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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 111



Washington, D.C.



Issued May 1934

PLANT MATERIAL INTRODUCED BY THE DIVISION OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, APRIL 1 TO JUNE 30, 1932 (Nos. 98257-100467)

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INTRODUCTORY STATEMENT

Inventory 111, including material received by the Division of Foreign Plant Introduction from April 1 to June 30, 1932 (nos. 98257 to 100467, inclusive), records conspicuously the collections of the Allison V. Armour expedition to the West Indies from December 1931 to April 1932, in which a widely varied range of tropical plants was gathered. Particular attention was paid to mangoes, of which 27 numbers were collected to be added to the permanent collection at Coconut Grove, Fla., where the test collection is established at the United States Plant Introduction Garden. A considerable number of palms were secured for the collection at the same garden, and a large number of ornamentals, including orchids, aroids, and bromeliads, as well as herbaceous perennials and flowering trees and shrubs, a total of 431 numbers.

The Erlanson-MacMillan expedition to Peru records in this inventory 328 introductions, of which 264 numbers were wild potatoes, the main object of the expedition. A considerable collection of native corn (99244-99288) was included.

In addition to the mangoes brought back by the Allison V. Armour expedition, the collection at Coconut Grove is increased by the collections from Puerto Rico (99760-99771, 99793-99801) and from Tahiti (99802-99804).

Through the kindness of Maj. Lionel de Rothschild, London, England, in sharing the material from the sixth Forrest expedition to southwestern China, this inventory records seeds numbered 99823-100103, 100141-100226, and 100281-100364, valued particularly for lilies, meconopsis, nomocharis, and primulas.

China is also represented by the collections received from Joseph Rock (99059-99070, 99676-99682), Albert Steward (99139-99242), and the botanical garden of Dr. Sun Yat Sen's memorial park, Nanking (98364-98387).

Special contributions for the specialists of the Division of Forage Crops and Diseases were received from the Union of Soviet Socialist Republics (98271-98304, 98524-98536), from Wales (99115-99138), from New South Wales (99327-99333), from Australia (99322-99325, 99467-99489, 100107-100113), and from New Zealand (100231-100251), including both grasses and legumes.

From the Union of Soviet Socialist Republics special collections for the use of other Department specialists were received, including cotton (98782-98790), peanuts (99302-99314), and sweetpotatoes (100253-100267).

PLANT MATERIAL INTRODUCED

Other collections, particularly of ornamentals, are recorded for the permanent collections of the several plant-introduction gardens maintained by this Division, particularly collections of species and varieties of maple.

The botanical determinations were made and the nomenclature determined by the late H. C. Skeels,¹ who had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

DIVISION OF FOREIGN PLANT INTRODUCTION,
Washington, D.C., October 27, 1933:

¹ Died Jan. 3, 1934.

INVENTORY²

**98257. ARUNDO PLINI Turra. Poa-
ceae. Grass.**

From Algeria, Africa. Roots presented by Dr. René Maire, University of Algiers, Algiers. Received April 2, 1932.

This species of *Aruno* is much smaller than *Aruno donar*, and the leaves are upright. It is native to the Mediterranean region and, in Algeria, is much used as a windbreak and as shading mats by the vegetable growers. Introduced as of possible value in experiments being carried on in the arid southwestern part of the United States.

**98258. SOLANUM TUBEROSUM L. Sol-
anaceae. Potato.**

From Germany. Tubers presented by the estate of Herr von Lockow, at Petkus, through Loyd V. Steere, agricultural attaché, Berlin. Received April 4, 1932.

Ackersegen. A wart-resistant table potato, with yellow flesh, that gives a high yield.

**98259. SOJA MAX (L.) Piper (*Glycine
hispida* Maxim.). Fabaceae. Soybean.**

From Japan. Seeds presented by T. B. Macaulay, Montreal, Canada. Received April 4, 1932.

Fukunaga. From the island of Hokkaido. A medium-sized, nearly round, straw-yellow bean with prominent dark-brown hilum.

98260. CITRUS sp. Rutaceae.

From Morocco. Seeds presented by M. H. Brayard, directeur de la Station Experimentale, Marrakech. Received April 4, 1932.

Rhobz el arsa. Introduced for trial as stock for the better varieties of lemon.

**98261. PSEUDOPHOENIX S ARGENTII
Wendl. Phoenicaceae. Palm.**

From the West Indies. Seeds presented by J. J. Albury, commissioner, The Bight, Cat Island, Bahamas, at the request of Hugh M. Matheson, Miami, Fla. Received March 30, 1932. Numbered in April 1932.

The so-called hog cabbage palm which grows wild on several of the Bahama keys. It does well in the rocky limestone formation of the islands.

For previous introduction see 96488.

**98262 to 98266. TRITICUM AESTIVUM
L. (*T. vulgare* Vill.). Poaceae.**

Common wheat.

From Australia. Seeds presented by H. Wenzholz, director of plant breeding, Department of Agriculture, New South Wales. Received March 29, 1932. Numbered in April 1932.

Grown at the experiment farm, Glen Innes, Sydney, New South Wales.

98262. *Bombard.* 98265. *Gluford.*

98263. *Cleveland.* 98266. *Yok.*

98264. *Ford.*

98267 to 98269.

From the Union of Soviet Socialist Republics. Cuttings presented by the director, Botanic Garden, Kamenetz-Podolsk, Ukraine. Received April 5, 1932.

98267. *TRADESCANTIA FLUMINENSIS* Vell. (*T. albiflora* Kunth). Commelinaceae.

Wandering-jew.

A trailing or pendulous herbaceous vine with ovate sessile leaves having sheaths with hairs only at the top. The white flowers, 1 inch wide, are hairy inside and are borne in axillary clusters. It is native to Brazil and Argentina.

98268. *TRADESCANTIA NAVICULARIS* Ort. Commelinaceae.

A stoloniferous creeping herbaceous perennial, native to Peru. The sessile ovate leaves are glabrous, and the bright-rose flowers are borne in terminal umbels.

98269. *ZEBRINA PENDULA* Schnizl. Commelinaceae.

Wandering-jew zebra.

A trailing half-succulent perennial herb native to Mexico, closely resembling *Tradescantia fluminensis*, but the leaf sheaths are hairy at both top and bottom. The sessile lanceolate leaves are silvery white above and red-purple beneath, and the flowers are rose red.

**98270. CITRUS GRANDIS (L.) Osbeck.
Rutaceae. Grapefruit.**

From Java. Plant and seeds presented by Mrs. Sophie H. Pownall, Banjoewangi. Received April 5, 1932.

A pink-fleshed grapefruit with a thick skin, introduced for the use of Department specialists.

² 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 Division 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 seed samples or 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

98271 to 98304. Poaceae.

From the Union of Soviet Socialist Republics. Seeds presented by Wl. Kousnetzoff, in charge of forage plants, Institute of Plant Industry, Lenin Academy of Agricultural Sciences, Leningrad, at the request of Prof. N. I. Vavilov. Received March 25, 1932. Numbered in April 1932.

A collection of forage grasses introduced for the use of Department specialists.

98271 to 98275. *Alopecurus pratensis* L. Meadow foxtail.

98271. No. 8023. From the Voronezh Experiment Station.

98272. No. 8026. From the Voronezh Experiment Station.

98273. No. 8229. From Burjato-Mongolia.

98274. No. 8733. From Melitopol, Ukraine.

98275. No. 8733-a. From the Askania Nova Experiment Station, Ukraine.

98276 to 98288. *Bromus* spp. Bromegrass.

98276. *Bromus albidus* Bieb.

No. 11. From the Volga region in European Russia.

For previous introduction see 78772.

98277 to 98280. *Bromus erectus* Huds. Meadow bromegrass.

A perennial thickly cespitose grass with upright stems 1 to 3 feet high. Native to Europe and Asia Minor.

For previous introduction see 68066.

98277. No. 137. From Samara, European Russia.

98278. No. 171. From the Saratov Experiment Station.

98279. No. 497. From Irkutsk, Siberia.

98280. No. 500. From Krim.

98281 to 98284. *Bromus inermis* Leyss. Common bromegrass.

98281. No. 491. From the Samara Experiment Station.

98282. No. 511. From Saratov.

98283. No. 517. From the Askania Nova Experiment Station, Ukraine.

98284. No. 554. From the Volga region in European Russia.

98285. *Bromus japonicus* Thunb.

No. 1. From Tiflis, Caucasus region. A biennial, upright or ascending grass of wide distribution in Europe and Asia. It commonly becomes 1 to 2 feet high.

98286. *Bromus squarrosus* L.

No. 17. From Melitopol, Ukraine.

For previous introduction see 57515.

98287. *Bromus tectorum* L.

No. 28. From the Kharkov Experiment Station, Ukraine.

98288. *Bromus* sp.

No. 23. From Pamir.

98289 to 98291. *Dactylis glomerata* L. Orchard grass.

98289. No. 7696. From the Altai region, Siberia.

98290. No. 7776. From Omsk, Siberia.

98291. No. 8693. From the Kharkov Experiment Station, Ukraine.

98292 to 98296. *Festuca* spp. Fescue.

98271 to 98304—Continued.

98292 and 98293. *Festuca elatior* L. Meadow fescue.

98292. No. 6081. From the Ural region in Siberia.

98293. No. 7025. From Omsk, Siberia.

98294. *Festuca elatior arundinacea* (Schreb.) Celak.

No. 8031. From the Voronezh Experiment Station.

For previous introduction see 88909.

98295 and 98296. *Festuca ovina* L. Sheep fescue.

98295. No. 7779. From Omsk, Siberia.

98296. No. 9392. From Murman, Hibini.

98297 to 98299. *Lolium perenne* L. Perennial ryegrass.

98297. No. 6149. From the Tambov Government.

98298. No. 6585. From the Kaluga Government.

98299. No. 7648. From the Luga Government.

98300 to 98304. *Phleum* spp. Timothy.

98300. *Phleum phleoides* (L.) Karst.

No. 9421. From Priyenisseisk, Siberia. A perennial gray-green loosely cespitose grass with short creeping rhizomes and stems 1 to 2 feet high. It is native to dry stony places throughout central Europe.

For previous introduction see 95555.

98301 to 98304. *Phleum pratense* L.

98301. No. 6061. From the Tambov Government.

98302. No. 7765. From Oiretia, Siberia.

98303. No. 8827. From Vitebsk Government.

98304. No. 9002. From Mingrelia, Caucasus.

98305. *Casimiroa edulis* Llave. Rutaceae. White sapote.

From California. Bud wood presented by Mrs. Nancy Maltby, Carlsbad. Received April 5, 1932.

Bud wood from a tree 10 years old, which bears fruits weighing $1\frac{1}{4}$ pounds. The tree is over 20 feet tall.

For previous introduction see 73081.

98306 to 98316.

From Germany. Plants purchased from A. Hesse, Weener. Received April 6, 1932.

98306 to 98309. *Acer* spp. Aceraceae. Maple.

98306. *Acer caesium* Wall.

A tree up to 75 feet high, native to the slopes of the Himalayas between 7,000 and 10,000 feet altitude. The palmately five-lobed leaves, pale beneath, are cordate with serrate margins and are 6 to 8 inches long and broad. The flowers appear after the leaves in large pyramidal panicles and are followed by smooth fruits with the wings spreading nearly at right angles.

98307. *Acer orientale* L.

Variety *sempervirens*. A dwarf form with undivided entire or crenulate leaves, scarcely exceeding half an inch in length.

98308. *Acer cappadocicum* Gleditsch. Coliseum maple.

Variety *laetum rubrum*. A form in which the leaves are blood red while unfolding, later becoming green.

98306 to 98316—Continued.

98309. ACER LOBELII Ten.

A tree up to 60 feet high, with ascending branches and glaucous branchlets, related to the Coliseum maple (*Acer cappadocicum*) and also a native of Italy. The leaves, 4 to 6 inches across, are usually divided into five long-acuminate lobes and are dark green above and slightly paler beneath. The corymbs of small flowers are followed by winged fruits which spread at a wide angle.

For previous introduction see 97501.

98310. CARPINUS LAXIFLORA Blume. Betulaceae. Hornbeam.

A tree, native to Japan, 40 to 50 feet high. The obliquely elliptic to cordate long-pointed leaves are 2 to 3 inches long and have serrate margins. The inconspicuous flowers are borne in loose catkins 2 to 3 inches long.

98311 and 98312. CARPINUS TSCNONOSKII Maxim. Betulaceae. Hornbeam.

98311. A graceful shrubby tree up to 45 feet high, native to northeastern Asia, with the young branchlets and leaves softly pubescent. The elliptic to oblong leaves are 2 to 4 inches long and have irregularly finely serrate margins.

98312. Received as *C. yedoensis*.

98313. DAPHNE BLAGAYANA Freyer. Thymelaeaceae. Balkan daphne.

A low diffusely branched shrub native to the mountains of southeastern Europe. The obovate leaves, 1 to 2 inches long, are crowded at the end of the branchlets, and the creamy fragrant flowers, borne in heads, are followed by globose light-pink fruits.

For previous introduction see 92285.

98314. FAGUS SYLVATICA L. Fagaceae. European beech.

Variety *fastigiata*. A form with erect branches and smooth glossy leaves. Received as variety *dawyczkii*.

98315 and 98316. NOTHOFAGUS ANTARCTICA (Forst.) Oerst.

98315. A forest tree up to 100 feet high, native to Chile and closely related to the American beech (*Fagus grandifolia*). The branchlets are tomentulose, and the small leaves, about 1 inch long, are broadly ovate to oblong and have fine irregular teeth on the margin or occasionally bear small lobes.

98316. Variety *uliginosa*.

98317 to 98339.

From the Netherlands. Plants purchased from B. Ruys, Ltd., Royal Moerheim Nurseries, Dedemsvaart. Received April 6, 1932.

98317. ERYNGIUM sp. Apiaceae. Eryngo.

Jewel; a hybrid with dark-violet flowers.

98318. ERYNGIUM sp. Apiaceae. Eryngo.

Springfield seedling; a hybrid with dark steel-blue flowers which have blue stems.

98319. FUCHSIA LONGIPEDUNCULATA Hort. Onagraceae.

A name for which a place of publication and a description have not been found.

98320. GALEGA sp. Fabaceae. Goatsrue.

His Majesty; a high-growing hybrid with fine dark-blue flowers.

98321. GALEGA sp. Fabaceae. Goatsrue.

Lady Wilson; a hybrid with pinkish flowers.

98317 to 98339—Continued.

98322. HELENIUM AUTUMNALE L. Asteraceae. Sneezeweed.

Moerheim Beauty; a hybrid of erect habit. The strong flowers, which clear the foliage by several inches, are about 3 inches in diameter and have broad deep-crimson ray florets, shading to orange at the tips, surrounding a deep-purple disk which becomes golden as the stamens appear.

98323 to 98326. HOSTA spp. Liliaceae. Plantainlily.

98323 and 98324. HOSTA FORTUNEI (Baker) Bailey.

98323. A perennial herb, native to Japan, with slightly glaucous cordate leaves 6 to 8 inches long. The funnel-shaped pale-lilac flowers, 1 to 2 inches long, are borne in a raceme on a stalk 18 inches high.

98324. Variety *robusta*; a gigantic form with enormous leaves and flowers of the same color as the type.

98325. HOSTA SIEBOLDIANA (Hook.) Engler (*Funkia glauca* Sieb.). Cushion plantainlily.

A perennial herb, native to Japan, with very glaucous cordate leaves 10 to 15 inches long. The slender pale-lilac drooping flowers are borne on short stalks usually shorter than the leaves.

98326. HOSTA MINOR (Baker) Nakai.

Variety *alba*; a white-flowered form of this herbaceous perennial, native to China and Japan, with slightly cordate leaves, 4 to 6 inches long, on petioles as long as the blades. The small flowers are borne on long stalks 12 to 18 inches high.

98327 to 98329. KNIPHOFIA HYBRIDA Hort. Liliaceae. Torchlily.

98327. *Egypt*. Flowers a distinct shade of orange yellow.98328. *Excellence*. Elegant stems and flowers a very peculiar shade of red.98329. *Lord Roberts*. A variety with wonderful red flowers of distinct merit.

98330. LATHYRUS LATIFOLIUS L. Fabaceae. Perennial pea.

Rose Queen. A variety with large bright-pink flowers.

98331. PODOPHYLLUM EMODI Wall. Berberidaceae. Himalayan mayapple.

Variety *majus*; a very early flowering plant with foliage peculiarly marbled on long stems. The light-pink flowers, also on long stems, are raised just above the leaves and are followed by conspicuous fruits like the Spanish pepper.

98332 to 98339. PRIMULA JULIAE Kusnez. Primulaceae. Primrose.

98332. *Bunty*. A dwarf novelty, the finest of the Juliae-hybrid group. The flowers are as near blue as possible.98333. *Helena*. A hybrid with beautiful carmine-purple flowers.98334. *Helena* *purpurkissen*. A hybrid with very early, fine purple flowers.98335. *Juliana Gloria*. A very free-flowering dwarf hybrid with brilliant magenta-colored flowers with an orange eye.98336. *Magenta*. Flowers deep velvety crimson red with brilliant yellow eye.98337. *Mrs. MacGillatry*. An early variety with enormous quantities of fine lilac-pink flowers. (Originated in the Ruys Nurseries.)98338. *Pam*. A Juliae cross which is a dwarf with deep purple-crimson flowers; one of the finest and richest colors of this group.

98317 to 98339—Continued.

98339. *Wanda*. A very early dwarf hybrid with a mass of brilliant purple-blue flowers.

98340 to 98347.

From France. Seeds presented by the secretary general, Société Nationale d'Acclimatation de France, Paris. Received April 2, 1932.

98340. *ANNONA DIVERSIFOLIA* Safford. *Annonaceae*. *Ilama*.

A small tree, native to Mexico and tropical America, with brown-gray aromatic bark. The thin membranous leaves 5 inches long are broadly elliptical to oblanceolate. The broadly ovoid fruit, about 6 inches long, is clothed in dense grayish feltlike tomentum and, when mature, is usually covered with stout thick protuberances. The hard smooth golden-brown nutlike seeds are embedded in the edible cream-colored or rose-tinted flesh.

For previous introduction see 58850.

98341. *CARICA PAPAYA* L. *Papayaceae*. *Papaya*.

98342 and 98343. *CASIMIROA EDULIS* Llave. *Rutaceae*. *White sapote*.

98342. Originally from Hidalgo, Mexico.

98343. Originally from Tlaxcala, Mexico.

98344 to 98346. *PRUNUS CAPULI* Cav. *Amygdalaceae*. *Capulin*.

98344. Originally from Mexico, Mexico.

98345. Originally from Puebla, Mexico.

98346. Originally from Tlaxcala, Mexico.

98347. *PSIDIUM CATTLEIANUM* Sabine. *Myrtaceae*. *Strawberry guava*.

A form with red fruits.

For previous introduction see 94288.

98348 to 98350. *SACCHARUM OFFICINARUM* L. *Poaceae*. *Sugarcane*.

From British Guiana. Cuttings presented by the British Guiana Experiment Station, Georgetown. Received April 7, 1932.

98348. No. 10.

98349. No. 663-13.

98350. No. 666-18.

98351. *VITIS VINIFERA* L. *Vitaceae*. *European grape*.

From Algeria, Africa. Cuttings presented by Emil Vivet, Director of Agriculture, Algiers, through Oscar S. Heizer, American consul. Received April 7, 1932.

Valensi. A large round golden-yellow grape which forms a rather loose cluster and somewhat resembles the *Panse Précoce*.

98352 to 98362.

From the Union of Soviet Socialist Republics. Seeds presented by the director, Botanic Garden, Kamianetz Podilskyj, Ukraine. Received April 5, 1932.

98352 to 98356. *ALYSSUM* spp. *Brassicaceae*.

98352. *ALYSSUM ARGENTUM* Vitm. *Silver alyssum*.

A dwarf herbaceous perennial up to 15 inches high, native to Europe. The oblong spatulate leaves, 1 inch long, are silvery beneath, and the small yellow flowers appearing all summer are borne in dense clusters.

98352 to 98362—Continued.

98353. *ALYSSUM CALYCIUM* L.

A rather low annual alyssum from the mountains of Asia Minor. The lower leaves are obovate, the upper oblanceolate, and the flowers are in a simple raceme.

For previous introduction see 90608.

98354. *ALYSSUM MARITIMUM* (L.) Lam. *Sweet alyssum*.

Variety *Benthami*; a dwarf compact form, not over 6 inches high, with very pervasive scent.

98355. *ALYSSUM MONTANUM* L.

A tufted alpine perennial, native to the mountains of Europe. The pubescent plants, 2 to 3 inches high, have obovate leaves, and the fragrant yellow flowers are borne in simple racemes.

98356. *ALYSSUM SAXATILE* L. *Goldentuft*.

A low herbaceous perennial, native to Europe, forming dense mats. The oblanceolate hoary-tomentose leaves, 2 to 4 inches long, are entire or wavy margined, and the bright-yellow flowers are borne in small compact clusters on stems about 1 foot high.

98357. *DIANTHUS CHINENSIS* L. *Silenaceae*. *Chinese pink*.

Variety *Sequierii*; a form with the flowers in panicles and with squarrose-spreading bracts.

98358. *ECHINOPS KARATAVICUS* Regel and Schmalh. *Asteraceae*. *Globethistle*.

A stout hairy perennial composite from Turkistan, with a stem 1 or 2 feet high and elliptic-lanceolate or lanceolate pinnatifid leaves 6 to 8 inches long. The pale-blue flower heads are in small clusters.

98359. *ECHINOPS SPHAEROCEPHALUS* L. *Asteraceae*. *Common globethistle*.

A tall herbaceous perennial, native to southern Europe, with coarse stems 5 to 7 feet high. The large pinnatifid leaves are viscous pubescent above, tomentose beneath, and the broad lobes are armed with yellow spines. The white or bluish flowers are borne in globose masses.

98360. *KITAIBELIA VITIFOLIA* Willd. *Malvaceae*.

A robust herbaceous perennial up to 8 feet high, somewhat like abutilon, with five-lobed maple-like leaves and showy white or rose colored five-petaled flowers, clustered in the axils. Said to be useful in half-shady places. Native to Europe.

For previous introduction see 79503.

98361. *STATICE PINIFOLIA* Brot. *Plumbaginaceae*. *Thrift*.

A stemless herbaceous perennial with long rigid sharp-pointed leaves 4 to 6 inches long and pink flowers on three or four scapes 1 to 2 feet high. Native to Portugal.

98362. *STATICE SPLENDENS* Lag. and Rodr. *Plumbaginaceae*. *Thrift*.

A magenta-flowered herbaceous perennial with narrow linear basal leaves one half inch long and simple filiform scapes 2 inches high. Native to Spain.

98363. *MEDICAGO SATIVA* L. *Faba-ceae*. *Alfalfa*.

From Arabia. Seeds presented by K. S. Twitchell, mining engineer, Jidda, Hejaz. Received April 5, 1932.

A collection of native alfalfa introduced for the use of Department specialists.

98364 to 98387.

From China. Seeds presented by H. K. Fu, director, Botanic Garden, Dr. Sun Yat Sen's memorial park, Nanking. Received March 28, 1932. Numbered in April 1932.

98364 to 98366. *ABIES* spp. Pinaceae. Fir.

Collected in Szechwan Province.

98364. *ABIES BEISSNERIANA* Rehd. and Wils.

A fine tree up to 60 feet in height, with a trunk 2 to 3 feet in diameter, which grows along stream beds at about 11,000 feet altitude. The needles are not silvery beneath, and the erect cones are greenish white.

For previous introduction see 58499.

98365. *ABIES DELAVAYI* Franch.

A tall tree, often over 100 feet high, native to western China. The slightly grooved branchlets are lustrous red-brown and the emarginate linear leaves, about 1 inch long, are revolute on the margin, dark green above and with two white bands beneath. The violet-black cylindrical to ovoid cones are 2 to 4 inches long, and the scales are nearly 1 inch wide.

98366. *ABIES RECURVATA* Masters.

A tall tree up to 125 feet high, native to western China. The rough bark is dark gray or red brown, the lustrous branchlets are pale yellow-gray, and the sharp-pointed recurved linear leaves, more than 1 inch long, are shining blue-green above and paler beneath. The ovoid cones, 2 to 4 inches long, are violet-purple, finally becoming gray-brown.

98367. *BUDDLEIA LINDLEYANA* Fortune. Loganiaceae. Lindley butterflybush.

An upright shrub 6 to 8 feet high, collected in Chekiang Province, where it is native. The branchlets are four angled and slightly winged, and the ovate to oblong-lanceolate leaves are 2 to 4 inches long and have remotely denticulate margins. The purple-violet flowers are borne in rather dense upright spikes 6 to 8 inches long.

98368. *CASTANOPSIS HYSTRIX* A. DC. Fagaceae. Evergreen chinquapin.

A lofty tree 80 to 100 feet high, with trunks 3 feet in diameter, found in pine forests in Szechwan Province at 6,000 feet altitude. The smooth fawn-colored bark is flaky, and the straight ascending branches give the tree an oblong appearance. The burs are in long densely packed spikes, and the involucre are covered with long soft green spines. The small nuts are borne singly or in twos. This is one of the finest forest trees of the region. According to the natives, the wood is very durable and is not attacked by insects.

For previous introduction see 65759.

98369. *CROTON TIGLIUM* L. Euphorbiaceae. Croton-oil plant.

Collected in Szechwan Province. A small ornamental tree with ovate leaves varying in color from metallic green to bronze and orange. The powerful purgative, croton oil, is obtained from the seeds by crushing.

For previous introduction see 45196.

98370. *EUCOMMIA ULMOIDES* Oliver. Trochodendraceae. Tu-chung.

Shih mien shu, stone cotton tree, in reference to the asbestoslike threads of shining whitish color which appear when the pieces of bark or leaf are snapped across. A tree which reaches a height of 80 feet and seems to grow best when sheltered by other trees. It is native to the southwestern part of China.

For previous introduction see 46119.

98364 to 98387—Continued.

98371. *EXCHORDIA RACEMOSA* (Lindl.) Rehd. Rosaceae. Common pearlbrush.

A slender spreading shrub 9 to 12 feet high, native to eastern China. The elliptic to obovate leaves are 2 to 5 inches long and whitish beneath, and the white flowers, nearly 2 inches across, are borne in 6- to 10-flowered racemes.

98372. *GREWIA BILOBA* Don. Tiliaceae.

A shrub 6 to 9 feet high, with tomentose branchlets, native to northern China, and collected in Chekiang Province. The rhombic-ovate leaves, 2 to 5 inches long, are unequally and doubly serrate, sometimes three-lobed, and are densely stellate pubescent beneath. The creamy-yellow flowers, about one half inch across, are borne in 5- to 8-flowered umbels and are followed by orange-red 2- to 4-lobed fruits.

98373. *GYMNOCLADUS CHINENSIS* Baill. Caesalpiniaceae.

Closely resembling the Kentucky coffeetree (*G. dioica*), but the oblong-obtuse leaflets are smaller and are pubescent on both sides. The lilac-purple flowers are borne in large panicles and appear before the leaves.

98374. *MALLOTUS APELTA* (Lour.) Muell. Arg. Euphorbiaceae.

Collected in Chekiang Province. A large tropical shrubby perennial, native to southeastern China, closely related to the castor-bean (*Ricinus communis*). The leaves are alternate, broadly oval, and the fruit is a prickly capsule.

98375 to 98380. Collected in Szechwan Province.

98375. *ORMOSIA HOSIEI* Hemsl. and Wils.

Hung-tou Mu, red bean tree, so-called because the seeds are red and in a beanlike pod. The heavy wood is a rich-red color, beautifully marked, and is used for the very best furniture and high-grade cabinetwork. In the spring the tree is covered with large panicles of white and pink pea-shaped flowers, and at all seasons it is striking in appearance.

For previous introduction see 54033.

98376. *PICEA PURPUREA* Masters. Pinaceae. Spruce.

A large forest tree often over 100 feet high, native to China. It is closely related to *P. likiangensis*, from which it differs in having purple cones about 2 inches long. The shoots are usually densely covered with pale-gray spreading villous pubescence; the leaves are narrowly lanceolate, about one half inch long, and vary from deep green to glaucous. The trees vary in habit from pyramidal to spreading, and sometimes the branchlets are drooping.

98377. *PINUS TABULAEFORMIS DENSATA* (Masters) Rehd. Pinaceae. Pine.

A tree up to 75 feet high, native to China. The stiff leaves are 3 to 5 inches long, and the obliquely ovoid cones, 2 to 3 inches long, have the ends of the outer scales conspicuously swollen.

98378. *PINUS YUNNANENSIS* Franch. Pinaceae. Yunnan pine.

A large forest tree, native to Yunnan, China. The long slender drooping leaves are up to 10 inches long, and the cones, 2 to 4 inches long, have flat scales.

98379. *PYRACANTHA CRENATO-SERRATA* (Hance) Rehd. Malaceae. Firethorn.

An evergreen shrub up to 10 feet high, native to central and western China. The branchlets are rusty pubescent, and the elliptic to obovate leaves, 1 to 3 inches long, are entire or crenate, dark green and lustrous above and paler beneath. The umbels of small white flowers are followed by coral-red fruits.

98364 to 98387—Continued.

98380. *QUISQUALIS INDICA* L. Combretaceae.
Rangoon-creeper.

A rambling subscandent shrub, native to India, with opposite obovate leaves 4 inches long and short axillary and terminal spikes of tubular pink or red flowers. The obovoid fruits are 1 to 2 inches long and are sharply five-angled.

98381 to 98387. Collected in Chekiang Province.

98381. *RHAMNELLA FRANGULOIDES* (Maxim.) Weberbauer. Rhamnaceae.

A tree up to 30 feet high, native to China and Japan. The long-pointed oblong-ovate leaves, 2 to 5 inches long, are serrulate on the margin, and the small green flowers, in axillary cymes, are followed by cylindrical-oblong black fruits about one-third inch long.

98382. *RHEUM ALEXANDRAE* Batal. Polygonaceae.

A stout herbaceous perennial, native to China, with a rosette of elliptic-ovate dark glossy-green leaves and flower stems, 3 to 4 feet high, bearing large pale-yellow overlapping leaflike bracts.

For previous introduction see 84049.

98383. *SOPHORA FLAVESCENS* Ait. Fabaceae.

A subshrubby perennial, 3 to 4 feet high, with odd-pinnate leaves of 3 to 6 pairs of elliptical leaflets 1 to 2 inches long and loose racemes of creamy white pea-shaped flowers 1 inch long. It is native to northern China.

For previous introduction see 98124.

98384. *TSUGA CHINENSIS* (Franch.) Pritz. Pinaceae. Chinese hemlock.

A large forest tree, up to 150 feet high, native to western China. The branchlets are yellowish at first, later turning pale yellow-gray. The linear leaves, 1 inch long, are glossy dark green above and have broad whitish bands beneath which later become inconspicuous. The ovoid cones, 1 inch long, have lustrous yellow-brown scales.

98385. *XYLOSMA CONGESTUM* (Lour.) Merr. Flacourtiaceae.

A shrub or small tree, sometimes spiny, native to China and Japan. The ovate-serrate leaves are 1 to 2 inches long, and the small fragrant yellow flowers, in axillary racemes 1 inch long, are followed by globose black fruits one fourth inch in diameter.

98386. *ZANTHOXYLUM ALATUM PLANISPINUM* (Sieb. and Zucc.) Rehd. and Wils. Rutaceae. Prickly-ash.

A Japanese shrub 7 to 13 feet high, much branched at the base, sometimes with a short trunk. The dark-brown spreading branches, drooping a little at the tips, bear stout straight spines in pairs and evergreen pinnate leaves, dark green above and paler beneath. The small red fleshy fruits are persistent and emit a very agreeable aromatic odor when bruised. The shrub may be used as an ornamental or as a hedge plant.

For previous introduction see 98085.

98387. *ZANTHOXYLUM SCHINIFOLIUM* Sieb. and Zucc. Rutaceae. Prickly-ash.

A graceful Japanese shrub or small tree with attractive compound leaves and, in the autumn, rather conspicuous clusters of greenish or brownish fruits.

For previous introduction see 90676.

98388 to 98392. *VITIS VINIFERA* L. Vitaceae. European grape.

From the Union of Soviet Socialist Republics. Cuttings presented by Maj. C. R. Olberg, Tiflis, Transcaucasia, through the commercial attaché, Istanbul, Turkey. Received April 9, 1932.

A collection of commercial varieties introduced for the use of Department specialists.

98388. *Rozovii Kishmish*, light-red raisin grape.

98389. *Zheltii Kishmish*, yellow raisin grape.

98390. *Ackepu askjari*.

98391. *Meskahakie*.

98392. *Rozovii Kishmish*, light-red raisin grape.

98393. *CORDIA* sp. Boraginaceae.

From the West Indies. Seeds collected by Gaines R. Wilson, of Miami, Fla., at Albert Town, Fortune Island, Bahamas. Received March 28, 1932. Numbered in April 1932.

A tree growing in poor soil in an exposed position, where it has become both drought and hurricane resistant. The dark-green leaves looked thrifty, although there had been a drought for 4 months.

98394 to 98396. *FICUS* spp. Moraceae. Fig.

From Egypt. Cuttings presented by T. W. Brown, director, horticultural section, Cairo. Received April 15, 1932.

98394. *FICUS BENGHALENSIS* L. Banyan tree.

A large tree, 75 to 100 feet high, rooting from the branches. The branchlets are softly pubescent, the broadly ovate coriaceous leaves are 4 to 8 inches long, and the globose red fruits, borne in pairs, are about the size of small cherries. The tree is native to India and northern Africa.

98395. *FICUS ERIOBOTRYOIDES* Kunth and Bouche.

A tree with straight branches, brown pubescent branchlets, and oblong-ovate, coriaceous leaves 1 foot long and 3 to 4 inches wide. The native country is not known.

For previous introduction see 93271.

98396. *FICUS LACCIFERA* Roxb.

A tropical tree with oval or cordate shining-green leaves up to 7 inches long and smooth oval fruits the size of a gooseberry. Native to Silhet, India.

98397. *BOUGAINVILLEA GLABRA* Choisy. Nyctaginaceae. Lesser bougainvillea.

From the Canal Zone. Plants presented by J. E. Higgins, director, Experiment Gardens, Summit. Received April 13, 1932.

A form with pink flowers.

98398. *PERSEA AMERICANA* Mill. Lauraceae. Avocado.

From the Society Islands. Bud wood presented by Harrison W. Smith, Papeari, Tahiti. Received April 14, 1932.

Motuovini. A variety of excellent flavor and quality, originated by Mr. Smith.

98399 to 98417.

From the West Indies. Scions collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931-32 Allison V. Armour expedition. Received April 11, 1932.

98399 to 98417—Continued.

98399. CITRUS AURANTIFOLIA (Christm.) Swingle. Rutaceae. Lime.

No. 2942. From Charlotteville, Tobago, February 20, 1932. Very acid and very juicy fruit; on the same tree were found large fruits with rough skin and small smooth-skinned fruits.

98400 to 98416. MANGIFERA INDICA L. Anacardiaceae. Mango.

Nos. 98400 to 98406 were presented by E. A. Walter, superintendent of the Agricultural Experiment Garden at St. Lucia, Windward Islands, March 8, 1932.

98400. No. 3717. *Tin creme*. A medium-sized oval yellow to green mango with smooth cream-flavored flesh with persistent fibers. It is an early mango in St. Lucia, ripening a small crop in February and March and the main crop from April until August.

98401. No. 3718. *La Rose*. A bright rose-colored medium-sized pear-shaped subacid mango which ripens in August.

98402. No. 3720. *Tin Tin*. The *Tin* mango seems to be a race of seedlings coming partly true to type. There is a theory that these seedlings came from a grafted mango. They are not immune to anthracnose, but fruit in February and March and again from April to August.

98403. No. 3721. *Amelie*. A medium-sized, green-yellow mango which has a red blush if grown in the sun; one of the most prized mangoes of the island. It is a midseason variety and rather stringy and not so good a shipper as the *Julie*.

98404. No. 3722. *Imperial*. A large very juicy yellow fruit with a small seed and very little fiber, which ripens in midseason.

98405. No. 3723. *Graham*. A seedling of the *Julie*, that has a larger fruit and develops a crimson blush when grown in the sun. It is preferred by many in the West Indies to the *Julie*, which seems to be the standard mango of the islands.

98406. No. 3724. *Julie*. This dwarf mango, with wedge-shaped squarish fruit that in sunlight develops a distinct red blush, is becoming the standard mango of the West Indies. It is a midseason variety, yielding a reasonably sure crop, and is a good shipper.

Nos. 98407 and 98408 were presented by Mr. Buffon, head gardener at Jardin d'Essais, Basse Terre, Guadeloupe, French West Indies, March 12, 1932.

98407. No. 3787. *D'Or*. A large round yellow mango, not fibrous, with a medium-sized seed and much juicy flesh, rather inclined toward the acid side.

98408. No. 3788. *Coq D'Inde* (turkey egg). A small yellow mango about the size of a turkey egg, with thin skin, a large seed, and highly perfumed yellow fibrous flesh. A midseason variety that may prove better than the ordinary "turpentine" mango.

98409. No. 3816. *Quanto*. From Tortola, British Virgin Islands, March 18, 1932. A mango of medium size with green skin, a small seed, and sweet yellow flesh without fiber but with a turpentine flavor. The tree is a heavy bearer and is introduced for comparison with the ordinary "turpentine" mango now growing in Florida, as stock or for crossing purposes.

98410. No. 3817. *Turkey breast*. From the French side of St. Martin Island, March 17, 1932. A large thick mango with a suture down one side, which gives it the appearance of a turkey's breast. The fruit is said to be

98399 to 98417—Continued.

fiberless, but as it was not ripe its quality could not be judged, but it is evidently the best mango of this region.

Nos. 98411 to 98416 were collected March 18, 1932, on Tortola.

98411. No. 3818. *Bullhead* or *Miss Niles*. Scions from a seedling tree 70 years old, on the estate of J. S. W. Georges, at Bough Bay. The large light-yellow fruits, up to a pound in weight, have small seeds, light-yellow, very juicy flesh with short fibers, and are not so strong flavored as most mangoes.

98412. No. 3819. *Cottage*. Scions from an old seedling tree 3 feet in diameter which was loaded with both fruit and flowers. The fruits are medium to small, very sweet, and rather fibrous. Evidently a rather early sort, which may have some character worth preserving.

98413. No. 3826. *Royal*. Presented by Roy Campbell, on whose place the tree was growing. A medium-sized seedling mango of scarlet color, not very fibrous, and of good flavor, but not the best. Its color will make it a valuable variety for use in breeding work.

98414. No. 3831. *Tortola seedling*. From an old seedling tree growing in the orchard plat at the Tortola Experiment Station. The fruit is said to be of good quality, somewhat acid, and very juicy, with less fiber than the common type. The skin is yellow, overlaid with a dark-red blush, similar in shape to the *Julie*, but larger, as the fruits weigh from three-fourths to 1 pound each.

98415. No. 3832. *Rector* or *Boar hog*. Collected near Sea Cow Bay. A large sweet yellow fruit with very little fiber. It is one of the largest-fruited mangoes on the island and is probably a midseason or late variety.

98416. No. 3833. *Kidney*. Collected near the experiment station. The large fruits are said to be greenish yellow when ripe and one of the best seedling mangoes on the island.

98417. ARMOURIA BEATA Lewton. Malvaceae.

No. 2617. A new genus and species from Beata Island, Dominican Republic, March 22, 1932. Seeds and scions of a shrub or small tree 15 to 20 feet high found on a rocky cliff. The leaves, over 2 inches long, are cordate, subobovate, roughish above, paler and softly stellate-tomentose beneath. The beautiful silver-shaped cream-colored flowers are solitary and over 3 inches in diameter.

98418 to 98444. ACER spp. Aceraceae.

From England. Plants purchased from W. Fromow & Sons, Chiswick, London, W. Received April 13, 1932.

98418 to 98427. ACER PALMATUM Thunb. Japanese maple.

98418. *Atropurpureum*; a vigorous handsome plant with bold dark-purple foliage.

98419. *Corallinum*; a pretty small-growing variety with bright coral-red foliage in spring.

98420. *Crispum*; a tree of very distinctive erect habit with green red-stalked leaves which have convoluted edges.

98421. *Decompositum*; a distinct variety with pretty green leaves.

98422. *Dissectum atropurpureum*; a variety with fine purple deeply serrated leaves, 9- to 10-parted.

98423. *Dissectum ornatum*; a variety with bronze-purple, deeply serrated leaves, 9- to 10-parted. It is very similar to *dissectum atropurpureum* except that the leaves are more bronzy.

98418 to 98444—Continued.

98424. *Dissectum palmatifidum*; a tree with bright-green very fine palmately divided leaves.

98425. *Dissectum variegatum*; a tree with very fine palmately divided leaves, prettily variegated rose and white.

98426. *Involutum*; a tree with five-lobed serrated leaves, edged with rose in the spring.

98427. *Involutum variegatum*; a tree with five-lobed serrated leaves, prettily variegated with white in the center and edged with rose; very pretty in the spring.

98428 to 98432. *ACER JAPONICUM* Thunb.
Fullmoon maple.

98428. A tree with light-green, many-lobed leaves which change in summer to red tints.

98429. *Aureum*; a splendid bright-golden form of the above; the finest golden maple.

98430. *Dissectum*; a distinct species with large broad foliage of dark green, marbled with yellow.

98431. *Laciniatum*; a beautiful form whose leaves have deeply lacinated lobes which are light green in the spring, changing to reddish in the summer and crimson in autumn.

98432. *Uribanishki*.

98433 to 98444. *ACER PALMATUM* Thunb.
Japanese maple.

98433. *Laciniatum*; bright-green, deeply lacinated leaves which change to red in autumn.

98434. *Laciniatum atropurpureum*; a dark-purple form of the above.

98435. *Linearifolium*; a very distinct form with light-green leaves having seven very narrow lobes.

98436. *Linearifolium purpureum*; a dark-purple form of the preceding.

98437. *Reticulatum* (flavescens); a form with pale yellow-green, seven-lobed, deeply serrated leaves with dark-green veins.

98438. *Roseum marginatum*; a very distinct and charming variety having light-green leaves with deeply cut lobes, margined with rose.

98439. *Rufescens*; a form with pale-green sharply serrated leaves with seven lobes.

98440. *Sanguineum*; a striking variety with five-lobed leaves of deep reddish crimson.

98441. *Sanguineum variegatum*; a striking variety with five-lobed leaves of deep reddish crimson variegated with bright scarlet, changing to white.

98442. *Septemlobum*; a form with seven-lobed, pale-green leaves which change to red in the autumn.

98443. *Seigenii*; a pretty variety with bright-red leaves in the spring which change in the summer.

98444. *Variegatum* (versicolor); a form with variegated green leaves spotted and striped, rose and white.

98445 to 98447. *MANGIFERA INDICA* L.
Anacardiaceae. Mango.

From the West Indies. Scions collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931-32 Allison V. Armour expedition. Received April 14, 1932.

Presented February 17, 1932, by R. O. Williams, director, Trinidad Botanic Garden.

98445. No. 2898. *Graham*; a seedling of the *Julie* mango, originated locally and named after the

98445 to 98447—Continued.

originator. When grown in the wet part of the island, the mango is a yellowish green, but when grown in dry parts of the island it develops a crimson cheek. The fruit is larger than the *Julie*, and the tree is a good bearer.

98446. No. 2899. *Pere Louis*; a medium-sized, yellow mango of very good flavor and very little fiber. It has no turpentine taste.

98447. No. 2900. *Roseau*; a yellow-green mango of good flavor and little fiber, with no turpentine flavor. It is not as good as the *Julie* and is not a good shipper.

98448. *CITRUS AURANTIUM* L. Rutaceae. Seville orange.

From the West Indies. Seeds collected on Dominica, Windward Islands, and presented through the Division of Fruit and Vegetable Crops and Diseases. Received April 14, 1932.

Dominican sour orange.

98449. *CITRUS GRANDIS* (L.) Osbeck. Rutaceae. Grapefruit.

From the West Indies. Plants collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931-32 Allison V. Armour expedition. Received April 11, 1932.

No. 2865. Presented February 16, 1932, by R. O. Williams, director, Trinidad Botanic Gardens. A wild grapefruit which is oval in shape and quite distinct from the common grapefruit of Florida.

98450 to 98481. *RHODODENDRON* spp. Ericaceae.

From England. Plants purchased from Harry White, Sunningdale Nursery, Windlesham, Surrey. Received April 15, 1932.

98450 to 98456. *RHODODENDRON AZALEODENDRON* Vilm. and Bois.

A collection of rhododendron-azalea hybrids.

98450. *Goenianum*.

98451. *Odoratium*.

98452. *Jackie*.

98453. *Katie*.

98454. *Nellie*.

98455. *Smithii aureum*.

98456. *Torlonianum*.

98457. *RHODODENDRON AMBIGUUM* Hemsl.

A low Chinese evergreen shrub with lanceolate leaves 2 to 3 inches long and flowers which are pale yellow spotted with greenish yellow and 2 inches across.

For previous introduction see 86758.

98458. *RHODODENDRON CALOSTROTUM* Balf. and Ward.

A low shrub a foot high, native to northeastern Burma between 11,000 and 12,000 feet altitude. The obovate leaves 1 inch long are densely covered above with greenish scales, and the lower surface is pale red with numerous flaky scales. The widely funnel-shaped flowers, 1 inch long, are bright red purple and are borne in pairs at the ends of the branchlets.

