 63053. No. 304. *Asahibozu*.
 63054. No. 305. *Moriwase*.
 63055. No. 306. *Soshinriki*.
 63056. No. 307. *Goke*.
 63057. No. 308. *Hayataka*.
 63058. No. 310. *Kamenoo*.
 63059. No. 311. *Shinshukaneko*.
 63060. No. 312. *Yamatochikara*.
 63061. No. 313.
 63062. No. 314.
 63063. No. 315. *Bungo*.
 63064. No. 316. *Shishu*.

62962 to 63148—Continued.

63065. No. 317. *Sedaibozu*.
 63066. No. 318. *Nagoyakairyō*.
 63067. No. 319. *Joho*.
 63068. No. 320. *Hachiemon*.
 63069. No. 321. *Yatsukabo*.
 63070. No. 322. *Komyonishiki*.
 63071. No. 323. *Yaetsu*.
 63072. No. 324. *Tamanoo*.
 63073. No. 325. *Kobore*.
 63074. No. 326. *Shirobozo*.
 63075. No. 327. *Nisenbon No. 2*.
 63076. No. 328. *Nimaikawaso*.
 63077. No. 329.
 63078. No. 330.
 63079. No. 331. *Kairyobozu*.
 63080. No. 332. *Takamiya*.
 63081. No. 333. *Waseshinriki*.
 63082. No. 334. *Nii*.
 63083. No. 335. *Tamagokata No. 73*.
 63084. No. 336. *Nabeshima*.
 63085. No. 337. *Soshinriki*.
 63086. No. 338. *Soshinriki*.
 63087. No. 339. *Soshinriki No. 1*.
 63088. No. 340. *Ishijiro*.
 63089. No. 341. *Suwadabo*.
 63090. No. 342.
 63091. No. 343.
 63092. No. 344.
 63093. No. 345.
 63094. No. 346.
 63095. No. 347.
 63096. No. 348.
 63097. No. 349. *Kinchyaku*.
 63098. No. 350. *Kinchyakuhen*.
 63099. No. 351. *Kinchyakubozu*.
 63100. No. 352. *Yabuerami*.
 63101. No. 353. *Gonpachi*.
 63102. No. 354. *Nisenbon No. 1*.
 63103. No. 355. *Tosabozu*.
 63104. No. 356. *Takasakibozu*.
 63105. No. 357. *Ipponwase*.
 63106. No. 358. *Seisui*.
 63107. No. 359. *Shirouzura*.
 63108. No. 360. *Gonpachi No. 15*.
 63109. No. 361. *Sigeri*.
 63110. No. 362. *Hattanso*.
 63111. No. 363. *Rokusuke*.
 63112. No. 364. *Gokawase*.
 63113. No. 365. *Kyoriki*.
 63114. No. 366. *Shirobeniya*.
 63115. No. 367. *Beniyashiro*.

62962 to 63148—Continued.

63116. No. 368. *Hitachinishiki*.
 63117. No. 369. *Fukuyama*.
 63118. No. 370. *Nisenbon*.
 63119. No. 371. *Fukuokawase No. 2*.
 63120. No. 372. *Hiroshimashinbo*.
 63121. No. 373. *Nippon*.
 63122. No. 374. *Mori*.
 63123. No. 375. *Shirome*.
 63124. No. 376. *Sekaiichi*.
 63125. No. 377. *Araki*.
 63126. No. 378.
 63127. No. 379.
 63128. No. 380. *Sekitorimie No. 7*.
 63129. No. 381. *Masaoka No. 2*.
 63130. No. 382. *Izumowase*.
 63131. No. 383. *Tsuganishiki*.
 63132 to 63148. Additional varieties for which no specific data are available.
 63132. No. 384. 63141. No. 393.
 63133. No. 385. 63142. No. 394.
 63134. No. 386. 63143. No. 395.
 63135. No. 387. 63144. No. 396.
 63136. No. 388. 63145. No. 397.
 63137. No. 389. 63146. No. 398.
 63138. No. 390. 63147. No. 399.
 63139. No. 391. 63148. No. 400.
 63140. No. 392.

63149. MEDICAGO SATIVA L. Fabaceae.
Alfalfa.

From Kuelshheim, Baden, Germany. Seeds presented by Alois Grimm, through Charles J. Brand, United States Department of Agriculture. Received March 25, 1925.

Introduced for testing by alfalfa specialists.

Kuelshheim is the native place of Wendell Grimm, who, in 1857, brought the alfalfa seed into Minnesota, which after many years of natural selection became the hardy Grimm alfalfa of to-day. (*Brand*.)

63150. TRIFOLIUM PRATENSE L. Fabaceae.
Red clover.

From Reading, England. Seeds purchased from Sutton & Sons. Received March 27, 1925.

Giant hybrid red clover. An English variety.

63151 to 63153. PISUM SATIVUM L. Fabaceae.
Pea.

From Histon, Cambridge, England. Seeds purchased from W. J. Unwin, through D. N. Shoemaker, Bureau of Plant Industry. Received March 30, 1925.

Locally developed varieties.

63151. *Unwin's Advance Guard*.

63152. *Unwin's Cropper*.

63153. *Unwin's Little Wonder*.

63154. TRICHOSANTHES BRACTEATA
(Lam.) Voigt (*T. palmata* Roxb.).
Cucurbitaceae.

From Simla, India. Seeds presented by H. E. J. Peake, Khaltoo Fruit Orchards, Solan brewery. Received March 30, 1925.

This is called "Gohaker" by the Indians of this region; in Bengal it is called "Makhal." It is a very ornamental creeper resembling the tree-tomato. The flesh of the fruit is slate gray and very bitter; it is used by the Indians medicinally for ulcers and other similar disorders. (Peake.)

63155 to 63203.

From Peking, Chihli, China. Seeds collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received March 10, 1925. Notes by Mr. Dorsett.

January 13, 1925. Unless otherwise stated, the following seeds, Nos. 63155 to 63181, were purchased from Nau Yu Shing.

63155. ALLIUM FISTULOSUM L. Liliaceae.
Welsh onion.

No. 1844. A Chinese variety planted in the fall, allowed to stand over winter, then transplanted in the spring and harvested in the fall.

63156. ALLIUM sp. Liliaceae. Onion.

No. 1862. This variety is planted in the early spring and until the end of May. It is chopped fine and fried with meat.

63157 and 63158. APIUM GRAVEOLENS L. Apiaceae. Celery.

63157. No. 1848. Planted in the spring or early summer, and when an inch or so high it is transplanted. It is chopped into pieces and used to cook with meat.

63158. No. 1849. *Yang Chiu Ts'ai* (foreign celery). Planted in early August and later transplanted; harvested in November.

63159. BETA VULGARIS L. Chenopodiaceae. Beet.

No. 1855. This variety is eaten boiled with meat and also with other vegetables.

63160. BRASSICA PEKINENSIS (Lour.) Gagn. Brassicaceae. Petai.

No. 1850. *Pai Ts'ai* (winter cabbage). Planted in August and transplanted when the plants are young. Matures in 60 to 70 days.

63161 to 63172. BRASSICA spp. Brassicaceae.

63161. BRASSICA sp.

No. 1822. *Piao er Ts'ai* (calabash vegetable). This variety, which is used like cabbage, is planted in the early spring and later transplanted.

63162. BRASSICA sp.

No. 1830. *Tze Ts'ai Ts'ai* (purple-stemmed vegetable). A variety planted during any season and which matures in about 50 days. Used chiefly by foreigners as greens.

63163. BRASSICA sp.

No. 1831. *Kai Ts'ai* (cover vegetable). Planted during any season and matures in about 50 days.

63155 to 63203—Continued.

63164. BRASSICA sp.

No. 1833. *Tai Ku Ts'ai* (great ancient vegetable). Planted in early spring and later transplanted. Used like cabbage.

63165. BRASSICA sp.

No. 1834. *Kai Lan Ts'ai* (fragrant cover vegetable). This variety is planted in July, and when the plants are 2 or 3 inches high they are transplanted. Harvested about 50 days after transplanting.

63166. BRASSICA sp.

No. 1836. *Yu Ts'ai* (oil vegetable). Planted in July and harvested in 50 to 60 days. The leaf blades are chopped into small pieces, scalded, and fried with meat or dried shrimp.

63167. BRASSICA sp.

No. 1837. A vegetable resembling a Chinese turnip. Planted in July and harvested in about 60 days. Used only for pickling.

63168. BRASSICA sp.

No. 1847. *Tai Ts'ai* (moss vegetable). A variety planted in spring and early summer, maturing for market in 60 days. The stems are chopped and used in soup.

63169. BRASSICA sp.

No. 1851. *Tin Hsin Pai Pai Ts'ai* (summer cabbage). Planted in early spring. When young plants are 2 to 4 inches high they are transplanted; harvested in 60 to 70 days. Used like any other cabbage.

63170. BRASSICA sp.

No. 1860. *Shih Liu Hung* (red pomegranate vegetable). The leaves are used for frying with meat and also for pickling.

63171. BRASSICA sp.

No. 1865. *Tze Ts'ai Hua* (purple vegetable flower). Planted during any season and matures in 60 to 70 days. Used with meat and bean curd.

63172. BRASSICA sp.

No. 1867. *Hsiao Pai Ts'ai* (small cabbage). This variety is planted during any season and matures for market in 40 to 50 days. It is cooked mostly with bean curd.

63173 to 63175. CAPSICUM ANNUM L. Solanaceae. Red pepper.