For previous introduction see 97384.

98459. *RHODODENDRON CANTABLE* Balf. f.

A shrub up to 3 feet high with small oval-elliptic leaves densely dotted brown beneath. The small flowers are a deep purplish blue.

For previous introduction see 59564.

98450 to 98481—Continued.

98460. RHODODENDRON CEPHALANTHUM Franch.

A shrub 2 feet high with small elliptical leaves which have brownish wool beneath. The tubular flowers are white.

For previous introduction see 59029.

98461. RHODODENDRON CHARTOPHYLLUM Franch.

A distinct species with the general characteristics of *R. yunnanense*, but the leaves are usually deciduous, more narrowly oblanceolate, and entirely wanting the bristles on the upper surface, which are typical of the true *R. yunnanense*. The form with leaves completely deciduous is called *R. chartophyllum praecox*. No doubt the two species, both of which grow in Yunnan, hybridize freely, and this probably explains the confusion between them in gardens.

For previous introduction see 97622.

98462. RHODODENDRON DASYPETALUM Balf. and Forr.

A low shrub 2 to 3 feet high, with scaly branchlets, native to Yunnan, China. The oblong-elliptic leaves, less than an inch long, are densely covered beneath with light-green overlapping scales. The openly funnel-shaped flowers, 1 inch long, are borne in terminal clusters of 1 to 2 flowers, and the bright purple-rose corolla is softly pubescent outside.

98463. RHODODENDRON FASTIGIATUM Franch.

A low erect shrub with scaly branchlets, native to Yunnan, China. The elliptic-oblanceolate leaves, one third inch long, are densely scaly on both surfaces, and the light-purple flowers, one-half inch long, are borne in terminal clusters of 4 or 5.

98464. RHODODENDRON SARGENTIANUM Rehd. and Wils.

A low alpine shrub up to 2 feet high, native to Szechwan, China. The broadly elliptic mucronate leaves half an inch long are reticulate and shining above, clothed with loose flaky scales beneath. The widely tubular lemon-yellow flowers, less than 1 inch long, are densely scaly outside and are borne in loosely capitate few-flowered clusters.

98465. RHODODENDRON HIPPOPHAEODES Balf. and Smith.

A shrub up to 3 feet high, native to swampy situations in the Likiang Snow Range, Yunnan, China. The small narrowly oblanceolate leaves obtusely mucronate are covered with contiguous scales above, more densely below; the scales often slightly overlapping are a uniform pale gray. The small flowers, pale lilac to rose, are not spotted.

For previous introduction see 97625.

98466. RHODODENDRON HYPOLEPIDOTUM (Franch.) Balf. and Forr.

A shrub over 4 feet high with scaly branchlets, found in open situations in pine forests at 13,000 feet altitude in southeastern Tibet. The oblanceolate leaves up to 2 inches long are scaly on both surfaces, the scales below being rather dense and very unequal, flaky, some pale, others darker; lateral nerves distinct. The small yellow flowers are in terminal clusters of 5 or 6.

For previous introduction see 59076.

98467. RHODODENDRON IMPEDITUM Balf. and Smith.

A low shrublet native to the Likiang Snow Range, Yunnan, China, between 15,000 and 16,000 feet altitude. The short branchlets are covered with small black scales, and the broadly elliptic leaves, less than 1 inch long, are deeply scaly on both surfaces, the scales below being about half their own diameter apart, more or less uniform but some darker. The openly funnel-shaped

98450 to 98481—Continued.

flowers, mauve or light purplish blue, are in terminal clusters of 1 or 2.

For previous introduction see 59263.

98468. RHODODENDRON LYSOLEPIS Hutchins.

A dwarf shrub with erect branches and spreading or recurved oblong-elliptic leaves, glistening glandular scaly above and with scattered scales beneath. The deep-violet to pink-violet flowers, 1 inch across, in terminal clusters of three, have a short-tubed corolla with the limb spreading at right angles. This specimen was described from plants cultivated at Kew.

98469. RHODODENDRON MULIENSE Balf. and Forr.

A low shrub less than 3 feet high with densely scaly branchlets. The oblong-elliptic leaves, less than 1 inch long, are densely scaly on both surfaces, and the bright-yellow flowers are in compact 5- to 6-flowered terminal umbels.

For previous introduction see 94120.

98470. RHODODENDRON MYRTILLOIDES Balf. and Ward.

A dwarf shrublet, 3 to 4 inches high, native to northeastern Burma. The obovate-lanceolate leaves less than 1 inch long are rounded to a thick point and are glaucous beneath with a few scattered scales. The solitary terminal shortly bell-shaped flowers about one-half inch long are plum colored outside and maroon inside and are on slender peduncles over 1 inch long.

98471. RHODODENDRON RACEMOSUM Franch.
Mayflower rhododendron.

An upright Chinese shrub up to 6 feet high, with scaly branchlets, elliptic to obovate leaves which are glabrous above and glaucous beneath, and few-flowered clusters of pink flowers so abundantly produced as to completely cover the plant.

For previous introduction see 97400.

98472. RHODODENDRON OLEIFOLIUM Franch.

An erect shrub native to Yunnan, China. The narrowly lanceolate evergreen leaves, 2 inches long, are glabrous above and densely glandular scaly beneath. The pink to almost white flowers, 1 inch long, are borne in 1- to 2-flowered terminal clusters.

For previous introduction see 58505.

98473. RHODODENDRON RUBIGINOSUM Franch.

A rigid evergreen shrub or tree up to 30 feet high, with scaly purplish branches, native to Yunnan, China, in open situations in forests between 7,500 and 11,000 feet altitude. The ovate to lanceolate leaves, 2 to 3 inches long, are densely covered beneath with brown-red scales. The broadly funnel-form flowers, varying from bright red to mauve spotted with brown, are produced in 4- to 8-flowered terminal clusters.

For previous introduction see 86762.

98474. RHODODENDRON RUSSATUM Balf. and Forr.

A small shrub up to 4 feet high, native to Yunnan, China. The oblong-lanceolate leaves, 1 inch long, are densely scaly on both surfaces, being rusty brown beneath. The white-throated deep purple-blue flowers are openly funnel-shaped and are borne in terminal clusters of 4 or 5.

98475. RHODODENDRON SCINTILLANS Balf. and Smith.

A small shrub with erect branches and densely scaly branchlets, native to Yunnan, China. The oblanceolate leaves, one-half inch long, are densely scaly on both surfaces, and the lavender-blue openly funnel-shaped flowers, one-half inch long, are borne in terminal clusters of three from the upper axils of the shoots.

For previous introduction see 59598.

98450 to 98481—Continued.

98476. RHODODENDRON SMIRNOWII Trautv.
Smirnow rhododendron.

A shrub or small tree about 20 feet high, with dark-green leaves, gray-hairy beneath, and compact heads of rose-red flowers each about 3 inches across. Native to the Caucasus region.

For previous introduction see 79042.

98477. RHODODENDRON TELMATEIUM Balf. and Smith.

A low shrubby plant up to 3 feet high, with oblong or narrowly lanceolate leaves about one-half inch long and solitary rose-purple flowers one-half inch long. Native to Yunnan, China.

For previous introduction see 94130.

98478. RHODODENDRON UNGERNII Trautv.

A shrub or small tree up to 20 feet high, with white-tomentose branchlets, native to the Caucasus region. The thick leathery oblong-lanceolate leaves are 4 to 8 inches long, glabrous and dark green above and covered beneath with gray to fawn dense woolly tomentum and scattered long-stalked glands. The funnel-campanulate, pale-rose flowers, 1 to 2 inches long, are borne in 20- to 30-flowered lax racemes.

98479. RHODODENDRON WEYRICHII Maxim.

A deciduous shrub up to 15 feet high, native to Japan and China. The broadly ovate to rhombic leaves, 1 to 3 inches long, are in clusters of 2 to 3 at the tips of the branchlets and turn vinous-purple in autumn. The rotate-funneliform red flowers, 1 to 3 inches across, appear before or with the leaves.

98480. RHODODENDRON YUNGNINGENSE Balf. f.

A low shrub 1 to 2 feet high with short densely scaly branchlets, native to Szechwan, China. The oblong-lanceolate leaves, one-third inch long, are densely covered with rust-brown scales, and the openly funnel-shaped deep-purple flowers are one-third inch long.

98481. RHODODENDRON YUNNANENSE Franch.
Yunnan rhododendron.

A low shrub, 6 feet or less high, with narrowly elliptic somewhat hairy leaves and few-flowered clusters of broadly funnel-shaped flowers, white with the upper lobes spotted blood red. Native to Yunnan, China.

98482. RHODENDRON CAUCASICON Pall.
Ericaceae. Caucasian rhododendron.

From England. Plants purchased from Robert Veitch & Son, Ltd., Royal Nurseries, Exeter. Received April 15, 1932.

Cunningham's sulphur.

98483 to 98503. Phoenicaceae. Palm.

From the West Indies, British Guiana, and Surinam. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931-32 Allison V. Armour expedition. Received April 18, 1932.

98483. ACROCOMIA SCLEROCARPA Mart.
Macauba palm.

No. 2961. From St. Vincent and Windward Islands, February 4, 1932. A beautiful palm 40 feet high, with a very spiny trunk, particularly when young, as its finely pinnate leaves are graceful and drooping. The large bunches of fruits are green with brown scurfy hairs at the basal portion.

For previous introduction see 93399.

98484. ARCHONTOPHOENIX ALEXANDRAE (F. Muell.) Wendl. and Drude.

No. 2983. From the Botanic Garden, Georgetown, British Guiana. A pinnate-leaved palm,

98483 to 98503—Continued.

70 to 80 feet high, with leaves several feet long of lanceolate usually entire leaflets, 1 to 2 feet long, and whitish beneath. The green-yellow flowers are borne in a cluster about 1 foot long and are followed by small round fruits. It is native to Queensland, Australia.

For previous introduction see 97805.

98485. ARECA TRIANDRA Roxb.

No. 2954. From the Botanic Station, Scarborough, Tobago. A graceful spineless palm ultimately about 25 feet high, usually with several trunks which bear crowns of pinnate leaves 4 to 6 feet in length. The fruits, about the size of an olive, are orange-scarlet. Native to India.

For previous introduction see 97807.

98486. ARECA sp.

No. 3727. Collected March 10, 1932, on the island of Martinique.

98487. BORASSUS FLABELLIFER L. Palmyra palm.

No. 2979. From the Botanic Gardens, Georgetown, British Guiana, February 25, 1932. A handsome though slow-growing palm found on the dry coastal regions of Ceylon where it appears able to withstand any amount of lime and is said to have been used successfully as a sand binder. In the number of ways in which this palm is used in Ceylon, it rivals the coconut.

For previous introduction see 93318.

98488. COCCOTRINAX MARTII (Griseb. and Wendl.) Beccari.

No. 3889. From the United States Naval Station, Guantanamo Bay, Cuba, March 25, 1932. A slender fan palm 25 feet high growing in calcareous and hard red clay soil where the rainfall is 16 inches annually. It resembles the silver palm, but has a bottle-like base.

98489. COCCOTRINAX sp.

No. 3873. From a tree in the Agricultural Experiment Station, Tortola, British Virgin Islands, March 19, 1932. A rather slender fan palm with tips of the pinnae drooping and the basal pinnae twisted in a position of a spiral, making some of the pinnae cross over the petiole of the leaf in a very characteristic manner. The shining black fruits are large for the genus.

98490. RHYTICOCOS AMARA (Jacq.) Beccari
(*Cocos amara* Jacq.).

No. 3728. From Martinique. A tall slender perfectly straight feather palm 50 feet high, with leaves 15 feet long. The golden-yellow fruits, 2 inches long by 1½ inches wide, are covered with a pulp filled with long fibers. This pulp ferments easily and develops butyric acid. The seed is large and of the characteristic coconut shape.

For previous introduction see 97282.

98491. COPERNICIA CERIFERA Mart.
Carnauba palm.

No. 2977. From the Botanic Garden, Georgetown, British Guiana. The wax palm of Brazil, which has fan-shaped leaves and grows to a height of 25 feet. From the leaves is obtained carnauba wax which is used in making phonograph records.

For previous introduction see 97811.

98492. ELAEIS MELANOCOCCA Gaertn.

No. 3683. Collected near the Station Onverwacht, Surinam, March 3, 1932. A wide-spreading low wild palm which grows in damp situations. It is closely related to the African oil palm (*Elaeis guineensis*). A clear oil is extracted from the kernels in small quantities by the natives, who prize it highly for cooking.

For previous introduction see 97911.

98483 to 98503—Continued.

98493. EUTERPE OLERACEA Mart.

No. 2955. *Manac* or *Manaque*. From Tobago, February 20, 1932. A graceful palm with a trunk seldom more than 4 inches in diameter. It is said that fats suitable for oils and soaps can be derived from the blue-black berrylike fruits.

For previous introduction see 97813.

Nos. 98494 to 98496 were collected in the Georgetown Botanic Garden, British Guiana.

98494. HYPHAENE THEBAICA (L.) Mart.
Doom palm.

No. 2980. A palm about 30 feet high, which is noted as one of the few branching palms. It grows in alkaline sandy soils and is native from Upper Egypt to central Africa. The stems of old trees sometimes fork 3 or 4 times. The beautiful yellow-brown fruits are borne in long clusters of 100 to 200. In Upper Egypt the poor people eat the fibrous husk, which tastes much like gingerbread but is rather hard. The hard tough wood is used for domestic utensils.

For previous introduction see 97814.

98495. LICUALA GRANDIS (Bull.) Linden.

No. 2978. A dwarf palm with the stem clothed with the dead leaf sheaths. The erect spreading fan-shaped leaves have closely plicate segments which are 2-lobed at the end. Native to the island of New Pommern, Bismarck Archipelago.

For previous introduction see 97815.

98496. LIVISTONA HOOGENDORPII Andre.

No. 2982. A form with blue fruits. A tall Javanese palm with fan-shaped leaves 4 to 6 feet wide on spiny petioles 3 to 5 feet long, red-brown at the base and becoming olive green near the blade. The blades are made up of 10 to 12 plicate pendulous segments with 5 to 7 acute lobes at the apex.

For previous introduction see 97914.

98497. MANICARIA SACCIFERA Gaertn.

No. 2940. *Monkey-cap* palm. Collected February 18, 1932, near Sangre Grande, Trinidad, in deep shady forest in poor wet soil that is probably acid. Unlike other palms, this Brazilian species has entire leaves which become about 30 feet long and 5 feet wide. The trunk is erect, ringed, and unarmed, and 15 to 20 feet high. The natives of Brazil use the immense leaves of this palm for thatching their huts and also for making a coarse cloth.

For previous introduction see 82600.

98498. MAURITIA FLEXUOSA L. f.

No. 2984. From the Botanic Garden, Georgetown, British Guiana, February 25, 1932. A palm native to tropical Brazil, which grows to a height of 150 feet and 30 inches in diameter. The fan-shaped leaves are from 9 to 16 feet long. This is one of the so-called ivory-nut palms. The fruit is spherical, about the size of a small apple, and covered with smooth reticulated scales. The spadix when loaded with fruit is of immense weight, often more than two men can carry.

For previous introduction see 97915.

98499. ENGLEROPHOENIX REGIA (Mart.) Kuntze.

No. 3684. *Maripa* palm. From the market at Paramaribo, Surinam, March 3, 1932. A massive ornate palm up to 50 feet high, with persistent leaf petioles and immense leaves, reminding one of the *Cohune*. The subacid fruits have thin fleshy pulp and are much appreciated by the natives.

For previous introduction see 97912.

98500. RAPHIA VINIFERA Beauv.

No. 3772. From Fort de France, Martinique, March 10, 1932. The *wine* palm of Africa. A

98483 to 98503—Continued.

striking pinnate palm with immense leaves rising almost upright from the rather low trunk, somewhat as do the leaves of the *Cohune* palm. It bears immense clusters of very decorative fruits that are covered with scales and polished like pieces of jade.

For previous introduction see 95211.

98501. COCCOTHRINAX BARBADENSIS (Lodd.) Beccari.

No. 3783. Presented by Mr. Buffon, superintendent of the Jardin d'Essais, Basseterre, St. Kitts, British West Indies, March 13, 1932. A tall slender fan palm with the aspect of the *Silver* palm, but much larger. The clusters of greenish fruits which later become black are not particularly attractive. The palm seems adapted to a strongly calcareous soil.

98502. LIVISTONA AUSTRALIS (R. Br.) Mart.
Australian fan palm.

No. 3686. From Paramaribo, Surinam, March 4, 1932. A tall slender palm from 30 to 40 feet high, with a smooth trunk 8 to 10 inches in diameter and a dense crown of circular leaves 3 to 4 feet in diameter, divided nearly to the base into narrow plicate segments. The moderately hard light-colored wood is occasionally used for light construction work; the leaves are used for making baskets; and the unexpanded fronds, after being dipped in boiling water, are dried, shredded, and the fiber used in making hats resembling Panama hats.

For previous introduction see 97917.

98503. THRINAX sp.

No. 3689. Presented by Dr. G. Stabel, Paramaribo, Surinam, March 4, 1932. A form with white fruits.

98504. PIGAFETTIA ELATA (Mart.) Wendl. Phoenicaceae. Palm.

From Buitenzorg, Java. Seeds presented by the 'sLands Plantentuin (Botanische Tuin). Received April 18, 1932.

A tall ornamental palm with a stout trunk, spiny above, and spreading pinnate foliage resembling that of the coconut. Native to the East Indies.

For previous introduction see 93981.

98505 and 98506. VITIS VINIFERA L. Vitaceae. European grape.

From Turkey. Cuttings received through the American Embassy, Istanbul. Received April 19, 1932.

Native varieties of grapes from the collection at the Halkali Agricultural School, Istanbul.

98505. *Chaoush*.

98506. *Pembe Chaoush*.

98507. AMYGDALUS PERSICA L. Amygdalaceae. Peach.

From Java. Seeds presented by A. M. Cramer, Wonosobo. Received April 19, 1932.

A naturalized peach from 6,000 feet altitude at Tosari; introduced for the use of Department specialists.

98508. CITRUS LIMONIA Osbeck. Rutaceae. Lemon.

From Morocco. Seeds presented by H. Brayard, director, Experiment Station, Marrakech. Received April 22, 1932.

Introduced for rootstock experiments by Department specialists.

98509. FICUS sp. Moraceae. Fig.

From Cuba. Cuttings presented by Señor Antonio Portuondo, Director General of Agriculture, Habana. Received April 22, 1932.

An ornamental ficus, somewhat like *F. myso-rensensis*, but with a heavy coating of brown hairs on the under side of the leaves.

98510 to 98514. Phoenicaceae. Palm.

From the West Indies, British Guiana, and Surinam. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931-32 Allison V. Armour expedition. Received April 18, 1932.

98510. ASTROCARYUM sp.

No. 2957. Collected on Tobago Island.

98511. ASTROCARYUM SEGREGATUM Drude.

No. 2987. Purchased February 23, 1932, in the market at Georgetown, British Guiana. A rather low-growing Brazilian palm with a spiny trunk and large pinnate leaves armed with large stout black spines along the midribs. The fragrant, oily, smooth fruits are about 2 inches in diameter. Native to eastern Brazil.

For previous introduction see 97809.

98512. ASTROCARYUM PARAMACA Mart.

No. 2685. Purchased in the market at Paramaribo, Surinam, March 2, 1932. A low-growing very attractive shade-loving palm from 6 to 8 feet high with the pinnae all on one plane. The inflorescence consists of a single central upright spadix to which the fruits are attached by peduncles 1 inch long. The fruits are small, 1 inch long, with tiny black spines and a tough oily endosperm.

For previous introduction see 97910.

98513. COCCOTHRINAX sp.

No. 2614. From Beata Island, Dominican Republic. A very handsome slender fan palm with a trunk 20 feet high and about 3 inches in diameter. The under side of the leaves is silvery and the fruit is dark purple. Found on sand dunes near the seacoast.

For previous introduction see 96483.

98514. MAURITIA FLEXUOSA L. f.

No. 3652. Collected in the Lamaha Savanna, British Guiana, February 26, 1932.

For previous introduction see 98498.

98515. DIOSCOREA sp. Dioscoreaceae. Yam.

From Puerto Rico. Tubers presented by T. B. McClelland, director, Agricultural Experiment Station, Mayaguez. Received April 19, 1932.

Morado; so called from its purple color just below the epidermis. The flesh below this is white or cream colored, and is of good quality. In comparative trials this year at the experiment station this yam outyielded all other varieties. The production from one plant was 22 pounds, but this figure is sometimes nearly doubled.

98516 to 98519.

From the West Indies, British Guiana, and Surinam. Seeds and tubers collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931-32 Allison V. Armour expedition. Received April 11, 1932.

98516. COCOS NUCIFERA L. Phoenicaceae. Coconut.

No. 2724. *Claret*. Presented by S. H. Walter, curator, Botanic Garden, St. Lucia, Windward Islands, February 3, 1932. Seeds of a distinct variety with claret-colored husk. This is apparent only when the young coconut husk is cut.

98516 to 98519—Continued.**98517. XANTHOSOMA sp. Araceae. Yautia.**

No. 2908. Tubers purchased in the market at Paramaribo, Surinam, March 2, 1932.

98518. DIOSCOREA TRIFIDA L. f. Dioscoreaceae. Yampi.

No. 3677. *Bush yam*. Presented February 29, 1932, by Mr. Collins, secretary of the British Guiana Producers' Association in Georgetown, British Guiana. This is the yam grown by the Negroes of the interior. It is considered the best one grown in the colony.

98519. XANTHOSOMA CARACU Koch and Bouche. Araceae. Yautia.

No. 3768. March 8, 1932. Tubers purchased in the market at Castries, St. Lucia. Remarkable for their large size and uniform shape.

98520. ANANAS SATIVUS Schult. f. Bromeliaceae. Pineapple.

From Ceylon. Plants purchased from the manager of the publication depot and central seed store, Department of Agriculture, Peradeniya. Received April 25, 1932.

Mauritius.

98521 to 98523. Phoenicaceae. Palm.

From the West Indies and British Guiana. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931-32 Allison V. Armour expedition. Received April 11, 1932.

98521. NYPA FRUTICANS Wurmb. Nipa palm.

No. 2981. Presented March 23, 1932, by Professor Dash, Department of Agriculture, Georgetown, British Guiana. A very ornamental palm with a stout creeping underground stem and pinnate leaves about 20 feet long in erect clusters. The flat fruits, 5 inches long, 4 inches wide, and 2 inches thick, are crowded into a large round head which is borne on a special erect stalk. The juice obtained by cutting this stalk just below the fruiting head is a promising source of sugar and alcohol. The leaves are extensively used for thatching and for making baskets and mats.

98522. MAURITIA FLEXUOSA L. f.

No. 3652. Collected in the Lamaha Savanna, British Guiana, February 26, 1932.

For previous introduction and description see 98514.

98523. MAURITIA SETIGERA Griseb. and Wendl.

No. 2929. From the Scarborough Botanic Station, Tobago, February 19, 1932. A fan palm 60 feet high of magnificent proportions. Its fruits are covered with polished brown overlapping scales, are as large as hens' eggs, and very attractive. The tree was growing in acid soil and will probably do well in soil in which there is a considerable quantity of lime.

98524 to 98536. AGROPYRON spp. Poaceae. Wheatgrass.

From the Union of Soviet Socialist Republics. Seeds presented by N. Vavilov, Bureau of Introduction, Leningrad. Received April 8, 1932.

A collection of grasses to be tested by Department specialists for resistance to drought.

98524 and 98525. AGROPYRON CRISTATUM (L.) Gaertn.

98524. No. 7027. From the Omsk Experiment Station.

98525. No. 9051. From the Saratov Institute for the Study of Drought.

98526. AGROPYRON ELONGATUM (Host) Beauv.

No. 9052. From the Saratov Institute for Study of Drought.

98524 to 98536—Continued.

98527. *AGROPYRON GMELINI* (Griseb.) Scribn. and Smith.

No. 9053. From the Saratov Institute for the Study of Drought.

98528. *AGROPYRON ORIENTALE LASIANTHUM* Boiss.

No. 9026. From the Saratov Institute for the Study of Drought. An annual grass thickly branched at the base, with numerous mostly prostrate stems scarcely 8 inches high. Native to Asia Minor and northern Africa.

For previous introduction see 98201.

98529 to 98531. *AGROPYRON REPENS* (L.) Beauv.

For previous introduction see 94258.

98529. No. 9014. From the Experiment Station, Omsk, Siberia.

98530 and 98531. From the Saratov Institute for the Study of Drought.

98530. No. 9055. 98531. No. 9035.

98532 to 98534. *AGROPYRON SIBIRICUM* (Willd.) Beauv.

98532. No. 9009. From the Experiment Station, Omsk, Siberia.

98533. No. 9033. From the Saratov Institute for the Study of Drought.

98534. No. 5305. From Kasakstan, Aktyubinsk.

98535. *AGROPYRON TENERUM* Vasey.

No. 7786. From the Experiment Station, Omsk, Siberia.

98536. *AGROPYRON SIBIRICUM* (Willd.) Beauv.

No. 7951. From the Saratov Institute for the Study of Drought.

98537 to 98544. *ZEA MAYS* L. Poaceae. Corn.

From Australia. Seeds presented by Dr. H. Wenholz, director of plant breeding, Department of Agriculture, Sydney, New South Wales. Received February 18, 1932.

A collection of corn from the Glen Innes Experiment Farm, introduced for the use of Department specialists.

98537. 43-1-3-4-1. 98541. 43-1-2-2-1.

98538. G-43-2-3-4-2. 98542. G-43-2-3-3-2.

98539. G-55-5-1-1-1. 98543. G-55-5-1-1-2.

98540. G-43-1-1-5-1. 98544. G-44-1-1-2-1.

98545 to 98561.

From the West Indies and British Guiana. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931-32 Allison V. Armour expedition. Received April 11, 1932.

98545. *ATTALEA COHUNE* Mart. Phoeniceaceae. Cohune palm.

No. 2746. From the Botanic Garden on St. Vincent, Windward Islands. A magnificent feather-leaved palm, native to the West Indies and Central America, which reaches a height of 40 feet, with leaves about 20 feet long, produced abundantly at the top of the trunk. The yellowish flowers are borne very freely, and the ovoid fruit, 2 to 3 inches long, contains a seed or nut which yields an oil of considerable value, as it is of high quality and finds a ready sale for cooking purposes.

For previous instructions see 97542.

98545 to 98561—Continued.

98546. *BYRSONIMA SPICATA* (Cav.) DC. Malpighiaceae.

No. 2912. *Serrette*. From the Avena Forest Reserve in the northern part of Trinidad, February 16, 1932. A large tree with a girth of 10 feet, found in poor sandy soil. The narrow leaves are shiny green above the rusty brown beneath, and the yellow flowers, followed by acid edible fruits of the same color, make the tree a showy ornamental. The tough light wood is useful for general construction, and the bark is a source of tannin.

For previous introduction see 62006.

98547. *CARICA PAPAYA* L. Papayaceae. Papaya.

No. 2915. From Roseau, Dominica, Leeward Islands, January 29, 1932. A very sweet, firm-fleshed, large, long-fruited papaya grown from seed brought from São Paulo, Brazil, by Mrs. Green of Dominica. Introduced for comparison with varieties now growing in the United States.

98548. *CARYOCAR TUBERCULOSUM* (Aubl.) Baill. Caryocaraceae.

No. 2999. *Souari*. Presented February 29, 1932, by Mr. Collins, secretary of the British Guiana Producers' Association, Georgetown. A tree native to tropical America, up to 100 feet high, with digitately 3- to 5-foliolate leathery leaves and large white flowers in terminal racemes, followed by large drupeous fruits having a hard stone and an edible seed, one of the very largest and finest of the tropical world. It is nearly 3 inches long, over 1 inch wide, and almost 1 inch thick. The flavor is delicate, reminding one of the Brazil nut, but it is not so oily.

98549. *COLVILLEA RACEMOSA* Boj. Caesalpinaceae.

No. 2907. From the Botanic Garden, Trinidad, February 15, 1932. A tree said to become from 40 to 50 feet high. The pinnate leaves are 3 feet long, and the brilliant orange-scarlet curiously shaped flowers with 10 protruding stamens are borne in drooping racemes more than a foot long. The tree was discovered in Madagascar in 1824 and named for the Governor of Mauritius, Sir Charles Colville. In all probability it will stand no more frost than the poinciana. Like other leguminous trees, it is readily propagated from seeds.

For previous introduction see 79538.

98550. *COUROUPIA GUIANENSIS* Aubl. Lecythidaceae.

No. 2904. From Port-of-Spain, Trinidad, February 13, 1932. The famous *Cannon-ball* tree, distinguished by the trunk being covered for many feet with short crooked branches that bear showy flowers of the strangest structure, like a mouse trap, followed by fruits the size and shape of a cannon ball. These fruits are a russet brown and are packed with a pulp full of seeds that, when ripe, has one of the most repellent odors in the vegetable kingdom. The pulp stains anything it touches an inky black.

For previous introduction see 76777.

98551. *CYRTOSTACHYS RENDA* Blume. Phoeniceaceae. Palm.

No. 2834. *Sealing-wax* palm. From Port-of-Spain, Trinidad. A handsome palm with scarlet leaf sheaths. A Sumatran palm of stately habit about 25 feet high, with a slender spineless trunk crowned by a graceful cluster of pinnately divided leaves.

For previous introduction see 97546.

98552. *EUGENIA CALYCOLPOIDES* Griseb. Myrtaceae.

No. 2854. From the Trinidad Botanic Garden, February 13, 1932. A small tree, native to Trini-

98545 to 98561—Continued.

dad, with oblong-lanceolate membranous leaves 2 to 3 inches long. The small flowers are borne in axillary fascicles and are followed by ovoid scarlet berries one half inch long, said to be edible.

98555. JAFARANDIBA AUGUSTA (L.) Kuntze (*Gustavia augusta* L.). Lecythidaceae.

No. 2853. Presented February 13, 1932, by R. O. Williams, director, Botanic Garden, Port-of-Spain, Trinidad. A small evergreen tree, native to tropical America, which bears flowers 4 inches across, creamy white tinged with rose inside and externally rose colored. The stamens form a circle in the center of the flowers and are white at the base with rosy filaments and yellow anthers.

98554. HELICONIA PSITTACORUM L. f. Musaceae.

No. 2905. Collected February 15, 1932, on the Aripo Savanna, Port-of-Spain, Trinidad. A shrub 3 feet high with a small cluster of pretty and curiously shaped flowers at the top of the slender stems, orange yellow with black tips.

98555. JACARANDA FILICIFOLIA (Anders.) Don. Bignoniaceae.

No. 2901. From the Botanic Garden, Trinidad, February 12, 1932. A tree with blue-purple flowers and fernlike leaves.

98556. MANICARIA SACCIFERA Gaertn. Phoenicaceae. Palm.

No. 2940. *Monkey-cap* palm. Collected February 18, 1932, near Sangre Grande, Trinidad.

For previous introduction and description see 98497.

98557. OPERCULINA PTERODES (Choisy) Meisn. Convolvulaceae. Morning-glory.

No. 2959. From the Botanic Garden, Trinidad, February 15, 1932. A tuberous-rooted climbing vine, native to Trinidad, with large cordate-sinuate leaves and campanulate yellow flowers 2 inches across, said to open in the morning.

98558. PELTOGYNE PORPHYROCARDIA Griseb. Caesalpiniaceae.

No. 2913. *Purple heart*. From the Avena Forest Reserve, Trinidad, February 16, 1932. A much-branched timber tree which reaches a girth of 10 feet, with bifoliate leaves consisting of oblong-falcate leaflets about 1 inch long and small flowers in short racemes. The wood is a strange purple color, very hard and durable, and is used for a certain type of furniture. It is native to the West Indies.

98559. PICRODENDRON BACCATUM (L.) Krug. and Urb. (*P. arboreum* Planch.). Simaroubaceae.

No. 2846. From the Botanic Garden, Trinidad, February 13, 1932. A deciduous tree up to 40 feet high, native to Jamaica. The digitately compound leaves are made up of three elliptical to lanceolate leaflets 4 to 5 inches long, and the inconspicuous flowers are followed by orange-yellow fruits about 1 inch in diameter.

98560. RHEEDIA MACROPHYLLA (Mart.) Planch. and Triana. Clusiaceae.

No. 2860. From the Botanic Garden, Trinidad, February 15, 1932. A shrub with deep-green leathery foliage and fruit the shape and size of a lemon, with a rough watery skin and several large smooth seeds. The scanty pulp around the seeds is palatable and reminds one of the mangosteen.

98561. STACHYTARPHETA GRANDIFLORA Hort. Verbenaceae.

No. 2906. From the Botanic Garden, Trinidad, February 15, 1932. A name for which a place of publication and a description have not been found.

98562 to 98565. ORYZA SATIVA L. Poaceae.

From India. Seeds purchased through Arthur G. Frost, American consul general, Calcutta. Received April 19, 1932.

A collection of Patnai or Patna rice, introduced for the use of Department specialists.

98562. *Borna.* 98564. *Kotcho.*

98563. *Deshi.* 98565. *Nabashan.*

98566 and 98567.

From Chilóe Island, Chile, South America. Tubers collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received April 20, 1932.

98566. *DIOSCOREA* sp. Dioscoreaceae. Yam.

No. 186. *Silvestre*. Collected March 22, 1932.

98567. *DIOSCOREA* sp. Dioscoreaceae. Yam.

No. 143. Collected March 16, 1932.

98568. AGROPYRON PUNGENS (Pers.) Roem. and Schult. Poaceae.

Wheatgrass.

From the Union of Soviet Socialist Republics. Seeds presented by N. Vavilov, Bureau of Introduction, Leningrad. Received April 23, 1932.

From the Maikop region, Khutor Shuntuk, at 600 feet altitude. Introduced for the use of Department specialists working with drought-resistant forage crops.

98569 to 98572.

From Chile, South America. Seeds and tubers collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received April 20, 1932.

98569. *DIOSCOREA* sp. Dioscoreaceae. Yam.

No. 144. Collected March 16, 1932, on Chilóe Island.

98570. *SOLANUM TUBEROSUM* L. Solanaceae. Potato.

No. 102. Seed balls from a wild type of potato growing in a cultivated field on the farm of Mr. Ritter, south of Ancud, Chilóe Island. The balls are less than 1 inch in diameter and are round at the apex.

98571. *SOLANUM TUBEROSUM* L. Solanaceae. Potato.

No. 162. *Frutilla*. Collected March 22, 1932, in the garden of Francisco Schwerter, Puerto Montt. A small round irregular tuber with rather deep eyes, pink and white mottled skin, and white flesh. It is considered a very disease-resistant potato.

98572. (Undetermined.)

No. 153. Collected March 17, 1932, in the garden of Mr. Turner, Ancud, Chilóe Island. A plant cultivated for its medicinal properties and not as a food. Probably the same as no. 144 (98569).

98573 and 98574.

From Africa. Seeds presented by P. T. L. Putman, Avakuli, Stanleyville, Belgian Congo. Received April 22, 1932.

98573. (Undetermined.)

M-73. A large forest tree with edible fruits.

98574. *ERYTHROPHLOEUM* sp. Caesalpiniaceae.

M. 123. *Akoba* or *igbanda*. A black bean, seed of a leguminous forest tree, which is eaten by monkeys; but when shelled, steamed a little, and beaten into a paste it is used by the natives as an arrow poison.

98575 to 98721. SOLANUM TUBEROSUM
L. Solanaceae. Potato.

From Chile, South America. Tubers collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received April 20, 1932.

Nos. 98575 to 98577 were collected March 2, 1932, near Puerto Montt, Chile, on the farm of Mr. Schaefer.

98575. No. 38. A variety with large round tubers having red skin, yellow flesh, and eyes slightly sunken. It is said to have been of French origin.

98576. No. 39. An indigenous variety cultivated as a curiosity. The small tubers are irregularly round with deep wide eyes and red skin; the outer flesh is white, while the inner flesh is red.

98577. No. 40. *Blanca Alemana*. A cultivated commercial type, probably from introduced stock. The large oval tubers have white skin, shallow eyes, and white flesh. It is considered one of the best and most disease-resistant varieties.

Nos. 98578 to 98637 were collected March 9, 1932, at the Genetic Station, Ancud, Chiloé Island.

98578. No. 41. *Corahila Quilquico*. Station No. 272. Large irregularly round tubers with red skin, shallow eyes, and white flesh. Said to have come originally from the island of Quilquico, Chile.

98579. No. 42. *Blanca Alemana*. Station No. 283. Ovate flattened tubers with white skin and flesh and shallow eyes. Said to have come originally from Pudeto, Chiloé Island.

98580. No. 43. *Cisne Redondo*. Station No. 251. An indigenous sort producing small irregularly round pink tubers with shallow eyes and yellow-white flesh.

98581. No. 44. *Corahila Rilán*. The small round red tubers, of a variety originally from Rilán, Chiloé Island, have shallow pink eyes and yellow-white flesh.

98582. No. 45. *Corahila Chonchi*. Station No. 33. A variety indigenous to the island of Chonchi, Chiloé Province. The small round red tubers have pink eyes and yellow-white flesh.

98583. No. 46. *Corahila Santa Elvira*. Station No. 75. A variety, originally from the island of Santa Elvira, Chiloé Province, which has small round-ovate red tubers with shallow pink eyes and white flesh mottled with yellow.

98584. No. 47. *Rosada Caipulle*. Station No. 164. A variety indigenous to the island of Caipulle, Chiloé Province, which has large round to oval red tubers, yellow flesh, and shallow pink eyes.

98585. No. 48. *Corahila Alao*. Station No. 207. A variety indigenous to the island of Alao, Chiloé Province, which has large round red tubers with white flesh mottled with red (the red is in the vascular ring) and shallow pink eyes.

98586. No. 49. *Corahila Blanca Alemana*. Station No. 224. A small round to oval red tuber with shallow pink eyes and yellow flesh. It is probably a hybrid between indigenous and introduced stock.

98587. No. 50. *Corahila Chauilinee*. Station No. 12. A variety originally from the island of Chauilinee, Chiloé Province, with small round to oval red tubers, white flesh, and shallow pink eyes.

98588. No. 51. *Rosada Pudeto*. A variety originally from Pudeto, Chiloé, which has long ovate red tubers with yellow-white flesh and shallow narrow eyes.

98575 to 98721—Continued.

98589. No. 52. *Huevo*. An indigenous variety with large long-oval red tubers which have yellow flesh and deep long eyes.

98590. No. 53. *Volera Santa Elvira*. An indigenous type, originally from the island of Santa Elvira, with small long-ovate tubers which have gray skin, white flesh mottled with purple, and deep eyes with numerous buds.

98591. No. 54. *Blanca Alemana*. A round flattened tuber with white flesh and skin and shallow eyes. It is grown as a commercial potato and may be from introduced stock.

98592. No. 55. *Corahila Mechaico*. A variety originally from the island of Mechaico, Chiloé Province, which has ovate flattened red tubers with white flesh and shallow pink eyes.

98593. No. 56. *Blanca Alemana Pudeto*. A type, coming from Pudeto, Chiloé, with small round flattened red tubers which have shallow pink eyes and white flesh except the vascular ring, which is pink.

98594. No. 57. *Huevo Santa Elvira*. A variety originally from the island of Santa Elvira, Chiloé Province, which has small round red tubers with yellow flesh and deep eyes.

98595. No. 58. *Canales Jeske*. A variety indigenous to the islands of Chiloé Province. The large oval flattened red tubers have yellow-white flesh and shallow pink eyes.

98596. No. 59. *Alemana Elefant*. A type indigenous to Chiloé Province, with large irregularly round white tubers, white flesh, and deep eyes.

98597. No. 60. *Cisne Redonda*. An indigenous type having round flattened red tubers with shallow eyes and yellow-white flesh with the vascular ring red.

98598. No. 61. *Corahila Mechaico*. An indigenous type from the island of Mechaico, with small round flattened red tubers which have white flesh and shallow pink eyes.

98599. No. 62. *Corahila Santa Elvira*. A variety, originally from the island of Santa Elvira, Chiloé Province, having small round flattened red tubers, with shallow pink eyes and white flesh with the vascular ring red.

98600. No. 63. *Blanca Alemana Pudeto*. A type from Pudeto, Chiloé, with large ovate flattened white tubers which have white flesh and shallow eyes.

98601. No. 64. *Corahila Chelín*. A variety indigenous to the island of Chelín, Chiloé Province, with round to oval flattened red tubers which have white flesh and shallow eyes.

98602. No. 65. *Caigue*. An indigenous type with small round long-narrow red tubers which have shallow eyes and white flesh heavily mottled with red.

98603. No. 66. *Volera Santa Elvira*. A type indigenous to the island of Elvira, Chiloé Province, with small round gray tubers having white flesh and shallow blue eyes.

98604. No. 67. *Corahila Chonchi*. A type indigenous to the island of Chonchi, Chiloé Province. The tubers are small, long, round with red skin, white flesh, and shallow eyes.

98605. No. 68. *Corahila San José*. A type indigenous to San José, Chiloé Province, with round flattened red tubers, white to yellow flesh, and shallow eyes.

98606. No. 69. *Corahila Redondo Pudeto*. A type indigenous to Pudeto, Chiloé. The large irregularly round red tubers have shallow eyes and white flesh with a red vascular ring.

98575 to 98721—Continued.

98607. No. 70. *Corahila Trangui*. A round flattened red tuber with shallow eyes and yellow-white flesh.
98608. No. 71. *Corahila Alemana Pudeto*. A type indigenous to Pudeto, Chiloé. The ovate flattened white tubers have white flesh and shallow eyes.
98609. No. 72. *Corahila Quilquico*. A variety indigenous to the island of Quilquico, with small round red tubers which have white flesh and deep eyes.
98610. No. 73. *Corahila Quehue*. A variety indigenous to the island of Quehue. The large round flattened red tubers have shallow eyes and yellow flesh with a red vascular ring.
98611. No. 74. *Cisne*. Small elongate-round red tubers with yellow-white flesh and shallow pink eyes; a type indigenous to Chiloé Province.
98612. No. 75. *Corahila Mechaico*. A type indigenous to the island of Mechaico, with round flattened red tubers, yellow-white flesh, and shallow pink eyes.
98613. No. 76. *Corahila Quilquico*. Ovate flattened red tubers with yellow flesh and shallow pink eyes. This type is indigenous to the island of Quilquico.
98614. No. 77. *Cisne*. A type indigenous to Chiloé Province. The large round flattened red tubers have white flesh and shallow eyes.
98615. No. 78. *Corahila Rauco*. Large ovate red tubers with yellow-white flesh and shallow eyes; a type indigenous to the island of Rauco, Chiloé Province.
98616. No. 79. *Corahila Alao*. A variety having small round tubers with white skin mottled with blue, white flesh, and shallow eyes; it is indigenous to the island of Alao, Chiloé Province.
98617. No. 80. *Villarroela*. A type indigenous to Chiloé Province, with red ovate tubers, white flesh, and shallow eyes.
98618. No. 81. *Corahila Mechaico*. Elongated white tubers mottled with pink, which have yellow-white flesh and shallow eyes. The type is indigenous to the island of Mechaico, Chiloé Province.
98619. No. 82. *Corahila Vilupulle*. A type, indigenous to Chiloé Province, with oval tubers having thick red skin, white flesh, and shallow pink eyes.
98620. No. 83. *Corahila Quilquico*. A variety indigenous to the island of Quilquico. The elongate-flattened red tubers have white flesh and shallow eyes.
98621. No. 84. *Corahila Chonchi*. A variety indigenous to the island of Chonchi. The ovate tubers with pink and white mottled skin have white flesh and shallow eyes.
98622. No. 85. *Cisne*. A variety indigenous to Chiloé Province, with oval white tubers, white flesh, and shallow eyes.
98623. No. 86. *Chaulinee*. A type indigenous to Chiloé Province which has ovate red tubers with white flesh and shallow pink eyes.
98624. No. 87. *Corahila San José*. A type, indigenous to Chiloé Province, with elongated red tubers, white flesh, and shallow pink eyes.
98625. No. 88. *Corahila Rilán*. A variety, indigenous to the island of Rilán, with small ovate tubers, white flesh, and shallow eyes.
98626. No. 89. *Cisne Redondo*. A variety, indigenous to Chiloé Province, with round flattened red tubers, yellow-white flesh, and shallow pink eyes.

98575 to 98721—Continued.

98627. No. 90. *Corahila Rilán*. A variety, indigenous to the island of Rilán, with ovate red tubers which have white flesh and shallow pink eyes.
98628. No. 91. *Corahila Alao*. A variety, indigenous to the island of Alao, Chiloé Province, with elongated red tubers, yellow-white flesh, and shallow pink eyes.
- Nos. 98629 to 98631 are types indigenous to Chiloé Province.
98629. No. 92. *Corahila Vilupulle*. Oval red tubers with white flesh and shallow pink eyes.
98630. No. 93. *Americana*. Small elongated red tubers with yellow-white flesh and shallow pink eyes.
98631. No. 94. *Corahila Tenten*. Small round red tubers with white flesh and shallow pink eyes.
98632. No. 95. *Chelin*. A type, indigenous to the island of Chelin, Chiloé Province, with round red tubers which have white flesh and shallow eyes.
98633. No. 96. *Vilupulle*. A variety, indigenous to Chiloé Province, with ovate red tubers, shallow eyes, and yellow-white flesh.
98634. No. 97. *Blanca Alemana*. A variety, indigenous to Chiloé Province, with oval red tubers, shallow eyes, and white flesh with a red vascular ring.
98635. No. 98. A variety, indigenous to the island of Chiloé, with ovate red tubers, shallow eyes, and yellow flesh.
98636. No. 99. *Corahila Mechaico*. A variety, indigenous to the island of Mechaico, with ovate white tubers, shallow eyes, and white flesh.
98637. No. 100. *Corahila Tenten*. A variety, indigenous to the island of Tenten, with small ovate red tubers, shallow eyes, and yellow-white flesh.
- Nos. 98638 and 98639 were collected March 11, 1932, on the farm of Mr. Ritter, about 10 miles south of Ancud, Chiloé Island. They were grown from indigenous stock.
98638. No. 101. Large round red tubers with shallow eyes and white flesh.
98639. No. 103. Round red tubers with deep and pink eyes and white flesh.
- Nos. 98640 to 98653 are indigenous types from the farm of Mr. Sagner, about 5 miles south of Ancud, Chiloé Island.
98640. No. 104. *Corahila*. A commercial variety with flattened red tubers, shallow eyes, and white flesh.
98641. No. 105. A large irregularly round blue tuber with shallow white eyes and yellow-white flesh.
98642. No. 106. An ovate red tuber with deep eyes and yellow-white flesh.
98643. No. 107. Large elongated red tubers with shallow eyes and white flesh. This is the best commercial potato from native stock.
98644. No. 108. Large elongated red tubers with shallow eyes and yellow-white flesh with red center.
98645. No. 109. *Guapo*. Round red tubers with shallow pink eyes and yellow-white flesh.
98646. No. 110. Small round blue tubers with shallow white eyes and yellow-white flesh.
98647. No. 111. Large ovate red tubers with shallow eyes and yellow-white flesh with a red vascular ring.

98575 to 98721—Continued.

98648. No. 112. Large ovate red tubers with shallow pink eyes and yellow-white flesh slightly mottled with pink.
98649. No. 113. Large irregular tubers with mottled blue and white skin, deep white eyes, and white flesh with a purple vascular ring.
98650. No. 114. Ovate flattened red tubers with shallow white eyes and white flesh.
98651. No. 115. Large ovate red tubers with shallow eyes and white flesh. It is supposed to be more frost resistant than the usual types grown.
98652. No. 116. *Americana*. Large irregularly round tubers with mottled blue and white skin, deep eyes, and white flesh.
98653. No. 117. Large ovate red tubers with shallow eyes and yellow-white flesh. One of the best commercial types from native stock.
- Nos. 98654 to 98659 were collected March 14, 1932, near Ancud.
98654. No. 120. *Biscocha Maidama*. Small round light-violet tubers with shallow blue eyes and white flesh.
98655. No. 121. *Ñochas*. A variety native to the island of Chelin and reputed to be disease resistant. The tubers are long and narrow, with purple-black skin, shallow eyes, and white flesh spotted with purple, and a purple vascular ring. The vascular bundles of the stem are also purple at the nodes.
98656. No. 122. *Biscocha*. A variety, native to Mechaico, Chiloé Province, with large round tubers, blue, rather deep eyes, violet skin, and white flesh.
98657. No. 123. A variety, native to the island of Chipicum, Chiloé Province, with small irregularly round red tubers, which have deep and pink eyes and rose-colored flesh with a red vascular ring.
98658. No. 124. *Inglesa*. A variety, native to Caipulle, which has large irregularly round blue-violet tubers with deep eyes and yellow-white flesh with a purple vascular ring.
98659. No. 125. *Mantequilla*. A native variety.
- Nos. 98660 to 98683 were collected in the northern part of the island of Chiloé, March 16, 1932. Unless otherwise stated, they are all native varieties.
98660. No. 126. *Ficocha*. Small round-oval white tubers with shallow eyes and white flesh.
98661. No. 127. *Inglesa*. Large ovate purple tubers with shallow eyes and white flesh.
98662. No. 128. *Guilcaña*. Small round purple-black tubers with shallow eyes and white flesh with the center mottled in purple.
98663. No. 129. *Ficocha negra*. Small round light-violet tubers with shallow eyes and yellow-white flesh.
98664. No. 130. *Peane negra*. Small round dark-purple tubers with shallow eyes and white flesh.
98665. No. 131. *Vastonesa*. Small round light-violet tubers with numerous shallow eyes and white flesh.
98666. No. 132. *Guego*. Small round pink tubers with shallow eyes and yellow flesh.
98667. No. 133. *Emperadora*. Small round white tubers with shallow eyes and white flesh.
98668. No. 134. *Guapa*. Large oval red tubers with deep eyes and white flesh with a purple vascular ring.
98669. No. 135. *Americana*. Large oval tubers with mottled purple and white skin, deep eyes, and white flesh.

98575 to 98721—Continued.

98670. No. 136. *Quila*. Small elongated white tubers, mottled with purple, shallow eyes, and white flesh.
98671. No. 137. *Clavella*. Large oval tubers with the skin mottled red and white, deep and white eyes, and white flesh with a red vascular ring.
98672. No. 138. *Alemana*. Small oval white tubers with white flesh and shallow eyes. This may be of introduced stock.
98673. No. 139. *Chalupa negra*. Long narrow slightly curved purple-black tubers with shallow eyes and white flesh with purple vascular ring.
98674. No. 140. *Notra*. Long narrow red tubers with numerous deep eyes and white flesh heavily mottled with purple.
98675. No. 141. Long oval red tubers with deep eyes and yellow-white flesh.
98676. No. 142. Small ovate dark-violet tubers with rather deep eyes and white flesh with purple vascular ring.
98677. No. 145. *Mantequilla*. Small oval tubers, very uniform in size and shape, with deep eyes and yellow flesh. A potato with a good flavor.
98678. No. 146. *Huevo*. Large oval tubers with deep eyes, red skin, and yellow flesh.
98679. No. 147. *Americana*. Large ovate tubers with deep eyes, skin mottled white and purple, and white flesh.
98680. No. 148. *Blanco*. Large oval white tubers with shallow eyes and white flesh.
98681. No. 149. *Clavella*. Large ovate tubers with deep eyes, skin mottled white and violet, and white flesh.
98682. No. 150. Small round tubers with deep eyes, skin mottled purple and white, and white flesh with purple vascular ring.
98683. No. 151. Large oval purple tubers with few and shallow eyes and white flesh.
- Nos. 98684 and 98685 were collected in the garden of Mr. Turner at Ancud, Chiloé Island, March 17, 1932.
98684. No. 152. *Mantequilla*. A native potato with irregularly round yellow tubers, deep eyes, and yellow flesh.
98685. No. 154. A potato of uncertain origin, with medium-sized smooth oval white tubers, shallow eyes, and white flesh.
- Nos. 98686 to 98692 were collected in the garden of Mr. Werner, Punta, Chiloé Island, March 19, 1932.
98686. No. 155. A wild potato native to the forests of Cucao, with small elongate purple tubers, shallow eyes, and white flesh.
98687. No. 156. *Blanca silvestre*. A native potato with large oval flattened white tubers, shallow eyes, and white flesh.
98688. No. 157. *Colorado silvestre*. A native potato with large round-oval red tubers which have shallow eyes and white flesh.
98689. No. 158. *Blanca Alemana*. A commercially cultivated potato with very large oval white tubers with shallow eyes and white flesh.
98690. No. 159. *Colorado Argentina*. A potato of uncertain origin with large irregularly oval red tubers which have shallow eyes and white flesh.
98691. No. 160. *Corahila*. The native potato generally cultivated commercially in Chiloé and sent to northern Chile as seed potatoes. It has large long-oval red tubers, shallow eyes, and white flesh.

98575 to 98721—Continued:

98692. No. 161. *Mantequilla*. A native potato which is a good but small producer. The small irregularly round yellow tubers have deep eyes and yellow flesh.
98693. Nos. 162 and 163. *Frutilla*. Collected March 22, 1932, at Puerto Montt, on the mainland, Chile. A potato of uncertain origin. The small irregularly round tubers have rather deep eyes, pink and white mottled skin, and white flesh. A very disease-resistant potato.
No. 162. Collected in the garden of Francisco Schwertner.
No. 163. Collected on a farm near Puerto Montt.
98694. No. 164. *Corahila*. A potato grown commercially in the region of Puerto Montt and Puerto Varas. Collected on the farm of Fernando Wilhelm, who has grown the same variety for 17 years. This is a disease-resistant potato with large oval flattened red tubers, shallow eyes, and white flesh.
98695. No. 166. *Castrina*. Collected south of Ancud, Chiloe Island, March 22, 1932. A potato with small oval pink tubers with rather deep eyes and white flesh mottled with pink.
- Nos. 98696 to 98721 are native varieties collected in the northern part of the island of Chiloe.
98696. No. 167. *Nohsas*. Long narrow red tubers with shallow eyes and white flesh mottled with red.
98697. No. 168. *Sedas*. Small oval tubers mottled white and purple, with shallow eyes and white and purple flesh.
98698. No. 169. *Remenda*. Small oval tubers with deep eyes, skin mottled white and purple, and white flesh with purple center.
98699. No. 170. *Pahacoña*. Small oval white tubers with shallow eyes and white flesh.
98700. No. 171. *Caque blanco*. Small long-oval red tubers with shallow eyes and white flesh.
98701. No. 172. *Francesa negra*. Small round black-purple tubers with white around the shallow eyes and white flesh mottled with purple.
98702. No. 173. *Nereque*. Large long-narrow purplish tubers with shallow eyes and white flesh.
98703. No. 174. *Camota*. Small round purple tubers with white around the deep eyes and white flesh with a purple vascular ring.
98704. No. 175. *Limeña*. Small irregularly round red tubers with deep eyes and yellow-white flesh.
98705. No. 176. *Ficocha negra*. Small oval red tubers with shallow eyes and white flesh.
98706. No. 177. *Lichaguina*. Small oval blue-red tubers with deep eyes and yellow-white flesh.
98707. No. 178. *Maullina*. Small irregularly round white tubers mottled with pink, with deep eyes and white flesh.
98708. No. 179. *Ojos azules*. Small irregularly round yellow-white tubers with blue, deep eyes and yellow-white flesh.
98709. No. 180. *Alaseca*. Small oval flattened white tubers with shallow purple eyes and yellow-white flesh.
98710. No. 181. *Quilas*. Small long-narrow white and pink tubers with deep eyes and white flesh.
98711. No. 182. *Villarruela*. Large oval flat red tubers with shallow eyes and white flesh mottled with pink.

98575 to 98721—Continued.

98712. No. 183. *Guapa*. Small irregularly oval red tubers with deep eyes and white flesh.
98713. No. 184. *Francesa blanca*. Small oval white tubers with shallow eyes and yellow-white flesh.
98714. No. 185. *Chalupa*. Small long-narrow curved purple-black tubers with shallow eyes and white flesh with purple vascular ring.
98715. No. 187. *Vastonesa*. Small oval light-purple tubers with shallow eyes and white flesh with purple vascular ring.
98716. No. 188. *Mago*. Large irregularly round purple-black tubers with deep eyes and yellow-white flesh.
98717. No. 189. *Caballero*. Small smooth oval pink tubers with shallow eyes and white flesh.
98718. No. 190. *Quillipicume*. Small round red tubers with deep eyes and white flesh with red vascular ring.
98719. No. 191. *Guapa negra*. Small round oval purple-black tubers with shallow eyes and white flesh mottled with purple.
98720. No. 192. *Aitamirana*. Small long-oval pink tubers with shallow eyes and white flesh.
98721. No. 193. *Maidama*. Large irregularly oval red tubers with deep eyes and white flesh.
- 98722 to 98726. ORYZA SATIVA L.**
Poaceae. Rice.
- From India. Seeds presented by W. O'Brien, Corsley, Hyderabad, Deccan. Received April 21, 1932.
- A collection of paddy rice introduced for the use of Department specialists.
98722. *Badsha*. A very fine variety that matures in 5 months.
98723. *Basmali*. A fine variety with large grains that matures in 4 months.
98724. *Burmah* or *Black Poofoo*. A very superior variety that matures in 5 months.
98725. *Peshawari*. A very fine variety that matures in 5 months.
98726. *Rajanshal*. A medium-fine variety that matures in 4 months.
- 98727 to 98729.**

From Tahiti, Society Islands. Seeds collected by Martin L. Grant, University of Minnesota. Received April 15, 1932.

98727. CANAVALLIA MICROCARPA (DC.) Piper. Fabaceae.

No. 5055. A seashore perennial which climbs trees to a height of 20 feet. The purple flowers are in large spikelike racemes and the pods are flat or slightly swollen. It is closely related to *C. obtusifolia*.

For previous introduction see 30879.

98728. INDIGOFERA SUFFRUTICOSA Mill. Fabaceae. Indigo.

No. 4570. A slender, yellow-flowered bushy legume 3 to 5 feet high producing rather scanty growth, making it an indifferent cover crop.

For previous introduction see 97885.

98729. VIGNA LUTEA (Swartz) A. Gray (*V. marina* Merr.). Fabaceae.

No. 4452. A tropical perennial vine or creeper, native to the Philippines, where it has been found useful as a cover crop. It has also made good forage.

For previous introduction see 80772.

98730. CITRUS sp. Rutaceae.

From Puerto Rico. Cuttings presented by Edmund H. Twight, specialist in fruits, Bureau of Agricultural Development, Department of Agriculture and Commerce, Rio Piedras. Received April 21, 1932.

Rico No. 5. A light-yellow fruit between 3 and 4 inches in diameter, with thick rind, deep-yellow tender, very juicy flesh, and very few seeds. Introduced for the use of Department specialists interested in citrus breeding.

98731 and 98732.

From Ceylon. Seeds presented by Dr. Andreas Nell, Kandy. Received April 23, 1932.

98731. ATALANTIA MISSIONIS (Wight) Oliver. Rutaceae.

A small tree much resembling an orange tree in habit, with pale-gray bark, and branches armed with short stiff spines, rather large stiff leaves with indistinct veining and very sweet white flowers. The fruit is like a small dark orange. The pale yellow-white wood is close grained, smooth, and suitable for cabinetwork.

For previous introduction see 95350.

98732. ATALANTIA CEYLANICA (Arn.) Oliver. Rutaceae.

Yakinaran or *peykurundu*. A much-branched spiny shrub or small tree native to Ceylon and India. Chiefly of interest as a stock for the better varieties of citrus fruits.

For previous introduction see 41444.

98733 to 98736. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. Japanese chestnut.

From Japan. Seeds purchased from the Yokohama Nursery Co., Yokohama. Received December 22, 1931. Numbered in April 1932.

A collection of chestnuts introduced for the use of Department specialists.

98733. From Iwate Ken. Midsuwasa Eirinsho, Iwate Ken, Esashi Gun, Yanagawa Mura.

98734. From Ginyose, Kyoto Fu, Minami, Kuwata Gun, Shino Mura.

98735. From Imakita, Kyoto Fu, Minami, Kuwata Gun, Shino Mura.

98736. From Akita Ken, Tsunodate Eirinsho, Akita Ken, Sanhoku Gun, Tsunodate machi.

98737. ZAMIA PORTORICENSIS Urban. Cycadaceae.

From Puerto Rico. Tubers presented by Henry C. Henricesen, Puerto Rico Agricultural Experiment Station, San Juan. Received April 25, 1932.

A cycad with a short stem 12 to 18 inches high, native to Puerto Rico. The pinnately compound leaves, 2 to 3 feet long, are made up of 20 to 34 smooth shining narrowly linear leaflets, 2 to 8 inches long, which are usually entire but may have 1 or 2 small teeth near the top. The oblong-cylindric fruiting cone, 10 inches long, is covered with gray tomentose scales.

98738 and 98739. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.

From the Union of Soviet Socialist Republics. Scions presented by Maj. C. R. Olberg, Tiflis, Transcaucasia. Received April 26, 1932.

Native Armenian apricots about the size of small peaches, with very red skins. They compare favorably in flavor with the best of our apricots. Introduced for the use of Department specialists.

98738. *Mirsandjali*.

98739. *Hurman*.

98740. LILIUM GIGANTEUM Wall. Liliaceae. Giant lily.

From China. Seeds presented by Albert N. Steward, University of Nanking, Nanking. Received April 21, 1932.

Nan Pai Ho. Collected along a stream near Huang Chia Wan, Kweichow Province, at 5,000 feet altitude.

For previous introduction see 93213.

98741. ASYSTASIA GANGETICA (L.) Anders. Acanthaceae.

From the Seychelles Islands. Seeds presented by P. R. Dupont, director, Department of Agriculture. Received April 21, 1932.

A zigzag subshrub 1 to 4 feet tall, native to India. The cordate to ovate leaves are 1 to 4 inches long, and the yellow, dingy white or dark-violet flowers are narrow below and inflated above. It is considered a good pasture plant.

For previous introduction see 97926.

98742. CITRUS GRANDIS (L.) Osbeck. Rutaceae. Grapefruit.

From Hawaii. Plants presented by the Agricultural Experiment Station, Honolulu, through E. May, Division of Fruit and Vegetable Crops and Diseases, Bureau of Plant Industry. Received April 25, 1932.

Victoria Pomelo.

98743. LAPAGERIA ROSEA Ruiz and Pav. Liliaceae. Red Chile-bells.

From Chile, South America. Seeds presented by Z. Galemo, of the Escuela de Artilleria, Linares, Chile, through J. L. Colom, chief, Division of Agricultural Cooperation, Pan American Union, Washington, D.C. Received April 27, 1932.

Copihue, the Chilean national flower.

For previous introduction see 80434.

98744 to 98754. GOSSYPIUM spp. Malvaceae. Cotton.

From the Bahamas, West Indies. Seeds presented by Hugh H. Matheson, Miami, Fla. Received March 14 and 22, 1932. Numbered in April 1932.

Nos. 98744 to 98751 were collected by Gaines R. Wilson, and 98744 to 98749 are from Clarence town, Long Island, Bahamas.

98744. *GOSSYPIUM* sp.

98745. *GOSSYPIUM* sp.

From Deadman's Cay, 13 miles from Clarence town.

98746. *GOSSYPIUM* sp.

From near Billy Rowe's place.

98747. *GOSSYPIUM* sp.

Presented by W. C. P. Major, J. P.

98748. *GOSSYPIUM* sp.

Anguilla cotton.

98749. *GOSSYPIUM* sp.

Fly-a-way cotton.

98750. *GOSSYPIUM* sp.

From Highburn Cay.

98751. *GOSSYPIUM* sp.

From Port Nelson, Rum Cay.

98752. *GOSSYPIUM* sp.

From Albert Town, Fortune Island.

98744 to 98754—Continued.

98753. *Gossypium* sp.

From Albert Town, Fortune Island.

98754. *Gossypium* sp.

From Duncan Town, Great Rugged Island.

98755. *BRYOPHYLLUM PROLIFERUM*
Bowie. Crassulaceae.

Plants presented by George Pring, superintendent, Missouri Botanic Garden, St. Louis, Mo. Received April 23, 1932.

A tall robust succulent, native to southern Africa, with stems reaching a height of 12 feet. The new growth is four-angled, later becoming cylindrical, and the pinnatifid to pinnate leaves are much contorted and have finely crenate margins. The tubular yellowish flowers are borne in paniculate clusters.

98756 to 98778. *Gossypium* spp. Mal-
vaceae. Cotton.

From the West Indies. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry with the 1931-32 Allison V. Armour expedition. Received April 21, 1932.

98756. *Gossypium* sp.

No. 1. From Nassau, New Providence Island, Bahamas.

98757. *Gossypium* sp.

No. 4. From Conception Island, Bahamas.

Nos. 98758 to 98761 were collected in the Bahama Islands, but the names of the islands were not given.

98758. *Gossypium* sp.

No. 5.

98759. *Gossypium* sp.

No. 6.

98760. *Gossypium* sp.

No. 9.

98761. *Gossypium* sp.

No. 11.

98762. *Gossypium* sp.

No. 14. From Great Inagua, Bahamas.

98763. *Gossypium* sp.

No. 21. From Saona Island, Dominican Republic.

Nos. 98764 to 98768 were collected on Beata Island, Dominican Republic.

98764. *Gossypium* sp.

No. 16.

98765. *Gossypium* sp.

No. 17.

98766. *Gossypium* sp.

No. 18.

98767. *Gossypium* sp.

No. 19.

98768. *Gossypium* sp.

No. 20.

98769. *Gossypium* sp.

No. 25. From St. Kitts, Leeward Islands.

98770. *Gossypium* sp.

No. 30. From Dominica, Leeward Islands.

98756 to 98778—Continued.

98771. *Gossypium* sp.

No. 36. From a town between the Bar de l'Isle and D'Ennery, St. Lucia, Windward Islands.

98772. *Gossypium* sp.

No. 87. From St. Lucia, Windward Islands.

98773. *Gossypium* sp.

No. 91. From Martinique, French West Indies.

98774. *Gossypium* sp.

No. 95. From Deer Point, Guantanamo Bay, Cuba.

98775. *Gossypium* sp.

No. 8. From the Bahamas.

98776. *Gossypium* sp.

No. 3. From Cat Island, Bahamas.

98777. *Gossypium* sp.

From St. Martin, colony of Curaçao.

98778. *Gossypium* sp.*Marie Galante* cotton, from Cannouna Island.98779. *HERNANDIA SONORA* L. Her-
nandiaceae.

From Trinidad. Seeds presented by the Bureau of Plant Quarantine. Received September 11, 1931. Numbered in April 1932.

A large soft-wooded tree growing very close to the beach line, with rather thin broad leaves and masses of very interesting, curiously shaped fruits. The black seed hangs in the center of a large white translucent inverted bell-shaped covering and may be seen through a hole in the bottom of this covering.

For previous introduction see 67185.

98780. *ZELKOVA SERRATA* (Thunb.)
Planch. Ulmaceae. Sawleaf zelkova.

From Japan. Seeds presented by M. Fujioka, director, Forest Experiment Station, Department of Agriculture and Forestry, Meguro, Tokyo, at the request of Dr. H. Ando, director, Imperial Agricultural Experiment Station, Tokyo. Received April 23, 1932.

Keaki. Collected in Yamagata in 1930. A handsome tree, native to Japan, up to 90 feet high, with a short trunk dividing into many upright spreading branches and forming a broad round-topped head. The sharply serrate leaves are ovate and are usually 2 to 3 inches long, or on young shoots, up to 8 inches long.

For previous introduction see 82488.

98781. *HIBISCUS TILIACEUS* L. Mal-
vaceae. Linden hibiscus.

From Straits Settlements. Seeds presented by R. Holtum, director, Botanic Gardens, Singapore. Received April 25, 1932.

A tall shrub or small tree up to 30 feet high, generally cultivated in the Tropics. The broadly cordate leaves are hoary beneath, and the yellow flowers are 2 to 3 inches long.

98782 to 98790. *Gossypium* spp. Mal-
vaceae. Cotton.

From the Union of Soviet Socialist Republics. Seeds presented by the Bureau of Introduction of the Institute of Plant Industry, Leningrad. Received May 2, 1932.

A collection of Russian cotton varieties, introduced for the use of Department specialists.

98782 to 98789. *Gossypium hirsutum* L.

Upland cotton.

98782 to 98790—Continued.

98782. No. 10337. From the Turkistan Selection Station.

98783. No. 36009. *Ak-Szhura*, variety 182. From the Selection Station, Gandzha, Azerbaijan.

98784. No. 133887. *King-Karajazskij*, variety 459. From the Selection Station, Gandzha, Azerbaijan.

98785. No. 36018. Variety 508. From the Turkistan Selection Station.

98786 to 98790. From the Selection Station, Gandzha, Azerbaijan.

98786. No. 106915. *King-Karajazskij*, variety 1138.

98787. No. 36029-a. *Thyeder*, variety 1306.

98788. No. 106914. *King-Karajazskij*, variety 1683.

98789. No. 106919. *King-Karajazskij*, variety 1827.

98790. *GOSSYPIMUM* sp.

Barraka.

98791 and 98792.

From Egypt. Roots presented by Alfred Bircher, Middle Egypt Botanic Station, El Safi. Received April 25, 1932.

98791. *ELETTARIA CARDAMOMUM* (L.) Maton. Zinziberaceae. **Cardamon.**

A perennial with large leafy shoots. The powdered dried fruits of this tropical Asiatic plant are used as a spice.

For previous introduction see 90895.

98792. *ZINZIBER MIOGA* Roscoe. Zinziberaceae.

A perennial herb about 3 feet high, found both wild and cultivated in Japan, with nearly linear smooth membranous leaves up to 15 inches long, white flowers in spikes over 3 inches long, and ovoid capsules. In summer and autumn the flowers with the bracts are eaten either raw or boiled and have a slight acid taste and an aromatic odor.

For previous introduction see 44579.

98793 to 98888.

From the West Indies, British Guiana, and Surinam. Roots and seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931-32 Allison V. Armour expedition. Received April 20, 1932.

98793. *ZINZIBER OFFICINALE* Roscoe. Zinziberaceae. **Ginger.**

No. 2891. Roots purchased in the market at Trinidad, February 17, 1932. This is the tropical ginger from which Jamaica ginger and candied ginger are made.

For previous introduction see 97821.

98794. *ABELMOSCHUS MOSCHATUS* (L.) Medic. Malvaceae.

No. 3693. *Musk okra*. Collected March 2, 1932, along a new road near the Saramacca Canal, back of Paramaribo, Surinam. An ornamental annual 3 to 12 feet high which bears large light-yellow flowers with deep dark-chocolate purple spots in the throat. The seeds have a musky odor and are used in the making of perfume.

For previous introduction see 97860.

98795. *ABROMA AUGUSTA* L. f. Sterculiaceae.

No. 3703. *Devil's cotton*. Collected March 2, 1932, in the experiment station, Paramaribo,

98793 to 98888—Continued.

Surinam. A quick-growing shrub, native to the East Indies, with large angular leaves and dull, deep dark-red flowers. The fiber is used for ropes and cordage in the Orient.

For previous introduction see 93169.

98796. *ANACARDIUM OCCIDENTALE* L. Anacardiaceae. **Cashew.**

No. 3715. Collected March 8, 1932, on the Baboneau Marquis estate, St. Lucia, Windward Islands. The cashew nut of commerce.

For previous introduction see 97751.

98797. *ANNONA SQUAMOSA* L. Annonaceae. **Sugar-apple.**

Seeds of a good fruit collected on Eleuthera, Bahama Islands.

98798. *ARISTOLOCHIA ELEGANS* Masters. Aristolochiaceae. **Calicoflower.**

No. 3719. March 1, 1932. Presented by Dr. G. Stahel, director, botanic garden, Paramaribo, Surinam. A perennial vine with long-stalked broadly ovate leaves 2 to 3 inches across and solitary flowers, which have no unpleasant odor, borne on the pendulous young wood. The flowers have a yellow-green tube 2 to 3 inches long and the cordate-circular limb, 3 inches across, is purple and white blotched, white outside with a yellow eye. It is native to Brazil.

For previous introduction see 91393.

98799. *ARTOCARPUS INTEGRATA* (Thunb.) L. Moraceae. **Jackfruit.**

No. 3692. From Paramaribo, Surinam, March 3, 1932. A very sweet variety introduced from Java about 20 years ago into Surinam and growing now in the Javanese village of Oranweg. The fleshy aril of this fruit has a sweet delicious tropical flavor and is of good texture.

For previous introduction see 97563.

98800 to 98803. *BAUHINIA* spp. Caesalpiniaceae.

98800. *BAUHINIA MONANDREA* KUNZ. **Butterfly bauhinia.**

No. 3812. Collected February 10, 1932, in the botanic garden at St. George, Grenada, Windward Islands. A small tree with gray bark and thick leaves, bearing large rose-colored flowers one petal of which is carmine spotted. Said to be a form which has escaped from cultivation in the West Indies.

For previous introduction see 97752.

98801 and 98802. *BAUHINIA TOMENTOSA* L. **St. Thomas tree.**

An erect shrub or small tree which has obtuse-ly lobed leathery leaves, broader than long, and few-flowered clusters of pale-yellow flowers, with the upper petals marked by deep-purple blotches. Native to India.

For previous introduction see 90900.

98801. No. 2960. From the botanic station, Scarborough, Tobago Island, February 19, 1932.

98802. No. 3698. From the experiment station, Paramaribo, Surinam, February 29, 1932.

98803. *BAUHINIA VAHLII* Wight and Arn. **Malu-creeper.**

No. 2827. Collected in the botanic garden at Port-of-Spain, Trinidad, February, 1932. An enormous-leaved vine that climbs over the tops of forest trees and bears large white flowers. It is native to India.

For previous introduction see 53567.

98793 to 98888—Continued.

98804. *BILLBERGIA* sp. Bromeliaceae.

No. 3716. From the experiment station, Paramaribo, Surinam, March 1, 1932. The billbergias are tropical American evergreen epiphytic herbs with a rosette of long spiny pineapple-like leaves from which arises a spicate panicle of 3- to 6-parted flowers. The colored bracts of the flower cluster are usually quite showy.

98805. *BRADBURYA PUBESCENS* (Benth.) Kuntze-Fabaceae.

No. 3704. Collected March 2, 1932, in the experiment station, Paramaribo, Surinam. A leguminous vine, native to tropical America, with trifoliate leaves and small yellowish flowers. It is used as a cover crop.

For previous introduction see 81410.

98806 and 98807. *BROMELIA PINGUI* L. Bromeliaceae.

A tropical succulent plant, 3 to 4 feet high, with spiny-margined leaves that turn red with age. The reddish flowers are in dense panicles, and the acid fruits, the size of plums, yield a cooling juice. Native to the West Indies.

For previous introduction see 82408.

98806. No. 3837. Collected March 15, 1932, on the mountain side above the village of Windward, Saba Island, Netherland West Indies.

98807. No. 3892. Collected March 27, 1932, on the island of Haiti.

98808. *BROWNEA GRANDICEPS* Jacq. Caesalpiniaceae.

No. 3794. From the Tivoli Garden, Martinique, French West Indies, March 9, 1932. A large handsome tropical American tree, up to 40 feet in height, with attractively mottled young foliage and bright-red flowers in large dense clusters borne at the ends of the branches.

For previous introduction see 67982.

98809. *BUCIDA BUCERAS* L. Combretaceae.

No. 3822. Collected March 14, 1932, near the village of Codrington, on Barbuda, Leeward Islands. A so-called oak with leaves up to 3 inches long and 2 inches wide. A tree up to 75 feet high with a diameter of 3 to 4 feet and having spatulate leaves clustered at the ends of the branches. The spikes of inconspicuous flowers are followed by small slightly fleshy drupes about one fourth inch long. It is native to tropical America.

For previous introduction see 97753.

98810. *CAESALPINIA SEPIARIA* Roxb. Caesalpiniaceae. Mysore thorn.

No. 3851. *Wait-a-bit*. Collected March 10, 1932, near Fort de France, Martinique, French West Indies. A very spiny, vinelike shrub with strong recurved spines on the twigs and petioles which catch one's clothes and hold fast. The long upright racemes of yellow flowers are very showy.

For previous introduction see 67678.

98811. *ANNESLIA TERGEMINA* (L.) Britt. and Rose (*Calliandra tergemina* Benth.). Mimosaceae.

No. 3765. *Bois patat*. Collected March 10, 1932, at Morne la Regale, Martinique. A shrub or small tree which makes an exceedingly attractive hedge and is in bloom most of the time. When the foliage first appears it is pink, turning to yellow-green and later to dark green. The showy part of the flower is the bundle of stamens colored in bands of pink, white, and red.

For previous introduction see 97757.

98793 to 98888—Continued.

98812. *CALOPHYLLUM ANTILLANUM* Britton (*C. calaba* Jacq.). Clusiaceae. Calaba-tree.

No. 3776. *Galba*. From Basse Terre, Guadeloupe, French West Indies, March 13, 1932. A large tree, up to 100 feet high, native to the West Indies. The dark-green leathery leaves, 3 to 6 inches long, and the small white fragrant flowers, borne in small racemes, are followed by hard-shelled fruits about 1 inch in diameter.

For previous introduction see 97836.

98813. *CANARIUM INDICUM* Stickm. (*C. commune* L.). Balsameaceae. Kanari.

No. 3702. Collected March 2, 1932, in the botanic garden at Paramaribo, Surinam. A large ornamental tree, native to the East Indies, and grown to a great extent as a shade tree and for its edible nuts. The tree is notable for its enormous buttressed trunk and ornamental yellow blossoms. The dark-purple fruits are produced in great abundance throughout most of the year. The hard-shelled nuts are very rich in oil.

For previous introduction see 66207.

98814. *CANAVALIA MARITIMA* (Aubl.) Thouars. Fabaceae.

No. 2935. Collected February 19, 1932, in the botanic station, Scarborough, Tobago Island. A strong-growing vine 10 feet high climbing over shrubs and fence rows. The thick pods are from 4 to 6 inches long.

For previous introduction see 97758.

98815. *CANELLA WINTERANA* (L.) Gaertn. Canellaceae.

No. 3834. *Wild cinnamon*. Collected March 14, 1932, near Martello Tower on Barbuda, Leeward Islands. An evergreen shrub or small tree, up to 45 feet high, native to the West Indies. The gray bark and the spatulate leaves, 4 inches long, are aromatic. The purple, red, or violet flowers are borne in terminal clusters and are followed by crimson or nearly black fruits about one-third inch in diameter.

98816. *CAPPARIS INDICA* (L.) Druce. Cappariaceae.

No. 3836. Collected March 14, 1932, on Barbuda, Leeward Islands. A shrub with attractive foliage, silvery white beneath, and large white flowers.

98817 to 98819. *CAPSICUM* spp. Solanaceae.

98817 and 98818. *CAPSICUM ANNUUM* L.

Common redpepper.

A beautiful deep-red redpepper shaped like a turban, flattened lengthwise; of mild flavor, not very hot.

98817. No. 3804. Purchased in the market at Pointe-à-Pitre, Guadeloupe, French West Indies, March 13, 1932.

98818. Purchased in the market at Georgetown, British Guiana.

98819. *CAPSICUM FRUTESCENS* L.

Bush redpepper.

No. 3823. Collected on the windward side of Saba Island, Netherland West Indies, at 1,500 feet altitude, March 15, 1932. An ornamental variety with thimble-shaped, almost black fruits, one-half inch long, which stand upright on their stems. Origin of the variety is unknown.

For previous introduction see 96503.

98820. *CARICA* sp. Papayaceae.

No. 2939. Collected February 20, 1932, on Tobago Island. A very sweet fruit with the characteristic papaya flavor.

98793 to 98888—Continued.

98821. *CASSIA OBOVATA* Collad. Caesalpiniaceae.

No. 3797. From Anguilla, Leeward Islands, March 16, 1932. A low bushy herbaceous shrub with typical cassialike yellow flowers and flat pods, rounded at both ends and crested in the middle. A tea made from the leaves and fresh twigs is used by the Negroes of Anguilla medicinally. It is a naturalized species, introduced probably from the Old World Tropics.

For previous introduction see 34809.

98822. *CASUARINA* sp. Casuarinaceae.

No. 3852. Collected March 16, 1932, near South Hill, Anguilla. A handsome species with smaller cones and larger coarser twigs than *C. equisetifolia*; possibly a hybrid.

98823. *CAYAPONIA AMERICANA* (Lam.) Cogn. Cucurbitaceae.

No. 3855. Collected March 19, 1932, near Harrington, Tortola, British Virgin Islands. A woody vine with large scabrous rough five-lobed leaves of very dark-green color. The long-ovoid fruits, less than 1 inch long, turn red when ripe.

98824. *CEDRELA ODORATA* L. Meliaceae.

Cigarbox-cedar.

No. 3800. From the Jardin d'Essais, Basse Terre, Guadeloupe. This is the *West Indian* or *Spanish* cedar, the soft fragrant wood of which is easily worked and in great demand for cigar boxes. It is also used as a shade tree in coffee plantations.

For previous introduction see 97976.

98825. *CLITORIA TERNATEA* L. Fabaceae.

No. 3824. Collected March 14, 1932, in the village of Codrington, Barbuda, Leeward Islands, where it was growing in dry rocky calcareous soil. An ornamental leguminous vine with pea-shaped blue or white flowers about 1 inch long.

For previous introduction see 90906.

98826. *CLUSIA ROSEA* Jacq. Clusiaceae.

No. 2892. From the Avena Forest Reserve, Trinidad, February 16, 1932. A Central American shrub or tree up to 30 feet high, usually epiphytic when young but eventually killing the host plant. The opposite entire broadly ovate leaves are very thick and leathery, and the large white flowers are often tinged with pink.

For previous introduction see 77024.

98827. *CLUSIA* sp. Clusiaceae.

No. 3825. From St. Cloud, near Basse Terre, Guadeloupe, French West Indies, March 13, 1932. A tree with crimson fruits 2 inches long with a five-parted stigma which persists, and thick dark-green foliage which seems never to be diseased.

98828 to 98831. *COCCOLOBA* spp. Polygonaceae.98828. *COCCOLOBA KRUGII* Lindau.

No. 3829. From near Codrington, Barbuda, Leeward Islands, March 14, 1932, where it forms a component of the scrub which thrives in the dry limestone soil of the island. A shrub or small tree up to 25 feet high, with smooth gray bark and slender branches, native to the West Indies. The light-green, somewhat leathery, broadly cordate leaves are 4 to 6 inches long, and the small green flowers with white stamens are borne in slender spikes and followed by small ovoid slightly fleshy black fruits.

98829 and 98830. *COCCOLOBA DIVERSIFOLIA* Jacq.

Collected on Barbuda Island March 14, 1932. A small tree 25 feet high, native to the West Indies. The ovate to elliptic-obovate coriaceous leaves are 2 to 6 inches long, and the small green flowers, followed by slightly fleshy black fruits, are borne in slender spikes longer than the leaves.

98793 to 98888—Continued.

98829. No. 3830. A larger-fruited form than no. 3829 (98828) and a promising ornamental.

98830. No. 3811. A small-leaved form that seems well able to withstand long periods of drought.

98831. *COCCOLOBA* sp.

No. 3874. Probably collected from trees on the dry rocky soil of Great Inagua, Bahama Islands.

98832. *CORDIA NITIDA* Vahl. Boraginaceae.

Glossy cordia.

No. 3868. *Red manjack* or *West Indian cherry*. Collected March 19, 1932, on Tortola, British Virgin Islands. A shrubby tree with harsh glossy foliage, white flowers, and red viscid berries which are eaten by the wild doves.

For previous introduction see 51118.

98833. *CRACCA TOXICARIA* (Pers.) Kuntze (*Tephrosia toxicaria* Pers.). Fabaceae.

No. 3713. Collected March 1, 1932, at Paramaribo, Surinam. A shrub up to 7 feet high, with leaves made up of nine or more leaflets, and racemes of white and pink flowers. It is used as a cover crop, and in Peru, where it is native, parts of the plant are crushed and thrown into the water to poison fish. It is now being tried as an ingredient of insecticides to replace arsenical salts.

For previous introduction see 81056.

98834 to 98842. *CROTALARIA* spp. Fabaceae.98834. *CROTALARIA ANAGYROIDES* H. B. K.

No. 3711. From Paramaribo, Surinam, March 1, 1932. A shrubby vigorous species over 7 feet high with mucronate pubescent trifoliate leaves and terminal inflorescences of brilliant yellow flowers.

For previous introduction see 97878.

98835. *CROTALARIA RETUSA* L.

No. 3860. Collected March 19, 1932, above the village of Roadtown, Tortola, British Virgin Islands.

For previous introduction see 97958.

98836 to 98839. *CROTALARIA INCANA* L.

For previous introduction see 97956.

98836. No. 3814. From Little Bay, St. Martin Island, March 17, 1932.

98837. No. 3638. Collected March 15, 1932, at Bottom, Saba, Netherland West Indies. A small species growing in the cultivated lands.

98838. No. 3853. Collected March 19, 1932, on Tortola, British Virgin Islands. A small-podded legume growing on a rock wall at Harrigan.

98839. No. 3813. Collected March 17, 1932, on the island of St. Martin. A low bushy herbaceous legume with densely pubescent soft delicate leaves. It may be a naturalized form escaped or introduced with forage.

98840 and 98841. *CROTALARIA JUNCEA* L.

Sunn-hemp.

For previous introduction see 97931.

98840. No. 2974. Collected February 25, 1932, in the Botanic Garden, Georgetown, British Guiana. A large plant 8 feet high with deep-orange or brilliant-yellow flowers 1 inch long borne on erect slender gray-pubescent branches. The short, somewhat flattened pods are covered with velvety pubescence.

98793 to 98888—Continued.

98841. No. 2973. From a private garden at St. George, Grenada, Windward Islands, February 9, 1932. Very similar to no. 2974 (98840), but a smaller plant.

98842. CROTALARIA RETUSA L.

No. 3876. Collected January 26, 1932, on Antigua, Leeward Islands.

For previous introduction see 98835.

98843. CYPERUS COMOSUS (Kunth) Poir. Cyperaceae.

No. 3701. Collected March 4, 1932, in the experiment station, Paramaribo, Surinam. A large handsome sedge which becomes 8 feet high in the wet lands of the experiment station at Paramaribo. Introduced for trial as an ornamental sedge for water gardens.

98844. DIOSPYROS PEREGRINA (Gaertn.) Guerke. Diospyraceae.

No. 2848. Collected February 13, 1932, at Port-of-Spain, Trinidad. An evergreen Indian species, with large leaves, which produce a very dense shade. The young foliage is blood red, and the white waxy blossoms are very fragrant. The fruits, over 1 inch in diameter, have sticky pulp which, in India, is used in calking boats. Introduced as an ornamental.

98845. DOLICHOS LABLAR L. Fabaceae.

Hyacinth-bean.

No. 3796. Collected March 15, 1932, in the village of Bottom, Saba, Netherland West Indies. This is the standard variety grown on the island, where it is known as the *Bonanist* bean and forms an important article of diet.

98846. ERYTHRINA VARIEGATA Stickm. Fabaceae.

Coraltree.

No. 3774. Collected March 12, 1932, in the Jardin d'Essais, Guadeloupe. A moderate-sized, quick-growing deciduous tree, native throughout India from the foot of the Himalayas into Burma and cultivated in many parts of the Tropics. The clusters of large bright-red flowers appear before the leaves. The pods, 4 to 8 inches long, contain several dark-carmine seeds. The flowers are dried for use as a dye; the bark is used for tanning and dyeing and yields an excellent pale straw-colored fiber. The leaves are used as cattle fodder; the bark and leaves are also used medicinally. The open-grained light wood is durable and does not split or warp; it is used for boxes, toys, and also for firewood. Much of the lacquered ware of India is made from the wood of this tree.

For previous introduction see 68335.

98847. ERYTHRINA GLAUCA Willd.

No. 3710. *Bois Immortelle*. From St. Louis, Windward Islands, March 8, 1932. The immortelles are spectacular trees as seen from the harbor in St. Lucia. Their salmon-colored flowers, borne by leafless branches on great spreading crowned trees, dot the landscape with color, making it gay and very attractive. There are several forms, though all have salmon-pink and yellow blossoms.

For previous introduction see 77163.

98848. EUGENIA AUSTRALIS Wendl. Myrtaceae.

Australian brush-cherry.

No. 3655. The so-called *Jammon*. Collected in the Botanic Garden, Georgetown. A form with small, almost black, fruits not over one-half inch long. An Australian tree up to 80 feet high, with ovate evergreen leaves 3 inches long, branching panicles of white flowers 1 inch across, and ovoid reddish edible fruits an inch long.

For previous introduction see 76938.

98849 to 98851. FICUS spp. Moraceae.

Fig.

98793 to 98888—Continued.

98849 and 98850. FICUS LAEVIGATA Vahl.

98849. No. 3726. Collected March 10, 1932, on the drier side of the island of Martinique. A rather attractive species with medium-sized glossy leaves and an abundance of white berries with irregular chocolate-brown spots.

98850. No. 3861. From near Harrington, Tortola, British Virgin Islands, March 19, 1932. A good-looking tree 15 feet high growing on the dry side of the island. The white fruits, less than one-half inch in diameter, turn pink as they ripen and are covered with irregular reddish spots.

98851. Ficus sp.

No. 3904. From Haiti, March 27, 1932. A tall buttressed tree with leaves like *F. altissima*, found at 1,000 feet altitude.

98852. GALACTIA LONGIFLORA Arnott. Fabaceae.

No. 2657. Collected January 26, 1932, on Boggy Peak, MacCarthy Valley, Antigua, Leeward Islands. A tropical leguminous vine with pinnately trifoliate leaves composed of rounded or retuse leaflets and handsome scarlet pealike flowers in small axillary racemes of great charm and beauty. Native to St. Vincent, British West Indies.

98853. HAMELIA ERECTA Jacq. Rubiaceae.

Scarletbush.

No. 3764. Collected March 10, 1932, in Lamentin, Martinique. A shrub or small tree up to 25 feet high, native to Florida and southward to Brazil. The opposite or verticillate, elliptic to ovate leaves, 2 to 6 inches long, are pubescent, and the cymes of tubular crimson, scarlet, or orange flowers, nearly 1 inch long, are followed by small dark-red to purple berries. Introduced for comparison with the forms now grown in the Southern States.