63173. No. 1852. *Yang Chi Chiao Chiu Chiao* (goat-horn pepper). Planted in early spring and later transplanted. Used for seasoning, with sesame oil, and to make pepper pickle.

63174. No. 1853. *Ta Hung Shih Tzu Chiao* (large red persimmon pepper). Planted in early spring and later transplanted to the field; harvested in the fall.

63175. No. 1854. *Hung Ch'ang Chiu Chiao* (red long pepper). Used as seasoning for meats and soups.

63155 to 63203—Continued.

63176. *CORIANDRUM SATIVUM* L. Apiaceae. **Coriander.**

No. 1835. Planted in any growing season and harvested in 20 to 30 days. It is chopped fine and used as a condiment and is also used for pickling.

63177 and 63178. *CUCUMIS SATIVUS* L. Cucurbitaceae. **Cucumber.**

63177. No. 1840. This variety is planted in early spring and harvested in 40 to 50 days.

63178. No. 1841. *Tung Tzu Huang Kua* (greenhouse cucumber). This looks different from our forcing type and is better flavored. It is grown in native greenhouses heated with flues.

63179. *CUCURBITA MOSCHATA* Duchesne. Cucurbitaceae. **Cushaw.**

No. 1864. *Nan Kua* (southern pumpkin). This variety is planted in the early spring and later transplanted. It is boiled with meat.

63180. *CUCURBITA PEPO* L. Cucurbitaceae. **Pumpkin.**

No. 1863. *Hsi Hulu* (western gourd). Planted in early spring and later transplanted. When the plants have 10 leaves they begin to bear and continue through the season.

63181. *DAUCUS CAROTA* L. Apiaceae. **Carrot.**

No. 1843. *Yang Hung Luo Pu* (foreign carrot). This is a smooth, rather long carrot of a bright orange. It is boiled with meat and served with a thickened sauce.

63182. *ECHINOCHLOA CRUSGALLI* EDULIS Hitchc. Poaceae. **Barnyard millet.**

No. 1875. January 16, 1925. Presented by Dr. A. A. Howath, of the Peking Union Medical College. Doctor Howath collected this variety in Manchuria several years ago.

63183. *Foeniculum vulgare* Hill. Apiaceae. **Fennel.**

No. 1839. This variety is planted any time through the growing season and is harvested in 40 to 50 days. It is chopped into small pieces and used in meat pie.

63184. *GLEDITSIA SINENSIS* Lam. Caesalpinaceae. **Chinese honey locust.**

No. 1878. January 16, 1925. Secured in the Western Hills by Doctor Howath. This is a larger fruited variety than the one under No. 1019 [S. P. I. No. 62176].

63185. *MEDICAGO SATIVA* L. Fabaceae. **Alfalfa.**

No. 1877. January 16, 1925. Collected in the Western Hills and presented by Doctor Howath.

63186 and 63187. *PHASEOLUS VULGARIS* L. Fabaceae. **Common bean.**

63186. No. 1856. *Hsun Pien Tou* (greenhouse bean). This variety is planted in October in greenhouse beds under cucumbers and matures in 80 to 90 days. It is used chiefly to boil with pork.

63187. No. 1857. January 13, 1925. *Mer Tou* (white bean). A pole bean cooked with meat.

63155 to 63203—Continued.

63188 and 63189. *PISUM SATIVUM* L. Fabaceae. **Pea.**

63188. No. 1845. *Hei Wau Tou Miao* (black pea sprouts). Planted in the early spring and summer. It is ground into flour and made into cakes and boiled and fried when green either with or without meat.

63189. No. 1846. *Pai Wau Tou Miao* (white pea sprouts). This variety is planted in early spring and summer, and when green it is boiled with sauce and meats.

63190 to 63197. *RAPHANUS SATIVUS* L. Brassicaceae. **Radish.**

63190. No. 1818. *Ta Hung P'ao Luo Pu* (big red-robed radish). The Chinese recommend planting this variety in July and August, and the crop is supposed to be ready for market in September and October. Used chiefly for boiling with meat and making into soup.

63191. No. 1819. This variety is planted in July and August and harvested in September and October. It is eaten as a fresh vegetable, cooked with meat, and used in soup.

63192. No. 1820. *Hsiang Ya Pai Luo Pu* (white elephant-tusk radish). Planted in May and June; matures in about 60 days. Used mostly for making soup.

63193. No. 1821. *Hsiao Hung Shiu Luo Pu* (small red water radish). It is usually peeled and eaten raw with pickles and is seldom cooked.

63194. No. 1823. *Hung Hsiu Ts'ui Luo Pu* (red-hearted fragile radish). Planted in July and August and harvested in September and October. It is stored before selling. Eaten raw.

63195. No. 1824. *Tze Tsui Luo Pu* (purple fragile radish). Planted in July and August and harvested in September.

63196. No. 1825. *Pien Luo Pu* (changing radish). Planted in July and August and harvested in September and October. Used only for soup, which is made with mutton, chopped coriander, and this radish.

63197. No. 1838. *Hung Ts'ui Luo Pu* (red fragile radish). Planted in July and August and harvested in September and October. It is eaten fresh.

63198. *SOJA MAX* (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soy bean.**

No. 1875. January 16, 1925. Collected in Manchuria by Dr. A. A. Howath.

63199 and 63200. *SOLANUM MELONGENA* L. Solanaceae. **Eggplant.**

63199. No. 1859. A round variety planted in early spring and later transplanted, and which fruits throughout the season. It is boiled with meat, fried in oil with it, and also used to make pickles.

63200. No. 1861. *Pai Chang Chieh Tzu* (white long eggplant). Planted in the early spring and later transplanted. Used boiled and fried in sesame oil.

63155 to 63203—Continued.

63201. SPINACIA OLERACEA L. Chenopodiaceae. Spinach.

No. 1826. Used in the following ways—as greens, in soups, and chopped up and fried with pork.

63202 and 63203. VIGNA SESQUIPEDALIS (L.) Fruwirth. Fabaceae. Yard Long bean.

63202. No. 1858. *Huang Hua Ching Chiang Tou* (yellow-flowered cowpea). Planted in May, June, and July and harvested in 60 to 70 days. The bean pods are chopped up when green and cooked with meat, or they are boiled and eaten with a vinegar soy sauce.

63203. No. 1866. *Ssu Kua Ching Chiang Tou* (green-threaded gourd cowpea). Planted in May and June. The green pods are chopped into small pieces and cooked with meat.

63204 to 63291.

From Echo, Manchuria, China. Seeds presented by A. D. Woelkoff, director, experimental farm. Received March 23, 1925.

63204 to 63208. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Fabaceae. Adzuki bean.

63204 and 63205. *Li hsiao tou*, a dark variety.

63204. No. 306. 63205. No. 307.

63206. No. 309. *Pai hsiao tou*, a white variety.

63207 and 63208. *Hung hsiao tou*, a red variety.

63207. No. 310. 63208. No. 316.

63209 to 63211. PHASEOLUS AURUS Roxb. Fabaceae. Mung bean.

63209 and 63210. *Lu tou*.

63209. No. 317. 63210. No. 326.

63211. No. 327. *Huang lu tou*.

63212 to 63291. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. Soy bean.

63212. No. 254. *Hsiao li er huang tou tsa*, a small, yellow variety.

63213 and 63214. *Hsiao li er fung tou tsa*.

63213. No. 255. 63214. No. 256.

63215. No. 257. *Hsiao huang tou tsa*, a small, yellow type.

63216 and 63217. *Hsiao ch'in huang tou tsa*, a golden variety.

63216. No. 258. 63217. No. 262.

63218. No. 264. *Ta li hua huang tou tsa*.

63219. No. 265. *Ta ch'in mi huang tou tsa*.

63220. No. 266. *Hua lia tou tsa*.

63221 to 63229. *Huang tou tsa*.

63221. No. 267. A yellow type.

63222. No. 272. This and the following variety [S. P. I. No. 63223] are yellow with black hilums.

63204 to 63291—Continued.

63223. No. 273.

63224. No. 275. A variety with a broad hilum.

63225. No. 276. A type with a black hilum.

63226. No. 278. This and the following type [S. P. I. No. 63227] have brown hilums.

63227. No. 279.

63228. No. 280. This and the following variety [S. P. I. No. 63229] have smooth hilums.

63229. No. 281.

63230 to 63232. *Hei tou*. The hilums of these three varieties are black.

63230. No. 282.

63231. No. 284.

63232. No. 286.

63233 to 63235. *Chong tou*. These three varieties have green hilums.

63233. No. 287.

63234. No. 288.

63235. No. 290.

63236. No. 291. *Jao li er huang tou tsa*.

63237. No. 294. *Ssu lui hua*.

63238. No. 295. *Shao hei mi*.

63239. No. 296. *Feng tien pai mi*.

63240. No. 297. *Kunchuling pai mi*.

63241. No. 298. *Wan hsiang hei mi*.

63242. No. 299. *Scui pink haipo hei hua*.

63243. No. 301. A brown variety.

63244. No. 303. This and the following variety [S. P. I. No. 63245] are yellow with brown hilums.

63245. No. 304.

63246. No. 1146. *Vanto*.

63247. No. 1150. This is a yellow type.

63248. No. 1151. Brown variety.

63249. No. 1152. A green variety.

63250. No. 1153. A light yellow variety.

63251. No. 1155. A green variety with a dark hilum.

63252. No. 1157. A green variety with a light hilum.

63253. No. 1158. A brown variety.

63254. No. 1160. A yellow variety.

63255. No. 1161. A green variety with a dark hilum.

63256. No. 1162. Shining black, round type.

63257. No. 1163. A light-green variety with a dark hilum.

63258. No. 1164. A black variety.

63259. No. 1169. A black variety.

63260. No. 1170. Green with darker side.

63261. No. 1171. A greenish brown variety.

63204 to 63291—Continued.