98854. HIPISCUS BIFURCATUS Cav. Malvaceae.

Rosemallow.

No. 3696. Collected March 3, 1932, from a pole-hole in the rocks in the middle of the Surinam River. A wild species, with large pink flowers 3 inches long, that occurs commonly along the Surinam River.

98855 to 98861. INDIGOFERA spp. Fabaceae.

Indigo.

98855 and 98856. INDIGOFERA TINCTORIA L.

True indigo.

For previous introduction see 45309.

98855. No. 3714. Collected February 6, 1932, on almost pure beach sand at Grand Bay, Cannouan, Grenadine Islands.

98856. No. 3801. Collected January 23, 1932, in an open field near the experiment station of St. Kitts, Leeward Islands.

98857 to 98859. INDIGO SUFRUTICOSA Mill.

A slender yellow-flowered bushy legume 3 to 5 feet high, producing a rather scanty growth which is not considered one of the best cover crops.

For previous introduction see 98728.

98857. No. 3835. From Barbuda, Leeward Islands, March 14, 1932.

98858. No. 3839. From the town of Bottom, Saba, Netherland West Indies, at 1,000 feet altitude, March 15, 1932. A low shrubby very fruitful species, covered with small sickle-shaped pods.

98859. No. 3875. From Beata Island, Dominican Republic, March 23, 1932. A woody plant 5 feet high found on the beach.

98793 to 98888—Continued.

98860 and 98861. *INDIGOFERA TINCTORIA* L.
True indigo.

For previous introduction and description see 98856.

98860. No. 3877. From the roadside in dry situations on the southern part of St. Martin Island, March 17, 1932.

98861. No. 2886. From Guantanamo, Cuba, March 24, 1932. Found in heavy clay soil on a high bluff above the river.

98862. *INGA LAURINA* (Swartz) Willd. *Mimosaceae*.
Guama.

No. 3761. *Pois doux*. From the Jardin d'Essais, Pointe-à-Pitre, Guadeloupe, Grand Terre Island, French West Indies, March 11, 1932. A valuable shade and windbreak tree with dark glossy-green leaves like a laurel and remarkably strong trunks which appear to withstand the hurricanes well. The tree is a rapid grower and produces pods containing beans surrounded by a sweet but insipid aril of which children are quite fond, hence the name *Pois doux* (sweet peas).

For previous introduction see 52511.

98863. *LONCHOCARPUS DOMINGENSIS* (Pers.) DC.
Fabaceae.

No. 3770. From the Botanic Garden, Basse Terre, Guadeloupe, March 12, 1932. The *Savoneth de Riviere* of Martinique. A medium-sized handsome spreading tree with long slender branches, large pinnate leaves, and violet or rose-colored flowers. A leguminous tree of real promise.

98864. *LUCUMA DUSSIANA* Pierre. *Sapotaceae*.

No. 3854. From the Basse Terre Botanic Garden, Guadeloupe, March 12, 1932. A small tropical tree with elliptic-obovate leathery leaves and edible ovoid or depressed-spherical fruits about twice as large as a hen's egg, with smooth yellowish skin and yellow-brown pulp. Native to Peru, where it is called *pomme pam*.

98865. *MABA GRISEBACHII* Hiern. *Diospyraceae*.

No. 3388. Presented by Cmdr. G. B. Keester, of the Naval Station at Guantanamo, Cuba, March 24, 1932. *Ebony* tree. A tree 1 foot in diameter found on the top of dry calcareous cliffs. The hard green fruits, with persistent 3-parted calyx, are filled with a sticky juicelike gambaoge that upon exposure to air turns very dark and almost iridescent. It is not astringent, but stains the hands deep yellow. The wood is said to be blue-black.

98866. *MALPIGHIA FUNICIFOLIA* L. *Malpighiaceae*.

No. 3805. Presented by Mrs. Lawton, wife of the American consular agent in Paramaribo, Surinam, March 1, 1932. A shrub that is quite generally cultivated in the West Indies, with pretty rose-colored flowers followed by brilliant red fruits the size of ordinary cherries, which have a thin skin and juicy orange-colored pulp of a refreshing flavor.

98867 and 98868. *MAMMEA AMERICANA* L. *Clusiaceae*.
Mamey.

A tropical tree with dark-green glossy foliage and large gray-green fruit. The skin of this fruit exudes a resinous, gummy juice which is used for killing chigoes and lice when applied locally.

For previous introduction see 47425.

98867. No. 3709. From the market at Georgetown, British Guiana, February 29, 1932.

98868. No. 3906. From near the citadel of Christophe, Haiti, March 27, 1932.

98793 to 98888—Continued.

98869. *MIMUSOPS BALATA* (Aubl.) Gaertn. f.
Sapotaceae.

No. 3895. From the Bayeux plantation in west-central Haiti, under observation of the Division of Rubber Plant Investigations, March 27, 1932. A tree which bears small round edible fruits, but is cultivated for its latex which is much like gutta-percha in character and is used in the trade for coating cables, etc.

98870. *UCHNA MOSSAMBICENSIS* Klotzsch. *Ochnaceae*.

No. 2971. From the Botanic Garden, Georgetown, British Guiana, February 25, 1932. An ornamental evergreen shrub which has large thick deep-green obovate leaves and terminal clusters of showy flowers, with the central disk and rather fleshy sepals wine red.

98871 and 98872. *PASSIFLORA LAURIFOLIA* L. *Passifloraceae*.
Waterlemon.

Pomme Liane. A strong vigorous vine, very suitable for arbors and trellises, with oval to ovate leaves and fragrant purple flowers about 2 inches in diameter. The ovoid-pointed fruit has a tough leathery shell which when green is six-striated with white stripes, but when quite ripe is a dull orange yellow. The numerous seeds are embedded in the juicy scented pulp, which is aromatic and delicious.

For previous introduction see 68038.

98871. No. 3771. From the market at Castries, St. Lucia, Windward Islands, March 8, 1932.

98872. No. 3775. From the market at Basse Terre, Guadeloupe, March 13, 1932.

98873. *PHASEOLUS LUNATUS* L. *Fabaceae*.
Lima bean.

No. 3795. *Run* bean. From Bottom, Saba, Netherland West Indies. A variety with brown-spotted seeds, which is one of the staple food plants of the island.

98874. *PHASEOLUS MUNGO* L. *Fabaceae*. *Urd*.

No. 3705. From Paramaribo, Surinam, March 3, 1932. A promising bean grown on sandy soils of the savanna back of Paramaribo by the Javanese colonists. It seemed to be growing and fruiting well in the strictly tropical climate and was probably introduced from Java by the Javanese.

98875. *PITHECOLLOBIUM DULCE* (Roxb.) Benth.
Mimosaceae.
Guamachil.

No. 2962. From the Botanic Garden, Georgetown, British Guiana, February 23, 1932. A large stately tree with pinnate leaves composed of obovate or oblong leaflets 1 inch long; the white flowers, finely pubescent, are followed by twisted pods 5 or 6 inches long and over 1 inch wide. It is widely cultivated in the Tropics as an ornamental. The pulpy arils are eaten by the poorer classes as food, and the bark yields a yellow dye.

For previous introduction see 92366.

98876. *PLUMERIA ALBA* L. *Apocynaceae*.

No. 3799. From Anguilla, Leeward Islands, March 16, 1932, where it was growing in the pot-holes in calcareous rocks and exposed to the drying salt-spray-laden trade winds. A tree up to 30 feet high, native to the West Indies. The linear-lanceolate subcoriaceous leaves, 10 inches long, are glabrous above and densely white-tomentose beneath. The salver-shaped flowers, 2 inches across, white with a yellow eye, are borne in compact clusters.

For previous introduction see 97576.

98793 to 98888—Continued.

98377. *PSIDIUM* sp. Myrtaceae.

No. 3807. From Kaleel, Surinam, March 4, 1932. A wild relative of the guava which bears fruits 1 inch in diameter composed mostly of angular hard seeds. Of possible value in breeding with the ordinary guava.

98873 and 98879. *QUASSIA AMARA* L. Simarubaceae.

A lofty tree, native to Surinam, which resembles the ash, with large showy red flowers, followed by beautiful and decorative fruits arranged in fives around a fleshy peduncle. The wood of this tree is extremely bitter and was found to be a remedy for certain fevers by a Negro named Quassi.

98378. No. 3661. From the Botanic Garden, Paramaribo, Surinam, March 2, 1932.

98379. No. 3802. Presented by Père Quentin, of Basse Terre, Guadeloupe, March 13, 1932.

98880. *RAVENALA GUYANENSIS* Steud. Musaceae.

No. 3866. From an Indian village near Paramaribo, Surinam, March 3, 1932. There are only two species in the genus, one in Madagascar and the other in Guiana. This species is not so large as the Madagascar one, but it rises to a height of 25 feet making a fanlike head. Its enormous flower spike is 9 feet long and as much as a man can carry. Unlike the Madagascar species, the seed of which has a deep-blue aril, this has an orange aril.

98881. *SAMANEA SAMAN* (Jacq.) Merr. (*Pithecolobium saman* Benth.). Mimosaceae.

No. 2966. From the Botanic Garden, Georgetown, British Guiana, February 24, 1932. The rain tree of the West Indies. A large spreading tree up to 60 feet high, native to Central America, but widely distributed throughout the Tropics as an ornamental and shade tree. The horizontal branches are extremely long, and between each pair of leaflets there is an extra-floral nectary, which exudes nectar and attracts insects. The dropping of this nectar has given the tree the reputation of producing rain. The dark pods, like carob beans, are filled with sweet pulp and are fed to stock. The wood is not very hard, but the heartwood is a handsome red color and takes a fine polish.

For previous introduction see 93364.

98882. *SICANA ODORIFERA* (Vell.) Naud. Cucurbitaceae. **Casabanana.**

No. 3772. From Fort-de-France, Martinique, French West Indies. A subtropical ornamental cucurbitaceous vine producing large fruits a foot or more long. Its texture and flavor are extremely pleasant, reminding one of a summer squash. For cultivation in the vine would require a strong trellis like the chayote.

For previous introduction see 92926.

98883. *STIGMAPHYLLON LINGULATUM* (Poir.) Small. Malpighiaceae.

No. 3850. From the village of Sandy Ground, Anguilla, Leeward Islands, March 16, 1932. A woody vine with glossy foliage and flowers which resemble those of crapemyrtle except that they are a pretty yellow color. The winged fruits are borne in pairs.

For previous introduction see 33585.

98884. *TAMARINDUS INDICA* L. Caesalpinaceae. **Tamarind.**

No. 3790. From a hillside above the village of Bottom, Saba, Netherland West Indies, March 15, 1932. A tree bearing unusually large fine fruits. Some of the pods were 8 to 9 inches long and over an inch wide.

98793 to 98888—Continued.

98885. *TRIMEZA MARTINICENSIS* (Jacq.) Herb. (*Cipura martinicensis* H. B. K.). Iridaceae.

No. 3503. From a terrace just below the rainforest edge in the St. Cloud region above Basse Terre, Guadeloupe, March 13, 1932. A yellow tigridialike plant 18 inches high, with small round rhizomes having intensely yellow flesh, light-green leaves, and small fugaceous yellow flowers.

For previous introduction see 97762.

98886. *VANGUERIA MADAGASCARIENSIS* Gmel. Rubiaceae.

No. 3762. From Guadeloupe, March 13, 1932. A small deciduous tree with large light-green leaves having prominent midribs. In March and April it bears quantities of globular green fruits over 1 inch in diameter, which become brown when ripe. The seeds are surrounded by slightly acid brown pulp, reminding one of the tamarind.

98887. *VIGNA LUTEA* (Swartz) A. Gray. Fabaceae.

No. 3885. From Road Town, Tortola, British Virgin Islands, March 19, 1932.

For previous introduction and description see 98728.

98888. *ZEA MAYS* L. Poaceae. **Corn.**

No. 3691. From the market, Paramaribo, Surinam, March 3, 1932. Introduced for the use of plant breeders who are searching for a strain resistant to the corn ear worm.

98889 to 98903.

From Egypt. Seeds presented by Alfred Bircher, Middle Egypt Botanic Garden, El Saff. Received April 23, 1932.

98889. *ACROCARPUS FRAXINIFOLIUS* Wight and Arn. Caesalpinaceae.

A lofty tree, native to the eastern Himalayas up to 4,000 feet altitude. The sapwood is white and the heartwood light red and moderately hard. The natives use the wood for planking and tea boxes.

For previous introduction see 57882.

98890. *BRAHEA DULCIS* (H. B. K.) Mart. Phoenicaceae. **Palma dulce.**

A short palm, up to 20 feet high, native to Mexico. The fan-shaped leaves, 4 to 5 feet long, are made up of about 50 linear leaflets, and the globose yellow edible fruits are borne on pendulous much-branched stalks 6 to 8 feet long.

98891. *BUTIA CAPITATA* (Mart.) Becc. Phoenicaceae. **Palm.**

A large palm, like the coconut, native to Argentina, with a spineless trunk, pinnate leaves, and large bunches of small edible fruits. It is said to be hardier than any species of *Cocos*.

For previous introduction see 82399.

98892. *CANTHUM PARVIFLORUM* Lam. Rubiaceae.

A rigid spiny shrub, native to India and Ceylon. The crowded leathery ovate to orbicular leaves are about 1 inch long, and the very small yellowish flowers, borne in cymes, are followed by obovate fruits less than 1 inch long.

98893. *CEREUS JAMACARU* DC. Cactaceae. **Mandacaru.**

A rigid upright cactus 12 to 16 feet high and 6 inches in diameter, native to Brazil. The new growth is azure, becoming dark green with age, and the large white flowers are 10 inches long and 8 inches across.

98889 to 98903—Continued.

98894. *DOVYALIS HEBECARPA* (Gardn.) Warb. (*Aberia gardnerii* Clos.). Flacourtiaceae.

A small, much-branched tree 16 to 20 feet high, native to India. The ovate-lanceolate leaves are 2 to 4 inches long, and the greenish flowers are followed by pale-purple edible fruits about 1 inch in diameter.

98895. *EUCLEA PSEUDEBENUS* E. Mey. Diospyraceae.

A shrub or small tree, native to southern Africa. The alternate entire linear coriaceous leaves are 1 to 3 inches long, and the inconspicuous flowers are followed by blue-black edible fruits about one-fourth inch in diameter.

98896. *EUGENIA SUPRA-AXILLARIS* Spring. Myrtaceae.

A glossy-leaved evergreen shrub from eastern Brazil, which bears clusters of white flowers and black one-seeded globose fruits in clusters of 3 to 10. The fruits are about the size of small cherries and somewhat resemble juniper berries in flavor.

For previous introduction see 47988.

98897. *JUNIPERUS BARBADENSIS* L. Pinaceae. Bermuda redcedar.

An evergreen tree, up to 40 feet high, native to the West Indies. The small spiny-pointed imbricated leaves are pale blue-green, and the depressed globose fruits are blue.

98898. *OPUNTIA PARAGUAYENSIS* Schum. Cactaceae. Pricklypear.

An erect shrubby branched cactus of the section *Platypuntia*. The flat joints, about 8 inches long and 3 inches wide, are spineless, but are beset with short yellow bristles that tend to disappear with age. The yellow flowers are over 2 inches across. Native to Escoban, Paraguay.

98899. *OPUNTIA TUNA* Mill. Cactaceae. Pricklypear.

An erect spreading treelike cactus 10 to 12 feet high, native to the West Indies and Mexico. The elliptical deep-green joints are 10 to 14 inches long; the yellow, fading to red, flowers are 3 to 4 inches across, and the dark-purple, round or pear-shaped edible fruits are 1 to 2 inches in diameter.

98900. *PACHIRA FASTUOSA* (DC.) Decaisne (*P. excelsa* Hort.). Bombacaceae.

A handsome tropical tree native to Mexico, with leaves not unlike those of the horse-chestnut but more leathery in texture. The attractive white flowers, 12 inches in diameter, have strap-shaped petals and large brushlike clusters of crimson and yellow stamens.

For previous introduction see 73879.

98901. *PROSOPIS SPICIGERA* L. Mimosaceae.

A low prickly tree with gray branches, native to India and Persia. The compound leaves are made up usually of four pinnae, each bearing 16 to 24 gray coriaceous leaflets less than one-half inch long. The small flowers are borne in axillary spikes and terminal panicles, and the pods, 4 to 6 inches long, contain an edible pulp.

98902. *TRECLIA AFRICANA* Decaisne. Moraceae.

A tropical African tree, related to the breadfruit, up to 80 feet high and yielding a whitish latex. The coriaceous ovate-elliptic leaves are 8 inches long and 4 inches broad. The large yellowish fruit, a foot or more in diameter, is said to weigh up to 30 pounds. The seeds are ground by the natives and used as meal.

98903. *VANGUERIA MADAGASCARIENSIS* Gmel. Rubiaceae.

For previous introduction and description see 98886.

98904 and 98905.

From the West Indies and Surinam. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931-32 Allison V. Armour expedition. Received April 11, 1932.

98904. (Undetermined).

No. 2763. From Mayero Island, one of the Grenadines, February 6, 1932. An unidentified orchid with very large seed pods.

98905. *SCHOMBURGKIA UNDULATA* Lindl. Orchidaceae.

No. 2763. Presented March 6, 1932, by Mrs. Lawrence, wife of the American consul at Paramaribo, Surinam. A showy orchid with purple flowers in many-flowered clusters at the tips of long flower stalks.

98906. *ARUNDINARIA MACROSPERMA* Michx. Poaceae. Southern cane.

From Louisiana. Cuttings presented by Charles E. Chambliss, Crowley, La. Received May 2, 1932.

A native American bamboo growing along streams in the southeastern part of the United States. The stems are 20 to 30 feet high with numerous short divergent branches and lanceolate leaves 10 to 15 inches long.

For previous introduction see 75148.

98907. *SOLANUM TUBEROSUM* L. Solanaceae. Potato.

From England. Tubers presented by Sutton & Sons, Reading. Received April 27, 1932.

Shamrock. Introduced for the use of Department specialists.

98908 to 98917.

From China. Seed purchased from L. Pfitsin, Harbin, Manchuria. Received December 23, 1931. Numbered in April 1932.

98908. *ACER GINNALA* Maxim. Aceraceae. Amur maple.

A shrub or small tree up to 25 feet high, native to northeastern Asia, with lustrous dark-green three-lobed serrate leaves, long-stalked panicles of yellowish flowers, and winged fruits which are conspicuously red during the summer. The leaves turn bright red in autumn.

For previous introduction see 77615.

98909. *FRAXINUS MANDSHURICA* Rupr. Oleaceae. Manchurian ash.

A handsome ash, often 100 feet high, native to eastern Asia. The leaves are up to 15 inches long with dull-green bristly leaflets. The tree is said to be susceptible to late spring frosts.

For previous introduction see 90781.

98910. *PINUS KORAIENSIS* Sieb. and Zucc. Pinaceae. Korean pine.

A 5-needle pine that occasionally becomes 150 feet high, with smooth red-gray bark. It produces valuable lumber and edible seeds and is also of ornamental value, being of slow growth and forming a dense broad pyramidal head of handsome foliage. Native to Japan.

For previous introduction see 93419.

98911. *ROSA* sp. Rosaceae.

98912. *RUBUS* sp. Rosaceae.

98913. *RUBUS* sp. Rosaceae.

98914. *RUBUS* sp. Rosaceae.

98915. *RUBUS* sp. Rosaceae.

98908 to 98917—Continued.

98916. *SYRINGA AMURENSIS* Rupr. Oleaceae.
Manchurian lilac.

A shrub or small tree with large clusters of white flowers.

For previous introduction see 92067.

98917. *VITIS AMURENSIS* Rupr. Vitaceae.
Amur grape.

A wild grape with large bunches of acid purple berries about the size of a marrowfat pea. They are eaten fresh and also made into wine. This variety is hardy in the region of Mefun, Manchuria.

98918 and 98919.

From the Philippine Islands. Cuttings presented by the chief of the division of forest investigation, Bureau of Forestry, Agricultural College, Laguna, through Arthur Fischer, director of forestry, Manila. Received May 9, 1932.

98918. *DEGUELIA ELLIPTICA* (Roxb.) Taub. (*Deris elliptica* Benth.). Fabaceae.

A large handsome climbing vine native to southeastern Asia. The compound leaves, 1 foot long, are made up of 9 to 13 thin leathery obovate leaflets 4 to 6 inches long, and the bright-red pea-shaped flowers, 1 inch long, are borne in lax racemes a foot in length. It yields the commercial tuba root, which is used in the manufacture of insecticides. The plant is at present extensively cultivated in the Malay Archipelago.

For previous introduction see 95366.

98919. *DEGUELIA POLYANTHA* (Perkins) Blake. Fabaceae.

A tropical woody climber with alternate pinnate leaves and small pinkish flowers in axillary racemes. It is closely related to *D. scandens* and is native to the Philippine Islands.

98920. *ARRACACIA XANTHORRHIZA* Bancroft. Apiaceae. Arracacha.

From Venezuela. Roots presented by H. Pittier, Caracas. Received May 10, 1932.

The arracacha is a biennial herb about 3 feet high, with carrotlike foliage and small umbels of purple flowers. It is native to northern South America, where it is cultivated for its roots, which may be white, yellow, or mulberry colored. The large fleshy roots are used as food in South America and Central America, being boiled like parsnips or sliced and fried. They also produce an excellent starch for laundry purposes. The plant is propagated either by seed or cuttings, and it will stand no frost.

For previous introduction see 78832.

98921. *CUCURBITA MOSCHATA* Duchesne. Cucurbitaceae. Cushaw.

From China. Seeds presented by W. T. Chang, Nanking University, Nanking. Received May 6, 1932.

98922 to 98924.

From Scotland. Seeds presented by the North of Scotland College of Agriculture, Craibstone, Aberdeen. Received May 9, 1932.

A collection of grasses introduced for the use of Department specialists.

98922. *DACTYLIS GLOMERATA* L. Poaceae.
Orchard grass.

Craibstone grazing cocksfoot.

98923. *LOLIUM PERENNE* L. Poaceae.
Perennial ryegrass.

Craibstone perennial ryegrass.

98922 to 98924—Continued.

98924. *PHELUM PRATENSE* L. Poaceae. Timothy.
Craibstone timothy hay.

98925 and 98926.

From Ceylon. Seeds presented by the manager of the publication depot and central seed store, Department of Agriculture, Peradeniya. Received May 9, 1932.

98925. *CRACCA CANDIDA* (DC.) Kuntze (*Tephrosia candida* DC.). Fabaceae.

A low shrub with slender branches and large clusters of reddish or white flowers. It is the preferred cover crop in the lime plantations of Dominica, West Indies, and widely distributed in tropical countries. The bark and leaves are used as a fish poison plant in Bengal and Burma, but tests show that as an insecticide it is much inferior to *C. vogelii*.

For previous introduction see 97764.

98926. *CRACCA VOGELII* (Hook. f.) Kuntze (*Tephrosia vogelii* Hook. f.). Fabaceae.

A shrubby legume native to tropical Africa. All parts of the plant are macerated and thrown into the water to kill fish. It is considered very valuable for its insecticidal properties, the seeds being found to contain the highest concentration of the toxic principle.

For previous introduction see 81414.

98927. *BROMUS INERMIS* Leyss. Poaceae. Common bromegrass.

From China. Seeds purchased from L. Ptitin, Harbin, Manchuria. Received May 9, 1932.

Koster. Introduced for the use of Department specialists working with forage crops.

98928. *CAVANILLESIA PLATANIFOLIA* H. B. K. Bombacaceae.

From the Canal Zone. Seeds presented by J. E. Higgins, director, Canal Zone Experiment Gardens, Summit. Received May 3, 1932.

A Colombian tree up to 100 feet high, with a large thick trunk, smooth pale bark, large shallowly 5- to 7-lobed leaves, and red flowers 1 inch long. The coarse pithlike wood is white or yellowish and is used for making canoes and rafts.

For previous introduction see 78818.

98929. *PRUNUS SALASII* Standl. Amygdalaceae.

From Central America. Seeds presented by Mr. Salas, director general, Agricultural Department, Guatemala, through Otto Katzenstein & Co., Atlanta, Ga. Received May 12, 1932.

A tropical evergreen cherry which is native to the highlands of Antigua, Guatemala, where it is known as the carreto. The light-green leathery narrow-oblong leaves are 3 to 5 inches long, and the small white flowers are in racemes about 6 inches long.

98930 to 98973. *MALUS SYLVESTRIS* Mill. (*Pyrus malus* L.). Malaceae. Apple.

From Germany. Plants presented by Dr. W. Gleisberg, Die Gartenbauwissenschaft, Fillnits und Elbe, through L. Späth, Berlin-Baumschulenweg. Received May 13, 1932.

A collection of selected stocks introduced for the use of Department specialists in their studies of fruit-tree root stocks.

98930. No. 3. *Grosser Bohnapfel*.

98931. No. 6. *Kasselrenett (Grosse Reinette)*.

98932. No. 7. *Kanadarenett*.

98930 to 98973—Continued.

98933. No. 8. *Guldparmån* (*Winter-Goldparmäne*).
 98934. No. 11. *Ananasrenett*.
 98935. No. 12.
 98936. No. 13.
 98937. No. 19. *Winter-Dechansbairne*.
 98938. No. 21.
 98939. No. 22.
 98940. No. 24.
 98941. No. 28.
 98942. No. 31.
 98943. No. 37. *Baumanns renett*.
 98944. No. 43.
 98945. No. 47.
 98946. No. 49.
 98947. No. 53.
 98948. No. 55.
 98949. No. 61.
 98950. No. 64.
 98951. No. 67.
 98952. No. 72.
98953. No. 91.
 98954. No. 92.
 98955. No. 92-a.
 98956. No. 93.
 98957. No. 94.
 98958. No. 107.
 98959. No. 108.
 98960. No. 113.
 98961. No. 115.
 98962. No. 116.
 98963. No. 117.
 98964. No. 122.
 98965. No. 123.
 98966. No. 124. *Londoner Pepping*.
 98967. No. 129.
 98968. No. 159.
 98969. No. 162.
 98970. No. 175.
 98971. No. 176.
 98972. No. 186.
 98973. No. 187.

98974. FRAGARIA sp. Rosaceae.

Strawberry.

From Sweden. Plants presented by Mr. Eckstrom. Central Bureau of Agriculture, Stockholm. Received May 25, 1932.

Abundance.

98975. GOSSYPIUM sp. Malvaceae.

Cotton.

From the Galápagos Islands. Seeds presented by George Stone. Received April 4, 1932.

Wild cotton collected on the island of Santa Maria.

98976 to 98999.

From the West Indies, British Guiana, and Surinam. Plants and seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931-32 Allison V. Armour expedition. Received April 11, 1932.

98976. RODRIGUEZIA SECUNDA H. B. K. Orchidaceae.

No. 3659. From Surinam, March 2, 1932. An epiphytic orchid with small delicate pseudobulbs, long slender leaves, and deep-rose flowers, borne in erect secund racemes 6 inches high. It grows commonly either on sapodilla or calabash trees in the savanna region around Paramaribo.

98977. ACACIA CHORIOPHYLLA Benth. Mimosaceae.

No. 3905. From Mariguana, Bahama Islands, March 29, 1932. A shrub or small tree with leathery pinnate leaves and pretty yellow flower heads followed by short thick pods in which the brown seeds are embedded in a white sweet aril. Introduced as an ornamental shrub or wind-break.

98978. ALBIZZIA CARIBAEA (Urban) Britton and Rose. Mimosaceae.

No. 2965. From the Botanic Garden, Georgetown, British Guiana, February 24, 1932. A tall

98976 to 98999—Continued.

gaunt naked-looking tree with slender branches, thin pinnate foliage, and papery pods 4 or 5 inches long and less than an inch wide, containing 11 or 12 seeds.

98979. LYSILOMA LATISILIQUA (L.) Benth. Mimosaceae.

No. 3887. From Blue Beach, near Guantanamo, Cuba, March 24, 1932. A small decorative tree 25 feet high, with pretty bipinnate leaves composed of obovate leaflets and papery pods of interesting structure. The outside of the dehiscent pod appears to flake off, leaving only the papery mesocarp to enclose the seeds; the dark margin of the pod persists.

98980. AMERIMNON LATIFOLIUM (Roxb.) Kuntze. Fabaceae.

No. 3657. From the Botanic Garden, Georgetown, British Guiana, February 24, 1932. A forest tree native to the Sikkim region in India. The pinnate leaves, 4 to 6 inches long, are made up of 5 to 7 orbicular coriaceous leaflets, and the small pea-shaped white flowers are borne in broad lax panicles. The brown strap-shaped pods are 2 to 3 inches long.

98981 and 98982. BRADBURYA VIRGINIANA (L.) Kuntze. Fabaceae. Piedmont butterfly-pea.

A long-podded vigorous legume, similar to the rice bean.

98981. No. 3815. From the Dutch side of the island of St. Martin, in a very dry locality, March 17, 1932.

98982. No. 3828. From Barbudo, Leeward Islands, March 14, 1932. Found in dry limestone soil.

98983. CAESALPINIA PAUCIJUGA Benth. Caesalpinaceae.

No. 2967. From the Botanic Garden, Georgetown, British Guiana, February 24, 1932. *Brazilletto wood*. A large beautiful spreading timber tree which is covered in season with racemes of small fragrant yellow flowers.

For previous introduction see 98070.

98984. CESTRUM LAURIFOLIUM L'Her. Solanaceae.

No. 3862. From the village of Harringan, Tortola, British Virgin Islands, March 19, 1932. An attractive shrub 10 to 15 feet high with dark-green leaves. The yellow funnelform flowers, one-half inch long, are followed by pretty black berries each with a persistent calyx and each bearing three ovate brown seeds flat on one side.

98985. GYMINDA LATIFOLIA (Swartz) Urban. Celastraceae.

No. 3842. *Maiden berry*. From Anguilla, Leeward Islands, March 16, 1932. A shrub or small tree, up to 30 feet high, native to the West Indies. The oblong to ovate, glossy-green, slightly leathery leaves are 1 to 3 inches long and the axillary clusters of small greenish flowers are followed by ellipsoid red drupes about a quarter of an inch long, said to be edible.

98986. COSTUS CYLINDRICUS Jacq. Zinziberaceae.

No. 2958. From Tobago Island, February 20, 1932. A rank-growing, forest-loving species with large dark-green leaves arranged spirally about the flower stalk, which is a terminal conelike structure with reddish bracts from above which pink-white flowers peep out.

98987 to 98990. DOLICHOLUS spp. Fabaceae.

98987. DOLICHOLUS sp.

No. 3810. From Charlotteville, Tobago Island, February 21, 1932. A legume collected in a lowland meadow.

98976 to 98999—Continued.

98998 and 98999. *DOLICHOLUS RETICULATUS* (Swartz.) Millsp.

A legume with yellow flowers and very short broad pods.

98998. No. 3843. Collected March 15, 1932, above the village of Bottom on the island of Saba.

98999. No. 3857. Collected on the mountain side back of Road Town, Tortola Island, March 1, 1932.

98990. *DOLICHOLUS MINIMUS* (L.) Medic.

No. 3858. From near the village of Harringan, Tortola Island, March 19, 1932. A legume which may have value as a green manure.

For previous introduction see 97311.

98991. *ESCHWEILERA* sp. Lecythidaceae.

No. 2857. From the Botanic Garden, Port-of-Spain, Trinidad, February 12, 1932. A large tree 50 feet tall, with fruits in clusters resembling acorns with their acorn cups. The seed is bean shaped, however, and strikingly different from any acorn.

98992. *EUGENIA LAMBERTIANA* DC. Myrtaceae.

No. 3779. From near St. Cloud, on Basse Terre, Guadeloupe, March 13, 1932. A tall shrub, native to the West Indies, with glossy dark-green oblong to elliptical leaves 4 to 6 inches long. The small flowers are followed by axillary clusters of 2 to 6 globular yellow fruits about one-half inch in diameter.

98993. *PHASEOLUS ADENANTHUS* G. Meyer. Fabaceae. **Bean.**

No. 3725. From Lamentin, Guadeloupe, March 10, 1932. A sparsely flowering legume of scraggly habit growing over underbrush. The white and purple flowers, borne on long peduncles, remind one of sweet peas.

For previous introduction see 97883.

98994. *GALACTIA LONGIFLORA* Arnott. Fabaceae.

No. 3859. From the road between the villages of Bottom and St. John, Saba Island, March 15, 1932.

For previous introduction and description see 98852.

98995. *GUZMANIA* sp. Bromeliaceae.

No. 3806. From the highlands of Guadeloupe, March 12, 1932. A bromeliad with leafy terminal inflorescences, not panicle, rising from the broad rather tender leaves which form a rosette. The leaves of the inflorescence differ little from the rest of the plant. A decorative species, but not a strikingly handsome one.

98996. *INDIGOFERA SUFFRUTICOSA* Mill. Fabaceae. **Indigo.**

No. 2616. From the beach of Beata Island, Dominican Republic, January 18, 1932.

98997. *INGA INGOIDES* Willd. Mimosaceae.

No. 2991. From the Botanic Garden, Georgetown, February 27, 1932. A tree 30 to 40 feet high, native to British Guiana. The compound leaves are made up of 3 to 4 pairs of elliptical leaflets 2 to 4 inches long, and the small tubular flowers are followed by tomentose four-angled pods 4 to 6 inches long.

98998. *IPOMOEA POLYANTHES* Roem. and Schult. Convolvulaceae.

No. 3763. From near the village of Vauclin, Martinique, March 10, 1932. A climbing herb with large bright-yellow flowers not abundant enough to make it a very showy species.

For previous introduction see 97769.

98976 to 98999—Continued.

98999. *NYMPHOIDES HUMBOLDTIANUM* (H. B. K.) Kuntze (*Limnanthemum humboldtianum* Griseb.). Menyanthaceae. **Floatingheart.**

No. 3808. From the Lamaha Canal, near Georgetown, British Guiana, February 27, 1932. A water plant having tiny white flowers, with fringed petals which rise a foot above the floating leaves.

99000 to 99023.

From the West Indies, British Guiana, and Surinam. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931-32 Allison V. Armour expedition. Received April 20, 1932.

99000. *MORA EXCELSA* Benth. Caesalpinaceae.

No. 3712. From Trinidad, February 16, 1932. A large forest tree, native to Guiana. The abruptly pinnate leaves are made up of 3 to 4 pairs of blunt leaflets 5 to 8 inches long, and the small flowers, borne in cylindrical spikes 6 to 10 inches long, are followed by oblong woody pods 3 to 6 inches long, each containing one seed.

99001. *PAULLINIA PINNATA* L. Sapindaceae.

No. 2990. From the Botanic Garden, Georgetown, British Guiana, February 27, 1932. A strong-growing vine that climbs 30 to 40 feet to the tops of trees. The bright-red fruits, the size of cherries, are borne in racemes 6 inches or more in length.

99002. *PELTOGYNE PORPHYROCARDIA* Griseb. Caesalpinaceae.

No. 2970. From the Botanic Garden, Georgetown, British Guiana, February 25, 1932.

For previous introduction and description see 98558.

99003. *PLATYMISCIUM POLYSTACHYUM* Benth. Fabaceae.

No. 2992. *Mormigo, palo de marimba*. From the Botanic Garden, Georgetown, British Guiana, February 25, 1932. A handsome tropical leguminous tree with opposite shining-green compound leaves made up of 3 to 5 ovate leaflets and racemes of small flowers. The wood is hard, streaked with black and red, and is considered excellent for cabinetwork.

For previous introduction see 80698.

99004. *SAMANEA SAMAN* (Jacq.) Merr. Mimosaceae.

No. 3706. From the Botanic Garden, Georgetown, British Guiana, February 23, 1932.

For previous introduction and description see 98881.

99005 and 99006. *TERAMNUS LABIALIS* (L.) Spreng. Fabaceae.

A legume found in dry places, growing over tall grasses. Its great productiveness and the vigor of its growth are in its favor as a cover crop, although there is little substance in its foliage.

99005. No. 3809. From near Richmond, Tobago Island, March 19, 1932.

99006. No. 3856. From the French side of the island of St. Martin, March 17, 1932.

99007 and 99008. *TRICHACHNE INSULARIS* (L.) Nees. Poaceae. **Grass.**

A tropical grass cultivated in Central America where it grows from 6 to 7 feet high.

For previous introduction see 52922.

99007. No. 3863. From the experiment station at Harringan, Tortola Island, March 19, 1932.

99008. No. 2809. From Nome Rouge, Grenada, Windward Islands, February 10, 1932.

99000 to 99023—Continued.

99009. (Undetermined.)

No. 3827. March 3, 1932, near Kabel Station, Surinam. A vine with large yellow flowers, found over tall forest trees at the edge of the Surinam River.

99010. *STEGNOSPERMA HALIMIFOLIUM* Benth. Phytolaccaceae.

No. 3878. Beata Island, Dominican Republic. A very pretty scandent shrub with fruits which are reddish brown when ripe and, when opening, show a magenta aril that almost conceals the shiny black seed. In habit it resembles the northern bittersweet, and it could be used in the same decorative way.

For previous introduction see 97901.

99011. *GUAIACUM OFFICINALE* L. Zygophyllaceae. *Logniumvitae*.

No. 3880. From Barbuda, Leeward Islands, March 14, 1932. An evergreen tree up to 30 feet high, native to tropical America. The pinnate leaves are made up of 4 to 6 obovate leaflets 2 inches long, and the small blue flowers are in terminal clusters. The yellow-brown wood is very hard and heavy and is valued for hubs, cogs, and pulleys.

99012. *DUGGENA HIRSUTA* (Jacq.) Britton. Rubiaceae.

No. 3781. From Basse Terre, Guadeloupe, French West Indies, March 13, 1932. A shrub up to 10 feet high, with long slender branches, native to the West Indies and northern South America. The lanceolate to ovate leaves are 2 to 8 inches long, and the small white flowers, borne in spicate panicles, are followed by white to blue berries one-fourth inch in diameter.

99013. *RUELLIA TUBEROSA* L. Acanthaceae.

No. 3841. From near the village of Bottom, Saba, Netherland West Indies, March 15, 1932. An erect or ascending finely pubescent herbaceous perennial 2 feet high, native to the West Indies, tropical America, and the southeastern part of the United States. The ovate to oblong leaves, 5 inches long, are undulate on the margin and have winged petioles, and the tubular purple flowers, 2 to 3 inches long, are borne in several-flowered cymes.

99014. (Undetermined.)

No. 3844. Collected near the edge of the rain forest of St. Cloud, above Basse Terre, Guadeloupe, French West Indies, March 13, 1932. A tree 50 feet high, bearing masses of yellow-brown fruit capsules that split open into three valves and show inside a parchmentlike mesocarp and 1 or 2 small seeds that are embedded in a deep orange-colored aril. When the fruit opens it resembles the northern bittersweet and could be used in the same decorative way.

99015. (Undetermined.)

No. 3792. From Saba, Netherland West Indies, March 15, 1932. An orchid growing on the mountain side, where it was exposed to the bright tropical sunlight.

99016. *BUNCHOSIA GLANDULOSA* (Cav.) DC. Malpighiaceae.

No. 3879. Collected March 17, 1932, near Little Bay, St. Martin Island, Netherland West Indies. A shrub or small tree 25 feet high, native to the West Indies. The oblanceolate to obovate leaves, 1 to 5 inches long, are bright green above and paler beneath, and the small yellow flowers, in panicles, are followed by ovoid yellow to orange drupes nearly half an inch in diameter. The fruits are said to be eaten by birds.

99000 to 99023—Continued.

99017. *CEPHAELIS MUSCOSA* Swartz. Rubiaceae.

No. 3782. From near St. Cloud, Basse Terre, Guadeloupe, March 13, 1932. A shrub or small tree up to 15 feet high, native to the West Indies and Brazil. The oblong-lanceolate leaves are 3 to 4 inches long, the small white flowers are in heads with pale-blue bracts, and the ripe berries are blue.

99018. *TAMONEA GUIANENSIS* Aubl. Melastomaceae.

No. 3780. From near St. Cloud, Basse Terre, Guadeloupe, March 13, 1932. A shrub or small tree up to 25 feet high, native to the West Indies. The oblong to ovate leaves, 3 to 8 inches long, are green and glabrous above and pale and scurfy beneath. The small white flowers are borne in many-flowered panicles.

99019. (Undetermined.)

No. 3707. From the Botanic Garden, Georgetown, British Guiana, February 27, 1932. A rank-growing woody vine which climbs to the tops of trees. The large opposite leaves are 4 inches wide by 5 inches long, and the immense woody pods are 7 inches by 4 inches. The large leaves make this desirable as a pergola vine for subtropical regions.

99020. *SCOLOPIA COCHINCHINENSIS* (Lour.) Clos. (*S. crenata* Clos.). Flacourtiaceae.

No. 3708. From the Botanic Garden, Georgetown, British Guiana, February 27, 1932. A thorny shrub or small tree, native to southern China. The lanceolate to ovate leaves, 2 to 6 inches long, are shining above, pale and reticulate beneath, and glandular crenate on the margin. The racemes of inconspicuous flowers are followed by red fruits about one-half inch in diameter.

99021. *ELAEODENDRON XYLOCARPUM* (Vent.) DC. Celastraceae.

No. 3864. From Tortola Island, March 19, 1932. A small tree up to 30 feet high, native to the West Indies. The elliptic to oblong coriaceous light-green leaves are 2 to 4 inches long, and the axillary clusters of small green flowers are followed by ellipsoid fruits 1 inch long.

99022. *CITHAREXYLUM FRUTICOSUM* L. Verbenaceae.

No. 3849. *Fairy tree*. From the village of Codrington, Barbuda, Leeward Islands, March 14, 1932. A tree up to 30 feet high, native to the West Indies, where the wood is used for furniture and general construction. The oblong to obovate leaves are 2 to 6 inches long. The small tubular flowers are borne in spikelike racemes and are followed by red-brown to black drupes about one-third inch in diameter.

99023. *ALLOPLECTUS CRISTATUS* (L.) Mart. Gesneriaceae.

No. 3752. From the island of Martinique, March 10, 1932. A most attractive vine with bright-red bracts and trumpet-shaped flowers that rise from these heads of clusters of bracts.

99024 to 99027. *VICIA FABA* L. Fabaceae. **Broadbean.**

From Peru. Seeds collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received May 17, 1932.

Haba. Broadbeans purchased in the market at Tarma, Peru; grown in the highlands at 10,000 feet altitude.

99024. No. 210. Purple beans.

99025. No. 211. White beans.

99026. No. 212. Purple-black beans.

99027. No. 213. White and purple-mottled beans.

99028 and 99029.

From Tasmania. Seeds presented by L. A. Evans, Sandy Bay, Hobart. Received May 18, 1932.

99028. *ANOPTERUS GLANDULOSUS* Labill. Escalloniaceae.

Mountain laurel. A tall evergreen Tasmanian shrub with spreading branches, oblong dentate leaves 4 to 6 inches long clustered at the ends of the branches, and axillary racemes of white flowers.

For previous introduction see 94259.

99029. *BLANDFORDIA MARGINATA* Herb. Liliaceae.

A stout herbaceous perennial, 2 to 3 feet high, native to Tasmania. The linear-lanceolate radical leaves are 1 to 3 feet long, and the upper ones are few, short, and erect. The rich brown-red tubular flowers are 1 to 2 inches long and are borne in dense racemes 6 to 8 inches long.

99030 to 99058.

From the West Indies, Surinam, and British Guiana. Plants collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931-32 Allison V. Armour expedition. Received in April, 1932.

99030. *BROMELIA* sp. Bromeliaceae.

No. 3899. From Haiti, March 27, 1932. A pretty wine-red-leaved species growing on the battlements of the citadel of Haiti at 3,000 feet altitude, where cool moist conditions prevail during most of the year, but in the dry season the plants are subjected to intense heat and drought.

99031. *EPIDENDRUM* sp. Orchidaceae. Orchid.

No. 2626. From Saona, Dominican Republic, January 20, 1932. An orchid with yellow flowers.

99032. *EPIDENDRUM* sp. Orchidaceae. Orchid.

No. 2720. From St. Lucia, Windward Islands, February 3, 1932. An orchid with long racemes of delicate light-blue or lavender blooms, growing in masses on citrus trees in the moist valley beyond Bar de l'Isle.

99033. *HABENARIA* sp. Orchidaceae. Orchid.

No. 3754. From Martinique, March 10, 1932. A terrestrial orchid growing in full sunlight on the face of a cut in the mountain side in the rain-forest region between Fort-de-France and St. Pierre.

99034 to 99036. *ONCIDIUM* spp. Orchidaceae. Orchid.

Nos. 99034 and 99035 were presented by H. Caracciola, Port-of-Spain, Trinidad, February 19, 1932.

99034. *ONCIDIUM CEBOLLETA* Swartz.

No. 2910. An epiphytic orchid with small pseudobulbs, each with a single terete obscurely furrowed leaf 1 foot long. The rigid erect panicle about 2 feet high bears six-parted flowers having red-spotted green-yellow sepals and petals and a large bright-yellow labellum. It is native to Brazil.

99035. *ONCIDIUM PAFILO* Lindl.

Butterfly orchid.

No. 2911. An epiphytic orchid with oblong very leathery olive-green leaves, 6 to 8 inches long, mottled with purple brown. The flattened and jointed flower stem, 2 to 3 feet long, produces flowers several years in succession. The flowers are 4 to 5 inches long and 2 to 3 inches across and are mottled brown and yellow. It is native to the West Indies.