63262. No. 1172. A small black variety.
 63263. No. 1173. A black variety.
 63264. No. 1174. A small greenish brown variety.
 63265. No. 1175. Greenish brown variety.
 63266. No. 1177. Brownish yellow with a darker side.
 63267. No. 1180. Brown variety.
 63268. No. 1181. Lighter in color than No. 1180 [S. P. I. No. 63267].
 63269. No. 1183. Black variety.
 63270. No. 1185. Brown variety.
 63271. No. 1187. Greenish brown type.
 63272. No. 1189. Light-brown variety.
 63273. No. 1191. Brown variety.
 63274. No. 1193. Light-brown variety.
 63275. No. 1194. Brown variety.
 63276. No. 1195. Grayish black variety.
 63277. No. 1196. Brown variety.
 63278. No. 1200. Small, black variety.
 63279. No. 1203. Very small, brown variety.
 63280. No. 1205. Very small, greenish brown variety.
 63281. No. 1208. Brown variety.
 63282. No. 1209. Green variety with a black hilum.
 63283. No. 1213. Brown variety.
 63284. No. 1215. Black variety.
 63285. No. 1216. Black variety with a light hilum.
 63286. No. 1217. Black variety.
 63287. No. 1218. Brown variety.
 63288. No. 1221. Greenish yellow variety.
 63289. No. 1223. Yellow variety.
 63290. No. 1224. A green variety with a dark hilum.
 63291. No. 1228. A greenish yellow variety.

63292 to 63323.

From Chihli, China. Scions and cuttings collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received March 31, 1925. Notes by Mr. Dorsett.

- 63292 to 63294. *AMYGDALUS PERSICA* L. (*Prunus persica* Stokes). Amygdalaceae. Peach.
 63292. No. 2105. Wanwu, near Chiuchou, which is a big deciduous fruit section, located in a large valley near Peking. February 13, 1925. *Hung Ying Tsui T'ao* (red eagle bill peach). The large fruits, 3 to 4 inches in diameter, ripen in June and are said to be of very good quality.
 63293. No. 2106. Chiuchou. February 13, 1925. *Pai Ying Tsui T'ao* (white eagle bill peach). The fruits

63292 to 63323—Continued.

- are about 3 to 4 inches in diameter and have white flesh. This variety ripens about 10 days later than No. 2105 [S. P. I. No. 63292].
 63294. No. 2148. Wanwu, near Chiuchou. February 14, 1925. *K'uai Ta Yieh T'ao* (early large-leaved peach). A white peach, 3 to 4 inches in diameter, which ripens the middle of August.
 63295. *AMYGDALUS PERSICA* PLATYCARPA (Decaisne) Ricker (*Prunus persica platycarpa* Bailey). Amygdalaceae. Flat peach.
 No. 2107. Chiuchou. February 13, 1925. *Ho Shang Mao T'ao* (priest-hat peach). Ripens the end of July, becoming light green, and is 2 to 3 inches in diameter.
 63296 to 63300. *MALUS* spp. Malaceae. Apple.
 63296. *MALUS* sp.
 No. 2112. Chiuchou. February 13, 1925. *Chu Sha Hung Sha Kuo* (cinnabar-red crab apple). The red fruits are 1 to 1½ inches in diameter and ripen the middle of July. The trees from which these scions came are said to be about 50 years old.
 63297. *MALUS* sp.
 No. 2113. Chiuchou. February 13, 1925. *Ch'ang Pa Sha Kuo* (long handle crab apple). The light red fruits, 1 to 1½ inches in diameter, ripen late in July, and these scions are from a tree about 50 years old.
 63298. *MALUS* sp.
 No. 2119. Chiuchou. February 13, 1925. A variety called *Hung Ping Kuo* (red apple) by Mr. Fa. It is about 3 inches in diameter and is light green with a pink or red blush; ripens in September.
 63299. *MALUS* sp.
 No. 2134. Chiuchou. February 14, 1925. *Mo Pau Sha Kuo* (grindstone crab apple). A variety said to be 1½ to 2 inches in diameter and half red and half green when ripe, which is at the end of August.
 63300. *MALUS* sp.
 No. 2142. Chiuchou. February 14, 1925. *Hsiang Yo Pai Sha Kuo* (white elephant tusk crab apple). Fruits about 2 inches in diameter, white with a slight pink blush; ripens the early part of August. Secured from Chai Yu Chen's orchard.
 63301. *MORUS ALBA* L. Moraceae. White mulberry.
 No. 2111. Chiuchou. February 13, 1925. Cuttings of *K'uai Pai Sanggen* (early white mulberry), secured from Mr. Fa. The fruits are about an inch in diameter and ripen in June.
 63302. *POPULUS* sp. Salicaceae. Poplar.
 No. 2183. Wanchuang. A rather round-headed poplar quite common here. The bark is rough and dark gray on the trunk and main branches.
 63303 to 63314. *PRUNUS* spp. Amygdalaceae.

63292 to 63323—Continued.

63303 to 63308. PRUNUS ARMENIACA L.
Apricot.

63303. No. 2114. Chiuchou. February 13, 1925. A variety which Mr. Fa says is *Ping Kuo Pai Sha Kuo* (apple white apricot). The fruits, half red and half white with white flesh, ripen in July and are 1½ inches in diameter.

63304. No. 2130. Chiuchou. February 14, 1925. *Hsiao Pai Hsing* (small white apricot), 1½ to 2 inches in diameter, which ripens in June, becoming white or light green.

63305. No. 2135. Chiuchou. February 14, 1925. *Mai Huang Hsing* (straw yellow apricot). The fruits are reported to be 1 to 1½ inches in diameter and ripen in June, becoming white and yellow.

63306. No. 2138. Chiuchou. February 14, 1925. *Hung Lao Yieh Lien Hsing* (red god-faced apricot). The red fruits, 2 to 3 inches in diameter, ripen in July.

63307. No. 2140. Chiuchou. February 14, 1925. *Cha Hua Pa Ta Hsing* (flower rod apricot). The clingstone fruits, 1½ inches in diameter, ripen in early July. They are white and blushed with pink.

63308. No. 2146. Chiuchou. February 14, 1925. *Mien Pa Ta Hsing* (soft rod apricot). The fruits, 1½ inches in diameter, ripen in early August, becoming yellow.

63309 to 63311. PRUNUS TOMENTOSA Thunb.
Manchu cherry.

63309. No. 2104. Chiuchou. February 13, 1925. *Hung Shan Tou Ying T'ao* (red bush cherry) presented by Wang Chieh Ting. The fruits are of average size and ripen the middle of June.

63310. No. 2141. February 14, 1925. *Pai Shan Tou Ying T'ao* (white bush cherry) from Linkuanying village. The average-sized fruits ripen the end of May or early in June.

63311. No. 2147. Chiuchou. February 14, 1925. *Hung Shan Tou Ying T'ao* (red bush cherry), of average size, which ripens about the middle of June.

63312 to 63314. PRUNUS spp. Plum.

63312. PRUNUS sp.

No. 2103. Chiuchou. February 13, 1925. *Hung Li Tze* (red plum), secured in Mr. Ting's orchard. The fruits are reported to be 1½ inches in diameter, to ripen in June, and to be of good quality.

63313. PRUNUS sp.

No. 2108. Chiuchou. February 13, 1925. *Niu Hsin Hung Li Tze* (ox-heart red plum). This variety is 1½ to 2 inches in diameter, ripens the end of August, and is a purple red.

63314. PRUNUS sp.

No. 2131. Chiuchou. February 14, 1925. *Chiu Ken Li Tze* (autumn plum). The red fruits are said to be 1 to 1½ inches in diameter; ripen the end of August.

63292 to 63323—Continued.

63315 to 63319. PYRUS spp. Malaceae.
Pear.

63315. PYRUS sp.

No. 2115. Chiuchou. February 13, 1925. *Ya Kuang Li* (broad duck pear), secured from Mr. Wang's orchard. A large, dark-yellow, irregular pear, 3 to 4 inches in diameter, which ripens in early October.

63316. PYRUS sp.

No. 2115-a. Chiuchou. February 13, 1925. *Ya Kuang Li* (broad duck pear), secured from Mr. Wang's orchard. A large, dark-yellow, irregular pear, 3 to 4 inches in diameter, which ripens in early October. The same pear as No. 2115 [S. P. I. No. 63315], but from a different tree.

63317. PYRUS sp.

No. 2117. Chiuchou. February 13, 1925. This variety is called *Suan Li* (sour pear) by Mr. Fa. It is yellow, about 2 inches in diameter, and ripens the end of August.

63318. PYRUS sp.

No. 2118. Chiuchou. February 13, 1925. *Chiu Feng Tze Li* (golden lantern pear). The fruits are yellow blushed with pink and are 2 to 3 inches in diameter; ripen the end of August.

63319. PYRUS sp.

No. 2150. En route from Chiuchou to the village of Liuyuan. February 15, 1925. *Tieh Li* (iron pear). The fruits are yellow, 1½ to 2 inches in diameter, and ripen in September.

63320 and 63321. SALIX spp. Salicaceae.
Willow.