99036. *ONCIDIUM* sp.

No. 2572. From the village of Cotton Point, Rum Key, Bahamas, January 6, 1932. A large terrestrial or semiterrestrial orchid with leaves

99030 to 99058—Continued.

24 inches long and over an inch wide and an immense inflorescence over 8 feet tall, with many flowers which change color from light pink and yellow to deep pink or almost brown as they mature. The blossom has the fragrance of bee bread.

99037. *TILLANDSIA* sp. Bromeliaceae.

No. 2996. From the Sugar Experiment Station, Georgetown, British Guiana, February 25, 1932. A large species 3 feet long, bearing large attractive clusters of red and yellow flowers.

99038. *TILLANDSIA* sp. Bromeliaceae.

No. 3664. From near Charlotteville, Man of War Bay, Tobago, Windward Islands, February 20, 1932. A most attractive species, with long spikes of brilliant pink and yellow flowers.

99039 to 99041. *VANDA* spp. Orchidaceae. Orchid.

99039. *VANDA* sp.

No. 2688. From the Dominican Botanic Garden, January 29, 1932. Presented by F. A. Harcourt.

99040. *VANDA TERES* (Roxb.) Lindl.

No. 2835. *Agnes Joaquin.* Presented by Mrs. Fitt, Port-of-Spain, Trinidad, February 15, 1932. A vigorous hybrid which becomes 10 feet high and, when in full bloom, is a mass of lovely pink flowers. Some flowers are on the plant all the year.

99041. *VANDA TERES* (Roxb.) Lindl.

No. 2876. Presented February 16, 1932, by R. O. Williams, of the Botanic Garden, Trinidad. This straggling caustlike orchid with large rose-colored flowers on erect stalks is grown very commonly in the gardens of Trinidad. It seems to be very vigorous and hardy, and its long peduncles make the flowers especially adapted for cutting purposes. While not so vigorous as its hybrid, no. 2835 [99040], it is a very showy plant blooming in early spring all at once, whereas the hybrid *Agnes Joaquin* is in bloom most of the year.

99042. (Undetermined.)

No. 3893. From the United States Naval Station at Guantanamo, Cuba, March 24, 1932. A pink-flowered epiphytic orchid collected in one of the driest, most arid regions of Cuba.

Nos. 99043 and 99044 were collected on Saba, Netherland West Indies, March 15, 1932.

99043. (Undetermined.)

No. 3792. A terrestrial orchid found in the perpendicular wall of a mountain side exposed to the bright tropical sunlight.

99044. (Undetermined.)

No. 3867. A terrestrial orchid growing on a rock fence near the town of Bottom.

Nos. 99045 and 99046 were collected March 27 1932, in Haiti.

99045. (Undetermined.)

No. 3897. A semiterrestrial species, with handsome deep-purple flowers on a long-stalked inflorescence, growing on the decaying walls of the citadel at 3,000 feet altitude.

99046. (Undetermined.)

No. 3898. A terrestrial orchid collected on the decaying walls of the citadel at 1,000 feet altitude, where it is subjected to fogs and continual cold moisture in the winter. Flowers not seen.

99047. (Undetermined.)

No. 3753. From the island of Martinique, en route to St. Pierre, March 10, 1932. An epiphytic orchid with small but intensely pink flowers; of general appearance of a *Rodriquezia*.

99030 to 99058—Continued.

99048. (Undetermined.)

No. 26. Collected on the island of Beata, January 17, 1932; an epiphytic orchid, flowers not seen.

Nos. 99049 and 99050 were collected on St. Eustatius, Netherland West Indies, January 22, 1932.

99049. (Undetermined.)

No. 37. A large-seeded, attractive orchid growing on the rim of the crater. Flowers not seen.

99050. (Undetermined.)

No. 38. An attractive orchid with small greenish flowers.

99051. (Undetermined.)

From Grenada, Windward Islands. An orchid

99052. (Undetermined.)

An orchid.

99053. (Undetermined.)

An orchid from Great Inagua, Bahamas.

99054. (Undetermined.)

An orchid from Great Inagua, Bahamas.

99055. (Undetermined.)

An orchid from Paramaribo, Surinam.

99056. (Undetermined.)

No. 3896. From Haiti, March 27, 1932. An orchid found on the overhanging rocks at 100 feet altitude. In habit this reminds one of *Vanda teres*, with its long slender round stems hanging down in masses from the rocks. Flowers not seen.

99057. (Undetermined.)

No. 2763. From Mayero Island, February 6, 1932. An epiphytic orchid with very large seed pods. Flowers not seen.

99058. (Undetermined.)

An orchid, received without notes.

99059 to 99070. RHODODENDRON spp.—Ericaceae.

From Likiang, China. Seeds presented by Dr. Joseph F. Rock. Received May 11, 1932.

Collected on the western slopes of the Likiang Snow Range, Yunnan Province, in November and December 1931.

99059. RHODODENDRON sp.

A tree 12 to 16 feet high, with oblong to linear glabrous leaves and rich-pink flowers; collected in a limestone valley at 9,500 feet altitude.

99060. RHODODENDRON sp.

A shrub 3 to 5 feet high, with small glabrous leaves and pink to rose flowers, growing with pines and spruces at Atoda, 9,000 feet altitude.

99061. RHODODENDRON sp.

A shrub 3 feet high, with linear to elliptical glabrous leaves and pink flowers, collected at 10,000 feet altitude.

99062. RHODODENDRON sp.

A tree 10 feet high, with small leaves and red flowers, collected at 9,800 feet altitude.

99063. RHODODENDRON sp.

A very handsome shrub 3 to 4 feet high, with pink flowers.

99064. RHODODENDRON sp.

From the dense forests of Youngming, Bowutsu Valley, at 12,000 feet altitude. A tree 15 feet high with pink-purple flowers.

99059 to 99070—Continued.

99065. RHODODENDRON sp.

A tree 12 to 15 feet high, found along the streams in the Youngming forests.

Nos. 99066 to 99068 were collected on Mount Sengenague at altitudes between 10,000 and 13,000 feet.

99066. RHODODENDRON sp.

A shrub 5 to 6 feet high, with purple flowers.

99067. RHODODENDRON sp.

A shrub or tree 6 to 20 feet high, with flowers varying from pale lavender to deep purple.

99068. RHODODENDRON sp.

A shrub 7 to 8 feet tall, with oblong leaves, deeply rufous brown woolly beneath, and pink flowers.

99069. RHODODENDRON sp.

A globose shrub 2 feet high, with blue flowers, found in swampy meadows at 10,000 feet altitude.

99070. RHODODENDRON sp.

A shrub 3 to 5 feet tall, with dull-green leaves and blue flowers, found on sunny exposed slopes at 11,000 feet altitude.

99071 to 99114.

From Perù. Tubers collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received May 17, 1932.

99071 to 99074. OXALIS CRENATA Jacq. Oxalidaceae.

Oca. Cultivated forms from high alpine meadows between 10,000 and 11,000 feet altitude.

Nos. 99071 to 99073 were bought in the market at Tarma, April 22, 1932.

99071. No. 229. An herb 8 inches high, with elongate tubers which have yellow skin mottled with red, deep wide eyes, and yellow-white flesh. The flowers vary in color.

99072. No. 230. An ornamental herb, with red elongated edible tubers which have wide pink eyes and yellowish flesh, mottled with red.

99073. No. 231. An ornamental herb which has elongated edible tubers with yellow skin, wide yellow eyes, and yellow flesh.

99074. No. 260. Purchased in the market at Huancayo, April 24, 1932. Small oval tubers with yellow skin, shallow eyes, and yellow-white flesh.

99075 to 99109. SOLANUM spp. Solanaceae.

99075. SOLANUM NEOWEBERBAUERII Wittm.

No. 265. From near Chorillos, April 30, 1932. A rare wild potato native to the dry coastal region in the environs of Lima and Callao, Peru, growing always in stony situations and depending on fog for its water supply. The tubers are small, about one half inch in diameter, several to each plant. The plant belongs to a series of which *S. malitia* is the most common, occurring in arid sandy situations.

99076 to 99108. SOLANUM TUBEROSUM L.

Potato.

A collection of cultivated potatoes from the high alpine meadows between 3,000 and 11,000 feet altitude.

99076 and 99077. *Chuncho papas*. From Rio Colorado, near Merced, April 16, 1932. Cultivated by the Indians at 2,800 feet altitude.

99071 to 99114—Continued.

- 99078 and 99079. From the Hacienda Makko, near Tarma, April 20, 1932. A potato with large oval-flattened white tubers, shallow violet eyes, and white flesh. It is cultivated in alpine meadows at 11,500 feet altitude.
99078. No. 218. 99079. No. 219.
- Nos. 99080 to 99082 were bought in the market at Tarma, April 22, 1932. Cultivated in alpine meadows at 10,000 feet altitude.
99080. No. 221. Small round yellow-white tubers with violet eyes and yellow-white flesh.
99081. No. 222. Large round dark-purple tubers with deep and purple eyes and white flesh with purple vascular ring.
99082. No. 227. Large oval yellow-white tubers with deep eyes and yellow flesh.
- Nos. 99083 and 99084 were collected at the experiment station, Huancayo, Peru, April 24, 1932. Grown at 10,800 feet altitude.
99083. No. 234. Large oval white tubers with shallow white eyes and white flesh. This is the best commercial potato grown in this region.
99084. No. 235. Large elongated white tubers with shallow purple eyes and white flesh.
- Nos. 99085 to 99108 were bought in the market at Huancayo, April 24, 1932. Cultivated potatoes grown at 10,800 feet.
99085. No. 236. Large ovate white tubers mottled with purple, which have shallow purple eyes and white flesh.
99096. No. 237. Medium-sized oval red tubers with deep and pink eyes and white flesh.
99087. No. 238. Ovate white tubers mottled with dark purple which have deep and pink eyes and white flesh.
99088. No. 239. Small elongated red tubers with deep and pink eyes and white flesh with red vascular ring.
99089. No. 240. Irregularly ovate dark-purple tubers with shallow white eyes and yellow-white flesh.
99090. No. 241. Flattened ovate white tubers mottled with violet which have deep and violet eyes and white flesh.
99091. No. 242. Small round red tubers with deep and red eyes and white flesh tinged red at the eyes.
99092. No. 243. Small elongated red tubers with deep and red eyes and white flesh with red center.
99093. No. 244. Small round pink tubers with shallow pink eyes and yellow-white flesh.
99094. No. 245. Irregularly oval red tubers with deep and pink eyes and white flesh with red vascular ring.
99095. No. 246. Narrow-elongated dark-purple tubers with shallow purple eyes and white flesh with purple center, mottled except at the heart.
99096. No. 247. Narrow elongated white tubers mottled with red which have shallow pink eyes and gray-white flesh.
99097. No. 248. Elongated narrow white tubers mottled with violet which have shallow pink eyes and white flesh.
99098. No. 249. Large flat oval red tubers with few and shallow eyes and white flesh.

99071 to 99114—Continued.

99099. No. 250. Irregularly round dark-purple tubers with purple and deep eyes and white flesh.
99100. No. 251. Elongated dark-purple tubers with deep and purple eyes and white flesh with blue vascular ring.
99101. No. 252. Round dark-purple tubers with deep and purple eyes and white flesh with purple mottled center.
99102. No. 253. Round dark-purple tubers with deep and purple eyes and yellow flesh with purple marbling.
99103. No. 254. Round dark-purple tubers with deep and purple eyes.
99104. No. 255. Elongated white tubers mottled with red, which have shallow white eyes and white flesh with red center.
99105. No. 256. Elongated tubers with white skin mottled red, and shallow pink eyes.
99106. No. 257. Large elongated narrow tubers with yellow skin and shallow yellow eyes.
99107. No. 258. Elongated red tubers with shallow red eyes.
99108. No. 259. A round red-purple tuber with deep and purple eyes.
99109. SOLANUM WITTMACKII Bitter.
No. 266. A rare wild potato collected on Abancaes Hill, near Lima, at 500 feet altitude.
99110. TROPAEOLUM TUBEROSUM Ruiz and Pav. Tropaeolaceae.
No. 228. *Massua*. From the market at Tarma, April 22, 1932. A bright-yellow carrot-shaped edible tuber with deep eyes. It is cultivated in alpine meadows at 10,000 feet altitude.
- 99111 to 99114. ULLUCUS TUBEROSUS Caldas. Basellaceae.
Ullucu; purchased in the market at Tarma, April 22, 1932, but cultivated in high mountain meadows at 10,000 feet altitude.
99111. No. 223. Elongated tubers with yellow skin blotched with pink, shallow eyes, and yellow flesh with white center.
99112. No. 224. Elongated tubers with yellow skin, shallow eyes, and yellow flesh with white center.
99113. No. 225. Short slender tubers with red skin, shallow eyes, and yellow flesh with white center.
99114. No. 226. Ovate tubers with carrot-colored skin, somewhat deep eyes, and carrot-colored flesh with white center.
- 99115 to 99138.
- From Wales. Seeds presented by T. J. Jenkins, University College of Wales, Welsh Plant Breeding Station, Aberystwyth. Received May 2, 1932.
- 99115 to 99118. AGROPYRON spp. Poaceae.
99115. AGROPYRON CANINUM (L.) Beauv.
Awed wheatgrass.
Bs. 629. Harvested at Aberystwyth in 1930; original seed from Kew Gardens. A promising forage grass.
For previous introduction see 90124.
99116. AGROPYRON MULTIFLORUM LONGISETUM Hack.
Wheatgrass.
Bs. 380. Harvested at Aberystwyth in 1929; original seed from New Zealand.

99115 to 99138—Continued.

99117. *AGROPYRON REPENS* (L.) Beauv.
Couch grass.

Locally grown wild plants.

For previous introduction see 98531.

99118. *AGROPYRON SCABRUM* (R. Br.) Beauv.
Wheatgrass.

Bs. 379. Harvested at Aberystwyth in 1929; original seed from New Zealand.

99119 to 99128. *FESTUCA* spp. Poaceae. Fescue.

99119. *FESTUCA ELATIOR ARUNDINACEA* (Schreb.) Celak.

Bn. 87. Received from the Bureau of Introduction, Leningrad.

For previous introduction see 98294.

99120 to 99124. *FESTUCA ELATIOR* L.
Meadow fescue.

Nos. 99120 to 99122 were received from Garton's, Ltd., Warrington, England, in 1930.

99120. Bf. 152. No. 10, English Pure Line Strain.

99121. Bf. 153. No. 6, Danish Pedigree Strain.

99122. Bf. 154. No. 27, Dutch Indigenous Strain.

99123. Bf. 156. Sample received through the Bureau of Introduction, Leningrad, from Irkutsk Government, Union of Soviet Socialist Republics.

99124. 2bF (1) (M1/66); open-pollinated seed from a single plant of local origin.

99125. *FESTUCA GIGANTEA* (L.) Vill.
Great fescue.

597 (2) Bs. (1) (M1/67); seed from a single plant self-pollinated. Original seed came from wild plants near Belfast, Ireland.

99126. *FESTUCA OVINA* L. Sheep fescue.

B1. 1175. Sample from Sutton & Sons, Reading; described only as "sheep's fescue."

For previous introduction see 98296.

99127 and 99128. *FESTUCA RUBRA* L. Red fescue.

99127. B1. 728²/₃₀; Welsh Plant Breeding Station pedigree strain; original material from old British pastures.

99128. B1. 1176. Sample from Sutton & Sons; described as "Chewing's fescue."

99129. *HORDEUM MARITIMUM* With. Poaceae.
Grass.

Bs. 492. Sample harvested at Aberystwyth in 1930; original seed from Australia.

99130. *HORDEUM MURINUM* L. Poaceae. Grass.

Bs. 592-595. Seed harvested at Aberystwyth in 1930; original material native British grass.

For previous introduction see 78784.

99131 to 99138. *LOLIUM* spp. Poaceae.

99131 to 99136. *LOLIUM PERENNE* L.
Perennial ryegrass.

99131. Bs. 962. *Wimmera* ryegrass; 1930 seed from the Government Experiment Farm, Cowra, New South Wales; not yet tested at Aberystwyth.

99132. Ba. 1769. Original seed received from Australia as representative of typical and true *Wimmera* ryegrass; present sample harvested at Aberystwyth in 1928.

99115 to 99138—Continued.

99133. Ba. 2246. A mixture from the Hawke's Bay district of New Zealand, received from the Plant Research Station, Palmerston North, New Zealand.

Nos. 99134 and 99135 were received from Sutton & Sons, Reading, England.

99134. Ba. 2247. Commercial perennial ryegrass.

99135. Ba. 2248. British wild perennial ryegrass.

99136. Ba. 2251. Seed harvested from an old Hampshire pasture. Received from Leighton, Ltd., Whitechurch, Shropshire, England.

99137 and 99138. *LOLIUM TEMULENTUM* L.
Darnel.

99137. Bs. 548. Original seed received from the Basel Botanischer Garten; present sample harvested in Aberystwyth in 1930.

99138. Bs. 586. Original seed from Sutton & Sons, Reading; present seed harvested at Aberystwyth in 1930.

99139 to 99242.

From Kweichow and Hunan Provinces, China. Seeds presented by Albert N. Steward, Department of Botany, College of Agriculture, University of Nanking, Nanking. Received April 23, 1932.

99139 to 99141. *ACANTHOPANAX* spp. Araliaceae.

99139. *ACANTHOPANAX* sp.

No. 112. *Tze Teng Tai*. From a rocky slope in Laoshun, Fangchingshan, Kiangkouhsien, October 1, 1931. A shrub up to 15 feet tall, with black fruit.

99140. *ACANTHOPANAX* sp.

No. 105. *Tze Lao Pao*. Collected November 29, 1931, on a brushy slope near Tayoh, Tahoyen, Kiangkouhsien, at 4,000 feet altitude. A shrub up to 7 feet tall.

99141. *ACANTHOPANAX RICINIFOLIUM* Seem.

No. 109. *Tze Chiu*. From Miaowang, Kiangkouhsien, December 1, 1931, at 1,500 feet altitude. A tree about 60 feet tall and 25 inches in diameter, with black fruit. Found along the roadside.

99142. *ACER* sp. Aceraceae. Maple.

No. 12. *Ching Chuan*. From a rocky slope near Laoshan, Fangchingshan, Kiangkouhsien, October 1, 1931, at 7,000 feet altitude. A tree 30 feet high and a foot in diameter.

99143. *ACER* sp. Aceraceae. Maple.

No. 106. From a hillside in Papan, Kiangkouhsien, at 1,500 feet altitude, December 6, 1931. An evergreen tree about 35 feet high and 15 inches in diameter.

Nos. 99144 to 99150 were collected in Tahoyen, Kiangkouhsien.

99144. *ACTINIDIA CHINENSIS* Planch. Dilleniaceae.
Yangtao.

No. 94. From a brushy slope, November 26, 1931, at 3,000 feet altitude. A strong trailing shrub with edible brownish fruit covered with rusty hairs.

For previous introduction see 77643.

99145. *ARDISIA* sp. Myrsinaceae.

No. 89. *Pa Chao Ching Lung*. Collected November 7, 1931, on a brushy slope at 2,500 feet altitude. A low shrub about 3 feet tall, with scarlet fruit.

99139 to 99242—Continued.

99148. *BENZONIN* sp. Lauraceae.

No. 35. *Shui Mei Yah*. Collected September 5, 1931, at 3,000 feet altitude. A shrub about 20 feet high, with greenish fruit which becomes red and black, found on a brushy slope.

99147. *BERBERIS* sp. Berberidaceae. **Barberry.**

No. 84. From near Huangchiawan, November 26, 1931, at 4,500 feet altitude. A shrub with black fruit.

99148 to 99150. *BETULA* spp. Betulaceae. **Birch.**99148. *BETULA* sp.

No. 19. *Hua Kan Erh* or *Hua Shu*. Collected on a rocky slope near Huangchiawan, September 11, 1931, at 4,000 feet altitude. A tree about 50 feet high with brownish fruit.

Nos. 99149 and 99150 were collected October 20, 1931, on a rocky slope at 4,000 feet altitude.

99149. *BETULA* sp.

No. 11. *Tieh Hua Kan*, a tree 60 feet high and a foot in diameter.

99150. *BETULA* sp.

No. 11-A. *Tieh Hua Kan*, a tree 60 feet high and a foot in diameter.

Nos. 99151 and 99152 were collected in Fangchingshan, Kiangkouhsien, at 3,500 feet altitude.

99151. *CARPINUS* sp. Betulaceae. **Hornbeam.**

No. 26. From a rocky slope below Ssetzeah, October 4, 1931. A tree about 50 feet high and 10 inches in diameter, with brownish fruit.

99152. *CARPINUS* sp. Betulaceae. **Hornbeam.**

No. 45. From a rocky slope in the forest at Hweihsiangping, October 20, 1931. A tree about 65 feet tall and 15 inches in diameter, with brownish fruit.

99153. *CELASTRUS* sp. Celastraceae.

No. 53. From a brushy slope in Miaowang, Kiangkouhsien, September 26, 1931, at 1,500 feet altitude. A shrub about 15 feet high with yellow fruits. The seeds are covered with a red aril.

99154. *CELTIS KORAIENSIS* Nakai. Ulmaceae. **Hackberry.**

No. 58. *Chien Chiu Tze*. Collected along the roadside in Maolung, Kingkianghsien, November 6, 1931, at 2,000 feet altitude. A tree up to 40 feet high, with coarsely serrate, broadly ovate leaves 4 to 6 inches long and dull-orange, ovoid fruits one-fourth inch long.

99155. *CLEMATIS* sp. Ranunculaceae.

No. 13. *Hsiao Hsieh Teng*. From Laoshan, Fangchingshan, Kiangkouhsien, October 1, 1931, at 6,500 feet altitude. A twining herb, found along a forest roadside.

Nos. 99156 to 99163 were collected in Tahoyen, Kiangkouhsien.

99158. *CORNUS* sp. Cornaceae. **Dogwood.**

No. 63. *Teng Tai*. Collected September 3, 1931, at 3,000 feet altitude. A tree about 35 feet high and 15 inches in diameter, with black fruits; found near a stream.

99157. *CUNNINGHAMIA LANCEOLATA* (L.) Hook. Pinaceae. **China-fir.**

No. 31. *Sha Mu*. Collected October 10, 1931, at 3,500 feet altitude. A common forest tree about 65 feet tall growing on rocky slopes between 1,800 and 4,000 feet altitude.

99158. *CUPRESSUS FUNEBRIS* Endl. Pinaceae. **Mourning cypress.**

No. 69. *Pai Hsiang*. Collected October 15, 1931, at 3,000 feet altitude. A very graceful ever-

99139 to 99242—Continued.

green tree, native to China, growing on rocky slopes between 3,000 and 7,000 feet.

For previous introduction see 76900.

99159. *DAVIDIA INVOLUCRATA* Baill. Cornaceae. **Dovetree.**

No. 79. *Shan Mu Kou*. Collected November 25, 1931, at 4,500 feet altitude. A tree native to central and western China, which becomes 75 feet high with a shapely pyramidal crown, bright-green oval sharply toothed leaves 3 to 6 inches long, blooms with 2 or 3 large unequal snow-white bracts, followed by brownish pear-shaped fruits.

For previous introduction see 76030.

99160. *DECAISNEA FARGESII* Franch. Lardizabalaceae.

No. 82. From Huangchiawan, November 1, 1931, at 4,500 feet altitude. A handsome shrub up to 15 feet high with large pinnate leaves 3 feet long, greenish flowers in long pendulous racemes, and deep-blue fruits 3 to 4 inches long. Native to western China.

For previous introduction see 95507.

99161. *DIOSPYROS LOTUS* L. Diospyraceae. **Dateplum.**

No. 60. *Sze Tze*. Collected October 25, 1931, at 5,000 feet altitude. A tree about 20 feet high with small yellowish fruit. It is used as a stock on which to graft the better varieties of persimmons.

For previous introduction see 91515.

99162. *ELAEOCARPUS SIKKIMENSIS* Masters. Elaeocarpaceae.

No. 70. *Shuan Tsao*. From a rocky slope near Chingchaoaping, Tahoyen, Kiangkouhsien, November 8, 1931, at 2,000 feet altitude. A handsome evergreen tree with erect racemes of small white flowers and sharp-pointed serrate leaves about 8 inches long.

For previous introduction see 93204.

99163. *ENKIANTHUS* sp. Ericaceae.

No. 83. From Huangchiawan, November 25, 1931, at 4,500 feet altitude. A shrub up to 7 feet high, growing near a stream; the fruits are whitish.

99164. *EUGENIA* sp. Myrtaceae.

No. 62. From Chingchaoaping, Fangchingshan, Kiangkouhsien, October 23, 1931, at 3,500 feet altitude. A shrub up to 10 feet high with black fruits.

99165. *EUONYMUS ALATUS* (Thunb.) Rupr. Celastraceae. **Winged euonymus.**

No. 56. *Pan Lung Shu*. From Tahoyen, Kiangkouhsien, October 8, 1931, at 2,800 feet altitude. A spreading shrub up to 5 feet high, with corky branches, sharply toothed elliptic leaves about 2 inches long, small clusters of yellowish flowers, and small two-seeded fruits.

For previous introduction see 82508.

Nos. 99166 and 99167 are from Fangchingshan, Kiangkouhsien.

99166. *EURYA* sp. Theaceae.

No. 97. Collected November 26, 1931, at 2,800 feet altitude. A shrub or small tree up to 35 feet tall with black fruit. It is usually found on a brushy slope under forest trees.

99167. *EURYA* sp. Theaceae.

No. 65. *Pa Hua Mu*. From a forest slope near Machaoho, October 20, 1931, at 3,500 feet altitude. A very ornamental tree about 65 feet high, with scarlet flowers.

99139 to 99242—Continued.

99168. FAGUS sp. Fagaceae. Beech.

No. 15. From a rocky slope near Huangchiawan, Tahoyen, Kiangkoushien, October 15, 1931, at 5,000 feet altitude. A tree about 45 feet high and over 2 feet in diameter.

99169. FAGUS sp. Fagaceae. Beech.

No. 21. From a rocky slope at Hwehsiangping, Fangchingshan, Kiangkoushien, October 13, 1931, at 5,000 feet altitude. A tree about 65 feet high and over a foot in diameter.

99170 to 99172. FICUS spp. Moraceae. Fig.

99170. FICUS sp.

No. 34. From a brushy slope near Tahoyen, Kiangkoushien, September 5, 1931, at 3,000 feet altitude. A shrub about 7 feet tall with red fruits.

99171. FICUS sp.

No. 44. From Yingkianghsien, November 15, 1931, at 1,600 feet altitude. A shrub about 3 feet high with fruit tinged red, found along streams.

99172. FICUS sp.

No. 75. From Hwehsiangping, Fangchingshan, Kiangkoushien, October 11, 1931, at 5,000 feet altitude. A shrub about 7 feet high with fruit tinged red; growing on a brushy slope.

99173. FICUS PUMILA L. Climbing fig.

No. 110. From Mayang, Hunan Province, December 20, 1931, at 600 feet altitude. A woody vine about 35 feet long, growing on a tree trunk near the river.

99174. WARNERIA AUGUSTA Stickm. (*Gardenia florida* L.). Rubiaceae. Cape-jasmine.

No. 99. *Huang Tze Tze*. From Fangchingshan, Kiangkoushien, November 26, 1931, at 6,500 feet altitude. A bush about 7 feet high with yellowish fruits which are used for dyeing purposes.

99175. HELWINGIA sp. Cornaceae.

No. 3. From Liangfengyah, Tsuenyih, August 3, 1931, at 3,500 feet altitude. A deciduous shrub 3 to 5 feet high with small green-white flowers borne on the midrib of the leaves followed by black fruits.

99176 to 99179. HYDRANGEA spp. Hydrangeaceae.

Nos. 99176 to 99178 are from Tahoyen, Kiangkoushien.

99176. HYDRANGEA sp.

No. 10. Collected October 20, 1931, at 3,000 feet altitude. A shrub with brown capsules, growing on a brushy slope.

99177. HYDRANGEA sp.

No. 54. Collected September 20, 1931, at 2,800 feet altitude. A bush about 3 feet high; the sterile flowers are tinged with red and the capsules are brownish.

99178. HYDRANGEA sp.

No. 81. Collected November 15, 1931, at 4,500 feet altitude. A shrub with brownish capsules.

Nos. 99178 and 99180 were collected at Fangchingshan, Kiangkoushien.

99179. HYDRANGEA sp.

No. 33. From Machaobo, October 26, 1931, at 3,000 feet altitude. A trailing shrub about 18 feet long, found on a rocky slope beside the road.

99180. ILEX sp. Aquifoliaceae.

No. 48. From the roadside near Hwehsiangping, at 5,300 feet altitude, October 25, 1931. An evergreen shrub about 18 feet high with reddish fruit.

99139 to 99242—Continued.

99181. ILEX sp. Aquifoliaceae.

No. 93. From a brushy slope near Chingchaoping, Tahoyen, Kiangkoushien, November 14, 1931, at 2,500 feet altitude. An evergreen tree about 40 feet high and 15 inches in diameter, with bright-red fruits.

Nos. 99182 to 99184 were collected in Fangchingshan, Kiangkoushien.

99182. ILLICIUM sp. Magnoliaceae.

No. 29. *Hwei Hsiang*. From near Hwehsiangping, October 2, 1931, at 5,000 feet altitude. A tree up to 35 feet tall and 12 inches in diameter, commonly found on rocky slopes and in the forest.

99183. JUGLANS MANDSHURICA Maxim. Juglandaceae. Walnut.

No. 50. *Shan Heh Tao*. From near Fukwohsze, November 15, 1931, at 6,000 feet altitude. A tree over 30 feet high and 16 inches in diameter.

99184. KADSURA sp. Magnoliaceae.

No. 52. From Chawchang, November 1, 1931, at 3,500 feet altitude. A trailing shrub with red tinged fruit.

Nos. 99185 and 99186 were collected at Huangchiawan, Tahoyen, Kiangkoushien.

99185. LIGUSTRUM sp. Oleaceae. Privet.

No. 86. Collected November 25, 1931, at 4,500 feet altitude. A shrub about 15 feet high, with black fruit.

99186. LILIUM GIGANTEUM Wall. Liliaceae. Giant lily.

No. 39. *Nan Pai Ho*. Collected October 7, 1931, at 5,000 feet altitude.

For previous introduction and description see 98740.

99187. LIQUIDAMBAR FORMOSANA Hance. Hamamelidaceae. Formosa sweetgum.

No. 23. A handsome tree up to 100 feet high, with a straight trunk, a much-branched head, and frequently buttressed roots. The leaves turn to chestnut brown or red in the autumn and are retained late into the winter. This is one of the most widely distributed trees in China, being particularly abundant in western Hupeh. It is also cultivated in Japan.

For previous introduction see 71315.

Nos. 99188 to 99190 were collected in Tahoyen, Kiangkoushien.

99188. LIRODENDRON CHINENSE (Hemsl.) Sargent. Magnoliaceae. Chinese tuliptree.

No. 41. *Yah Choh Pan*. Collected October 28, 1931, at 3,200 feet altitude. A tree about 35 feet tall and 32 inches in diameter, found on a rocky slope.

99189. MICHELIA CHAMPACA L. Magnoliaceae. Champac.

No. 74. Collected October 25, 1931, at 3,000 feet altitude. A tall evergreen tree, native to the Himalayas, with pubescent branchlets, ovate-lanceolate leaves 8 to 10 inches long, and axillary, usually solitary, pale-yellow fragrant flowers 2 inches across.

For previous introduction see 93544.

99190. NEILLIA sp. Rosaceae.

No. 88. From Huangchiawan, November 25, 1931, at 4,500 feet altitude. A shrub about 7 feet high, growing along a stream.

99191 to 99193. PHOTINIA spp. Malaceae.

99191. PHOTINIA sp.

No. 59. From Fangchingshan, Kiangkoushien, November 9, 1931, at 2,500 feet altitude. A tree about 25 feet high and 8 inches in diameter with bright-red fruits, growing on a brushy slope.

99139 to 99242—Continued.

99192. *PHOTINIA* sp.

No. 113. From Chingchaoping, Tahoyen, Kiangkouhsien, October 23, 1931, at 3,000 feet altitude. A shrub about 15 feet high with red fruits, growing on a brushy slope.

Nos. 99193 to 99196 were collected at Fangchingshan, Kiangkouhsien.

99193. *PHOTINIA* sp.

No. 51. From Hweihsiangping, October 25, 1931, at 5,000 feet altitude. A tree about 15 feet high and 4 inches in diameter, with bright-red fruits. Found on a rocky forest slope.

99194. *SORBUS* sp. Malaceae. **Mountain-ash.**

No. 104. From Niutoushan, November 29, 1931, at 4,000 feet altitude. A tree up to 35 feet high and 4 inches in diameter with spreading branches, growing on a rocky forest slope.

99195. *PITTIOSPORUM* sp. Pittosporaceae.

No. 64. From a rocky slope near Machaoho, October 3, 1931, at 1,800 feet altitude. A shrub about 15 feet tall and 6 inches in diameter, with green fruits containing scarlet seeds.

99196. *PITTIOSPORUM GLABRATUM* Lindl. Pittosporaceae.

No. 90. From a brushy slope near Huangchia-wan, September 25, 1931, at 4,500 feet altitude.

99197. *PRUNUS* sp. Amygdalaceae. **Plum.**

No. 1. From Liangfengyah, Tsuenyih, August 23, 1931, at 2,800 feet altitude. A small sweet yellow-fleshed red plum.

99198. *PRUNUS* sp. Amygdalaceae. **Plum.**

No. 5. July 31, 1931. A plum, similar to no. 1 [99197].

Nos. 99199 and 99200 were collected in Tahoyen, Kiangkouhsien.

99199. *PYRACANTHA* sp. Malaceae. **Firethorn.**

No. 36. From Miaowang, October 25, 1931, between 1,800 and 3,000 feet altitude. A shrub up to 7 feet tall with bright-red fruits; commonly found along brushy slopes and dry stream beds.

99200. *PYRUS* sp. Malaceae. **Pear.**

No. 96. Collected on a brushy slope, November 26, 1931, at 2,800 feet altitude. A shrub about 7 feet tall, with yellowish fruit.

99201. *RHAMNELLA* sp. Rhamnaceae.

No. 6. From Liangfengyah, Tsuenyih, August 3, 1931, at 3,400 feet altitude. A deciduous shrub or small tree closely related to *Rhamnus*. The leaves are alternate, stipulate, serrulate, and the small green flowers, in axillary clusters, are followed by small orange-yellow one-seeded drupes which become black when ripe.

99202. *RHAMNUS* sp. Rhamnaceae. **Buckthorn.**

No. 78. From Tahoyen, Kiangkouhsien, November 20, 1931, at 2,500 feet altitude. A shrub about 7 feet high, with black fruits, growing along the roadside.

99203 to 99208. *RHODODENDRON* spp. Ericaceae.

Nos. 99203 to 99205 were collected near Hweihsiangping, Fangchingshan, Kiangkouhsien.

99203. *RHODODENDRON* sp.

No. 37. From a rocky slope, October 20, 1931, at 3,400 feet altitude. A shrub about 15 feet high.

99204. *RHODODENDRON* sp.

No. 46. From near Iaoshan, October 20, 1931, at 4,800 feet altitude. A common forest tree with the leaves silvery white beneath.

99139 to 99242—Continued.

99205. *RHODODENDRON* sp.

No. 72. Collected October 15, 1931, at 4,300 feet altitude. A shrub or small tree about 20 feet high, growing on a rocky slope.

99206. *RHODODENDRON* sp.

No. 85. From near Huangchiawan, Tahoyen, Kiangkouhsien, November 26, 1931, at 4,500 feet altitude. An evergreen shrub about 20 feet tall growing on a brushy slope.

99207. *RHODODENDRON* sp.

No. 103. *Ta Shieh Niu*. From a brushy slope near Niutoushan, Fangchingshan, Kiangkouhsien, November 21, 1931, at 4,000 feet altitude. A shrub or small tree about 15 feet high and 6 inches in diameter.

99208. *RHODODENDRON* sp.

No. 111. From Hweihsiangping, Fangchingshan, Kiangkouhsien, October 20, 1931, at 3,400 feet altitude. A shrub about 6 feet tall growing on a brushy slope.

99209. *RHUS* sp. Anacardiaceae. **Sumach.**

No. 73. *Chieh Shu*. From Tahoyen, Kiangkouhsien, November 5, 1931, at 3,100 feet altitude. A tree up to 15 feet high and 10 inches in diameter, growing on a brushy slope.

99210 to 99214. *ROSA* spp. Rosaceae. **Rose.**99210. *ROSA* sp.

No. 24. From Tahoyen, Kiangkouhsien, September 25, 1931, at 3,400 feet altitude. A trailing shrub about 15 feet long, with reddish fruit, growing on a rocky slope.

99211. *ROSA* sp.

No. 114. From Mingchiachang, Kiangkouhsien, December 2, 1931, at 1,200 feet altitude. A shrub with reddish fruits, growing along the roadside.

99212. *ROSA LAEVIGATA* Michx. **Cherokee rose.**

No. 107. *Hunan Kou*. From Mayang, Hunan Province, December 20, 1931, at 600 feet altitude.

99213. *ROSA MULTIFLORA* Thunb. **Japanese rose.**

No. 115. From Hehtehchang, Kiangkouhsien, December 3, 1931, at 900 feet altitude.

For previous introduction see 75691.

99214. *ROSA ROXBURGHII* Tratt. **Roxburghrose.**

No. 47. *Tze Li*. From Tahoyen, Kiangkouhsien, October 14, 1931, at 3,100 feet altitude. A common shrub about 7 feet high, with pinkish flowers followed by edible yellow-brown fruits.

99215 to 99218. *RUBUS* spp. Rosaceae.

Nos. 99215 and 99216 were collected July 23, 1931, at 3,400 feet altitude at Liangfengyah, Tsungyih.

99215. *RUBUS* sp.

No. 2. A widely distributed raspberry common along the roadsides and on brushy slopes. The orange-yellow fruits have a pleasant acid flavor and are three fifths of an inch in diameter.

99216. *RUBUS* sp.

No. 4. A shrub with small dark-red somewhat bitter fruits, separating from the receptacle like a raspberry, but the pedicel is easily deciduous so that the fully ripe fruit often falls together with the receptacle and pedicel.

99217. *RUBUS* sp.

No. 28. From Fangchingshan, Kiangkouhsien, October 1, 1931, at 6,800 feet altitude. A

99139 to 99242—Continued.

trailing shrub about 15 feet long with black fruits; collected from a rocky slope.

99218. *RUBUS* sp.

No. 32. *Tze Wu Pao*. From Tahoyen, Kiangkouhsien, September 25, 1931, at 3,400 feet altitude. A trailing shrub about 15 feet long with black fruits; collected from a brushy slope.

Nos. 99219 to 99221 were from Fangchingshan, Kiangkouhsien.

99219. *SCHIMA* sp. Theaceae.

No. 25. *Shwen Pan Tze*. October 2, 1931, at 5,300 feet altitude. An evergreen tree about 60 feet tall and 20 inches in diameter, with black fruits.

99220. *SCHIMA* sp. Theaceae.

No. 57. From Nantiyoh, November 18, 1931, at 2,800 feet altitude. An evergreen tree about 60 feet high and 16 inches in diameter, growing on a rocky brushy slope.

99221. *SLOANEA HEMSLEYANA* (Ito) Rehd. and Wils. Elaeocarpaceae.

No. 14. *Yo Chi Pa*. From a brushy slope near Machaoh, November 1, 1931, at 1,800 feet altitude. A tree about 60 feet tall and 4 feet in diameter.

99222. *SORBUS* sp. Malaceae. Mountain-ash.

No. 66. *Ai Li Tze*. From a rocky slope in the forest at Niutoushan, Tahoyen, Kiangkouhsien, September 7, 1931, at 3,900 feet altitude. A tree about 30 feet tall and 1 foot in diameter, with brownish fruit.

99223. *SORBUS* sp. Malaceae. Mountain-ash.

No. 76. From Fenghsiangping, Fangchingshan, Kiangkouhsien, October 18, 1931, at 4,800 feet altitude. A tree up to 60 feet tall and 18 inches in diameter, with fleshy pink fruits.

99224. *SPATHOLOBUS* sp. Fabaceae.

No. 18. *Wei Chan Tze*. From the city of Kiangkou, September 21, 1931, at 1,500 feet altitude. A trailing shrub about 30 feet long found commonly along the roadside. The winged fruits are tinged red.

99225. *STRANVAESIA* sp. Malaceae.

No. 68. *Shan Yang Niu*. From a rocky slope near Hwehsiangping, Fangchingshan, Kiangkouhsien, October 2, 1931, at 6,250 feet altitude. A tree up to 30 feet high and 16 inches in diameter.

Nos. 99226 to 99234 were collected in Tahoyen, Kiangkouhsien.

99226. *STRANVAESIA DAVIDIANA* Decaisne. Malaceae.

No. 102. *Shan Huang Tze*. Collected November 29, 1931, at 3,900 feet altitude. A shrub or tree about 15 feet high and 3 inches in diameter with bright-red fruits, found both on rocky slopes and in the forest.

For previous introduction see 93960.

99227. *STYRAX* sp. Styraceae.

No. 30. From a rocky slope, November 5, 1931, at 3,000 feet altitude. A tree up to 35 feet tall and 10 inches in diameter with grayish fruits.

99228. *TAXUS CHINENSIS* (Pilger) Rehder. Taxaceae. Chinese yew.

No. 49. *Shieh Pai*. Collected November 5, 1931, at 3,000 feet altitude. A tree about 30 feet high and 14 inches in diameter, with reddish fruits.

99229. *THEA OLEOSA* Lour. Theaceae.

No. 33. *Yu Cha* or *Shan Cha*. From a rocky slope, October 7, 1931, at 2,800 feet altitude. A

99139 to 99242—Continued.

shrub or tree about 25 feet high and 8 inches in diameter. The fruits are brownish and oil is extracted from the seeds.

99230. *VACCINIUM* sp. Vacciniaceae.

No. 98. Collected November 26, 1931, at 2,800 feet altitude from a brushy slope. A shrub about 7 feet tall with black fruits.

99231 to 99233. *VIBURNUM* spp. Caprifoliaceae.

Nos. 99231 and 99232 were collected November 25, 1931, at 4,500 feet altitude.

99231. *VIBURNUM* sp.

No. 80. A shrub about 10 feet tall with blue black fruits, growing on rocky slopes, usually along a stream.

99232. *VIBURNUM* sp.

No. 87. A shrub up to 15 feet high with bright-red fruits, found on a brushy slope.

99233. *VIBURNUM* sp.

No. 11. Collected November 27, 1931, at 2,800 feet altitude. A shrub about 7 feet high with red fruits, growing on brushy slopes.

99234. *ZANTHOXYLUM* sp. Rutaceae. Prickly-ash.

No. 40. *Tze Chiu*. From a rocky slope near Jenchi, October 28, 1931, at 3,200 feet altitude. A tree about 60 feet tall and 30 inches in diameter.

99235. *ZANTHOXYLUM* sp. Rutaceae. Prickly-ash.

No. 92. From a brushy slope in Chingchaoping, Kiangkouhsien, November 24, 1931, at 2,600 feet altitude. A thorny shrub about 15 feet tall, with brownish fruits and shining black seeds.

Nos. 99236 to 99238 were collected from rocky slopes in Fangchingshan, Kiangkouhsien.

99236. (Undetermined.)

No. 55. Collected near Soochiapo, October 25, 1931, at 3,000 feet altitude. An evergreen tree about 35 feet tall and 18 inches in diameter.

99237. (Undetermined.)

No. 77. Collected October 28, 1931, at 6,250 feet altitude. A tree about 30 feet tall and 16 inches in diameter, with reddish fruits.

99238. (Undetermined.)

No. 20. From near Chiulungtze, October 3, 1931, at 6,250 feet altitude. A tree about 30 feet tall and 10 inches in diameter with red fruits.

99239. (Undetermined.)

No. 17. From a brushy slope at Huangchiawan, Tahoyen, Kiangkouhsien, September 11, 1931, at 4,300 feet altitude. A shrub about 20 feet tall and 4 inches in diameter with black fruits.

99240. (Undetermined.)

No. 71. From a brushy slope at Chingchaoping, Tahoyen, Kiangkouhsien, October 28, 1931, at 3,000 feet altitude. A trailing shrub about 30 feet long; the pale-green fruits become brown when ripe.

99241. (Undetermined.)

No. 43. *Tung Ching*. From the forest margin at Laoshan, Fangchingshan, Kiangkouhsien, September 30, 1931, at 6,500 feet altitude. An evergreen shrub about 15 feet tall, with bluish fruits.

99242. (Undetermined.)

No. 108. *Tung Loh Tze*. From a forested slope at Fangchingshan, Kiangkouhsien, October 3, 1931, at 6,250 feet altitude. A tree about 30 feet tall and 1 foot in diameter, with bluish fruits.

99243. AMYGDALUS PERSICA L. Amygdalaceae. Peach.

From Australia. Plants purchased from George D. F. Althofer, "Glen Ora" Dripstone, New South Wales. Received May 24, 1932.

99244 to 99288. ZEA MAYS L. Poaceae. Corn.

From Peru. Seeds collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received May 17, 1932.

Nos. 99244 to 99287 were purchased in the market at Huancayo, Peru, April 24, 1932. Grown at 10,800 feet altitude.