63320. SALIX sp.

No. 2153. Tiuyuan. February 15, 1925. *Ch'a Tze Liu* (fork willow). From this tree the Chinese make their 3-tined pitchforks by selecting properly placed branches and then steaming the cut branches to bend to the desired shape.

63321. SALIX sp.

No. 2154. Wangming. February 15, 1925. *Ch'ing Pi Lui* (green-skinned basket willow).

63322 and 63323. ZIZIPHUS JUJUBA Mill.
(*Z. sativa* Gaertn.). Rhamnaceae.
Jujube.

63322. No. 2120. Chiuchou. February 13, 1925. *P'ao Tsao* (inflated jujube). The mahogany fruits, about three-fourths by 1 to sometimes 1½ inches long, ripen the middle of September.

63323. No. 2151. Liuyuan. February 15, 1925. *Wu Ho Tsao* (seedless jujube). Secured from Liu Tai Ho. The tree has a spread of about 20 feet, and 2 feet above the ground it measured 29 inches in circumference. It is reported to be 60 years old. The fruits are mahogany brown and about three-fourths of an inch in diameter and 1 to 1½ inches in length.

63324 to 63327. PISUM SATIVUM L.
Fabaceae. Pea.

From Horens, Denmark. Seeds purchased from Ostergaard Frowel. Received March 30, 1925.

Danish pea varieties.

63324. No. 1288. **63326.** No. 1332.

63325. No. 1313. **63327.** [No data.]

63328 to 63390.

From Nogent sur Vernisson, Loiret, France. Seeds presented by M. L. Pardé, directeur de l'Arboretum National des Barres, at the request of David Fairchild, agricultural explorer, Bureau of Plant Industry. Received March 11, 1925. Notes by Doctor Fairchild.

63328. ABIES KOREANA Wilson. Pinaceae.
Fir.

A newly discovered fir from Chosen which is described by E. H. Wilson (Journal of the Arnold Arboretum, vol. 1: 188) as a tree 30 to 50 feet high, with a trunk 4 to 10 feet in circumference, and characterized by its pyramidal habit and deeply fissured rough bark. It is an alpine species, growing abundantly above 3,000 feet in Chosen. It is densely branched, and the lustrous-green leaves with white undersurfaces make the tree very striking.

63329. ABIES NUMIDICA De Lannoy. Pinaceae.
Algerian fir.

Variety *glauca*. A small tree from Algeria which fruits abundantly at Nogent sur Vernisson in central France. Its wood is similar in all respects to that of the common European silver fir, and it may thrive in Arizona and California.

63330. ACANTHOPANAX TRIFOLIATUM (L.) C. Schneid. (*A. aculeatum* Seem.).
Araliaceae.

A hardy, spiny, climbing shrub, native to western China, with slender-stemmed, 3-parted, light-green leaves and compound terminal umbels of small, greenish flowers followed by small, black berries.

63331. ACER DIABOLICUM Blume. Aceraceae.
Maple.

A Japanese maple 10 meters in height. The yellow flowers appear in April before the leaves, which are pubescent beneath and five lobed.

63332. AMPELOPSIS BREVIPEDUNCULATA (Maxim.) Koehne. Vitaceae.

A handsome strong-growing vine, native to eastern Asia, which is particularly attractive in autumn with its clusters of deep-blue berries; it is well adapted for covering trellises and low walls.

63333. AMPELOPSIS MEGALOPHYLLA Diels and Gilg. Vitaceae.

A vigorous, hardy, very interesting vine, becoming 20 to 30 feet in length, with long-stemmed, deeply lobed leaves often more than 3 feet in diameter. The bluish black fruits are in loose cymes. This species is native to western Hupeh, China, where it grows at an altitude of about 4,000 feet.

For previous introduction, see S. P. I. No. 58647.

63328 to 63390—Continued.

63334. AMPELOPSIS ORIENTALIS (Lam.) Planch. Vitaceae.

The bright-green, finely cut foliage and dark-purple fruits of this Asiatic vine make it an attractive ornamental for the southern portions of the United States.

63335 to 63340. BERBERIS spp. Berberidaceae.
Barberry.

63335. BERBERIS GAGNEPAINI C. Schneid.

An evergreen Chinese shrub 3 to 6 feet high, with leathery leaves, spiny on the margins, and delicate yellow flowers on red pedicels. The ellipsoid berries are dark purple.

For previous introduction, see S. P. I. No. 58138.

63336. BERBERIS JULIANAE C. Schneid.

A shrubby barberry, up to 7 feet high, native to western China. It has thick, 3-cleft spines about 1½ inches long, narrowly oval leathery leaves, and small, yellow flowers.

For previous introduction, see S. P. I. No. 58108.

63337. BERBERIS PRUINOSA Franch.

A robust evergreen shrub, probably 10 feet or more in height, native to southwestern China. Its leaves are of leathery texture, up to 2½ inches long, lustrous green above, often grayish beneath, not unlike in general appearance those of the Himalayan *Berberis aristata*. It gets its name from the rich pruinose (plum-colored) bloom which covers the fruits.

For previous introduction, see S. P. I. No. 48015.

63338. BERBERIS SARGENTIANA C. Schneid.

A black-berried barberry from western Hupeh, China, reaching a height of 7 feet. According to Dr. C. S. Sargent, it is the only evergreen barberry which has proved entirely hardy at the Arnold Arboretum, Jamaica Plain, Mass.

63339. BERBERIS TOLUACENSIS Hort.

A barberry of unknown origin, allied to *Berberis aquifolium*. The five to seven leaflets are bright shining green, very narrow, and spiny toothed.

63340. BERBERIS VERNAE C. Schneid.

A low shrub, native to Kansu, China, producing spatulate leaves in small fascicles and small yellow flowers which are followed by round, red berries one-fourth of an inch in diameter.

For previous introduction, see S. P. I. No. 58125.

63341. BERCHEMIA RACEMOSA Sieb. and Zucc. Rhamnaceae.

A tall Japanese shrub producing a great abundance of small berries which pass from green through red to black as they ripen. Mr. Mottet recommends it for trellises and old walls and to cover the stumps of old trees.

63328 to 63390—Continued.

63342. *BETULA MAXIMOWICZIANA* Regel
(*B. maximowiczii* Regel, not Rupr.).
Betulaceae. Birch.

Mr. Mottet remarks that this is without doubt the most beautiful of all the birches, characterized by the rapidity of its growth, the luxuriance of its foliage, and the yellow color of its bark. I saw a specimen at Kew and think it is one of the handsomest birches I have seen.

63343. *BUDDLEIA PANICULATA* Wall. Lo-
ganiaceae. Butterfly bush.

An Indian shrub, 6 to 15 feet high, with hairy branches and leaves and rather dense panicles of lilac-colored flowers. Probably best suited for the warmer parts of the United States.

63344. *CARAGANA BOISI* C. Schneid. Fab-
aceae.

A handsome bush 10 to 12 feet high, with long, arching branches, native to Szechwan and eastern Tibet, China. In May the light-green foliage and numerous yellow flowers make this an especially attractive ornamental.

For previous introduction, see S. P. I. No. 56808.

63345. *CARPINUS BETULUS* L. Betulaceae.
European hornbeam.

Var. *carpinizza*. A wild, Hungarian variety of the common European hornbeam, differing from the type in having its leaves more heart-shaped.

63346. *CARPINUS TURCZANINOVII OVALIFOLIA* Winkler. Betulaceae. Hornbeam.

A shrubby tree, native to northern China, and said to resemble closely *Carpinus polynura*. The latter is a handsome, hardy tree of elegant habit, with dark-green, sharply toothed leaves and fruit clusters up to 2 inches in length.

63347. *CELASTRUS DEPENDENS* Wall. Ce-
lastraceae. Bittersweet.

A climbing shrub, native to the warmer portions of the Himalayas at altitudes of 1,000 to 4,000 feet. The membranous leaves are very variable in shape, and the yellowish green flowers are in terminal, pendulous panicles. An oil used in India for illuminative purposes is expressed from the seeds.

63348. *CELASTRUS FLAGELLARIS* Rupr. Ce-
lastraceae. Korean bittersweet.

A shrubby Chinese vine, quite hardy, with persistent spiny stipules, small oval leaves, and small axillary fruits with crimson arils.

63349. *CELASTRUS ROSTHORNIANA* Loese-
ner. Celastraceae.

A Chinese plant described (Plantae Wilsonianae, vol. 2, pt. 2) as a climbing shrub 15 to 20 feet high, with thick, shining leaves, greenish white flowers, and orange-yellow fruits. It is fairly common in western Szechwan, China.

63350. *CELTIS TOURNEFORTII* Lam. Ulma-
ceae. Oriental hackberry.

A tree about 20 feet high, or sometimes only a shrub, with oval, sharp-pointed bluish green leaves 3 inches long or less and small, reddish yellow fruits. It is native to Asia Minor and is probably not hardy north of Washington, D. C.

63328 to 63390—Continued.

63351. × *CLEMATIS GLOBULOSA* Hort.
Ranunculaceae.

A hybrid of *Clematis douglasii scottii* and *C. texensis*, with deep-purple, pitcher-shaped flowers. Both of the parents of this European hybrid are native to the western United States.

63352. *CLEMATIS INTEGRIFOLIA* L. Ranun-
culaceae.

Var. *hybrida velleda*. An erect, herba-
ceous clematis, becoming 3 feet high,
with broad, entire, oval leaves and soli-
tary nodding blue flowers.