99244. Variegated.	99266. Red.
99245. Red.	99267. Red.
99246. White.	99268. Variegated.
99247. Variegated.	99269. Variegated.
99248. White.	99270. Red.
99249. Red.	99271. Variegated.
99250. Red.	99272. Red.
99251. White.	99273. Bronze variegated.
99252. Red.	99274. Variegated.
99253. Brown variegated.	99275. Variegated.
99254. Red.	99276. Variegated.
99255. Variegated.	99277. Red.
99256. Red.	99278. White.
99257. Red.	99279. Red.
99258. Variegated.	99280. White.
99259. Variegated.	99281. White.
99260. Red.	99282. White.
99261. Bronze.	99283. White.
99262. Variegated.	99284. Red.
99263. Bronze.	99285. Red.
99264. Red.	99286. Variegated.
99265. Red.	99287. White.

99288. No. 202. From Rio Colorado, near Merced, Peru, at 3,000 feet altitude, April 16, 1932. A few grains of red corn taken from a native hut.

99289. BAMBUSA MULTIPLEX (Lour.) Raeusch. Hedge bamboo.

From Florida. Plant presented by J. H. Wells, Baldwin. Received May 15, 1929. Numbered in May 1932.

This distichous, or fern-leaved, variety of the hedge bamboo has slender culms with green stripes of various widths on a yellowish to pinkish ground color and is of dwarf habit, usually not more than 5 feet high. However, according to a statement by C. E. Pleas, of Chipley, Fla., from whom Mr. Wells obtained his original plant, the variety shows a strong tendency to revert to the species type, in which the leaves are much larger and fewer on the branchlets, and culms up to 30 feet in height are produced; the foliage then appears similar in form to that of the well-known varieties *Alphonse Karri* and *Argentea striata*. The new culms of this dwarf variety usually appear during June and extend their branches and leaves within a few weeks, differing in these respects from the type and from the large-growing varieties of the species.

99290. PHASEOLUS LUNATUS L. Fabaceae. Lima bean.

From Haiti. Seed presented by Pierre G. Sylvain, chef de la Section d'Horticulture, Service National de la Production Agricole, Port-au-Prince. Received May 18, 1932.

Variegated beans, purchased in the market at Port-au-Prince.

99291 to 99301. DIANTHUS WINTERI J. L. Gibson. Silenaceae. Pink.

From England. Plants purchased from Gibson & Amos, Ltd., Cranleigh, Surrey. Received May 27, 1932.

99291. <i>Betty Morton</i> .	99297. <i>Mrs. Wormald</i> .
99292. <i>Cherry Morton</i> .	99298. <i>Norah</i> .
99293. <i>Ellen</i> .	99299. <i>Olive</i> .
99294. <i>Joey</i> .	99300. <i>Rachel</i> .
99295. <i>Meg Gardner</i> .	99301. <i>Winifred</i> .
99296. <i>Mrs. Black</i> .	

99302 to 99314. ARACHIS HYPOGAEA L. Fabaceae. Peanut.

From the Union of Soviet Socialist Republics. Seeds presented by the director, Regional Oil Plant Station, Kruglik, northern Caucasus. Received May 5, 1932.

A collection of peanuts introduced for the use of Department specialists.

99302 to 99312. *Spanish variety*.

99302. No. 154.	99308. No. 161.
99303. No. 155.	99309. No. 162.
99304. No. 156.	99310. No. 0286.
99305. No. 157.	99311. No. 0305.
99306. No. 158.	99312. No. 0344.
99307. No. 159.	

99313. No. 0433. *Valencia variety*.

99314. No. 0512. *Spanish variety*.

99315. LYSILOMA LATISILYQUA (L.) Benth. Mimosaceae.

From Cuba. Seeds collected in Oriente Province by J. G. Jack, Arnold Arboretum, and presented through Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received June 6, 1932.

For previous introduction and description see 98979.

99316 to 99318. CAPSICUM ANNUM L. Solanaceae. Common redpepper.

From Spain. Seeds presented by the Granja Escuela de Capataces Agricolas y Estaciones Especiales de Valencia, through Señor Miguel de Echegaray, agricultural attaché, Spanish Embassy, Washington, D.C. Received May 23, 1932.

A collection of the best commercial varieties of mild-flavored sweet redpeppers grown in Spain.

99316. *Cornicabra*.

99317. *Grande comun*.

99318. *Morrón gordo*.

99319. CYRTOSPERMA SENEGALENSE (Schott) Engler. Araceae.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received June 6, 1932.

A curious aroid which sends up its spathe on a spiny stem 10 feet high. The spathe itself is 16 inches long. The plant requires wet sandy soil, tropical conditions, and moist atmosphere.

For previous introduction see 90914.

99320. PHASEOLUS LUNATUS L. Fabaceae. Lima bean.

From Cuba. Seeds presented by Thomas R. Towns, Holguin. Received April 29, 1932.

A pole bean which grows for several years in Cuba and produces beans almost continuously. The pods are used as a green bean.

Introduced for the use of Department specialists.

99321. CITRUS HYSTRIX DC. Rutaceae. Cabuyao.

From India. Seeds presented by R. N. Parker, forest botanist, Forest Research Institute, New Forest, Dehra Dun. Received May 31, 1932.

From plants growing wild in Kumaon. A large thorny tree, 20 to 60 feet high, with leaves 6 to 8 inches long. The fruits vary in shape from oblate to pyriform-turbinate or oblong; the smooth to more or less corrugated thick rind is greenish lemon-yellow in color, and the flesh is greenish, juicy, and sharply acid. The tree is said to be very resistant to the citrus canker.

For previous introduction see 50309.

99322 to 99325.

From Australia. Seeds purchased from F. H. Brunning Pty, Ltd., Melbourne. Received May 17, 1932.

A collection of forage grasses introduced for Department specialists.

99322. DACTYLIS GLOMERATA L. Poaceae. Orchard grass.

Cocksfoot, Akaroa strain, New Zealand Government certified.

99323 to 99325. LOLIUM PERENNE L. Poaceae. Perennial ryegrass.

99323. Poverty Bay Perennial, New Zealand Government certified "mother" seed.

99324. Poverty Bay Perennial, New Zealand Government certified "maiden" seed.

99325. Victorian or Western District Perennial, genuine old pasture seed.

99326. TRIFOLIUM PRATENSE L. Fabaceae. Red clover.

From the Union of Soviet Socialist Republics. Seeds presented by the Kungursk elevator, Ural Regional Seed Producers, All-Russian Seed Producers' Union, city of Kungur, Ural District. Received May 25, 1932.

Introduced for the use of Department specialists.

99327 to 99333.

From Australia. Seeds purchased from the Glen Innes Experiment Farm, Plant Breeding Branch, Department of Agriculture, Sydney, New South Wales. Received May 28, 1932.

Forage grasses introduced for the use of Department specialists.

99327 to 99329. DACTYLIS GLOMERATA L. Poaceae. Orchard grass.**99327 to 99333—Continued.**

99327. G 30-205. Improved New Zealand cocksfoot.

99328. G 32-8. Improved cocksfoot.

99329. G 32-3. Commercial cocksfoot.

99330 and 99331. LOLIUM PERENNE L. Poaceae. Perennial ryegrass.

99330. G 30-29. Improved New Zealand perennial rye.

99331. G 32-4. Commercial perennial rye.

99332. PHALARIS TUBEROSA L. (*P. stenophylla* Hort.). Poaceae. Grass.

G 32-9.

99333. TRIFOLIUM PRATENSE L. Fabaceae. Red clover.

Commercial red clover.

99334 to 99337.

From Tobago, British West Indies. Seeds presented by E. J. H. Thomas, Charlotteville. Received May 26, 1932.

99334. CASSIA sp. Caesalpinaceae.

Easter blossom. A form with yellow flowers.

99335. ERYTHRINA sp. Fabaceae.

Mountain immortelle.

99336. ICHTHYOMETHIA PISCIPULA (L.) Hitchc. Fabaceae.

An attractive leguminous shade tree which becomes 50 feet high, with a spreading habit and large pinnate leaves. The large racemes of pale-pink flowers appear before the leaves and somewhat resemble those of the black locust. The wood is used for cart building.

For previous introduction see 97847.

99337. PASPALUM CONJUGATUM Berg. Poaceae. Grass.

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

For previous introduction see 76432.

99338. SORGHUM VIRGATUM (Hack.) Stapf. Poaceae. Grass.

From Africa. Seeds presented by Prof. August Chevalier, Museum of Natural History, Paris, France. Received May 25, 1932.

Seeds collected in the heart of the Sahara by Professor Chevalier on his recent trip across the Sahara to Timbuktu; they may prove of interest in the semidesert regions of the southwestern United States.

99339 to 99349.

From the Union of Soviet Socialist Republics. Seeds presented by the director, Regional Oil Plant Station, Kruglik, northern Caucasus. Received May 5, 1932.

99339. BRASSICA ALBA (L.) Boiss. Brassicaceae. White mustard.

The seeds of this white mustard are less pungent than those of the black mustard (*Brassica nigra*), but are used in the same way. The young leaves of both are useful as a potherb and also as a salad.

For previous introduction see 60774.

99340. CARTHAMUS TINCTORIUS L. Asteraceae. Safflower.

Used for oil and dye.

For previous introduction see 84283.

99339 to 99349—Continued.

99341. *CYPERUS ESCULENTUS* L. Cyperaceae
Chufa.

A sedge which produces small edible tubers that taste like very sweet almonds. The plant grows with the greatest facility, does not require moisture, and yields an abundant crop.

For previous introduction see 73845.

99342. *DRACOCEPHALUM* sp. Menthaceae.

99343. *GUIZOTIA ABYSSINICA* (L.f.) Cass. Asteraceae.

An annual plant 6 to 8 feet high, with showy yellow flower heads. The black shining seeds furnish the Niger oil of commerce.

For previous introduction see 75328.

99344. *LALLEMANTIA IBERICA* (Bieb.) Fisch. and Mey. Menthaceae.

A blue-flowered herbaceous perennial, native to semiarid regions in Asia Minor and Syria, whose seeds yield an oil said to be a high-grade drying oil.

For previous introduction see 72839.

99345. *RAPHANUS SATIVUS* L. Brassicaceae.
Radish.

Variety *oleiferus*.

99346. *RICINUS COMMUNIS* L. Euphorbiaceae.
Castor-bean.

Variety *praecox*.

99347 to 99349. *SESAMUM ORIENTALE* L. Pedaliaceae.
Sesame.

Locally grown varieties.

99350. *PISTACIA LENTISCUS* L. Anacardiaceae.
Lentisk.

From Italy. Seeds presented by the R. Orto Botanico di Palermo. Received May 4, 1932.

A wild shrub common in the Mediterranean regions where it grows on poor soil and withstands severe drought. It produces a gum used by the Arabs as a perfume. An edible oil known as shinia, used as a substitute for olive oil, is obtained from the berries.

For previous introduction see 97303.

99351 to 99377.

From the Union of Soviet Socialist Republics. Seeds collected by V. Gorbunova in Asia Minor and presented by Dr. V. P. Alekseev, chief, Bureau of Introduction, Institute of Plant Introduction, Leningrad. Received May 4, 1932.

99351 to 99356. *PISTACIA* spp. Anacardiaceae.

99351. *PISTACIA MUTICA* Fisch. and Mey.
Terebinth.

Seeds originally from Transcaucasia. A deciduous tree up to 35 feet high, with pinnate foliage. Native to the eastern Mediterranean region.

For previous introduction see 97304.

99352 to 99356. *PISTACIA VERA* L. Pistache.

99352. No. 1422. 99355. No. 1438.

99353. No. 1423. 99356. No. 1450.

99354. No. 1436.

99357 to 99377. *ELAEAGNUS ANGUSTIFOLIA* L. Elaeagnaceae.
Russian-olive.

Introduced for the use of Department specialists.

99357. No. 126. From Zaravshan.

99358. No. 127. From Zaravshan.

99351 to 99377—Continued.

99359 to 99364. From the Chirchik River.

99359. No. 234. 99362. No. 264.

99360. No. 256. 99363. No. 267.

99361. No. 260. 99364. No. 268.

99365 to 99368. From the Syr-Daria River.

99365. No. 285. 99367. No. 329.

99366. No. 300. 99368. No. 332.

99369. No. 356. From the Bokhara district.

99370 to 99372. From Zaravshan.

99370. No. 393. 99372. No. 403.

99371. No. 399.

99373. No. 617. From Farab, Amu-Daria.

99374 and 99375. From the Amu-Daria River.

99374. No. 618. 99375. No. 620.

99376. No. 621. From Amu-Daria.

99377. No. 622. From the Amu-Daria River.

99378 and 99379.

From Madagascar. Seeds presented by M. Raymond Decary, Ambovombe. Received June 3, 1932.

99378. *EUPHORBIA INTISY* Drake. Euphorbiaceae.

From Behara, Madagascar. An arborescent succulent, about 12 feet high, native to southern Madagascar in regions of limited rainfall, occasional frost, and varied soil conditions. At one time it was the most important rubber plant of Madagascar, but is now practically extinct commercially because of the lack of care used in harvesting the rubber. It has gray bark, dichotomous or somewhat whorled branches, and minute scattered leaves. The small and inconspicuous greenish flowers are in very short cymes near the tips of the branches.

For previous introduction see 78169.

99379. *EUPHORBIA* sp. Euphorbiaceae.

Received as *E. intisy*, but the seeds do not agree with the description for that species. Collected from trees in the administrator's garden at Ambovombe.

99380 to 99466.

From Italy. Seeds presented by S. W. McLeod Braggins, superintendent, Botanic Gardens, La Mortola, Ventimiglia. Received April 27, 1932.

99380. *ALECTRYON TOMENTOSUM* (F. Muell.) Radlk. (*Nephtium tomentosum* F. Muell.). Sapindaceae.

An Australian tree, 20 to 30 feet high, with rusty-velvety young branches, oval to lanceolate leaves 2 to 4 inches long, small flowers crowded in woolly panicles, and rather hard, depressed indehiscent fruits.

For previous introduction see 44521.

99381. *AMPHICOME ARGUTA* Royle. Bignoniaceae.

A low herbaceous perennial, not over 3 feet high, native to northern India. The compound leaves are made up of 5 to 9 deeply serrate lanceolate leaflets 2 inches long, and the rose-colored funnel-shaped flowers, 1 inch long, are borne in terminal racemes 6 to 8 inches long.

99382. *ANACAMPSEROS FILAMENTOSA* (Haw.) Sims. Portulacaceae.

A low succulent, native to southern Africa, with thick cobwebby ovate leaves one-fourth inch long and filamentous stipules longer than the leaves. The rather large rose-colored flowers are borne on 3- to 4-flowered scapes 2 to 3 inches long.

99380 to 99466—Continued.

99383. *ANISACANTHUS WRIGHTII* (Torr.) A. Gray.
Acanthaceae.

A low shrub, 2 to 4 feet high, native to southern Texas and northern Mexico. The linear to lanceolate leaves are 1 to 2 inches long, and the tubular red flowers, 2 inches long, are borne in interrupted one-sided spikes.

99384 to 99386. *ARISTOLOCHIA* spp. Aristolochiaceae.

99384. *ARISTOLOCHIA ALTISSIMA* Desf.

A somewhat woody evergreen vine climbing 12 to 18 feet high, native to southern Europe and northern Africa. The coriaceous cordate leaves are 2 to 3 inches long, and the purple-brown pipe-shaped flowers are about 2 inches long.

99385. *ARISTOLOCHIA MOLLISSIMA* Hance.

An ornamental vine, with ovate-cordate, rounded, silky-hairy leaves 2 to 3 inches long and erect solitary flowers about 1 inch long. Native to southern China.

99386. *ARISTOLOCHIA SEMPERVIRENS* L.

A prostrate or somewhat climbing vine, native to the island of Crete. The slightly leathery triangular-cordate leaves are 1 to 2 inches long, and the yellowish purple-striped flowers are smaller than those of *A. altissima*.

99387 to 99391. *ASPARAGUS* spp. Convallariaceae.

99387. *ASPARAGUS ACUTIFOLIUS* L.

A hardy evergreen species, native to Spain, which makes a beautiful hedge plant, somewhat resembling juniper. As the plants grow older there is a tendency to produce vinelike shoots. The tuberlike storage roots and drought-resistant foliage make it valuable for regions of scanty rainfall.

For previous introduction see 92149.

99388. *ASPARAGUS APHYLLUS* L.

A bushy perennial asparagus with rough angled stems, cladodes in fascicles of 4 to 12, and black berries. Native to southern Europe.

99389. *ASPARAGUS COOPERI* Baker.
Cooper asparagus.

A vining asparagus which climbs to a height of 10 to 12 feet, with a shrubby terete stem up to 2 inches in diameter at the base; the firm twining wirelike stem sends out many slender spreading threadlike ultimate branchlets from which the numerous minute needlelike cladodes spring in dense clusters. The very small flowers are not abundantly produced. Native to southern Africa.

For previous introduction see 38143.

99390. *ASPARAGUS CRISPUS* Lam.
Drooping asparagus.

A tuberous-rooted asparagus, native to southern Africa, with green herbaceous sarmentose stems 3 to 6 feet long. The zigzag reflexed branches bear reflexed 3-angled cladodes less than one-half inch long, and the fragrant white flowers, borne on axillary drooping pedicels, are followed by white or pinkish berries one-half inch across.

99391. *ASPARAGUS STIPULARIS* Forsk. (*A. horridus* L. f.).

A shrubby perennial, with erect, often climbing, angled stems, scalelike leaves, thick, often solitary sharp-pointed cladodes, and black berries. Native to southern Europe.

99392. *BAUHINIA GRANDIFLORA* Juss. Caesalpinaceae.

A small tree up to 20 feet high, with subcordate leaves slightly lobed at the apex and tomentose beneath. The large pure-white flowers, opening

99380 to 99466—Continued.

at night, are in clusters of 1 to 3 on axillary peduncles, and the obovate petals are clawed. Native to Peru.

For previous introduction see 81143.

99393. *BAUHINIA YUNNANENSIS* Franch. Caesalpinaceae.

A vigorous woody climber from southwestern China; the rounded 2-parted leathery leaves are over an inch long. The flowers, rosy white striped with purple, are in many-flowered pendulous racemes.

For previous introduction see 67635.

99394 to 99397. *BESCHORNERIA* spp. Amaryllidaceae.

99394. *BESCHORNERIA DEKOSTERIANA* C. Koch

A succulent, native to Mexico, with a rosette of about 20 thick oblanceolate leaves 2 to 3 feet long and 3 inches wide at the middle, the base being broad and thick. The green funnel-form flowers, 1 to 2 inches long, are borne in a deltoid panicle.

99395. *BESCHORNERIA PUBESCENS* Berger.

An agavelike plant with a rosette of stiff glaucous leaves 2 feet long by 2 inches wide and finely denticulate on the margin. The flower stem, 4 to 5 feet high, is bright red and bears green or yellow pubescent tubular flowers in the axils of showy bracts. It is said to be native to Mexico.

99396. *BESCHORNERIA TUBIFLORA* Kunth.

A stemless plant with a rosette of about 12 linear leaves 1 foot long, roughened on both surfaces and minutely striate. The flower stalk, 4 feet high, bears an erect raceme of drooping brown-green tubular flowers. It is native to Mexico.

99397. *BESCHORNERIA YUCCOIDES* C. Koch.

A yuccalike plant with a rosette of about 20 lanceolate glaucous-green leaves 1 to 2 feet long and 2 inches broad and a flower stalk 3 to 4 feet high, bearing a panicle of dark-green yellow-tinged flowers 3 inches long on drooping red pedicels. It is native to Mexico.

99398. *BRACHYLAENA DENTATA* (Thunb.) DC. Asteraceae.

A bushy plant with cuneate or somewhat three-lobed coarsely dentate hairy leaves and terminal spikelike heads of yellow flowers. Native to southern Africa.

99399. *BULBINE FRUTESCENS* (L.) Willd. Liliaceae.

A succulent with simple or branched stems 1 foot high, native to southern Africa. The subterete bright-green leaves are 6 to 9 inches long, and the small bright-yellow flowers are borne in a close raceme 6 to 12 inches long and 1 inch in diameter.

99400. *BYTTNERIA URTICIFOLIA* Schum. Sterculiaceae.

A spiny climbing shrub with grooved branches, native to Brazil and Argentina. The long-petioled, coarsely serrate, appressed-hairy leaves are broadly heart-shaped, and the green-purple flowers, one half inch across, are in stalked clusters of 3 to 5.

99401. *CAESALPINIA SEPIARIA* Roxb. Caesalpinaceae.
Mysore thorn.

For previous introduction and description see 99810.

99402. *CALLISTEMON SALIGNUS* (J. E. Smith) Sweet. Myrtaceae.

A tall shrub or small tree up to 40 feet high, native to Australia. The distinctly penninerved

99380 to 99466—Continued.

lanceolate leaves are 1 to 3 inches long, and the small flowers, in spikes 1 to 2 inches long, have bright-yellow stamens usually not more than one half inch long.

99403. *CALLISTEMON SALIGNUS* (J. E. Smith) Sweet. Myrtaceae.

Received as *C. paludosus*, which is a form with smaller leaves not over 2 inches long.

99404. *CARISSA GRANDIFLORA* (E. Mey.) DC. Apocynaceae.

A handsome shrub, native to southern Africa, which is now cultivated in southern Florida and California as an ornamental hedge plant and for its edible scarlet berries.

For previous introduction see 98222.

99405. *CASUARINA CUNNINGHAMIANA* Miquel. Casuarinaceae. **Cunningham beefwood.**

A slender-branched leafless Australian ornamental tree, the so-called beefwood, which has branchlets suggesting horsetails.

For previous introduction see 90679.

99406. *CHILIANTHUS ARBOREUS* (L. f.) Benth. Loganiaceae.

An erect evergreen shrub 6 to 10 feet high with four-angled or crisply winged branchlets and lanceolate leathery leaves 3 to 4 inches long, smooth above and gray-scummy beneath. The small cream-white flowers are in small clusters formed into a large lax panicle 8 inches across. It is native to southern Africa.

99407. *CHLOROPHYTUM CAFENSE* (L.) Kuntze (*C. elatum* R. Br.). Liliaceae.

A perennial herb, native to southern Africa, with a rosette of 12 to 20 bright-green lanceolate leaves 1 to 2 feet long, often variegated with white or yellow bands in garden varieties. The large panicle of small white flowers is borne on a stalk 3 to 4 feet high.

99408. *COLLETIA CRUCIATA* Gill. and Hook. Rhamnaceae. **Anchorplant.**

A shrub 3 to 4 feet high, native to southern Brazil and Uruguay. The elliptic flattened decurrent spiny branches have few entire elliptic leaves and bear the small white flowers in clusters in the axils of the spines.

99409. *CORDIA SERRATIFOLIA* H. B. K. Boraginaceae.

A tropical tree, native to Campeche, Mexico, with oblong acuminate coarsely serrate leaves nearly 3 inches long and very small white flowers in globular spikes.

99410. *COWANIA MEXICANA* D. Don. Rosaceae.

A shrub 3 to 6 feet high, with small crowded cuneate 3- to 7-cleft leaves less than one half inch long and cream-white flowers 1 inch across. It is native to Mexico.

For previous introduction see 88734.

99411. *CROTALARIA CANDICANS* Wight and Arn. Fabaceae.

A stiffly erect much-branched shrubby species with hairy and somewhat leathery broadly rounded leaves and panicles of small silky yellow flowers. It is native to southwestern India.

For previous introduction see 64066.

99412. *CROTALARIA POLYSPERMA* Kotschy. Fabaceae.

A subshrubby densely villous perennial herb 1 to 2 feet high, native to the Nile region in Africa. The trifoliate leaves have obovate-oblong leaflets 1 to 2 inches long, and the small blue flowers are in lax lateral racemes.

99380 to 99466—Continued.

99413. *DANAE RACEMOSA* (L.) Moench. Convolvulariaceae.

A much-branched evergreen Persian shrub 3 to 4 feet high, with alternate lanceolate leaflike cladodes 4 inches long, terminal racemes of small white flowers, and globose red berries.

For previous introduction see 78677.

99414. *DIMORPHOTHECA ECKLONIS* DC. Asteraceae. **Cape-marigold.**

A robust and erect subshrub 2 feet or more high, with crowded linear-lanceolate leaves and terminal flower heads having rays over 1 inch long, which are white above and purplish below. Native to southern Africa.

For previous introduction see 81153.

99415. *DOVYALIS CAFFRA* (Hook. and Harv.) Warb. (*Aberia caffra* Hook. and Harv.). Flacourtiaceae. **Kei-apple.**

A very prickly shrub or small tree, native to tropical Africa, where it is used as a hedge. The pale-green leaves are over 1 inch long and nearly 1 inch wide. The edible fruit resembles a small yellow apple and is so exceedingly acid when fresh that it is said to be used as a pickle without adding vinegar.

For previous introduction see 98223.

99416. *DYCKIA RARIFLORA* Schult. f. Bromeliaceae.

A stemless succulent resembling an agave, native to Brazil. The lanceolate stiff spiny-margined leaves, 6 inches long, are in a basal rosette, and the flower stalk, 1 to 2 feet high, bears a panicle of orange flowers about one-third inch long.

99417. *ELAEODENDRON CAFENSE* Eckl. and Zeyh. Celastraceae. **False-olive.**

An erect shrub native to southern Africa, with leathery ovate leaves 3 inches long and panicles of small white flowers followed by red drupes 1 inch long. The plant has stood 18° F. without injury.

For previous introduction see 88346.

99418. *ENCEPHALARTOS VILLOSUS* Lem. Cyca-
daceae.

A cycad with a short thick woolly and scaly trunk up to 6 feet high, native to southern Africa. The pinnately compound leaves are 6 feet long and are made up of numerous linear-lanceolate, spiny toothed, and sharp-pointed bright-green leaflets.

99419. *ENCHYLAENA TOMENTOSA* R. Br. Chenopodiaceae.

A procumbent or widely branched shrub up to 3 feet high, native to Australia. The branches are silvery woolly, the alternate linear leaves are about one-half inch long, and the small flowers develop into fleshy edible red or yellow berries about the size of small peas.

99420. *FELICIA ABYSSINICA* Schultz Bip. Astera-
ceae.

A low shrubby much-branched perennial 6 to 12 inches high, native to the Nile region in Africa. The closely alternate linear entire leaves are less than 1 inch long, and the blue or violet asterlike flowers, 1 inch across, are borne on solitary terminal peduncles 1 to 2 inches long.

99421. *GHELINA LEICHARDTII* F. Muell. Verbenaceae.

An excellent timber tree, native to Australia. The somewhat leathery ovate leaves, 3 to 6 inches long, are glabrous and rugose above and densely softly tomentose beneath. The small two-lipped flowers, white with purple markings, are borne in loose ovoid terminal panicles.

99380 to 99466—Continued.

99422. *GREWIA FLAVA* DC. Tiliaceae.

A rigid much-branched shrub, native to southern Africa. The oval crenulate leaves, 1 inch long, are glabrous above and anescent beneath. The small solitary yellow flowers are followed by two-lobed black edible fruits.

99423. *GYNOPOGON BUXIFOLIUS* (R. Br.) Schum. Apocynaceae.

A low spreading shrub, native to Australia. The thick rigid obovate to orbicular leaves, 1 inch long, are in pairs or in whorls of three, and the inconspicuous tubular flowers, in terminal clusters, are followed by ovoid orange fruits about one-half inch long.

99424. *GYMNOSPORIA BUXIFOLIA* (L.) Szysz. Celastraceae.

A spiny shrub, several feet high, native to southern Africa. The obovate toothed leaves are 1 to 2 inches long, and the small white flowers, in axillary clusters, are followed by small fruits about the size of a pea.

99425. *HAKEA CYCLOCARPA* Lindl. Proteaceae.

A glabrous shrub, 5 to 6 feet high, native to Western Australia. The thick entire oblong-lanceolate leaves are 4 to 6 inches long, and the axillary clusters of small silky pubescent flowers are followed by woody compressed two-valved capsules 1 to 2 inches long, recurved at the base, then incurved, with a broad inflexed beak having a dorsal truncate protuberance at the top of each valve.

99426. *HALLERIA LUCIDA* L. Scrophulariaceae.

A shrub or small tree up to 30 feet high, native to tropical and southern Africa. The broadly ovate leathery leaves, 2 to 4 inches long, have serrulate margins, and the curved tubular brown-red to orange-purple flowers, 1 inch long, are followed by dark-purple ovoid berries nearly 1 inch in diameter.

99427. *HESPERALOE PARVIFLORA* (Torr.) Coult. Liliaceae.

A stemless yuccalike plant, native to Texas and Mexico. The lanceolate concave leaves, 3 to 4 feet long by 1 inch wide, have coarse marginal threads, and the glaucous flower stalk, 3 to 4 feet high, bears a panicle of nodding rosy oblong flowers 1 to 2 inches long.

99428. *HIBISCUS MUTABILIS* L. Malvaceae.
Cotton rosemallow.

A double-flowered variety of a tall East Indian shrub, with large broad cordate leaves and large white flowers, which later change to red. It blooms in summer and late autumn and is widely planted in the Bermuda Islands in gardens and hedges.

For previous introduction see 90918.

99429. *INDIGOFERA MACROSTACHYA* Vent. Fabaceae.
Indigo.

A shrubby plant with hairy leaflets and pink flowers in dense racemes which are longer than the leaves.

For previous introduction see 62185.

99430 to 99432. *KALANCHOE* spp. Crassulaceae.99430. *KALANCHOE AEGYPTIACA* DC.

A branched fleshy plant with pale-green ovate-spatulate leaves, the oldest rounded, and small orange flowers in a rather large terminal panicle. Native to Mount Melhân, Egypt.

99431. *KALANCHOE THYRSIFLORA* HARV.

A suffrutescent succulent 2 to 4 feet high, native to southern Africa. The oblong-spatulate pale-green leaves are 4 to 6 inches long, and

99380 to 99466—Continued.

the coral-orange flowers are borne in a compact oblong panicle or thyrsus.

99432. *KALANCHOE WELWITSCHII* Britten.

An erect succulent plant, native to tropical Africa, with cylindrical stems 3 to 5 feet high and 1 inch in diameter at the base. The large ovate-lanceolate basal leaves are 8 to 10 inches long and crenate-dentate, with purple-margined teeth; the upper leaves are linear-lanceolate and nearly entire. The bright sulphur-yellow flowers, nearly 1 inch long, are borne in diffuse panicles.

For previous introduction see 86828.

99433. *LAVANDULA ABROTANOIDES* Lam. Menthaeae.

A perennial herb about 2 feet high, native to the Canary Islands. It has green bipinnate leaves and a branched spike of bluish flowers.

For previous introduction see 81173.

99434. *MAGYDARIS TOMENTOSA* (Desf.) Koch. Apiaceae.

A perennial herb with pinnatisect hairy leaves and small white flowers in many-flowered umbels. Native to Sicily.

99435 to 99441. *MELALEUCA* spp. Myrtaceae.99435. *MELALEUCA CUTICULARIS* Labill.

A tall shrub or small tree with twisted branches and bark in paperlike layers. The thick flat linear oblong leaves are one half inch long, and the small flowers are grouped in a scaly head. Native to Australia.

For previous introduction see 81175.

99436. *MELALEUCA DIOSMAEFOLIA* Andrews.

A tall rigid shrub, native to Western Australia. The spreading ovate-lanceolate leaves are less than one half inch long, and the rather large yellow-green flowers are in dense cylindrical spikes below the ends of the branches.

99437. *MELALEUCA LINARIIFOLIA* J. E. Smith.

A tall shrub or small tree, native to Australia. The rigid broadly linear leaves are 1 to 2 inches long, and the small white flowers are in pairs in spikes 1 to 2 inches long.

99438. *MELALEUCA NESOPHILA* F. Muell.
Pink melaleuca.

A tall shrub or tree with thick spongy bark, native to Western Australia. The thick ovate to oblong leaves are 1 inch long and obscurely 1- to 3-nerved, and the pink or rose-colored flowers are in heads 1 to 2 inches in diameter.

99439. *MELALEUCA PUBESCENS* Schauer.

A tall shrub or small tree native to Australia, with small linear leaves one half inch long crowded on the pubescent branches and small white flowers borne in loose cylindrical spikes.

For previous introduction see 90716.

99440. *MELALEUCA PULCHELLA* R. Br.

A spreading shrub 2 to 3 feet high, native to Western Australia. The scattered oblong-ovate spreading or recurved leaves are less than one-fourth inch long, and the rather large purple flowers are solitary or in scattered clusters of 2 or 3 near the ends of the branches.

99441. *MELALEUCA WILSONI* F. Muell.
Wilson melaleuca.

A tall shrub, native to Australia, with thick linear imbricated leaves one-fourth to one-half inch long and small red flowers scattered in loose spikes.

99380 to 99466—Continued.

99442. *MYOPORUM CRYSTALLINUM* Kunze. Myoporaceae.

An evergreen shrub, native to Australia, with leathery green leaves, pellucid-punctate beneath. Closely related to *M. obscura*.

99443. *NOTEA AFRICANA* (L.) Reichenb. Rhamnaceae.

An upright evergreen shrub 10 to 12 feet high, native to southern Africa. The oblong-lanceolate serrate leaves, 1 to 2 inches long, are pale green beneath, and the small white flowers are in terminal clusters. The whole plant is said to be saponaceous, and the macerated foliage is used by the natives in washing.

99444. *NOTELAEA EXCELSA* Webb. and Berth. Oleaceae.

An evergreen shrub up to 15 feet high, native to the Canary Islands. The small white flowers in axillary racemes, appear in May and are followed by globular fruits.

99445. *OLEA CHRYSOPHYLLA* Lam. Oleaceae.

A small evergreen tree, closely related to the cultivated olive. Its chief ornamental value lies in the golden color of the under surfaces of the leaves. Native to eastern Africa.

For previous introduction see 81185.

99446. *OLEA YERRUCOSA* (Roem. and Schult.) Link. Oleaceae.

A tree, native to southern Africa, with linear leaves 3 inches long, covered with small yellow scales beneath. The axillary panicles, 2 inches long, of small flowers are followed by dark globose scarcely fleshy fruits one-fourth inch in diameter.

99447. *OLEARIA ARGOPHYLLA* (Labill.) F. Muell. Asteraceae.

A tree 20 to 25 feet high, emitting a strong musky odor. The alternate, ovate to lanceolate, entire or denticulate leaves, 3 to 5 inches long, are reticulate above and clothed with silvery-silky hairs beneath. The small blue-white, asterlike flower heads are in large terminal corymbs. It is native to Australia.

For previous introduction see 86265.

99448. *PANDOREA RICASOLIANA* (Tanf.) Baill. Bignoniaceae. **Ricasol pandorea.**

An evergreen climbing shrub with pinnate leaves of 7 to 11 ovate-serrate leaflets 1 inch long, dark green above, pale beneath, and loose terminal panicles of large campanulate flowers 2 inches long, light pink striped with red. Native to southern Africa.

For previous introduction see 98092.

99449. *PHOENIX CANARIENSIS* Chabaud. Phoeniceae. **Canary date palm.**

A palm, native to the Canary Islands, closely resembling the common date palm (*Phoenix dactylifera*), but more slender and graceful in all its parts, and the leaves are more numerous.

Variety *macrocarpa*; a form with large fruits.

For previous introduction see 93324.

99450 to 99454. *PITTIOSPORUM* spp. Pittosporaceae.

99450. *PITTIOSPORUM COLENSOI* Hook. f.

A tree, up to 50 feet high, native to New Zealand, with lanceolate to obovate leathery leaves 2 to 4 inches long. The solitary axillary dark-purple flowers, one-half inch long, are followed by thick woody globose capsules.

99451. *PITTIOSPORUM HETEROPHYLLUM* Franch. **Rock pittosporum.**

A spreading shrub, 3 to 6 feet high, native to Szechwan and Yunnan, China, where it grows

99380 to 99466—Continued.

on cliffs and in rocky places in the arid valleys. The ovate leaves are medium sized, and the light-yellow flowers are borne near the tips of the new branchlets.

99452. *PITTIOSPORUM PROCERUM* Hort.

A name for which a place of publication and a description have not been found.

99453. *PITTIOSPORUM UNDLATUM* Vent. **Orange pittosporum.**

An Australian evergreen shrub or tree up to 40 feet high, often used as a hedge. The lanceolate leaves, 3 to 6 inches long, are undulate on the margin, and the white flowers, whose fragrance resembles that of orange blossoms, are in terminal clusters.

For previous introduction see 76042.

99454. *PITTIOSPORUM VIRIDIFLORUM* Sims. **Cape pittosporum.**

An erect shrub up to 25 feet high, native to southern Africa. It resembles the well known *P. tobira*, differing in having smaller green-yellow flowers in dense compound clusters.

99455. *PLEIOGYNIUM SOLANDRI* (Benth.) Engl. Anacardiaceae.

A tree up to 60 feet high and often 3 feet in diameter, native to Queensland, Australia. The pinnately compound leaves are made up of 7 to 9 obovate leaflets 2 to 3 inches long, and the small inconspicuous flowers, in axillary racemes, are followed by broadly top-shaped purple drupes 1 to 2 inches across.

99456. *PODACHAENIUM EMINENS* (Lag.) Schultz Bip. Asteraceae.

A tall slightly branched shrub 9 to 15 feet high, native to Mexico and Guatemala. The broadly ovate 5- to 7-lobed leaves are roughened above and gray tomentose beneath, and the daisylike white flowers, 1 inch across, are in flat-topped clusters of about 20 or more.

99457. *PODANTHUS MITIQUI* Lindl. Asteraceae.

An evergreen shrub 3 feet high, with yellow flowers appearing in autumn. Native to Chile.

99458. *PYCNOSTACHYS URTICIFOLIA* Hook. Menthaeae.

A much-branched herbaceous perennial 5 to 7 feet high, native to tropical and southern Africa. The densely pubescent ovate leaves, 3 to 4 inches long, are deeply cut into rounded lobes, and the small bright-blue flowers are in dense spikes 2 to 3 inches long.

99459. *RHODOSPHAERA RHODANTHEMA* (F. Muell.) Engler. Anacardiaceae.

An evergreen tree up to 70 feet high, native to Australia and closely resembling sumach. The pinnately compound leaves are made up of 7 to 9 lustrous dark-green ovate leaflets 2 to 3 inches long and the small crimson or pink flowers, borne in axillary and terminal panicles, are followed by globular red-brown fruits one half inch in diameter.

99460. *SALVIA GARDNERIANA* Hort. **Menthaeae. Sage.**

A name for which a place of publication and a description have not been found.

99461. *SOLLYA HETEROPHYLLA* Lindl. Pittosporaceae. **Australian bluebell-creeper.**

An evergreen climbing shrub 2 to 6 feet high, native to Australia. The leaves, 1 to 2 inches long, vary from lanceolate to ovate, and the bright-blue flowers, one half inch long, are borne in 8- to 12-flowered cymes.

99462. *SOPHORA DAVIDII* (Franch.) Komarow. Fabaceae.

A spiny shrub up to 6 feet high, with slender spreading pubescent branchlets, native to central

99380 to 99466—Continued.

and western China. The pinnately compound leaves, 1 to 2 inches long, have 11 to 15 small elliptic leaflets, and the violet to white pea-shaped flowers, one half inch long, are in racemes of 6 to 12 on short terminal branchlets.

99463. *SUTHERLANDIA FRUTESCENS* (L.) R. Br. Fabaceae.

A leguminous shrub about 3 feet high, with finely pinnate leaves and showy scarlet flowers produced in short axillary racemes. Native to the Mediterranean countries.

For previous introduction see 91239.

99464. *TEMPLETONIA RETUSA* (Vent.) R. Br. Fabaceae. Melbourne coralbush.

A tall shrub with angular sulcate glaucous branchlets, native to Australia. The simple leathery broadly ovate leaves are 1 inch long, and the axillary red or white flowers, 1 inch long, are solitary or in clusters of 2 or 3.

99465. *TRISTANIA LAURINA* (J. E. Smith) R. Br. Myrtaceae.

A tall evergreen tree with glaucous or silky pubescent branchlets, native to Australia. The lanceolate or obovate leaves are 2 to 4 inches long, and the small yellow flowers are in short axillary cymes.

For previous introduction see 76948.

99466. *WASHINGTONIA FILAMENTOSA* (Wendl.) Kuntze. Phoeniceaceae.

California Washington palm.

Variety *microsperma*; a form with small fruits.

99467 to 99489.

From Australia. Seeds presented by R. Crowe, director, Department of Agriculture, Melbourne, Victoria. Received June 3, 1932.

A collection of seeds introduced for the use of Department forage-crop specialists.

99467. *DACTYLIS GLOMERATA* L. Poaceae. Orchard grass.

Victorian seed.

99468 to 99472. *LOLIUM LOLIACEUM* (Bory and Chaub.) Hand.-Mazz. (*L. subulatum* Vis.). Poaceae. Wimmera ryegrass.

An annual bunch grass with much-branched slender prostrate or ascending stems 2 to 3 inches long. Native to dry sandy places along the coast of southeastern Europe.

For previous introduction see 88519.

99468. An early variety (mixed sample).

99469. A late variety (mixed sample).

99470. A midseason variety (mixed sample).

99471. *Rutherglen New Strain*.

99472. Commercial seed.

99473 to 99489. *TRIFOLIUM* spp. Fabaceae.

99473 and 99474. *TRIFOLIUM REPENS* L. White clover.

99473. *Goulburn Valley Wild* white.

99474. Victorian seed; a mixed sample.

99475 to 99489. *TRIFOLIUM SUBTERRANEUM* L. Subterranean clover.

An Australian clover which appears to have value as a forage crop in the southern United States.

For previous introduction see 93258.

99467 to 99489—Continued.

99475. *Bacchus* 99482. *Myall*.

Marsh. 99483. *Nangeela*.

99476. *Daliak*. 99484. *Springhurst*.

99477. *Dwalganup*. 99485. *Tallarook*.

99478. *Goroke*. 99486. *Wangaratta*.

99479. *Hill's small strain*. 99487. (*Wangaratta Selva*) "*Nerang*."

99480. *Kybybolite*. 99488. *Wenigup*.

99481. *Macarthur*. 99489. *White seeded*.

99490 to 99499. PHASEOLUS LUNATUS L. Fabaceae. Lima bean.

From Puerto Rico. Seeds presented by T. B. McClelland, director, Agricultural Experiment Station, Mayaguez. Received June 1, 1932.

A collection of lima beans introduced for comparison with the types now grown on the Pacific coast.

99490 to 99493. Collected by the agricultural agent at Vega Baja, Puerto Rico.

99490. A small red bean slightly mottled with brown.

99491. A mixed sample of brown beans.

99492. A medium-sized red bean mottled with brown.

99493. A small dark tan bean slightly mottled with brown.

99494 to 99499. Collected by the agricultural agent at Villalba, Puerto Rico.

99494. A medium-sized white bean raised in Puerto Rico from imported seed.

Nos. 99495 to 99499 are native beans.

99495. A white bean slightly larger than a navy bean.

99496. *Blancas de Tocan*; a white bean the size and shape of the navy bean.

99497. *Veleadas*; a gray bean mottled with red.

99498. *Colorados*; a red bean faintly mottled with brown.

99499. *Recheccas*; a small round red bean with white hilum.

99500 to 99575.

From the West Indies, British Guiana, and Surinam. Plants collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931-32 Allison V. Armour expedition. Received April 11, 1932.

99500. *ADIANTUM TENERUM FARLEYENSE* Bonap. Polypodiaceae. Barbados maidenhair.

No. 2867. From the Botanic Garden, Trinidad, February 16, 1932. A fern with black-stemmed fronds up to 2 feet high, native to the West Indies. The closely overlapping pinnae bear light-green wedge-shaped leaflets with the outer margin deeply cut into 10 to 15 narrow lobes.

99501. *ADIANTUM TRAPEZIFORME* L. Polypodiaceae. Diamond maidenhair.

No. 2672. A tropical American fern with bipinnate leaves 18 inches or more long. The trapezoidal leaflets, 1 to 2 inches long, are lobed and have numerous spore cases.

99502. *ALLOPLECTUS CRISTATUS* (L.) Mart. Gesneriaceae.

99500 to 99575—Continued.

No. 3752. From the island of Martinique, March 10, 1932.

For introduction of seeds and description see 99023.

99503. *ALPINIA EXALTATA* (L. f.) Roem. and Schult. Zinziberaceae.

No. 3665. *Massala* or *masusa*. Purchased in the market at Paramaribo, Surinam, March 2, 1932. The purple-brown fruits of this plant are used to flavor curry sauce and to give it its yellow color. The flavor is superior to that of turmeric.

For previous introduction see 97924.

99504. *AMHERSTIA NOBILIS* Wall. Caesalpiniaceae.

No. 2870. From the Trinidad Botanic Garden, February 16, 1932. This is considered by many to be the most beautiful of all flowering trees and one of the most difficult to propagate. The tree is native to the Malay Peninsula and was named for Lady Amherst. It requires a high moist temperature and rich loam soil.

99505 to 99510. *ANANAS SATIVUS* Schult. f. Bromeliaceae. Pineapple.

99505. No. 3755. *Black Antigua*. From the St. Lucia Experiment Garden, March 8, 1932. A very sweet, tender-fleshed variety, excellent for home use but not for shipping.