63353. *CLEMATIS TANGUTICA* (Maxim.)
Korsh. Ranunculaceae. Clematis.

The handsomest yellow-flowered Cle-
matis in cultivation, the largest flowers
being about 4 inches across. The species
reaches a height of 8 to 10 feet and
bears gray-green leaves and solitary rich-
yellow flowers, with long, slender-pointed
sepals, downy outside and at the edges.
Native to northern and western China.

63354. *CORYLUS TIBETICA* Batal. Betula-
ceae. Hazelnut.

This remarkable species, with spiny
involucres somewhat resembling the burrs
of a chestnut, was introduced into the
Vilmorin Fruticetum from Kansu, China,
in 1885. It is in flower and there are
many catkins now (middle of January) on
the shrub. It hybridizes freely with the
other species here in the Fruticetum and
may prove of distinct value for breeding
purposes, but the nuts are too small to
be of commercial importance.

63355. *EUONYMUS BUNGEANUS SEMIPER-
SISTENS* (Rehder) C. Schneid. Celas-
traceae.

A large glabrous shrub or small tree,
from 3 to 5 meters high, with bright-
green, half-evergreen leaves of a bluish
or grayish hue. The yellowish white
flowers appear in loose, 3 to 7 flowered
cymes, and the few fruits are bright
pink. This variety differs from the typi-
cal species in having leaves which re-
main on the plant until midwinter.

63356. *EUONYMUS SANGUINEUS* Loes. Ce-
lastraceae.

The dull-green, serrate leaves and
large, pink fruits of this hardy Chinese
shrub or small tree make it an attrac-
tive ornamental for the northern United
States.

63357. *EVODIA HUPEHENSIS* Dode. Ruta-
ceae.

A very common tree in the woodlands
of western Hupeh, China, according to
E. H. Wilson (Plantae Wilsonianae, vol.
2, pt. 1), where it grows to a height of
20 to 40 feet. It has smooth, gray
bark, spreading branches, and white flow-
ers in large flat corymbs.

63358. *FRAXINUS MARIESII* Hook. f. Olea-
ceae. Ash.

A handsome, free-flowering shrubby
Chinese ash which has narrowly oval
leaflets with yellowish green lower sur-
faces. It blooms even when quite young;
the upright panicles are about 5 inches
long.

63328 to 63390—Continued.

63359. GENISTA AETNENSIS (Bivona) DC.
Fabaceae. Aetna broom.

An attractive shrub, 6 feet or less in height, with nearly leafless, slender branches, and fragrant, yellow flowers in loose terminal racemes. Native to Sicily and Sardinia.

63360. KRAUNHIA JAPONICA (Sieb. and Zucc.) Taub. (*Wisteria japonica* Sieb. and Zucc.). Fabaceae. Wisteria.

A comparatively little-known wisteria from Japan, which is hardy only in the Southern States. It is a deciduous climber with slender twining stems and bright, glossy green compound leaves. The white flowers are probably the smallest of all the wisterias, and are produced in very slender, many-flowered racemes up to a foot in length.

63361. LONICERA SIMILIS DELAVAYI (Franch.) Rehd. Caprifoliaceae.
Delavay honeysuckle.

A half-evergreen, shrubby climber, closely allied to *Lonicera japonica*, which was first found by the Abbé Delavay in the mountains of Yunnan, China. The oval leaves are gray felted beneath, and the sweet-scented, yellow flowers are in pairs in the axils of the leaves.

63362. MAGNOLIA SALICIFOLIA (Sieb. and Zucc.) Maxim. Magnoliaceae.
Anise magnolia.

A Japanese magnolia which is a slender tree about 20 feet in height, with narrowly oval, yellowish green leaves 3 to 6 inches long and short-stemmed white flowers 5 inches across. It is hardy at least as far north as southern Massachusetts.

63363. PHILADELPHUS MAGDALENÆ Koehne. Hydrangeaceae. Mock orange.

A bushy mock orange from Szechwan, China, which becomes about 6 feet high, with finely toothed, narrow leaves and white flowers an inch in diameter, borne in early June in few-flowered racemes.

63364. PLATYCARYA STROBILIFERA Sieb. and Zucc. Juglandaceae.

M. V. 5852. A small, striking Chinese tree which at this time (January) is covered with pretty, brown conelike fruits somewhat resembling miniature fruits of the teasel. This is hardier than the other species, *P. strobilifera*.

63365. PYRACANTHA GIBBSII A. Jackson. Malaceae. Firethorn.

A fine ornamental evergreen bush, vigorous and hardy, native to Hupeh and Szechwan, China. It becomes 12 to 14 feet high, is nearly spineless, and in the autumn bears large clusters of scarlet berries which contrast admirably with the glossy dark-green foliage.

For previous introduction, see S. P. I. No. 56694.

63366. RHAMNUS UTILIS Decaisne. Rhamnaceae. Buckthorn.

A hardy, shrubby tree of ornamental appearance, with light-green, opposite leaves. Native to central and eastern China.

63367 to 63376. ROSA spp. Rosaceae.
Rose.

63328 to 63390—Continued.

63367 and 63368. ROSA MACROPHYLLA Lindl.

This Himalayan rose is described by Brandis (Forest Flora of India, p. 203) as an erect, often unarmed shrub, with large, red flowers 2 inches or less in width, and large, soft edible fruits an inch long. In its native home this rose is found at an altitude of 10,000 feet, and plants introduced into England have proved hardy in that country.

63367. Typical form.

63368. Var. *inermis*.

63369. ROSA MOYESII Hemsl.

A strikingly handsome, wild rose with flowers varying from dark blood-red to light pink. It is a shrub up to 10 feet high, native to western China, with scattered, short, straight prickles on the branches. The deep orange-red, narrowly ovoid fruits are 2 inches or more in length.

63370. ROSA OMEIENSIS PTERACANTHA (Franch.) Rehd. and Wils.

A robust, much-branched thorny bush, native to western China, where it grows at altitudes of 3,000 to 11,000 feet. Because of the fine single white flowers, the large, red prickles, and the bright-red fruits this is an exceedingly attractive rose.

63371. ROSA PERSETOSA Rolfe.

A pink-flowered rose from western China which is characterized by Dr. Alfred Rehd. (Arnold Arboretum, Jamaica Plain, Mass.) as an upright shrub with densely bristly stems and flowers an inch across, produced in large panicles.

63372 to 63376. ROSA SERICEA Lindl.

An erect shrubby rose, up to 12 feet in height, with prickly branches and solitary white flowers, 2 inches wide, with usually only four petals. Native to the Himalayas, and perhaps hardy only in the Southern States.

63372. Typical form.

63373. M. V. 4001.

63374. M. V. 4620.

63375. M. V. 4710.

63376. Var. *xanthocarpa*.

63377. SAMBUCUS JAVANICA Reinw. Caprifoliaceae. Elder.

An East Indian elder, 6 feet or less in height, with long-pointed leaflets and flat clusters of ovoid, red berries.

63378. SCHIZONOTUS AITCHISONI (Hemsl.) Skeels. Rosaceae.

A shrub 2 to 3 meters high from Afghanistan, with straight, reddish branches which are strong and compact panicles of white flowers which bloom in September.

63379. SKIMMIA FORTUNEI Masters. Rutaceae.

A very pretty, spring-flowering shrub from China, with persistent foliage. The very fragrant, white flowers are borne in panicles; these are succeeded by deep-red, oval fruits which remain all winter here in France.

63328 to 63390—Continued.

63380. *SKIMMIA INTERMEDIA* Carr. Rutaceae.

A low, evergreen Japanese shrub, with entire, aromatic leaves, terminal panicles of rosy flowers, and attractive scarlet fruits.

63381. *SKIMMIA JAPONICA VEITCHII* (Carr.) Rehd. Rutaceae.

A Japanese shrub, 5 feet or more in height, with yellowish green leaves crowded at the ends of the branchlets and coral-red or bright-scarlet fruits about a third of an inch in diameter. It is said to be one of the best smoke-enduring evergreen shrubs, but is too tender to withstand the winters in the northern United States.

63382. *SOPHORA DAVIDII* (Franch.) Komarow (*S. vicifolia* Hance). Fabaceae.

A Chinese species 2 meters high of light and graceful habit, bearing clusters of white and blue flowers. This shrub appears to do well in limestone soil.

63383 and 63384. *STYRAX* spp. *Styracaceae.* **Snowbell.**

The styraxes are handsome shrubs of graceful, usually loose habit with numerous white, mostly fragrant, flowers. Several species are hardy as far north as southern Massachusetts.

63383. *STYRAX* sp.

M. V. 1901.

63384. *STYRAX* sp.

M. V. 5241.

63385. *SYRINGA VELUTINA* Komarow. *Oleaceae.* **Lilac.**

A charming shrub with pale-pink, deliciously fragrant flowers. In height it ranges from 4 to 8 feet. It is native to Chosen and is quite hardy.

63386 and 63387. *VIBURNUM* spp. *Caprifoliaceae.*

The viburnums are woody plants, many of which are valuable ornamentals because of their white or pinkish flowers and berrylike, red, blue, or black fruits.

63386. *VIBURNUM* sp.

M. V. 6870.

63387. *VIBURNUM* sp.

M. V. 7373.

63388. *VITIS COIGNETIAE* Pulliat. *Vitaceae.* **Grape.**

A Japanese species characterized by the very large leaves which turn purple-red in the autumn. This is a striking species for trellises.