99506. No. 3756. *Sugarloaf*. From the St. Lucia Experiment Garden, March 8, 1932. A good-shaped, desirable form of excellent quality.

99507. No. 3840. *Tortola*. From the Tortola Experiment Station, March 19, 1932. This pineapple of the Red Spanish type was selected as the most vigorous on the island. The fruit is about 8 inches long by 4 or 5 inches wide and is comparable to the Red Spanish in flavor.

99508. No. 3680. From Surinam, April 4, 1932. Collected in dense undergrowth near the Kadjoe Rapids. A wild pineapple introduced for breeding purposes.

99509. No. 3673. From the experiment garden at Paramaribo, Surinam, March 2, 1932.

99510. [Received without notes.]

99511 to 99513. *ANTHURIUM* spp. Araceae.99511. *ANTHURIUM GRANDIFOLIUM* Kunth.

No. 3786. From Basse Terre, Guadeloupe, French West Indies, March 13, 1932. A very handsome enormous-leaved aroid growing as an epiphyte on the trunks of trees at the edge of the rain forest. A stemless plant with long-stemmed, elongate-cordate, acute, leathery, shining-green leaves over 2 feet long, including the petiole. The brown-green tipped spadix is nearly a foot long. Native to Venezuela.

99512. *ANTHURIUM SELLOUM* C. Koch.

No. 2751. From St. Eustatius, Netherland West Indies, January 21, 1932. A magnificent dull-green leaved species found in forest undergrowth at 1,700 feet altitude. Its enormous leaves make it an exceptional ornamental. It is short-stemmed with somewhat leathery oblong-cordate leaves, stems 1 to 2 feet long, and leaf blades up to 3 feet long. The spadix is about a foot long, and the pale-green linear-lanceolate spathe is about 5 inches long. Native to the West Indies.

99513. *ANTHURIUM* sp.

No. 3883. From the Grenada Botanic Garden, February 9, 1932. An aroid with large leaves.

99500 to 99575—Continued.

99514. *ARALIA* sp. Araliaceae.

No. 3730. From the Jardin d'Essais, Tivoli, Martinique, March 10, 1932. A very handsome plant with dark-green glossy orbicular leaves 6 inches long by 4 inches wide which are not variegated and have coarsely serrated margins.

99515. *ARENCA ENGLERI* Beccari. Phoenicaceae. Palm.

A cluster palm with no trunk, which suckers from the ground and forms clumps 10 feet across. The pinnae are 16 inches long, over 1 inch wide, and fish-tail shaped. The red fruits are less than 1 inch in diameter.

For previous introduction see 97740.

99516 to 99518. *ARTOCARPUS COMMUNIS* Forst. Moraceae. Breadfruit.

99516. No. 2576. From Nassau, New Providence Island, January 9, 1932. A seedless grapefruit from the garden of Mrs. Edward George.

99517. No. 2820. From Grenada, Windward Islands.

99518. No. 3760. From Grande Terre, Guadeloupe, March 11, 1932.

99519. *ARTOCARPUS* sp. Moraceae.

No. 3865. From the experiment station at Harringan, Tortola, British Virgin Islands, March 19, 1932. A tree with beautiful broad dark-green leaves and light-pink seedless fruits from 1 to 2 inches long and 1 inch in diameter.

99520. *BACTRIS PAVONIANA* Mart. Phoenicaceae. Palm.

No. 2648. From Blubber Valley, Antigua, Leeward Islands, January 26, 1932. A beautiful palm, 50 feet tall, with feathery leaves, more striking than those of the Royal palm. The trunks of old trees are smooth, but those of young trees are covered with bands of black spines which later fall off. The leaves are also armed with black spines. The fruit is as large as a walnut. This is apparently an almost extinct species; Blubber Valley is the only place where it is found.

For previous introduction see 97280.

99521. *BAUHINIA MEGALANDRA* Griseb. Caesalpiniaceae.

No. 3884. From the Botanic Garden, Port-of-Spain, Trinidad, February 15, 1932. A tree, native to the West Indies, with deeply obcordate leaves 5 inches long and small white flowers, either solitary or in racemose clusters, at the tips of the branchlets.

99522. *BEGONIA* sp. Begoniaceae.

No. 3890. From Haiti, March 27, 1932. A pretty dwarf species found on the perpendicular walls of the citadel at 3,000 feet altitude. The rosettes of round leaves were pressed against the lichen-covered walls and made a very attractive show.

99523. *BEGONIA* sp. Begoniaceae.

From Dominica, Leeward Islands.

99524. *BENTINCKIA NICOBARICA* (Kurz) Beccari. Phoenicaceae. Palm.

No. 2842. From Port-of-Spain, Trinidad, February 15, 1932. A handsome feather palm, forming a single tall stem 70 feet high and 9 inches in diameter at the base. When young it reminds one of a *Kentia*, but it is a far statelier palm when full grown.

For previous introduction see 97281.

99525 to 99527. *BOUGAINVILLEA* spp. Nyctaginiaaceae.

99500 to 99575—Continued.

99525. *BOUGAINVILLEA SPECTABILIS* Willd.
Great bougainvillea.

No. 2689. *Mrs. Butt.* From the Dominican Botanic Garden, January 29, 1932. One of the best seedlings grown in Dominica. The flowers are a delicate shade of brick red.

99526. *BOUGAINVILLEA* sp.

No. 2864. March 23, 1932. A new orange sport, presented by R. O. Williams, director, Trinidad Botanic Garden.

99527. *BOUGAINVILLEA* sp.

March 23, 1932. A pink bougainvillea presented by R. O. Williams, director, Trinidad Botanic Garden.

99528 and 99529. *CACTUS INTORTUS* Mill. Cactaceae.

The *turkscap*, or *turkshead*, is one of the very showy and interesting forms of cactus which bears on top of its ovoid, ribbed basal portion a densely woolly head which grows 12 or more inches high and is covered with brown bristles. This head reminds one of a Turkish fez, although it is not red. The fruits are deep pink, the size of one's little finger tip, and are borne on the top of the head.

For previous introduction see 97564.

99528. No. 3789. From Saba, Netherland West Indies, March 15, 1932.

99529. No. 3846. From Anguilla, Leeward Islands, March 16, 1932.

99530. *CACTUS MELOCACTUS* L. Cactaceae.
Common turkscap.

A globular cactus, up to 15 inches in diameter, native to the West Indies. There are 10 to 20 ribs with clusters of radical spines, and the small red flowers and fruits are borne on a prolongation of the axis which is covered with small tubercles embedded in wool.

99531. *CALATHEA* sp. Marantaceae.

No. 2882. From the Aripo Savanna, Trinidad, February 14, 1932. An attractive vigorous-looking species with attractive foliage, the under side of which looks like changeable silk.

99532 and 99533. *CARLUDOVICA SCANDENS* Co-well. Cyathaceae.

A liana with palmlike leaves, related to the panama-hat palm, which attaches itself to precipitous cliffs and tall trees by means of aerial roots. Its large dark-green leaves resemble strikingly the first leaves of many palms, being parallel veined and only once divided.

99532. No. 2643. From Mount Misery, St. Kitts, Leeward Islands, January 24, 1932, at 1,700 feet altitude.

99533. No. 2776. From Roseau Valley, Dominica, Leeward Islands, January 30, 1932.

99534. *CARYOPHYLLUS MALACCENSIS* (L.) Stokes (*Eugenia malaccensis* L.). Myrtaceae. Ohia.

No. 2890. *Malac* or *Pomerac*. Plants and seeds from the market at Port-of-Spain, Trinidad, February 17, 1932. A tree with handsome large glossy leaves and large masses of flowers 1 inch or more across, filled with hundreds of beautiful deep rose-pink or crimson stamens. The crimson pear-shaped fruits, of characteristic flavor, are much esteemed here for preserves.

For previous introduction see 89027.

99535. *PITYROGRAMMA CALOMELANOS* (L.) Link (*Gymnogramma calomelanos* Kaulf.). Poly-podiaceae. Silver fern.

No. 2866. From the Botanic Garden, Trinidad, February 16, 1932. A black-stalked fern with

99500 to 99575—Continued.

leaves 1 to 3 feet long, native to the West Indies and Brazil. The ultimate leaflets are lanceolate, with a large lobelike auricle at the base, and the under side of the leaf is covered with a fine white powder.

99536. *CISSUS SICYOIDES* L. Vitaceae.

No. 3847. From Saba, Netherland West Indies, March 16, 1932. A quite glabrous form with dull-green fleshy foliage and cymes of reddish flowers, found near the beach where the spray could reach it.

99537. *CLUSIA ROSEA* Jacq. Clusiaceae.

No. 2892. From Trinidad.

For previous introduction and description see 98826.

99538. *CLUSIA* sp. Clusiaceae.

No. 3729. From Martinique, March 10, 1932. *Mountain mangrove* or *parrot apple*. A tree with large handsome dull-green leaves and large rather showy white flowers. The fruits remind one of a garcinia, a distant relative. Like the strangler fig tree, the clusias become epiphytic and strangle their hosts.

99539. *COCCOLOBA LATIFOLIA* Lam. Polygonaceae.

No. 3669. From Paramaribo, Surinam, March 3, 1932. A tree with dark-green leaves from 1 to 2 feet in diameter, found on poor lands of the coastal plain of Surinam. While not a striking tree in some respects, the large size of the leaves makes it attractive for dooryard and park purposes.

99540. *COCCOLOBA GRANDIFOLIA* Jacq. Polygonaceae.

No. 2656. From Antigua, Leeward Islands. A giant-leaved species which, when grown in the shade, has leaves 3 feet in diameter. It is a rare species related to the seagrape.

99541. *COCCOTHRINAX BARBADENSIS* (Lodd.) Baccari. Phoenicaceae. Palm.

No. 3740. From Guadeloupe, French West Indies. A tall slender fan palm with the aspect of the *Silver* palm, but much larger. The clusters of greenish fruits which later become black are not particularly attractive. The palm seems adapted to a strongly calcareous soil.

For previous introduction see 98501.

Nos. 99542 to 99552 were presented by M. Desiré Kervégant, in charge of the Jardin d'Essais, Fort de France, Martinique, French West Indies, March 10, 1932.

99542 to 99544. *XANTHOSOMA* spp. Araceae.

99542. *XANTHOSOMA* sp.

No. 3738. Variety *Nouvelle Caladonie*; recently brought to the island from the colony of New Caledonia in the Pacific. Petiole glaucous at first; margins of petioles and wings are pink.

99543. *XANTHOSOMA* sp.

Variety *Pierre*; one of the principal foods of the island. The petiole is pinkish maroon except near the top.

99544. *XANTHOSOMA* sp.

No. 3741. The leaf blade of this *yautia* stands horizontal with apex and basal lobes turned up. The petiole is green, with a narrow or wide pinkish line on margin of sinus wing, sometimes with small pinkish blotches on upper part of wing and often with long whitish streaks on the wings.

99545 and 99546. *COLOCASIA ESCULENTA* (L.) Schott. Araceae. Dasheen.

99500 to 99575—Continued.

99545. No. 3742. *Soupe*. The petiole of the leaf is moderately shaded with maroon, and there is a maroon petiolar spot on the blade.

99546. No. 3744. *Blanc*: a white variety which is one of the finest in cultivation at Tivoli, where the collection of economic plants is grown. There is a dull maroon petiolar spot on the leaf blade, and this color extends along the basal veins and the suture. The petiole is slightly shaded with maroon.

99547 to 99550. XANTHOSOMA spp. Araceae.

99547. XANTHOSOMA sp.

No. 3745. *Cama*. The petiole is green, often with irregular purple-maroon streaks or blotches on sinus wings and with a maroon line on the margin of each wing.

99548. XANTHOSOMA sp.

No. 3747. *Bouton*. Petioles glaucous maroon on lower half.

99549. XANTHOSOMA BRASILIENSE (Desf.) Engler.

No. 3748. *Calabou*. The leaves of this plant when properly cooked make one of the most delicately flavored green vegetables known; they are somewhat acrid in the raw state.

99550. XANTHOSOMA sp.

No. 3749. *Chou Dauc*. The basal lobes of the leaf blade are pointed, and the basal veins are naked at the base. The petiole is green with a glaucous bloom, and there is a pinkish line on the sinus wing.

99551. COLOCASIA ESCULENTA (L.) Schott. Araceae. Dasheen.

No. 3750. *Baton noir*. A variety with a dark-maroon leaf petiole, which is lighter near the top, and a green blade, slightly mottled with light green.

99552. XANTHOSOMA sp. Araceae.

No. 3751. *Boucané blanc*. A variety with the basal lobes of the leaf blades rounded and the petioles green, with a pinkish line on the margin of the recurved sinus wings.

99553. COLOCASIA sp. Araceae.

No. 3784. *Madere Blanche*. From Pointe-à-Pitre, Guadeloupe, French West Indies, purchased in the market, March 12, 1932. A variety with both leaf blades and petiole plain green.

99554. DIEFFENBACHIA sp. Araceae.

No. 3785. *Madère Noir*. Purchased in the market at Pointe-à-Pitre, Guadeloupe, March 12, 1932.

99555. COLOCASIA ESCULENTA (L.) Schott. Araceae. Dasheen.

The leaf blade of this variety has a maroon petiolar spot, and the petiole is plain green.

99556. CORYPHA UTAN Lam. Phoenicaceae. Palm.

No. 2633. From the Botanic Garden, Dominica, Leeward Islands, January 29, 1932. A palm with fan-shaped leaves with spiny petioles and an erect paniculate spadix. Native to the East Indies.

99557. CROTON ELUTERIA (L.) Swartz. Euphorbiaceae.

No. 3872. From Cat Island, Bahamas, January 5, 1932. A wild tree from which the natives collect the bark and sell it for medicinal purposes.

For previous introduction see 69065.

99500 to 99575—Continued.

99558. CYDISTA sp. Bignoniaceae.

No. 2817. From the Grenada Botanic Garden, February 10, 1932. A vine with beautiful deep-pink flowers which grows to the top of large forest trees.

99559. CYNOMETRA TRINITENSIS Oliver. Caesalpiniaceae.

No. 2869. Presented by R. O. Williams, of the Botanic Garden, Trinidad, February 16, 1932. A large native leguminous tree with leathery leaflets 4 inches long by over 1 inch wide, in pairs. The young pendent growths are pure white and give the tree a most striking appearance. The small white flowers, produced abundantly, make this an ornamental dooryard tree.

99560. CYRTOSTACHYS RENDA Blume. Phoenicaceae. Palm.

No. 2843. From Port-of-Spain, Trinidad, February 15, 1932.

For previous introduction and description see 98551.

99561 and 99562. DIOSCOREA spp. Dioscoreaceae. From Martinique, March 10, 1932.

99561. DIOSCOREA ALATA L. Winged yam.

No. 3757. *Caplaou*; a yam characterized by its large size and flat wedge shape. It ripens its tubers during the winter months, but is not prized so highly as the *Portugaise*.

99562. DIOSCOREA ROTUNDATA Poir. White Guinea yam.

No. 3759. *Portugaise*; a white-fleshed yam, usually of good size and excellent quality; the lower part of the vine is glaucous and vigorous vines usually grow thorns. This is the most highly prized of the yams of Martinique, and was probably introduced into the island from Portugal in the sixteenth century.

99563. DIOSPYROS sp. Diospyraceae. Persimmon.

No. 2968. From the Botanic Garden, Georgetown, British Guiana, February 25, 1932. Seeds of a dense-growing evergreen tree 25 to 30 feet high, with glossy-green leaves 6 inches long by 2 inches wide. The small fruits have an unpleasant odor.

99564. DIOSCOREA sp. Dioscoreaceae. Yam.

No. 3758. *San Martin*; from Martinique, March 10, 1932. A large white-fleshed yam with a long neck; the quality is rather poor, but, because it ripens its tubers in the winter, it is much grown on the island.

99565. EUGENIA sp. Myrtaceae.

No. 2691. *Guaea berry* tree: from the Dominica Botanic Garden, January 29, 1932. An erect-growing tree with smooth bark and glossy, fine-leaved foliage. The black berries are used in making liqueurs. It is native to the Virgin Islands.

99566 to 99568. EUTERPE spp. Phoenicaceae. Palm.

99566 and 99567. EUTERPE OLERACEA Mart.

Manac or *Manaque*. For previous introduction and description see 98493.

99566. No. 2883. From the Avena Forest Reserve, Trinidad, February 16, 1932.

99567. No. 3871. From the island of St. Kitts, January 24, 1923, at 700 feet altitude on Mount Misery, in what remains of the original wild forest of the island.

99500 to 99575—Continued.

99568. EUTERPE SP.

No. 2711. From St. Lucia, Windward Islands. A slender undergrowth palm, 30 to 40 feet tall and 3 inches in diameter. The pinnae are long and delicate, and the rachis and petiole are dark reddish green. The inflorescence varies from nearly white to cerise; the fruit is shining black.

For previous introduction see 97285.

Nos. 99569 and 99570 were collected on Carriacou, Grenadine Islands, in March 1932.

99569. FICUS BENJAMINA COMOSA (Roxb.) Kurz. Moraceae. Fig.

No. 2874. A strikingly handsome form with brilliant lemon-yellow fruits one half inch in diameter, many of which contain no seeds.

99570. FICUS SP.

No. 2794. A medium-sized tree found on a hillside exposed to the trade winds which sweep over the island. The light-green leathery leaves, 4 to 6 inches long, have prominent midribs. The branches are covered with very decorative small figs. Each fig has red-brown patterns of spots and areoles about each spot, giving it a most charming appearance.

For previous introduction see 97845.

99571. GARCINIA SP. Clusiaceae.

No. 3766. From the Jardin d'Essais, Fort de France, Martinique, March 9, 1932. Seeds of a species native to Cochinchina which was considered to be the true mangosteen by the authorities in the Jardin d'Essais where the tree has fruited. The very large leaves are leathery and the white flowers contain numerous stamens. The fruits, judging from shells found under the tree, are about the size of a mangosteen but thick walled and pyriform in shape, and are said to be yellow when ripe and very sour.

99572 and 99573. GIGANTOCHLOA SPP. Poaceae. Bamboo.

From Paramaribo Botanic Garden, Surinam, March 4, 1932. Two of the most valuable bamboo species of the Orient, which were introduced into Surinam over 20 years ago and are now over 60 feet high.

99572. GIGANTOCHLOA ASPERA Hort.

No. 3679. A clump bamboo.

For previous introduction see 71258.

99573. GIGANTOCHLOA VERTICILLATA (Willd.) Munro.

No. 3678. *Tali* bamboo of Java. A bamboo with culms over 4 inches in diameter, which is largely grown for its useful timber.

For previous introduction see 79568.

99574. GYNERIUM SAGITTATUM (Aubl.) Beauv. Poaceae. Uva grass.

No. 3672. *Pampas* grass; from the Botanic Garden, Paramaribo, Surinam, March 4, 1932. A stout reed, often 30 feet tall, native to the West Indies and southward to Paraguay. The lanceolate leaves are 6 feet long and are sharply serrulate on the margin. The inflorescence forms a plummy panicle 3 to 5 feet long, with the main axis erect and the branches drooping. Introduced for comparison with forms already in Florida.

99575. HELICONIA SP. Musaceae.

No. 3902. From Tobago Island, February 2, 1932. Seeds of a plant with striking scarlet bracts as large as one's hand which are edged with gold make this one of the showiest flowers of the rain forest.

99576 to 99650.

From the West Indies, British Guiana, and Surinam. Plants and seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931-32 Allison V. Armour expedition. Received April 11, 1932.

99576. HIBISCUS SP. Malvaceae.

No. 2693. From the Dominican Botanic Garden, January 29, 1932. Plants of an attractive yellow hybrid with coral-pink center, produced by Dr. Harland of Trinidad.

99577. HIBISCUS SP. Malvaceae.

No. 2893. Plants presented by Dr. S. C. Harland, of the Cotton Research Station, St. Augustine, Trinidad, February 17, 1932. The wine-red foliage and calyxes of this plant remind one somewhat of *H. sabbarifolia*, but the form of the leaves and floral parts are entirely distinct.

99578. HYMENOCALLIS ARENICOLA A. R. Northr. Amaryllidaceae.

No. 3894. From Conception Island, Bahamas, January 5, 1932. Plants of a West Indian spider-lily with erect spreading, fleshy dark-green lance-ovate leaves over a foot long and white flowers with a filiform tube about 2 inches long, in sessile umbels of 7 to 13 flowers. Native to the Bahamas.

99579. INGA SP. Mimosaceae.

No. 3760. Plants.

99580 to 99582. IXORA SPP. Rubiaceae.

99580. IXORA LUTEA Hutchinson.

No. 2668. Plants collected in the Botanic Garden, Dominica, January 28, 1932. A glabrous shrub with sessile or subsessile leaves, oblong with rounded or cordate base and sometimes an acuminate tip. It differs from *I. coccinea* by having a laxer inflorescence and pale-yellow flowers with larger ovate-rhomboid corolla lobes.

For the introduction of seeds see 97770.

99581. IXORA SP.

No. 2881. Plant presented by Mrs. Nora C Fitt, of Port-of-Spain, Trinidad, February 15, 1932. A very attractive light-pink hybrid.

99582. IXORA SP.

No. 3869. Plants collected at the Tortola Experiment Station, March 19, 1932. An attractive form with salmon-colored flowers, otherwise with characters of *I. coccinea*.

99583. JACARANDA CAERULEA (L.) Griseb. Bignoniaceae.

No. 2561. From Nassau, New Providence Island. Plants of a tree native to the West Indies, with bipinnate leaves made up of 2 to 8 branches, each bearing 8 to 16 pairs of obliquely oblong leaflets 1 inch long. The glabrous blue flowers, 1 to 2 inches long, are borne in lax panicles.

For the introduction of seeds see 96509.

99584. LECYTHIS ZABUCAJO Aubl. Lecythidaceae. Sapucaya nut.

No. 2889. Plant presented by R. O. Williams, of the Botanic Garden, Trinidad, February 17, 1932. The sapucaya nut is native to the Amazon Valley and adjacent regions, and many people consider it even better flavored than the Brazil nut. The somewhat triangular nuts, over 2 inches long and about an inch wide, are borne in large woody urn-shaped capsules about 10 inches in diameter with close-fitting lids at the top. The tree is a slow grower and requires a long time to reach the bearing stage.

For previous introduction see 98047.

99576 to 99650—Continued.

99585. *LODOICEA SONNERATI* (Giseke) Baill. (*L. sechellarum* Labill.). Phoenicaceae.

Double coconut.

Seeds from the Georgetown Botanic Garden, British Guiana, February, 1932. A lofty palm, frequently 100 feet in height, with palmate leaves the blades of which are 6 feet across. The fruits are probably the largest known, the individual nuts sometimes weighing 50 pounds; from the time of flowering to the full maturity of the seeds is said to cover a period of 10 years, and the palm itself does not attain full growth until after a hundred years. It is native to the Seychelles.

For previous introduction see 65048.

99586. *PHRYGANOCYDIA CORYMBOSA* (Vent.) Bur. (*Macfadaya corymbosa* Vent.). Bignoniaceae.

No. 2888. Plants presented by R. O. Williams, of the Botanic Garden, Trinidad, February 16, 1932. A rampant climber which covers the trees with a mass of dark-green foliage and several times a year with masses of large funnel-shaped flowers 3 inches in diameter and 3 inches long, mauve in color with a white throat and hooded yellow-green calyx.

99587 to 99593. *MANGIFERA INDICA* L. Anacardiaceae. Mango.

Nos. 99587 to 99592 were plants presented by M. Desiré Kervegant, Jardin d'Essais, Fort-de-France, Martinique, March 10, 1932. The West Indian varieties of mango appear to be, all of them, more or less stringy and of small size, but they have the reputation of being regular bearers in the drier parts of the various islands and to flower and fruit even where the ground never really dries out.

99587. No. 3732. *Amelie*, a variety which turns red if exposed to the bright sunlight.

99588. No. 3731. *Divine*, an oblong mango without a prominent heel. A rather early yellow fruit with a red blush when ripened in sunlight; not fiberless nor one of the best but prolific.

99589. No. 3735. *Julie*, considered probably the best shipping mango of the West Indies and commonly propagated by inarching. It is a squarish wedge-shaped variety that in the sunlight colors up with a red blush with an aromatic flavor.

99590. No. 3736. *Martij*, a selected seedling from the Tivoli garden.

99591. No. 3733. *Precinette*.

99592. No. 3734. *Sans Parcel*, a selected seedling grown in the Tivoli garden.

99593. No. 3821. *T'in*. Fruit purchased in the market at Basse Terre, Gaudeloupe, March 12, 1932. A very good yellow mango of medium size and thick round form with flesh much darker than the rind and of excellent quality. Fibers are short and not objectionable, seed small and rather thin leaving a large amount of flesh.

99594. *MARTINEZIA CORALLINA* Mart. Phoenicaceae. Palm.

No. 2888. *Gri Gri* or *fish tail palm*, a plant from the Avena Forest Reserve, Trinidad, February 16, 1932. A spiny palm with pinnate leaves about 9 feet long and clusters, 2 to 3 feet long, of small white flowers, followed by bright-red fruits nearly 1 inch in diameter. The pale-brown seeds are used for necklaces by the natives of Martinique where this palm is native.

For previous introduction see 81929.

99595. *MONODORA TENUIFOLIA* Benth. Annonaceae.

No. 2871. A plant presented by R. O. Williams, Botanic Garden, Trinidad, February 16, 1932.

99576 to 99650—Continued.

A tropical African tree or large shrub which flowers when the leaves have fallen and bears masses of flowers as showy as orchids, with white petals shading to yellow at the base and with crimson markings.

For previous introduction see 72437.

99596. *MONSTERA* sp. Araceae.

No. 2753. Plants from the Dominican Botanic Garden, January 29, 1932. An ornamental vine, native to Dominica, with deep glossy green leaves with few holes. The leaves are smaller and narrower than those of *M. deliciosa*.

99597. *MONSTERA* sp. Araceae.

No. 2754. Plants from the St. Vincent Botanic Garden, February 4, 1932, and called by T. Jackson, the curator of the garden, the "native species." It differs from *M. deliciosa* in having smaller, narrower leaves with few holes. It appears to be distinct also from no. 2753 [99596].

99598 and 99599. *MONTRICHARDIA ARBORESCENS* (L.) Schott. Araceae.

A tall-growing aroid forming dense thickets on low land near the sea and sometimes rising 10 feet with its treelike woody stems.

99598. No. 2948. Plants from Tobago, Windward Islands, February 20, 1932.

99599. No. 2997. *Mokka Mokka*. Seeds from the Sophia Sugar Station, British Guiana, February 25, 1932.

99600. *MORA EXCELSA* Benth. Caesalpiniaceae.

No. 2916. Plants from the mora forest of eastern Trinidad, February 18, 1932. A large forest tree, native to Guiana. The abruptly pinnate leaves are made up of 3 to 4 pairs of blunt leaflets 5 to 8 inches long, and the small flowers, borne in cylindrical spikes 6 to 10 inches long, are followed by oblong woody pods 3 to 6 inches long, each containing one seed.

For previous introduction see 99000.

99601. *MORAEA* sp. Iridaceae.

No. 2557. Plants presented by D. Lawrence, Nassau, New Providence Island, January 2, 1932. A plant with large coarse leaves over 3 feet tall, with single delicate blue and white and yellow-tinted fragrant sessile flowers about 3 inches in diameter arising singly from the leaves.

99602 and 99603. *MUSSAENDA* spp. Rubiaceae.

Plants presented by R. O. Williams, of the Botanic Garden, Trinidad, February 17, 1932.

99602. *MUSSAENDA ERYTHROPHYLLA* Schum. and Thonn.

No. 2875. A shade-loving scandent shrub; when in flower its brilliant scarlet bracts make it a remarkable sight. These bracts are enlarged sepals; one sepal in each flower cluster enlarges until it is 3 inches long and the size of an ordinary leaf and turns deep scarlet.

For previous introduction see 76700.

99603. *MUSSAENDA LUTEOLA* Delile.

No. 2909. A dwarf species of Rubiaceae, with small yellow flowers and large white bractlike sepals which are very showy. It reminds one somewhat of our northern dogwood.

For previous introduction see 66228.

99604. *NANNORRHOPS RITCHEIANA* (Griffith) Wendl. Phoenicaceae. Mazri palm.

No. 2804. Plants collected in the Botanic Garden, Grenada, February 10, 1932. A very rare cluster palm, native to Afghanistan and western India, which appears to be as hardy as the true date palm or more so. The leaves are very glau-

99576 to 99650—Continued.

cous, both above and below, and the back of the midrib peels off into a curious pubescent string. The terminal bud diverges into two branches.

For previous introduction see 44773.

99605. NEOMAMMILLARIA sp. Cactaceae. Cactus.

Plants from Guantanamo Bay, Cuba, March 26, 1932.

99606 and 99607. NORANTEA GUIANENSIS Aubl. Maregraviaceae.

A magnificent climber covering high forest trees. Its spikelike racemes, 3 feet long, are composed of rather inconspicuous flowers, but the fleshy nectar-bearing bracts, 1 inch long, which hang from the horizontally placed spikes are scarlet. In the Tropics it blooms in February and March.

99606. No. 2884. Collected in the Aripo Savanna, Trinidad, March 22, 1932.

99607. No. 3671. From the Agricultural Experiment Station, Paramaribo, Surinam, March 3, 1932.

99608. ORIBIGNYA SPECIOSA (Mart.) Barb.-Rodr. Phoenicaceae. Babassu nut.

No. 3667. Plants presented by Dr. G. Stahel, of the Botanic Garden, Paramaribo, Surinam. The *Uavassu* palm of Brazil and the Guianas is much like the *Cohune* palm, but its fruits, 3 to 4 inches long, are much larger. An edible oil is extracted from the seeds and is now being exported to the United States.

For previous introduction see 50595.

99609. PACHIRA AQUATICA Aubl. Bombacaceae. Guiana-chestnut.

No. 3000. Seeds from the Botanic Garden at Georgetown, British Guiana, February 26, 1932. A small tree, native to tropical America, with palmately compound leaves made up of 5 to 9 obovate leaflets 8 to 12 inches long. The large mallowlike pink to purple flowers are up to 14 inches long and have bright red stamens as long as the petals, and the brown capsules are 15 inches long by 3 to 5 inches in diameter.

99610 to 99612. PANDANUS spp. Pandanaceae.

99610 and 99611. PANDANUS PACIFICUS Veitch. Pacific screwpine.

Plants of a shrub or small tree with glossy dark-green leaves which make it a most desirable ornamental or hedge plant.

99610. No. 2685. From the Dominican Botanic Garden, March 23, 1932.

99611. No. 2887. From the Trinidad Botanic Garden, February 16, 1932.

99612. PANDANUS sp. Screwpine.

No. 2686. Plants presented by F. G. Harcourt from the collection in the Dominican Botanic Garden, January 29, 1932.

99613. (Undetermined.)

No. 3827. Plants collected near the Kabel station, Surinam, March 3, 1932. A vine with large yellow flowers growing over tall forest trees at the edge of the Surinam River.

For previous introduction see 99009.

99614. PASSIFLORA MALIFORMIS L. Passifloraceae.

No. 3769. Plant presented by M. Corbin, Jardin d'Essais, Grande Terre, Guadeloupe, March 11, 1932. The *Pomme Calabas* of Guadeloupe is characterized by having two large yellow-green bracts that hang down and cover the perfectly round fruit. This fruit is said to be intensely sour even when ripe.

99576 to 99650—Continued.

99615. PENTAS LANCEOLATA (Forsk.) Schum. (*P. carnea* Benth.). Rubiaceae.

No. 2873. Plant presented by R. O. Williams, director of the Trinidad Botanic Garden, February 16, 1932. A soft-wooded shrub 2 feet high, native to tropical Africa. The ovate-lanceolate leaves are 3 to 6 inches long, and the brilliant carmine flowers are in terminal heads. The plant does not thrive in the full sunlight.

99616. PEPEROMIA sp. Piperaceae.

No. 3820. Plants from the Matuba region of Grande Terre, Guadeloupe, March 13, 1932. A delicate creeping light-green form which roots at the nodes and stands shade well. It forms a mat of light green and would be very useful for the shady side of gardens in the subtropics.

99617. PEPEROMIA sp. Piperaceae.

No. 3902. Plants collected along the trail to the citadel, Haiti, March 27, 1932. A delicate small-leaved species with characters that may attract attention to it for hanging baskets and for rock gardens in the South.

99618. PETREA VOLUBILIS L. Verbenaceae.

No. 3870. From Antigua, January 26, 1932. *Alba*; a white variety which is not so attractive as the blue-flowered variety and its flowers drop earlier.

99619. PHLODENDRON TRIPARTITUM (Jacq.) Schott. Araceae.

No. 3901. Plants collected on the trail to the citadel, between 1,000 and 1,500 feet altitude, Haiti, March 27, 1932. A handsome aroid with rather thin deep-green trilobed membranous leaves, found climbing over rocks and tree trunks along the trail.

99620. PIPER BETLE L. Piperaceae.

No. 3767. Plants collected in the Javanese kampong, Cramerweg, Surinam, March 4, 1932. An ornamental vine, historically interesting, as the leaves of this vine are chewed by the Singhalese people.

99621. PLEOMELE FRAGRANS (L.) Salisb. Liliaceae.

No. 3793. Plants from Basse Terre, Guadeloupe, March 13, 1932. A foliage plant, native to tropical Africa, with a stem up to 20 feet high. The lanceolate leaves, 2 to 3 feet long, are spreading or recurved, and the heads of small yellow flowers are followed by orange-red berries. In Guadeloupe it is used as a hedge or windbreak. The canes, about 5 feet long, are planted closely together like piling and, taking root, make a remarkably dense living hedge; when in flower these hedges are said to fill the air with their fragrance.

99622. PLUMBAGO ROSEA L. Plumbaginaceae. Rose plumbago.

No. 3674. Plants from the Georgetown Botanic Garden, British Guiana, February 27, 1932. A zigzag half-climbing glabrous shrub 3 to 6 feet high, native to southern Asia. The clasping leaves are ovate to elliptic, and the red or scarlet salverform flowers, about 1 inch long, are borne in terminal spikes.

99623 to 99625. PLUMERIA spp. Apocynaceae. Frangipani.

99623. PLUMERIA ACUTIFOLIA Poir. Mexican frangipani.

No. 3900. From Haiti. Plant presented by C. F. Wood, American vice consul, March 26, 1932. A stiff erect small tree about 25 feet high, with naked branches except for clusters of leaves at the summit of each where also appear in early spring clusters of single white star-shaped flowers of delicious fragrance. The flowers are used in the manufacture of the perfume frangipani.

For previous introduction see 50668.

99576 to 99650—Continued.

99624. PLUMERIA OBTUSA L.

No. 2570. Plants from Rum Key (black lands), Bahama Islands, January 6, 1932. A tree, native to the West Indies, up to 20 feet high, but often flowering when only 6 feet high. The oblong to obovate leaves are 4 to 8 inches long, and the salverform flowers, 2 inches across, borne in terminal cymes, are white with a yellow eye.

99625. PLUMERIA ALBA L.

No. 2766. Plants from the island of Mayero, Grenadines. A tree up to 30 feet high, native to the West Indies. The linear-lanceolate subcoriaceous leaves, 10 inches long, are glabrous above and densely white tomentose beneath. The salver-shaped flowers, 2 inches across, are white with a yellow eye and are borne in compact clusters.

99626. POTHOS sp. Araceae.

No. 2885. Plants from the Aripo Savanna, Trinidad, February 14, 1932. An ornamental vine of great beauty with glossy dark-green entire leaves without variegation.

99627. PSEUDOPHOENIX SAONAE O. F. Cook. Phoeniceae. Palm.

No. 2620. Plants from Saona Island, off the southeast coast of the Dominican Republic, January 20, 1932. A tall palm over 25 feet high, with gray-green leaves and great bunches of brilliant scarlet fruits. It suggests in habit a small Royal palm.

For previous introduction see 96457.

99628 and 99629. PTYCHORAPHIS AUGUSTA (Kurz) Beccari. Phoeniceae. Palm.

A very tall feather palm from 80 to 100 feet high and 1 foot in diameter at the base. The crown of leaves, 8 to 12 feet long, with leaflets 2 to 3 feet long, makes a most graceful object in a landscape. Native to the Nicobar Islands, India.

99628. No. 2681. Plants presented by F. G. Harcourt, director, Dominican Botanic Garden, January 29, 1932.

99629. No. 2877. Plants presented by R. O. Williams, of the Botanic Garden, Trinidad, February 16, 1932.

99630. RAVENIA SPECTABILIS (Lindl.) Engler. Rutaceae.

No. 2872. Plant presented by R. O. Williams, of the Botanic Garden, Trinidad, February 16, 1932. A glabrous shrub, native to Cuba, with opposite trifoliate leaves and deep-pink to purple-red tubular flowers 1 inch across, borne singly or in few-flowered clusters.

99631. RHYTIDOCOS AMARA (Jacq.) Beccari (*Cocos amara* Jacq.). Phoeniceae. Palm.

No. 2702. Plants from Dominica, Leeward Islands.

For previous introduction of seeds and description see 98490.

99632. SAGUERUS PINNATUS Wurm. (*Arenga saccharifera* Labill.). Phoeniceae. Sugar palm.

No. 3666. *Gomuti* or *sugar* palm of the East Indies. Plants from Paramaribo, Surinam, March 3, 1932. A handsome palm 30 to 40 feet high, with immense leaves and enormous bunches of fruit. A rich-flavored palm sugar is made from the sap which flows from the bruised fruitstalk. It also furnishes a valuable black fibrous substance, ejoo fiber, superior in quality, cheapness, and durability to that obtained from the husk of the coconut and renowned for its power to resist moisture. It is used by the natives of the

99576 to 99650—Continued.

Indian Islands for every purpose of cordage. Underneath this material is found a substance of soft gossamerlike texture which is exported to China, where it is applied as oakum in caulking the seams of ships and more generally as tinder for kindling fire.

For previous introduction see 75246.

99633. ELSOTA DIVERSIFOLIA (L.) Blake (*Securidaca diversifolia* (L.) Blake. Polygalaceae.

No. 3670. Plants presented by Dr. G. Stahel, Paramaribo, Surinam, March 3, 1932. A trailing or climbing shrub with thick shining oblong to ovate leaves 2 to 6 inches long and racemes of rose-colored flowers. It is native to Central America and the West Indies.

For previous introductions see 88133.

99634. ELSOTA VIRGATA (Swartz) Kuntze. (*Securidaca virgata* Swartz). Polygalaceae.

No. 3891. Plants collected on a hillside on the route up to the citadel back of Cape Haitien, Haiti, March 27, 1932. A vinelike shrub with slender wandlike branches 20 feet long, native to the West Indies. The scattered oval leaves are less than 1 inch long, and the numerous small pink and yellow to orange flowers are borne in long slender racemes.

99635. SMILAX sp. Smilacaceae.

No. 2687. Plant from the Dominican Botanic Garden, January 29, 1932. A rank-growing variegated ornamental bushy shrub.

99636. SOCRATEA EXORRHIZA (Mart.) Wendl. Phoeniceae. Palm.

No. 3668. Plant presented by Dr. G. Stahel, of the experiment station, Paramaribo, Surinam, March 3, 1932. A tall handsome spineless palm, native to tropical South America, bearing small yellow flowers and olive-green fruits. It has a swollen cylindrical trunk elevated on a pyramid of exposed roots, giving it a remarkable appearance. The trunk, 35 feet or more high, bears at its summit a crown of large irregularly pinnate leaves.

For previous introduction see 80773.

99637. TRADESCANTIA sp. Commelinaceae. Spiderwort.

No. 3881. Plants from the Paramaribo Experiment Station, Surinam, March 5, 1932. A very attractive purple form that was growing wild at the experiment station.

99638. TRIMEZA MARTINICENSIS (Jacq.) Herb. (*Cipura martinicensis* H.B.K.). Iridaceae.

No. 2655. Plant from Antigua, Leeward Islands.

For previous introduction and description see 98885.

99639. IXORA FRAGRANS (Hook. and Arn.) A. Gray. Rubiaceae.

No. 2692. Plants presented by F. G. Harcourt, curator, Dominican Botanic Garden, January 29, 1932. A good-sized tree that bears masses of delicately perfumed white flowers.

99640. COLOCASIA ANTIQUORUM Schott. Araceae.

No. 3737. Plants presented by M. Desiré Kervégant, of the Jardin d'Essais, Martinique, March 10, 1932. *Malanga Blanc*; a white-fleshed variety considered the best-flavored sort grown in the volcanic soil of Martinique.

99641. ALOCASIA sp. Araceae.

No. 3743. Plants presented by M. Desiré Kervégant, of the Jardin d'Essais, Martinique, March 10, 1932. A very large-leaved form which is beautifully variegated with great irregular patches of almost white tissue on the dark-green leaves.

99576 to 99650—Continued.

99642. *ZEPHYRANTHES CARDINALIS* C. H. Wright (*Atamosco cardinalis* Britton). Amaryllidaceae. Zephyrilyl.

No. 2583. Plants from Nassau, New Providence Island, January 12, 1932. A low herbaceous perennial from a truncated bulb with shining green strap-shaped leaves 6 inches long. The cardinal-red, funnel-shaped flowers, 2 to 3 inches long, are borne on cylindrical scapes which are red at the base and green above.

99643. (Undetermined.)

No. 2555a. Plants from Nassau, New Providence Island, January 1, 1932. A dwarf palm with a curious bottle-shaped trunk and large heavy pinnate leaves, said to have been introduced from India.

99644. (Undetermined.)

No. 2700. Seedling of an undetermined wild palm, native to St. Kitts Island; presented by R. E. Kelsick, superintendent, Agricultural Experiment Station, Basseterre, January 23, 1932.

99645. (Undetermined.)

No. 2947. Plant collected on Tobago Island, February 20, 1932. A large and very vigorous vine with coriaceous heart-shaped leaves on long petioles and a habit which suggests its value as a porch or pergola vine.

99646. (Undetermined.)

No. 3778. Plants collected at the Union Experiment Station, St. Lucia, Windward Islands, March 3, 1932. A vigorous vine with many aerial roots, growing over a mango tree.

99647. (Undetermined.)

No. 2695. From Dominica, January 29, 1932. Plant presented by F. G. Harcourt, who collected it in Trinidad.

99648. (Undetermined.)

99649. (Undetermined.)

99650. (Undetermined.)

99651 to 99670.

From India. Seeds presented by G. Ghose & Co., Town-end, Darjeeling. Received May 6, 1932.

99651. *ACONITUM PALMATUM* Don. Ranunculaceae. Monkshood.

A leafy-stemmed perennial, 2 to 3 feet high, native to the temperate slopes of the Himalayas in India. The deeply five-lobed reniform leaves are 4 to 6 inches across, and the rather large green-blue flowers, on long pedicels, are borne in a sparse panicle.

99652. *ANEMONE RIVULARIS* Buch.-Ham.

A silky pubescent ornamental from 1 to 3 feet high, with three-parted basal leaves up to 6 inches in diameter and white or bluish flowers, over an inch long, in compound cymes. It is found in the Himalayan region at 5,000 feet altitude.

For previous introduction see 93183.

99653. *ASTER TRICEPHALUS* C. B. Clarke. Asteraceae.

A small vigorous subtropical herbaceous perennial with reddish flower heads. Native to Sikkim, India.

For previous introduction see 73146.

99654. *BETULA UTILIS* D. Don. Betulaceae. Birch.

A tree 40 to 60 feet high with red-brown trunk and branches and bark which peels off in papery flakes. It is native to the subtropical regions of the Himalayas. The oval, coarsely toothed,

99651 to 99670—Continued.

sharp-pointed leaves, 3 inches long, are dark green above and paler beneath. In winter the orange-chocolate color of the twigs is very striking.

For previous introduction see 73149.

99655. *CATHARTIA VILLOSA* Hook. f. Papaveraceae.

A hardy annual or biennial found in the Sikkim Himalayas. The abundance of long shaggy fulvous hairs and the bright-yellow glabrous flowers give it a handsome appearance. The cordate radical leaves are long-petioled and palmately five-lobed; the stem leaves are sessile and the uppermost pinnatifid. The large nodding flowers have golden anthers and a green fleshy stigma.

For previous introduction see 49624.

99656. *CHRYSANTHEMUM ATKINSONI* C. B. Clarke. Asteraceae.

A tuberous-rooted herbaceous perennial with woody stems 6 to 12 inches high, native to the Sikkim Himalayas in India. The oblong leaves, 4 to 6 inches long, are deeply pinnately divided into linear segments, and the purple flower heads, 1 to 2 inches across, are usually solitary at the thickened top of the stem.

99657. *CIRSIMUM INVOLUCRATUM* DC. Asteraceae. Thistle.

A stout herb, 2 to 6 feet high, native to India. The deeply pinnatifid leaves, 6 to 12 inches long, are white tomentose beneath, and the yellow-white to purple flower heads are 2 to 3 inches across.

99658. *CLINTONIA ALPINA* (Royle) Kunth. Con-vallariaceae.

A low perennial native to the temperate slopes of the Himalayas in India. The lanceolate sub-radical leaves are 4 to 9 inches long, and the small white funnel-shaped flowers are borne in a loose raceme on a scape 1 to 2 feet high.

99659. *CORTIA HOOKERI* C. B. Clarke. Apiaceae.