63389. *VITIS FLEXUOSA* Thunb. *Vitaceae.* **Grape.**

A slender-stemmed, Chinese vine, with oval, heart-shaped leaves and very small fruits. Its chief value appears to lie in the dark-purple autumnal color of its foliage.

63390. *VITIS TITANEA* Hort. *Vitaceae.* **Grape.**

A vigorous Japanese climber with dark-green leaves and small, black fruits.

63391. *ANANAS SATIVUS* Schult. f. *Bromeliaceae.* **Pineapple.**

From Wusi, Kenya Colony, Africa. Slips collected by H. L. Shantz, Bureau of Plant Industry. Received May 7, 1924. Numbered January, 1925.

No. 98, February 20, 1924. An exceptionally good, small pineapple, grown in the Burra Hills. The climate of this portion of Africa is not especially hot, and this variety is regarded as the best for this region. (*Shantz.*)

63392 to 63400.

From Paris, France. Purchased from Vilmorin-Andrieux & Co., through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received March 19, 1925. Notes by Doctor Fairchild.

63392. *CLEMATIS ARMANDI* Franch. *Ranunculaceae.* **Armand clematis.**

A species from Hupeh, China, bearing fragrant, white flowers, which has shown itself remarkably hardy here and which is characterized by the abundance and the persistence of its foliage.

63393. *CLEMATIS CIRRHOSA* L. *Ranunculaceae.*

A very attractive, climbing clematis from southwestern Asia, which bears, in spring, nodding, bell-shaped, white flowers over an inch across. It is tender to much frost and is therefore suited only for growing in the southern United States.

63394. *CLEMATIS SPOONERI* Rehd. and Wils. *Ranunculaceae.*

A most attractive species introduced in 1905 from China, bearing an abundance of large, white blossoms, some of which measure 9 centimeters in diameter.

63395. *COLUMNEA GLORIOSA* Sprague. *Gesneriaceae.*

Var. *superba*. A perennial epiphyte, indigenous to Costa Rica, with handsome scarlet and yellow flowers, produced singly in the axils of the leaves. It is tropical in its requirements.

63396. × *COLUMNEA VEDRARIENSIS* Hort. *Gesneriaceae.*

A new hybrid between *Columnnea magnifica* and *C. schiediana* recommended by Mr. Mottet. (*Vilmorin.*)

The parents of this hybrid are tropical American, herbaceous plants with scarlet and yellow flowers.

63397. × *COLUMNEA VILMORINIANA* Hort. *Gesneriaceae.*

A new hybrid between *Columnnea vedrariensis* and *C. gloriosa superba*, shown before the "Société Nationale d'Horticulture de France" on January 22, 1924, when it was awarded a certificate of merit.

It requires the same treatment as its parents and is very ornamental by reason of the intense red coloring of both flowers and leaves and its thickset, erect habit. (*Vilmorin.*)

63398. *DIOSCOREA* sp. *Dioscoreaceae.* **Yam.**

A variety of the Chinese yam. Through selection a tuber has been made to mature which does not penetrate so deeply into the soil as the original variety received from China. It is therefore worth testing as far north as Washington.

63392 to 63400—Continued.

63399. *HELIANTHUS TUBEROSUS* L. Asteraceae. Jerusalem artichoke.

This is said to be a most unusually vigorous strain of the common Jerusalem artichoke, producing long, fusiform tubers instead of the round, irregular ones.

63400. *HORDEUM VULGARE PALLIDUM* Scribn. Poaceae. Six-rowed barley.

A new variety of 6-rowed barley with silky awns which should make it a distinct advantage in harvesting.

63401. *VIBURNUM SARGENTI* Koehne. Caprifoliaceae.

From Elstree, Herts, England. Seeds presented by Vicary Gibbs, Aldenham House Gardens. Received February 20, 1925.

Although similar to the Highbush cranberry (*Viburnum americanum*) of North America, this handsome, hardy shrub from northern China is more upright and denser in habit. The leaves are thick, pubescent beneath, and the sterile flowers are about 1¼ inches across. The round scarlet berries are usually in upright clusters.

63402 and 63403.

From Paris, France. Purchased from Vil-morin-Andrieux & Co., through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received March 19, 1925. Notes by Doctor Fairchild.

63402. *SCHIZANDRA RUBRIFLORA* (Franch.) Rehd. and Wils. Magnoliaceae.

One of Wilson's Szechwan species which is hardy here. The red flowers appear when the shrub is quite young. Should be introduced as a climbing shrub for trellises, etc.

63403. *SCHIZOPHRAGMA INTEGRIFOLIA* Oliver. Hydrangeaceae.

A climbing shrub, closely related to the hydrangeas, native to rocky places in central China. It reaches about 15 feet in height, and has broadly oval, bright-green leaves about 5 inches long. The inflorescence consists of loose terminal clusters of small, white flowers, with large and showy sterile flowers at the margins of these clusters. This shrub is hardy as far north as southern Massachusetts.

For previous introduction, see S. P. I. No. 62280.

63404 to 63408.

From Algeria. Collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received March 21, 1925. Notes by Doctor Fairchild.

63404. *ARUNDO PLINII* Turra. Poaceae.

Cuttings. It is this species of Arundo, and not *Arundo donax*, which is so much used for windbreaks and all sorts of shading mats by the vegetable growers of the Algerian coast. It is very different in habit from *A. donax*, having upright leaves instead of pendent ones, and, being smaller, is therefore useful for a wider variety of purposes.

63405. *BETA VULGARIS* L. Chenopodiaceae. Beet.

Cape Matifou. February 27, 1925. Var. *maritima*. Plants collected by Doctor Trabut and myself. A form occurring on the headlands of the African

63404 to 63408—Continued.

coast, with exceedingly thick, fleshy, brittle leaves. This should furnish the start for the production of a fleshy leaved variety of beet for use as a pot-herb.

63406. *CASIMIROA EDULIS* Llave. Rutaceae. White sapote.

Cuttings of an Algerian strain.

63407. *DIOSPYROS SINENSIS* Hemsl. Diospyraceae.

Cuttings of a species which I believe is the one Frank Meyer found south of Shanghai years ago and of which we lost the material. He found that it was being used there as a stock for *Diospyros kaki* and the trunk, below the graft, had white bark. Trees of this species are growing at Fondak, Algeria; these originally came from the Jardin d'Essais du Hamma many years ago.

63408. *EUONYMUS* sp. Celastraceae.

Cuttings of an extremely dwarf species used as a border for flower beds in the same way as box is used, to separate the beds from the gravel walk.

63409. *VITIS VINIFERA* L. Vitaceae. European grape.

From Algiers, Algeria. Cuttings presented by Dr. L. Trabut. Received February 14, 1925.

An unnamed Algerian variety.

63410 to 63426.

From Paris, France. Purchased from Vil-morin-Andrieux & Co., through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received March 19, 1925. Notes by Doctor Fairchild.

63410. *IRIS FOETIDISSIMA* L. Iridaceae.

Seeds of a rank-growing iris which I saw only in fruit. The deep-green leaves attracted my attention, and its red berries, Doctor Trabut says, constitute its chief attraction.

63411. *MORUS KAGAYAMAE* Koidzumi. Moraceae. Mulberry.

A handsome Japanese mulberry which thrives in Algeria. The leaves are readily eaten by silkworms.

63412. *ORCHIS ROBERTIANA* Loisel. Orchidaceae.

Plants from the Hamez Barrage near Algiers, where it occurs wild. A tall orchid with rather attractive greenish purple flowers, over half an inch across. According to Doctor Trabut this terrestrial orchid is easily grown in good garden soil and will persist for many years if once transplanted. When grown in good soil it will grow to a height of several feet.

63413. *OREOPANAX EPREMESNILIANUM* Andre. Araliaceae.

Cuttings from a tree in the Botanic Gardens of Mustapha which is an object of striking beauty. This is a shade tree of tropical American origin, having large, palmate leaves of a shining dark green.

63414. *PAPAVER ATLANTICUM* Ball. Papaveraceae. Poppy.

Seeds of a perennial poppy, 1 to 2 feet high, covered throughout with copious hairs. The orange-red or scarlet flowers are 2 to 3 inches wide.

63410 to 63426—Continued.

63415. PAPAVER SETIGERUM DC. Papaveraceae. **Poppy.**

Forma *atropurpurea*. Seeds of a violet-flowered, annual poppy, closely related to the opium poppy (*Papaver somniferum* L.). Native to the Mediterranean region.

63416. PELARGONIUM LATERIPES L'Herit. Geraniaceae.

A beautiful strain of a handsome running species of the so-called "Geranium." It is used in Algiers to cover the retaining walls of the roadways.

63417. PELARGONIUM PELTATUM (L.) Ait. Geraniaceae.

Cuttings of a variety used in the same way as S. P. I. No. 63416, but having larger leaves and more conspicuous brilliant pink flowers; probably a very good form for window-box use.

63418. PHOENIX CANARIENSIS × RECLINATA. Phoenicaceae. **Palm.**

Seeds of one of the finest specimens in Arthurs Garden, Algiers. This very graceful palm, which is much more attractive than the type *Phoenix canariensis*, should be substituted for it in California.

63419. POPULUS EUPHRATICA Oliver. Salicaceae. **Poplar.**

Var. *mauretana*. Cuttings of what is probably a very ancient variety from the wet regions along the Euphrates in Mesopotamia. This form has interesting foliage, and, because of its ability to grow in the wet lands along irrigation ditches, where the soil is often saline from seepage, may be useful for similar regions in the United States.

63420. POPULUS THEVESTINA Dode. Salicaceae. **Poplar.**

Cuttings of one of the most brilliant, white-barked species of poplars I have ever seen. It grows to a fair size and resembles in its fastigate form the Italian poplar. Doctor Trabut remarks that it is less affected by a species of borer which attacks the Italian poplar and is altogether superior to that species as a tree for parks.

63421. POPULUS TOMENTOSA Carr. Salicaceae. **Chinese white poplar.**

Cuttings of a handsome species growing in the Jardin d'Essais at Maison Carree, Algiers. It is of upright growth, with widespread branches, brilliant white bark, and large leaves.

63422. PRUNUS MUME Sieb. and Zucc. Amygdalaceae. **Japanese apricot.**

Scions of a very handsome Japanese flowering apricot, with semidouble deep-pink flowers, growing in a garden at Fonduk. I have never seen a more floriferous or prettier variety than this and surmise it may be quite new to our collection.

63423. ROSA sp. Rosaceae. **Rose.**

Madame Tellier. Seeds of a beautiful, very vigorous variety from the garden of Doctor Trabut at Mustapha Supérieure. The flowers are salmon pink, and the fruits are unusually large and fleshy.

63410 to 63426—Continued.

63424. RUMEX SANGUINEUS L. Polygonaceae.

Cuttings of a tall shrub which Doctor Trabut informs me is used in Sicily and the Canaries for hedge purposes. The leaves are sour like those of *Rumex acetosella*.

63425. RUMEX TUBEROSUS L. Polygonaceae.

Plants of a variety from Blida, Algeria, presented by Professor Maire, of the University of Algiers. This is a vigorous grower with elongated leaves which are used in the preparation of a sorrel soup, as are those of the true "oseille," *Rumex acetosa*. It is more resistant to frost than the ordinary oseille.

63426. SCHINUS TEREBINTHIFOLIUS Raddi. Anacardiaceae. **Brazilian pepper tree.**

Scions from a selected tree.

63427. LECYTHIS ZABUCAJO Aubl. Lecythidaceae. **Sapucaia nut.**

From Cartagena, Colombia. Seeds obtained through Lester L. Schnare, American consul. Received March 30, 1925.

Like the Brazil nut, the sapucaia is native to the Amazon Valley and adjacent regions, whence it is occasionally exported. Apparently it has never formed the basis of a considerable industry, as has the Brazil nut. By many people it is considered of even better flavor and quality than the latter.

The somewhat triangular nuts are over 2 inches long and about an inch wide. They are borne in large, woody, urn-shaped capsules, about 6 inches in diameter, with close-fitting lids at the top.

It seems unlikely that this tree will succeed in the United States, but it ought to do so in the Canal Zone, Porto Rico, Hawaii, and elsewhere in the Tropics. It seems never to have received much horticultural attention. Perhaps this is because of its slow growth and the long time required for trees to reach bearing age.

63428. ALSTONIA CONSTRICTA F. Muell. Apocynaceae.

From Sydney, New South Wales. Seeds presented by the director, Botanic Garden. Received March 30, 1925.

A tall shrub or tree, native to southeastern Australia, which is said to be of possible value as a source of rubber.

63429 and 63430. JUGLANS REGIA L. Juglandaceae. **Persian walnut.**

From Srinagar, Kashmir, India. Seeds presented by R. K. Koul, proprietor, Koul's Gardens. Received March 30, 1925.

Walnuts have been cultivated since remote times in the hilly portions of India, and in Kashmir especially the industry has been highly developed. These seeds are from superior varieties which grow at an altitude of about 5,500 feet, in a region where mild winters and warm, but not hot, summers prevail.

63429. *Burzil.* **63430.** *Kaghzi.*

For previous introduction, see S. P. I. No. 58629.

63431 to 63476.

From China. Collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received March, 1925. Notes by Mr. Dorsett.

From the orchard area along the northern foothills near Huailai, about 1,800 feet above sea level.

63431 to 63433. *AMYGDALUS PERSICA* L. (*Prunus persica* Stokes). Amygdalaceae. Peach.

63431. No. 1986. Tunghoshankou, near Huailai. February 3, 1925. *Kang Tze Tao* (jar peach). Scions of a small, red peach, 1 to 2 inches in diameter. Ripens during August, becoming creamy white with a pink blush.

63432. No. 2027. Tsanfengying, near Huailai. February 5, 1925. Scions of the *Lo Yieh Pai Tao* (white-leaved peach). The fruits are 2 to 3 inches in diameter, becoming white when ripe, which is during August.

63433. No. 2028. Tsanfengying, near Huailai. February 5, 1925. Scions of the *Yiu Tao* (silver peach). The fruits are white with a pink blush, 3 to 4 inches in diameter, and ripen early in September.

63434. *AVENA NUDA* Hoefer. Poaceae. Naked oats.

No. 1949 Huailai. February 2, 1925. Known here as "oil wheat." Huailai is located in a broad valley, along the northern foothills, at an altitude of about 1,600 feet, which appears to be very well watered.

63435. *CANNABIS SATIVA* L. Moraceae. Hemp.

No. 1957. Huailai. February 2, 1925. Seeds.

63436. *FAGOPYRUM VULGARE* Hill (*F. esculentum* Moench.). Polygonaceae. Buckwheat.

No. 1955. Huailai. February 2, 1925. Seeds.

63437. *HOLCUS SORGHUM* L. (*Sorghum vulgare* Pers.). Poaceae. Sorghum.

No. 1953. Huailai. February 2, 1925. Seeds of a red sorghum.

63438 to 63448. *MALUS* spp. Malaceae. Apple.

63439. *MALUS* sp.

No. 1969. Shih tungtzu, near Huailai. February 3, 1925. Scions of an apple about 2 inches in diameter, which ripens in early September, becoming green and red.

63439. *MALUS* sp.

No. 1970. Shih tungtzu, near Huailai. February 3, 1925. Scions of a good-sized, red winter apple reported by the Chinese to be very good, but we found it soft and sweet and of only fair quality.

63440. *MALUS* sp.

No. 1971. Shih tungtzu, near Huailai. February 3, 1925. Scions of a winter apple, greenish with a red blush which sometimes extends over the fruit sufficiently to justify calling it red.

63431 to 63476—Continued.

63441. *MALUS* sp.

No. 1991. Tunghoshankou, near Huailai. February 3, 1925. Scions of an apple, 3 to 4 inches in diameter, which varies from pink to bright red and ripens in early September.

63442. *MALUS* sp.

No. 1993. Tunghoshankou, near Huailai. February 3, 1925. Scions of a fragrant apple, 2½ to 3 inches in diameter, which ripens during August, becoming green and red.

63443. *MALUS* sp.

No. 1996. Tunghoshankou, near Huailai. February 3, 1925. Scions of what the Chinese call *Sha Kuo Li* (crab-apple pear). The fruits, 1 to 2 inches in diameter, are similar to a pear when ripe, being light yellow with a pink blush. They ripen early in September.

63444. *MALUS* sp.

No. 1997. Tunghoshankou, near Huailai. February 3, 1925. Scions of an apple about 2 inches in diameter which ripens during September, being covered with large green and red spots. The flesh is acid in flavor.

63445. *MALUS* sp.

No. 1999. Tunghoshankou, near Huailai. February 3, 1925. Scions of a fragrant white apple, 2 to 3 inches in diameter, which ripens in August.

63446. *MALUS* sp.

No. 2008. Tung Hua Ssu temple, near Huailai. February 4, 1925. Scions of *Ping Kuo Tao* (peach apple). The fruits, 3 to 4 inches in diameter, have the shape of an apple but the flavor of a peach. They ripen in September.

63447. *MALUS* sp.

No. 2022. Tsanfengying, near Huailai. February 5, 1925. Scions of the *Pa Leng Hai Tang* (Polygon crab apple). The red fruits, 1 to 1½ inches in diameter, ripen in September.

63448. *MALUS* sp.

No. 2029. Tsanfengying, near Huailai. February 5, 1925. Scions of an apple, white with a pink blush, which ripens in September.

63449. *NICOTIANA TABACUM* L. Solanaceae. Tobacco.

No. 1975. February 3, 1925. Seeds of a large-leaved Chinese tobacco growing on the northern side of the White River, west of Huailai.

63450. *PHASEOLUS ANGULARIS* (Willd.) W. F. Wight. Fabaceae. Adzuki bean.

No. 1950. Huailai. February 2, 1925. Seeds of a small white bean.

63451. *PHASEOLUS AUREUS* Roxb. Fabaceae. Mung bean.

No. 1946. Huailai. February 2, 1925. Seeds of a green bean.

63452 and 63453. *PHASEOLUS VULGARIS* L. Fabaceae. Common bean.

63452. No. 1951. Huailai. February 2, 1925. Seeds of a yellow garden bean.

63431 to 63476—Continued.

63453. No. 1952. Huailai. February 2, 1925. Seeds of a white garden bean.
63454. *POPULUS* sp. Salicaceae. Poplar.
No. 2019. Tung Hua Ssu temple, near Huailai. February 4, 1925. Cuttings of a small-leaved poplar which was growing along waterways in the deciduous-fruit growing region of the foothills.
- 63455 to 63457. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.
63455. No. 2013. Tunghoshankou, near Huailai. February 4, 1925. Scions of the *Shui Hsing* (winter apricot). The yellow freestone fruits, 1½ to 2 inches in diameter, ripen in June.
63456. No. 2026. Tsanfengyung, near Huailai. February 5, 1925. Scions of a fragrant freestone apricot, 2 inches in diameter, which ripens about the middle of June, becoming light cream colored with a pink blush.
63457. No. 2030. Tsanfengyung, near Huailai. February 5, 1925. Scions of the *Chin Kang Chuan Hsing* (Buddha's hand apricot). A yellow clingstone, about 2 inches in diameter, which ripens in July. The kernel is quite sweet.
- 63458 to 63461. *PRUNUS* spp. Amygdalaceae. Plum.
63458. *PRUNUS* sp.
No. 1976. Tunghoshankou, near Huailai. February 3, 1925. Scions of the *Huang Niu Hsiu Li Tze* (yellow ox-heart plum). The fruits are said to be 1 to 1½ inches in diameter and about 2 inches long.
63459. *PRUNUS* sp.
No. 1976a. These scions are from a different tree than No. 1976 [S. P. I. No. 63458].
63460. *PRUNUS* sp.
No. 1988. Tunghoshankou, near Huailai. February 3, 1925. Scions of the *Niu Hsin Huang Li Tze* (red ox-heart plum). The dark-red fruits are 1 to 2 inches in diameter with yellow flesh, ripening during June and July.
63461. *PRUNUS* sp.
No. 2012. Tunghoshankou, near Huailai. February 4, 1925. Scions of the *Ting Pi Hung Li Tze* (red-topped plum). The yellow-fleshed fruits ripen during August and are 1 to 1½ inches in diameter.
- 63462 to 63466. *PYRUS* spp. Malaceae. Pear.
63462. *PYRUS* sp.
No. 1978. Tsanfengyung, near Huailai. February 3, 1925. Scions of the *Hung Hsiao Li* (red sour pear). The yellow fruits, 2 to 2½ inches in diameter, ripen in September.
63463. *PYRUS* sp.
No. 1980. Tunghoshankou, near Huailai. February 3, 1925. Scions of the *Chin Pa Hsiang Li* (fragrant golden handle pear). Sometimes called "gold" pear. The yellow fruits, 3 or more inches in diameter, ripen in September.

63431 to 63476—Continued.

63464. *PYRUS* sp.
No. 1908a.
63465. *PYRUS* sp.
No. 2025. Tsanfengyung, near Huailai. February 5, 1925. Scions of the *Yuan Ping Li* (round pear). The fruits, yellow with a pink blush, are 2 to 3 inches in diameter, ripening during September.
63466. *PYRUS* sp.
No. 2033. Tsanfengyung, near Huailai. February 5, 1925. Scions of the *Tieh Li* (iron pear) or *Suan Li* (sour pear). The fruit is 1½ to 2 inches in diameter and is yellow when ripe, but has to be kept a considerable length of time before it is ready to eat.
63467. *ROSA* sp. Rosaceae. Rose.
No. 2037. Peking. February 10, 1925. Cuttings of a very attractive double, bright-red rose, about 2 inches in diameter, presented by Prof. W. E. Chamberlain, head of the Department of Agriculture of the Peking University. This rose appears to be quite hardy and does not bear many thorns. It is evidently a climber and blooms continuously from August until frost.
- 63468 and 63469. *SOJA MAX* (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. Soy bean.
63468. No. 1947. Huailai. February 2, 1925. Seeds of a yellow variety.
63469. No. 1948. Huailai. February 2, 1925. Seeds of a black variety.
63470. *TRITICUM AESTIVUM* L. (*T. vulgare* Vill.). Poaceae. Common wheat.
No. 1945. Huailai. February 2, 1925. Seeds of Chinese spring wheat.
63471. *VICIA FABA* L. Fabaceae. Broad bean.
No. 1954. Huailai. February 2, 1925. *Tsan Tou* (silkworm bean). Seeds of an English broad bean.
63472. *VIGNA SESQUIPEDALIS* (L.) Frurwirth. Fabaceae. Yard Long bean.
No. 1960. Huailai. February 2, 1925. Seeds of a rather long and fairly broad bean which is yellow with longitudinal streaks.
- 63473 to 63475. *VIGNA SINENSIS* (Toner) Savi. Fabaceae. Cowpea.
63473. No. 1956. Huailai. February 2, 1925. Seeds of a pink or red cowpea.
63474. No. 1961. Huailai. February 2, 1925. Seeds of a cowpea mottled brown and cream colored.
63475. No. 1962. Huailai. February 2, 1925. Seeds of a yellow cowpea with a white or slightly brownish eye.
63476. *ZIZIPHUS JUJUBA* Mill. (*Z. sativa* Gaertn.). Rhamnaceae. Jujube.
No. 2023. Tsanfengyung, near Huailai. February 5, 1925. Scions of the *Chia Tsau* (home jujube). The fruits are said to be 1 to 1½ inches in diameter and 2½ inches long.

63477. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. Common wheat.

From Orleans, Loiret, France. Seeds presented by Edmond Versin, St. Jean le Blanc. Received March 27, 1925.

A new winter-wheat selection; not yet named nor in the trade. The heads are large and well filled; the yield is very large and the quality excellent. It is rust resistant and does not lodge; it is sown in October or November, maturing in July. (*Versin.*)

63478. TRIFOLIUM PRATENSE L. Fabaceae. Red clover.

From Chalonnnes sur Loire, France. Seeds presented by E. Jouffray. Received February 6, 1925.

Locally grown seeds.

63479 to 63483.

From Algeria. Collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received March 30, 1925. Notes by Doctor Fairchild.

63479. IRIS ALATA Poir. Iridaceae. Scorpion iris.

Plants of a dwarf iris growing in the dry, stiff, clay soils west of Aumale, Algeria, at an altitude of 2,500 feet. The rhizomes are located several inches below the surface, and in the autumn the plant sends up beautiful blue flowers. The leaves look like grass and are spread out in a kind of rosette.

63480. NARCISSUS BULBOCODIUM MONOPHYLLUS (Dur.) Baker. Amaryllidaceae.

A delicate, white-flowered plant, closely related to the narcissus but more delicate than any narcissus I ever saw. It is fragrant but less so than some other narcissus. The slender scape rises above the rocky ground to a height of not over 8 inches. In the summer it must be exposed to the blazing subtropical sun and get thoroughly dried out, for it occurs on the mountain tops in the edge of the Sahara near the Oasis of Bou Saada.

63481. POPULUS THEVESTINA Dode. Salicaceae. Poplar.

Cuttings of a strictly fastigate, brilliantly white-barked desert poplar. As I saw this tree it seemed to me that I had never seen any poplar so delicate in outline or so ghostlike in its white coloring. As a landscape tree for the irrigated regions of California it should prove to be a great addition.

63482. ROMULEA BULBOCODIUM (L.) Sebast. and Mauri. Iridaceae.

Bulbs. As we drove from Aumale to the Oasis of Bou Saada we observed the Arab boys and women digging up the tiny corms of this plant and tying them into bundles. We found these corms good to eat and quite sweet. The baked clay soils of this region are peppered with the little rosettes made by the slender grasslike leaves.

63483. SCILLA PERUVIANA L. Liliaceae. Squill.

Bulbs. On the baked clay steppes of the region east of Aumale we found that

63479 to 63483—Continued.

the rosettes of this interesting species were common.

A blue-flowered, bulbous plant resembling the hyacinth in habit.

63484 to 63486.

From Srinagar, Kashmir, India. Seeds presented by R. K. Koul, proprietor, Koul's Gardens. Received March 30, 1925. Notes by Mr. Koul.

63484. BRASSICA OLERACEA CAULO-RAPA DC. Brassicaceae. Kohl-rabi.

The *Knol-khol* is indigenous to Kashmir and was cultivated there long before America was discovered. The appearance is somewhat rough and the skin hard, but it is a most delicious vegetable, and I consider it far superior to the American kind imported into the Old World. The Kashmir varieties known as *Munjees*, 2 to 8 pounds in weight, are rare, being cultivated at only a few places in the valley. Besides being eaten as an ordinary vegetable, they make splendid pickles.

63485. BRASSICA OLERACEA VIRIDIS L. Brassicaceae. Kale.

The Kashmir sag (*Karmi Hakh*) is between 12 and 18 inches long and is indigenous to Kashmir. When the leaves are from 4 to 5 inches long and five to six in number each leaf is picked and collected in bundles of 10 to 12 each. The pickings, which take place every now and then during the season, are from the side shoots and not from the stem, which is kept intact. There are two ways of preparing this vegetable: First, the leaves when well examined and washed are slightly fried in oil or butter and then a sufficient quantity of water, salt, and condiments added, and the leaves are boiled until soft; second, the leaves are first boiled and then fried and spiced. This vegetable is very delicious and is peculiar only to Kashmir.

63486. RAPHANUS SATIVUS L. Brassicaceae. Radish.

The Mirpur radishes are large, between 12 and 13 inches long and from 1 to 4 pounds in weight, and are famous throughout northern India. They are eaten raw after being cut into small slices, are very delicious, and are better than any other table radish. They may also be cooked as an ordinary vegetable or used for pickling.

63487 to 63489.

From Medellin, Colombia. Seeds presented by Camilo C. Restrepo. Received March 7, 1925. Notes by Señor Restrepo.

63487. CHLORIS sp. Poaceae. Grass.

Splendid for permanent pastures; originally from Australia.

63488. ECHINOCHLOA sp. Poaceae. Grass.

Janeiro grass. A good grass for arid land.

63489. JUGLANS sp. Juglandaceae. Walnut.

An unidentified species.

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