A stemless herbaceous perennial with a rosette of 3- to 4-times pinnate leaves, the ultimate segments being linear and about one fourth inch long. The white or purplish flowers are borne in sessile umbels which are up to 8 inches long and form a dense mass over the crown of the plant. It is native to the Sikkim region in India.

For previous introduction see 93189.

99660. *CREMANTHODIUM OBLONGATUM* C. B. Clarke. Asteraceae.

A perennial herb, 4 to 8 inches high, native to the Himalayas on the border between India and Tibet. The coriaceous pinnately nerved radical leaves are reniform and 2 to 3 inches broad, the leaves on the scape are reduced to oblong bracts, and the yellow flower heads are 1 to 2 inches across. Received as *C. elongatum*, which appears to be an error for *C. oblongatum*, with which the seeds agree.

99661. *CYANANTHUS LOBATUS* Wall. Campanulaceae.

A perennial herb with more or less prostrate shoots up to 2 feet high, with ovate-oblong lobed leaves an inch long and single blue flowers, somewhat like a periwinkle, sometimes an inch across, appearing in late summer. Native to the Himalayas.

For previous introduction see 78880.

99662. *GAULTHERIA PYROLOIDES* Hook. f. and Thoms. Ericaceae.

A low evergreen shrub less than a foot high, with narrow-elliptic leaves 1 to 2 inches long and large blue-black berries. Native to the Himalayas.

For previous introduction see 78354.

99651 to 99670—Continued.

99663. *GENTIANA STYLOPHORA* C. B. Clarke.
Gentianaceae. **Gentian.**

A stout herbaceous perennial, native to the slopes of the Himalayas between 11,000 and 14,000 feet altitude in Sikkim, India. The simple stems are 3 to 6 feet high, the lower leaves are elliptic and 12 inches long, and the upper leaves are sessile, about 5 inches long. The widely funnel-shaped solitary flowers are borne on axillary peduncles up to 8 inches long.

For previous introduction see 93897.

99664. *HERACLEUM WALICHII* DC. Apiaceae.

A coarse herb, native to northern India, with stems 3 to 4 feet high, white-hirsute beneath the nodes. The lower leaves are serrate, the upper three-parted, and the small flowers, in compound umbels, are followed by flat brown thin-winged fruits one quarter inch long.

99665. *IRIS CLARKEI* Baker. Iridaceae.
Clarke iris.

A curiously local Himalayan iris, native to a circumscribed area in the Sikkim and Bhutan regions at altitudes between 6,000 and 11,000 feet, in ground that is swampy half the year and frozen hard under snow during most of the remaining months. The narrow leaves, 2 feet long, droop at the tips, the upper surface is polished and shiny, and the under side is glaucous. The solid stem is 2 feet long and bears 1 or 2 lateral heads. The falls are blue-purple blotched with white and are reflexed laterally. The upper part of the haft is marked with yellow, and the red-purple lanceolate standards are poised horizontally. The styles form the highest point of the flower; they are keeled, very convex, and 1 to 2 inches long.

For previous introduction see 92316.

99666. *JUNIPERUS RECURVA* Buch.-Ham. Pinaceae.
Himalayan juniper.

A prostrate or erect shrub, or sometimes an erect tree up to 30 feet high, native to the temperate and alpine slopes of the Himalayas in India. The fastigate branches are decurved and then ascending with pendulous branchlets.

99667. *LACTUCA DUBYAEA* C. B. Clarke. Cichoraceae.

A low herbaceous perennial, 6 to 18 inches high, native to the slopes of the central Himalayas in northern India. The ovate-hastate hispid leaves, 3 to 6 inches long, vary from simple to pinnatifid, and the nodding yellow flower heads, 1 inch across, are clothed with black glandular hairs.

99668. *LYCHNIS NIGRESCENS* Edgew. Silenaceae.
Campion.

A low herb less than a foot high, native to the alpine slopes of the Sikkim Himalayas in northern India. The simple glandular-pubescent stems are one-flowered, the leaves are lanceolate to spatulate, and the nodding purple flowers have the calyx inflated to nearly 1 inch in diameter and lined with broad purple-brown nerves.

99669. *MECONOPSIS NAPAULENSIS* DC. Papaveraceae.

A stout perennial herb, 3 to 5 feet high, with the young parts clothed in softly villous golden hairs, native to the temperate slopes of the Sikkim Himalayas in India. The sinuate-lobed or pinnatifid leaves are 10 to 16 inches long, and the golden yellow flowers, 2 to 4 inches across, are in elongated racemes.

99670. *MYRIACTIS NEPALENSIS* Less. Asteraceae.

An erect annual, 2 to 3 feet high, native to temperate slopes of the Himalayas in northern India. The lanceolate to ovate leaves, 1 to 1.5 inches long, are coarsely serrate, and the small daisylike white flower heads are in panicles.

99671 and 99672.

From India. Seeds presented by R. N. Parker, forest botanist, Forest Research Institute, New Forest, Dehra Dun. Received May 31, 1932.

99671. *EVODIA MELIAEFOLIA* (Hance) Benth.
Rutaceae.

A small much-branched tree, native to India. The pinnately compound leaves are made up of 3 to 5 pairs of obliquely lanceolate leaflets 3 to 4 inches long, and the small white flowers are in cymes 8 inches across.

99672. *MUNDULEA SUBEROSA* (Roxb.) Benth.
Fabaceae.

A stout erect shrub with thick corky bark, native to India and Ceylon. The coriaceous leaves are made up of 6 to 10 pairs of oblong-lanceolate leaflets 1 to 2 inches long, and the red pea-shaped thinly silvery flowers, 1 inch long, are in dense terminal racemes.

99673 to 99675. *CAPSICUM ANNUUM* L.
Solanaceae. **Common redpepper.**

From Spain. Seeds presented by the Granja Escuela de Capataces Agrícolas y Estaciones Especiales de Valencia, through Señor Miguel de Echegaray, agricultural attaché, Spanish Embassy, Washington, D.C. Received May 31, 1932.

A collection of the best commercial varieties of mild-flavored sweet redpeppers grown in Spain.

99673. *Dulce de Bola.*

99674. *Agridulce Temprano.*

99675. *Picante Leren.*

99676 to 99682.

From Likiang, China. Seeds presented by Dr. Joseph F. Rock. Received May 11, 1932.

Collected on the slopes of the Likiang Snow Range, Yunnan Province, in November and December 1931.

99676. *BERBERIS* sp. Berberidaceae. **Barberry.**

From Taitzutung at 8,000 feet altitude in a pine forest. An attractive shrub 1 to 2 feet high, with small leaves and globose pruinose fruits.

99677. *CRATAEGUS* sp. Malaceae. **Hawthorn.**

From the forests of Youngming at 10,000 feet altitude. A very handsome tree with brilliant red fruits.

99678. *EPHEDRA LIKIANGENSIS* Florin. Gnetaceae.
Jointfir.

A stout erect shrub, sometimes 4 feet high, with elongated rigid, thick green branches. The minute scalelike leaves are one fifth of an inch long. The fleshy ovoid fruit, nearly one half inch in diameter, is yellowish carmine. Native to Yunnan, China.

99679. *EUONYMUS* sp. Celastraceae.

From open forest on the eastern slopes of the mountains at 11,000 feet altitude. A tree 30 feet high with round spreading crown and very attractive pink fruits.

99680. *HEMEROCALLIS FORRESTII* Diels. Liliaceae.
Daylily.

A very handsome plant about 2 feet high, with a thick rootstock, narrow lanceolate leaves, and golden-yellow flowers 2 to 3 inches long borne in many-flowered corymbs. Found in limestone meadows at 11,000 feet altitude.

For previous introduction see 58135.

99681. *INCARVILLEA GRANDIFLORA* Bur. and Franch. Bignoniaceae.

A very handsome bush, 2 to 3 feet high, found among limestone rocks between 10,000 and 11,000

99676 to 99682—Continued.

feet altitude. The large leaves are pinnatisect, and the large flowers are purplish red and produced in long terminal spikes.

For previous introduction see 59418.

99682. SYRINGA sp. Oleaceae. Lilac.

Trees from 15 to 20 feet high, with rich pink flowers, found in open forests at 11,000 feet altitude.

99683 to 99701.

From India. Seeds presented by R. N. Parker, forest botanist, Forest Research Institute, New Forest, Dehra Dun. Received May 3, 1932.

99683 to 99686. ACACIA spp. Mimosaceae.

99683. ACACIA sp.

99684. ACACIA GAGEANA Craib.

A Himalayan acacia with thorny branchlets and compound leaves about 6 inches long, composed of 8 to 11 pinnae and 30 to 40 papery, narrowly oblong, closely set pinnules about 1 inch long. The small flower heads, half an inch in diameter, are in large panicles.

99685. ACACIA MODESTA Wall.

A medium-sized tree with glabrous gray branches and dark-brown polished prickles, native to the foothills of the western and central Himalayas in India. The bipinnate leaves are made up of 4 to 6 pinnae, each bearing 6 to 8 obovate leathery leaflets about one-half inch long. The small green flowers, in spikes 2 to 3 inches long, are followed by straight strap-shaped glossy drab pods 2 to 3 inches long.

99686. ACACIA PENNATA (L.) Willd.

A climbing prickly shrub up to 20 feet high, with very narrow rigid leaflets and dense panicles of yellow flower heads. Native to the central and eastern Himalayas.

For previous introduction see 68326.

99687. ACACIA SUMA (Roxb.) Kurz. (*Mimosa suma* Roxb.). Mimosaceae.

A medium-sized tree with white bark, native to India. The bipinnate leaves have 20 to 40 pinnae each bearing 60 to 100 small pale-green rigid leaflets. The small nearly white flowers are in axillary spikes 3 to 4 inches long.

For previous introduction see 59652.

99688 to 99690. ALBIZZIA spp. Mimosaceae.

99688. ALBIZZIA CHINENSIS (Osbeck) Merr. (*A. stipulata* Boiv.).

A large rapidly growing tree, native to the subtropical regions of India. It is said to have been found very satisfactory in Assam as a shade for tea. The roots do not penetrate the soil deeply, and the foliage does not make a dense shade.

For previous introduction see 83955.

99689. ALBIZZIA LUCIDA (Roxb.) Benth.

A handsome spreading leguminous tree with attractive feathery leaves; native to the East Indies.

For previous introduction see 93176.

99690. ALBIZZIA PROCERA (Roxb.) Benth.

A tall handsome tropical tree often 60 to 80 feet high, with yellowish or green-white bark, large compound leaves, and terminal panicles of yellow-white flowers. In Burma, Bengal, and southern India where this tree is native the brown heartwood is used for making agricultural implements.

For previous introduction see 94179.

99683 to 99701—Continued.

99691. BAUHINIA VARIEGATA L. Caesalpiniaceae. Buddhist bauhinia.

An Indian tree up to 20 feet high, with broadly ovate leaves, two-lobed at the top, and small clusters of large white flowers, beautifully variegated with red and yellow.

For previous introduction see 77156.

99692. BUTEA PELLITA Hook. f. Fabaceae.

An erect shrub 3 feet or less in height, with large trifoliolate leaves and yellow flowers about one-half inch long in axillary racemes. The ovate-oblong woody coriaceous pod is about 3 inches in length. Native to the Himalayas.

99693. CAESALPINIA SAPPAN L. Caesalpiniaceae. Sappan.

A shrubby leguminous tree, native to India and the Malay Archipelago, which bears showy yellow flowers. The wood yields a red dye, and the bark is used for tanning. It is said to be an excellent hedge plant and to endure rather poor dry soils.

For previous introduction see 94182.

99694. CAESALPINIA SEPIARIA Roxb. Caesalpiniaceae. Mysore thorn.

For previous introduction and description see 99401.

99695. CASSIA DIDYMOBOTRYA Fres. Caesalpiniaceae.

A shrub or small tree, 7 to 10 feet high, native to Africa. The finely divided leaves are about a foot long, and the numerous yellow flowers are in erect racemes up to a foot in length.

For previous introduction see 88109.

99696. CASSIA SURATTENSIS Burm. f. (*C. glauca* Lam.). Caesalpiniaceae.

A tropical leguminous shrub or small tree with pale-green compound leaves and clusters of pale-yellow flowers. It is native to the East Indies.

For previous introduction see 86694.

99697. ERYTHRINA STRICTA Roxb. Fabaceae. Coral tree.

A large tree with whitish prickles, native to India. The trifoliolate leaves have ovate rhomboid leaflets 4 to 6 inches long, and the coral-red flowers, 1 to 2 inches long, are borne in dense racemes 6 inches long.

99698. MIMOSA SPEGAZZINI Pirota. Mimosaceae.

A much-branched climbing shrub with recurved spines, sensitive bipinnate leaves 2 to 3 inches long, and globular heads, about 1 inch in diameter, of rose-purple flowers. It is native to Argentina.

For previous introduction see 94779.

99699. SOPHORA SECUNDFLORA (Ort.) DC. Fabaceae.

A shrub or small tree, up to 35 feet high, native to Mexico. The evergreen pinnate leaves are made up of 7 to 11 elliptic to oblong leaflets 2 inches long, and the fragrant violet-blue flowers, 1 inch long, are in racemes.

99700. SOPHORA TOMENTOSA L. Fabaceae.

A small tree, native to India and Ceylon, with slender wandlike branches and pinnate leaves made up of 15 to 19 obovate leaflets, 1 to 2 inches long, densely gray downy beneath. The yellow pea-shaped flowers, nearly an inch long, are borne in racemes 6 inches long.

99683 to 99701—Continued.

99701. *WIGANDIA KUNTHII* Choisy. Hydrophyllaceae.

A shrub or tree up to 15 feet high, native to Mexico and Central America, the stems being hispid with stinging hairs. The coarsely crenate cordate leaves, 16 inches long, are tomentose beneath, and the small blue and white bell-shaped flowers are in 1-sided cymes.

99702. *ULMUS PUMILA* L. Ulmaceae.
Chinese elm.

From Nanking, China. Seeds presented by the College of Agriculture and Forestry, University of Nanking. Received June 1, 1932.

A hardy rapid-growing Chinese elm which is cold- and drought-resistant and thrives in poor soil.

For previous introduction see 93750.

99703 to 99706.

From Cluj, Rumania. Seeds presented by Dr. Al. Borza, directeur du Jardin Botanique de l'Université de Cluj. Received May 31, 1932.

99703. *ELAEAGNUS MACROPHYLLA* Thunb. Elaeagnaceae.
Broadleaf elaeagnus.

An evergreen shrub, up to 10 feet high, with silver-white branchlets, native to Japan. The broadly ovate leaves, 2 to 5 inches long, are densely silvery scaly beneath, and the small fragrant nodding flowers, in clusters of 4 to 6, are covered outside with silvery and brown scales. The red ellipsoidal fruits are about one-half inch long and covered with silvery scales.

99704 to 99706. *RUBUS* spp. Rosaceae.

99704. *RUBUS LACINIATUS* Willd.
Cutleaf blackberry.

A blackberry, native to Europe, with angled arching stems armed with hooked prickles. The 3 to 5 pinnately lobed and incisely toothed leaflets are pubescent beneath, the light-pink flowers are in large prickly panicles, and the sweet black fruits are about one-half inch long.

99705. *RUBUS LASIOSTYLUS* Focke.
Woolly raspberry.

A wild raspberry from western China, with blue-white bristly stems, small pinnate leaves, silvery beneath, magenta flowers, and rose-colored woolly fruits which are sweet but said to be of little use for eating.

For previous introduction see 66607.

99706. *RUBUS ROSAEFOLIUS* J. E. Smith.
Roseleaf raspberry.

A raspberry, native to southeastern Asia and evergreen in the Tropics. The hairy stems are 3 to 6 feet high, the pinnately compound leaves are made up of 2 to 7 pairs of ovate sharply serrate leaflets, and the white flowers, 1 to 2 inches across, are in small clusters and are followed by erect bright-red, thimble-shaped fruits nearly 2 inches long, edible but insipid.

99707 to 99759.

From India. Seeds presented by the curator, Lloyd Botanic Garden, Darjeeling. Received May 6, 1932.

99707. *ABIES SPECTABILIS* Lambert. Pinaceae.
Himalayan fir.

A tree sometimes 150 feet high, native to the Himalayas. The dark-green leaves are arranged in two opposite series, so as to leave a V-shaped opening along the top; the individual leaves are 1 to 2 inches long. The cones, about 5 inches long, are violet purple at first, becoming brown.

For previous introduction see 73140.

99707 to 99759—Continued.

99708 to 99712. *ACER* spp. Aceraceae. **Maple.**

99708. *ACER CAMPBELLII* Hook. f. and Thoms.

A tree up to 50 feet high, native to India. The bright-green 5- to 7-lobed leaves are 4 to 7 inches across and contrast sharply with the red petioles, 1 to 3 inches long. The small green and white flowers are borne in cymes 2 to 6 inches long.

For previous introduction see 68327.

99709. *ACER CAUDATUM* Wall.

A large tree with dark-gray bark and 5-lobed, red-stemmed leaves from 2 to 5 inches long. The shiny compact moderately hard wood is white with a faint pink tinge. The maple is found in the temperate Himalayas between 7,000 and 11,000 feet altitude.

For previous introduction see 65752.

99710. *ACER HOOKERI* Miquel.

A handsome tree 40 to 50 feet high, with deeply fissured brown bark, native to the Sikkim Himalayas at altitudes between 8,000 and 10,000 feet. The oval leaves, though usually green, are sometimes copper colored. The wood is gray, with small pores and very numerous fine red medullary rays.

For previous introduction see 68328.

99711. *ACER LAEVIGATUM* Wall.

A large tree, up to 40 feet high and 3 to 4 feet in diameter, native to the temperate slopes of the Himalayas in India. The oblong to entire leaves are 2 to 6 inches long, ovate, deeply reticulated, and the panicked cymes of small white flowers appear with the leaves.

For previous introduction see 58903.

99712. *ACER THOMSONI* Miquel.

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.

For previous introduction see 62809.

99713. *ACONITUM LURIDUM* Hook. f. and Thoms. Ranunculaceae. **Monkshood.**

A perennial herb with simple erect stems 2 to 3 feet high, native to the alpine slopes of the Himalayas in India. The palmately five-lobed leaves, 2 to 3 inches across, have coarsely crenate margins, and the dull-red flowers, borne in a simple raceme, have a long straight beak and a broad domelike dorsal prominence.

99714. *ACONITUM* sp. Ranunculaceae. **Monkshood.**

Collected at 12,000 feet altitude.

99715. *ALLIUM WALLICHIANUM* Steud. Liliaceae. **Onion.**

A tall eastern onion, native to Asia, with narrow flat leaves about 3 feet long and purple flower heads.

For previous introduction see 97583.

99716. *ANAPHALIS ROYLEANA* DC. Asteraceae.

A perennial herb, 4 to 6 inches high, slightly woody at the base, native to the alpine slopes of the Himalayas up to 15,000 feet altitude. The sessile linear to oblong leaves are about 1 inch long and woolly beneath, and the small flower heads are densely white tomentose.

99717. *ANEMONE RIVULARIS* Buch.-Ham. Ranunculaceae.

For previous introduction and description see 99652.

99707 to 99759—Continued.

99718. *ARISAEMA SPECIOSUM* (Wall.) Mart.
Araceae.

A perennial herb with an oblique creeping rootstock often 5 inches in diameter, native to the temperate slopes of the Himalayas up to 10,000 feet altitude. The single leaf has a stout green petiole marbled with brown or purple and three slightly cordate leaflets, 16 to 19 inches long, edged with red or purple. The tube of the spathe, 2 to 4 inches long, is striped with purple, and the limb, 2 to 6 inches long, is banded with white and purple. The pink spadix has a threadlike purple tip 12 to 18 inches long.

99719. *ASTER DIPLOSTEPHIOIDES* (DC.) Benth.
Asteraceae.

A perennial herb 2 to 3 feet high, native to the alpine slopes of the Indian Himalayas up to 16,000 feet altitude. The entire lanceolate leaves are 2 to 3 inches long, and the blue to pale-purple flower heads are 1 to 3 inches across and are borne singly.

99720. *ASTER HIMALAICUS* C. B. Clarke. Asteraceae.

A low perennial herb, 12 to 18 inches high, native to the Indian Himalayas up to 15,000 feet altitude. The obovate-spatulate leaves are 1 to 2 inches long, and the lilac-blue flower heads, borne singly at the tips of the stems, are 1 to 2 inches across.

For previous introduction see 47642.

99721. *ASTILBE RIVULARIS* Buch.-Ham. Saxifragaceae.

A perennial herb with tawny hairy stems, 3 to 5 feet high, native to Nepal and western China. The biternate leaves have dentate ovate leaflets 1 to 3 inches long, and the creamy white flowers with pure-white stamens are borne in spikes gathered into large panicles at the top of the stems.

For previous introduction see 73147.

99722. *BUPLEURUM CANDOLLI* Wall. Apiaceae.

A perennial herb 1 to 3 feet high, native to the Himalayas up to 12,000 feet altitude. The linear to ovate leaves, 2 to 5 inches long, are entire, and the small yellow flowers are borne in compound umbels.

99723. *CALAMAGROSTIS EMODENSIS* Griseb. Poaceae.
Grass.

A perennial grass, 3 to 5 feet high, native to northern India up to 8,000 feet altitude. The pale glaucous-green leaves, 12 to 18 inches long, are somewhat leathery, and the soft silky pale-gray nodding panicles are 6 to 10 inches long.

99724. *CALLICARPA RUBELLA* Lindl. Verbenaceae.
Beautyberry.

A shrub or small tree up to 20 feet high, native to India and China. The ovate tomentose leaves are 5 inches long, and the small pink flowers in axillary cymes are followed by purple berries. Collected at 3,000 feet altitude.

99725. *CARYOTA URENS* L. Phoeniceaeae.

Toddy palm.

A palm up to 80 feet high and 18 inches in diameter, with twice pinnately divided leaves 20 feet long by 12 feet wide. The segments are curved and drooping. It is native to the Malay Archipelago.

For previous introduction see 91777.

99726. *CINNAMOMUM IMPRESSINERVIUM* Meisn.
Lauraceae.

An evergreen shrub or small tree with slender branches and silky branchlets, native to the Himalayas up to 6,000 feet altitude. The elliptic-lanceolate leaves, 3 to 5 inches long, have deeply impressed nerves, and the inconspicuous flowers are followed by dark-brown globular fruits less than one-half inch in diameter.

99707 to 99759—Continued.

99727. *CLEMATIS GREWIAEFLORA* DC. Ranunculaceae.

A woody climbing vine with densely tomentose, simply pinnate leaves, native to India. The 3 to 5 broadly cordate leaflets have serrate margins, and the tubular-campanulate tawny yellow flowers are 1 to 2 inches long.

99728. *CLERODENDRUM COLEBROOKIANUM* Walp.
Verbenaceae.

A low shrub, 4 to 8 feet high, with rose-purple or white flowers about an inch long and small blue fruits less than an inch in diameter. It is native to Sikkim and Assam, India, at rather low altitudes and will therefore probably not endure much cold.

For previous introduction see 61600.

99729. *CORTIA HOOKERI* C. B. Clarke. Apiaceae.

For previous introduction and description see 99659.

99730. *CURCULIGO CAPITULATA* (Lour.) Kuntze
(*C. recurvata* Ait.). Amaryllidaceae.

A stemless tuberous-rooted perennial, native to tropical Asia. The lanceolate plaited leaves, 1 to 3 feet long, are recurved, and the star-shaped drooping yellow flowers, about 1 inch across, are borne in dense heads on recurved stalks 3 inches long, covered with soft brown hairs.

99731. *HIEROCHLOE FLEXUOSA* Hook. f. Poaceae.
Grass.

An erect very slender sweet-scented perennial grass, 2 to 3 feet high, native to the Himalayas in Sikkim, India. The leaves are narrowly linear and the lax panicles, 2 to 3 inches long and broad, are made up of much-compressed brown spikelets.

99732. *HYPERICUM OBLONGIFOLIUM* Choisy (*H. cernuum* Roxb.). Hypericaceae. St. Johnswort.

A shrub 3 to 6 feet high, native to the temperate slopes of the Himalayas in India. The sessile ovate-lanceolate leaves are 1 to 3 inches long, and the nodding flowers, 2 inches across, are white on opening, turning light yellow with age.

99733. *IMPATIENS URTICIFOLIA* Wall. Impatientaceae.

A slender herb, 2 to 3 feet high, native to the temperate slopes of the Himalayas up to 12,000 feet altitude in Sikkim, India. The alternate membranous leaves, 4 to 6 inches long, are elliptic-ovate with a long point and have crenate margins. The flowers, nearly an inch in diameter, are yellow with white to purple streaks and are borne in small axillary clusters on slender pedicels.

99734. *INDIGOFERA DOSUA* Buch.-Ham. Fabaceae.
Indigo.

A low shrub with woody branches, covered with short gray or brownish pubescence. The leaves, 1 to 3 inches long, bear leaflets less than an inch long, which are dull green above and glaucous below. The racemes of bright-red flowers are 1 to 3 inches long with lanceolate-cuspidate silky bracts.

For previous introduction see 86679.

99735. *IRIS CLARKEI* Baker. Iridaceae.

Clarke iris.

For previous introduction and description see 99665.

99736. *JUNIPERUS RECURVA* Buch.-Ham. Pinaceae.
Himalayan juniper.

For previous introduction and description see 99666.

99707 to 99759—Continued.

99737. *LACTUCA LESSERTIANA* C. B. Clarke. *Cichoriaceae*.

A perennial herb, native to the temperate alpine slopes of the Himalayas up to 16,000 feet altitude in India. The stems, less than a foot high, are simple and slender or stout with many lateral branches. The membranous leaves, 1 to 8 inches long, vary from nearly entire to deeply pinnatifid, and the blue flower heads, nearly 1 inch long, are in 12- to 24-flowered panicles.

99738. *LOBELIA ROSEA* Wall. *Campanulaceae*.

A stout herb up to 12 feet high, with horizontal branches drooping at the tips, native to the sub-tropical slopes of the Himalayas in India. The narrowly lanceolate leaves, 6 inches long, are velvety above, and the rosy white flowers, nearly an inch long, are in crowded racemes.

99739. *LONICERA GLABRATA* Wall. *Caprifoliaceae*. **Honeysuckle.**

A shrubby climber, native to the temperate Himalayas up to 8,000 feet altitude. The cordate-oblong leathery leaves are 3 to 5 inches long, and the yellow flowers, an inch long, are tinged with purple outside and are followed by black fruits.

99740. *LONICERA TOMENTELLA* Hook. f. and Thoms. *Caprifoliaceae*. **Honeysuckle.**

A white-flowered honeysuckle, native to the interior valleys of the mountain region of north-eastern India, where it forms a shrub 10 to 12 feet high. The leaves are dark dull green, and the paired flowers hang from the axils of the leaves. The blue-black berries are about the size of peas.

For previous introduction see 47709.

99741 to 99743. *MEIBOMIA* spp. *Fabaceae*.

99741. *MEIBOMIA GYROIDES* (DC.) Kuntze (*Desmodium gyroides* DC.).

A shrubby leguminous plant 8 to 10 feet high, native to the warmer parts of the central and eastern Himalayas. It has pubescent leaves and terminal racemes of red-purple flowers.

For previous introduction see 77297.

99742. *MEIBOMIA HETEROCARPA* (L.) Kuntze (*Desmodium polycarpum* DC.).

An erect or suberect undershrub found throughout the Himalayas and Burma. All of the bushy species of this genus are said to contain good fibers, used in some cases for paper making.

For previous introduction see 94078.

99743. *MEIBOMIA TILIAEFOLIA* (D. Don.) Kuntze (*Desmodium tiliaefolium* Don.).

A hardy and more or less ornamental deciduous shrub with slender terete branches, thick green trifoliate leaves about 4 inches long, and red flowers in lax racemes often a foot long. The bark yields an excellent fiber which is used in rope making, the leaves are good fodder, and the roots are used medicinally as a tonic and diuretic. It is native to the Himalayas from 3,000 to 9,000 feet altitude.

For previous introduction see 93194.

99744. *OPHIOPOGON INTERMEDIUS* D. Don. *Liliaceae*.

A hardy perennial, indigenous to Ceylon, with grasslike leaves and white flowers. It reaches a height of about 1 foot and is suited to moist shady places.

For previous introduction see 91823.

99707 to 99759—Continued.

99745. *OXYSPORA PANICULATA* (D. Don.) DC. *Melastomaceae*.

A large spreading Himalayan shrub with opposite ovate leaves 5 inches long and large loose panicles of rose-purple flowers.

For previous introduction see 76907.

99746. *PAEDERIA FOETIDA* L. *Rubiaceae*

A slender attractive-looking climbing vine with glabrous ovate or lanceolate leaves on long petioles. The small pink flowers are in branching cymes. Native to India and the Malay Archipelago. The leaves or any part of the plant when bruised emit a most offensive odor.

For previous introduction see 41876.

99747. *PARNASSIA NUBICOLA* Wall. *Saxifragaceae*.

A perennial herb, 4 to 19 inches high, native to temperate and alpine slopes of the Himalayas up to 12,000 feet altitude. The 1 to 3 leaves are cordate-oblong, and the white flowers, an inch across, are borne singly.

99748. *PHOENIX RUPICOLA* T. Anders. *Phoenicaceae*. **Cliff date palm.**

A Himalayan palm with a solitary slender naked stem 15 to 20 feet high, bright-green leaves 10 feet long, and shining yellow oblong fruits.

For previous introduction see 76412.

99749. *PHYLLANTHUS EMBLICA* L. *Euphorbiaceae*. **Nelli.**

A small tree with slender branches bearing numerous linear 2-ranked leaves about one half inch long. The globose fruits are used as a purgative when raw or are cooked to make an acid sauce. Native to tropical Asia.

For previous introduction see 92925.

99750. *PHYLLANTHUS WIGHTIANUS* Muell. Arg. *Euphorbiaceae*.

A shrub with long spreading upcurved branches, native to India. The membranous oblique leaves are pale green above and glaucous beneath, and the solitary inconspicuous flowers are followed by small globular capsules covered with rusty bristles.

99751. *PRIMULA* sp. *Primulaceae*. **Primrose.**

Collected at 6,000 feet altitude.

99752. *SAXIFRAGA PURPURASCENS* Hook. f. and Thoms. *Saxifragaceae*. **Saxifrage.**

A beautiful herbaceous rock plant, native to the temperate regions of the Sikkim Himalayas between 10,000 and 14,000 feet altitude. The bright glossy green leaves are elegantly margined with red, and the scape and inflorescence are deep bright vinous red-purple.

For previous introduction see 63662.

99753. *SPIRAEA MICRANTHA* Hook. f. *Rosaceae*.

A very attractive shrub of rather lax habit found in the eastern temperate Himalayas between 6,000 and 10,000 feet altitude. The narrowly ovate, doubly toothed leaves are sometimes 7 inches long, and the small pale-pink flowers are borne in very long spreading panicles.

For previous introduction see 55705.

99754. *STYRAX HOOKERI* C. B. Clarke. *Styracaceae*. **Snowbell.**

A tree often 40 feet high, native to Sikkim and Bhutan, between 6,000 and 7,000 feet altitude. The white flowers, 1 inch long, are tomentose

99707 to 99759—Continued.

outside and the young branches are stellate-pubescent. The wood is white, close grained, and moderately hard.

For previous introduction see 86686.

99755. *SWERTIA CHIRAYITA* (Roxb.) Karst. (*S. chirata* Buch.-Ham.). Gentianaceae.

A tall herbaceous plant, native to India, with stems 2 to 5 feet high and subsessile leaves 2 to 4 inches long. The lurid green-yellow flowers, in large panicles, are tubular, with purple-veined lobes one-fourth inch long; they have two glandular depressions at the base of each lobe, with a fringe of long white or pink hairs at the summit.

99756. *SYMFLOCOS SUMUNTIA* Buch.-Ham. Sympllocaceae. Sweetleaf.

A small evergreen tree, native to the lower slopes of the Himalayas up to 7,000 feet altitude. The leathery oblong-lanceolate leaves, with crenate margins, are 3 to 5 inches long, and the small white flowers, borne in racemes 1 to 2 inches long, are followed by ovoid-cylindrical fruits less than one-half inch long.

99757. *THUNBERGIA LUTEA* T. Anders. Acanthaceae.

A slender perennial vine, native to the lower Himalayas up to 7,000 feet altitude. The ovate to lanceolate leaves are 6 inches long with toothed margins, and the funnel-shaped yellow flowers, 1 to 2 inches across, are in small axillary clusters.

99758. *TRACHYCARPUS MARTIANUS* (Wall.) Wendl. Phoenicaceae. Martius palm.

A slender-trunked fan-leaved palm from the temperate regions of the Himalayas where it grows to a height of 20 to 50 feet. The unarmed trunk bears at its summit a crown of rigid leathery roundish leaves 4 to 5 feet in diameter which are cut about halfway down into narrow two-lobed segments. The yellow flowers followed by blue fruits are borne on a nodding spadix about a foot in length.

For previous introduction see 55706.

99759. *XOLISMA OVALIFOLIA* (Wall.) Rehder. Ericaceae.

A shrub or small tree with ovate or somewhat oblong leathery leaves 3 to 6 inches long and racemes of white or bluish or sometimes flesh-colored flowers. Because of a poisonous principle, the young leaves and buds are useful as an insecticide.

For previous introduction see 68341.

99760 to 99771. *MANGIFERA INDICA* L. Anacardiaceae. Mango.

From Puerto Rico. Bud sticks presented by Edmund H. Twest, specialist in fruits, Insular Experiment Station, Rio Piedras. Received June 7, 1932.

A collection of mangoes introduced for the use of Department specialists working with fruit breeding.

99760. *Barsha*. No. 407.

99761. *Bombay Yellow*. No. 402.

99762. *Climoise*. No. 3320.

99763. *Divine*. No. 1822.

99764. *Emiria*. No. 205.

99765. *Kachmahua*. No. 3317.

99766. *Kistapal*. No. 101.

99767. *Martinique*. No. 1511.

99768. *Muller*. No. 2412.

99769. *Nucka*. No. 3418.

99770. *Singapur*. No. 1215.

99771. *Surka*. No. 3117.

99772 to 99789.

From Peru, South America. Seeds collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received May 19, 1932.

99772. *ASCLEPIAS CURASSAVICA* L. Asclepiadaceae. Bloodflower.

No. 216. From Rio Colorado, near Merced, April 28, 1932. An ornamental herb 3 feet high with red and yellow flowers, found on a wooded river bank at 2,800 feet altitude.

For previous introduction see 50678.

99773. *CANNA* sp. Cannaceae.

No. 203. From Rio Colorado, near Merced, April 16, 1932, at 2,800 feet altitude. A rare ornamental herb, 3 feet high, with red flowers. Found in black loam.

99774. *CAPSICUM ANNUM L.* Solanaceae. Common redpepper.

No. 208. *Aji*. From Rio Colorado, near Merced, April 16, 1932. A locally grown redpepper found in open black soil at 2,800 feet altitude. The almost round purple fruits, over an inch in diameter, are used by the Chuncho Indians.

99775. *CAPSICUM ANNUM L.* Solanaceae. Common redpepper.

No. 232. *Aji*. From the market at Tarma, April 23, 1932. A mixed sample of cultivated redpeppers grown at 10,000 feet altitude. The sample varied both as to color and shape.

99776. *CHAMAEDOREA* sp. Phoenicaceae. Palm.

No. 200. *Shia-Shia*. From Rio Colorado, near Merced, in the shade of the forest at 2,800 feet altitude, April 16, 1932. A liane with yellow flowers which are followed by dark-blue berries. The male flowers are very fragrant and are used as a perfume for clothing in the same manner as lavender is used.

99777. *CROTALARIA* sp. Fabaceae.

No. 215. From a wooded slope at 2,800 feet altitude in Rio Colorado, near Merced. An ornamental shrub 3 feet high.

99778. *CYPHOMANDRA BETACEA* (Cav.) Sendt. Solanaceae. Tree-tomato.

No. 263. *Tomaté*. Purchased in the market at Huancayo, April 24, 1932, but grown at 10,000 feet altitude. An ellipsoid, pointed, thick-skinned, maroon-colored fruit.

99779. *ERYTHROXYLON COCA* Lam. Erythroxylaceae. Cocaine-tree.

No. 197. *Coca*. From Rio Colorado, near Merced, at 2,800 feet altitude, April 16, 1932. A tropical shrub, native to Peru, 5 to 6 feet high, with rusty brown slender branches bearing clusters of obovate leaves at their tips. The yellowish flowers are borne in clusters of 3 to 5 in the axils of small scales which line the branchlets. It is grown commercially on a large scale throughout the warmer parts of South America, also in Java and Ceylon, for the sake of cocaine, which is extracted from the dried leaves.

For previous introduction see 78509.

99780. *INDIGOFERA SUFFRUTICOSA* Mill. Fabaceae. Indigo.

No. 199. *Añil*. From Rio Colorado, near Merced, April 16, 1932, at 2,800 feet altitude. A shrub 10 feet high growing in black loam and said to have escaped from cultivation.

For previous introduction see 98996.

99781. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

No. 209. *Tomaté*. From Rio Colorado, near Merced, April 16, 1932. A small red round tomato about an inch in diameter, cultivated by the Chuncho Indians at 2,800 feet altitude.

99772 to 99789—Continued.

99782. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

No. 233. *Tomaté*. Purchased in the market at Tarma, April 23, 1932. A small round red local variety, cultivated by the Indians at 10,000 feet altitude.

99783. *PASSIFLORA MOLLISSIMA* (H. B. K.) Bailey. Passifloraceae. Softleaf passionflower.

No. 264. *Tumbo*. Purchased in the market at Huancayo, Peru, April 24, 1932, but said to have been grown at 10,800 feet altitude. An edible variety with yellow elliptical pointed fruits.

99784. *ROLLINIA* sp. Annonaceae.

No. 206. From Rio Colorado, near Merced, in a tropical rain forest at 2,800 feet altitude, April 16, 1932. A native tree 40 to 50 feet high, with fruits 6 inches in diameter.

99785. *SOLANUM* sp. Solanaceae.

No. 196. Between Lima and Oroya, at 7,800 feet altitude, April 12, 1932. An herb 3 feet high, growing in open sandy soil. The lavender flowers are followed by berries on reflected peduncles.

99786. *COSMOS SULPHEREUS* Cav. Asteraceae. Yellow cosmos.

No. 207. From Rio Colorado, near Merced, in a tropical rain forest, at 2,800 feet altitude, April 16, 1932. An herb 3 feet high with showy yellow flowers.

For previous introduction see 51925.

99787. *ALONSOA ACUTIFOLIA* Ruiz and Pav. Scrophulariaceae.

No. 217. *Shohompay*. From the Hacienda Makko, near Tarma, at 11,500 feet altitude, in open alpine meadow, April 20, 1932. An ornamental herb, 2 feet high, with orange flowers; common at this altitude.

99788. (Undetermined.)

No. 214. From the Hacienda Makko, near Tarma, at 12,000 feet altitude, in alpine meadow, April 19, 1932. An herb 3 feet high, covered with bristles, which irritate the skin, as does the nettle. The drooping yellow flowers are very ornamental.

99789. (Undetermined.)

No. 220. From Rio Colorado, near Merced, on a wooded shady slope at 2,800 feet altitude, April 19, 1932. An ornamental herb with ultramarine blue berries.

99790 to 99792. *PHASEOLUS LUNATUS* L. Fabaceae. Lima bean.

From Cuba. Seeds presented by Mrs. F. S. Earle, Herradura. Received April 19, 1932.

Introduced for comparison with the varieties now being grown on the Pacific coast.

99790. A perennial bean with small white seeds.

99791. The commercial bean of this region.

99792. A locally grown speckled perennial lima bean.

99793 to 99801. *MANGIFERA INDICA* L. Anacardiaceae. Mango.

From Puerto Rico. Bud sticks presented by Edmund H. Twight, specialist in fruits, Insular Experiment Station, Rio Piedras. Received June 8, 1932.

A collection of mangoes introduced for the use of Department specialists working with fruit breeding. Except *Colombo Kidney*, all of the following are local selections. Most of them came from the island of Vieques and were probably originally from Martinique.

99793 to 99801—Continued.

99793. *Bayamon*. 99798. *Playa Grande*.

99794. *Colombo Kidney*. 99799. *Reine Amelie*.

99795. *Del Valle*. 99800. *Sorce*, No. 2.

99796. *Julie*. 99801. *Teté Nene*.

99797. *Lequillo*.

99802 to 99805.

From the Society Islands. Plants presented by Harrison W. Smith, Papeari, Tahiti. Received June 9, 1932.

99802 to 99804. *MANGIFERA INDICA* L. Anacardiaceae. Mango.

99802. *Brander mango*. A dwarf fruit with very small seed. This variety was previously called the *Rougier mango*.

99803. *Mission mango*. A beautiful, very sweet fruit. Its name is due to the fact that one of the Brothers at the mission has chiefly propagated it, and perhaps the original tree is in the mission grounds.

99804. *Tuehau mango*. This is considered, by some, the best and richest flavored mango of the islands, and it is said to come true from seed.

99805. *PERSEA AMERICANA* Mill. Lauraceae. Avocado.

Arue avocado.

99806. *PHASEOLUS LUNATUS* L. Fabaceae. Lima bean.

From Cuba. Seeds presented by Mrs. F. S. Earle, Herradura. Received June 6, 1932.

A white lima bean, grown in Cuba for export. Introduced for comparison with the varieties now being grown on the Pacific coast.

99807 and 99808.

From British Guiana. Seeds presented by Mr. Martyn, botanist, Georgetown Botanic Garden, through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received June 6, 1932.

99807. *BRADBURYA PLUMIERI* (Turp.) Kuntze (*Centrosema plumieri* Turp.). Fabaceae.

A tropical ornamental vine, native to Brazil, with white and red flowers. It is of value as green manure.

For previous introduction see 91467.

99809. *NAUCLEA ESCULENTA* (Afzel.) Merr. (*Sarcoccephalus esculentus* Afzel.). Rubiaceae.

A scandent shrub or a tree up to 25 feet high, native to tropical Africa. The sharp-pointed elliptical leaves are 2 to 8 inches long, and the white, yellowish, or pale-pink fragrant flowers are in dense heads. The fruiting head, 2 to 4 inches in diameter, is deep red with a brown granulated surface and a solid edible core which occupies about a quarter of the diameter.

99809. *MEIBOMIA* sp. Fabaceae.

From the Seychelles Islands. Seeds presented by P. R. Dupont, director, Department of Agriculture. Received June 6, 1932.

Introduced for the use of Department forage-crop specialists.

99810 to 99818. *PHASEOLUS LUNATUS* L. Fabaceae. Lima bean.

From the Canal Zone. Seeds presented by J. E. Higgins, director, Canal Zone Experiment Gardens, Summit. Received June 6, 1932.

A collection of lima-bean types grown in Panama, introduced for comparison with the types now being grown on the Pacific coast.

99810 to 99818—Continued.

99810. A small red bean blotched with light gray.
 99811. A gray bean three-fourths inch long, heavily blotched with black around the edge.
 99812. A small bean mottled tan gray and black.
 99813. A medium-sized gray and light-brown bean, slightly mottled with black.
 99814. A small light-gray bean with a black line around the hilum.
 99815. A red bean blotched with light gray, very similar to 99810, but smaller.
 99816. A medium-sized gray and tan bean slightly mottled with black.
 99817. A medium-sized gray and black bean slightly mottled with brown.
 99818. A gray bean, three-fourths inch long, with a black blotch around the hilum and marked with black and brown around the edge.

99819 to 99822.

From Africa. Seeds presented by D. C. Edwards, Scott Agricultural Laboratories, Department of Agriculture, Nairobi, Kenya. Received June 6, 1932.

Introduced for the use of Department forage-crop specialists.

99819. *CROTALARIA AGATIFLORA* Schweinf. f. Fabaceae.

For previous introduction see 66039.

99820. *CROTALARIA DILLONIANA* Baker. Fabaceae.

For previous introduction see 64535.

99821. *LUPINUS MUTABILIS* Sweet. Fabaceae. South American lupine.

For previous introduction see 88274.

99822. *LUPINUS LUTEUS* L. Fabaceae. European yellow lupine.

For previous introduction see 88271.

99823 to 100103.

From China. Seeds collected by the sixth Forrest expedition, 1930-32, to southwestern China and presented by Maj. Lionel de Rothschild, London, England. Received June 9, 1932.

99823. *ABIES GEORGEI* Hort. Pinaceae. Fir.

A name for which a place of publication and a description have not been found.

99824 to 99827. *ACER* spp. Aceraceae. Maple.

99824. *ACER FRANCHETI* Pax.

F. 30491. A small tree about 15 feet high, native to central China. The light-green leaves, 3 to 4 inches long, have three broadly ovate remotely toothed lobes, and the small flowers, in short pubescent racemes appearing with the leaves, are followed by winged fruits, spreading at nearly right angles and having hairy nutlets.

99825. *ACER LAXIFLORUM* Pax.

F. 30462. Received as *A. jorrestii*, which is now considered the same as *A. laxiflorum*.

99826. *ACER LAXIFLORUM* Pax.

F. 30631. A tree up to 50 feet high, with cordate-oblong leaves 4 inches long, having 2 to 4 short lobes near the base and serrate margins. The yellowish flowers are borne in slender pendulous racemes and are followed by fruits spreading at right angles. It is native to western China.

For previous introduction see 93373.

99823 to 100103—Continued.

99827. *ACER* sp.

F. 30462.

99828. *ALLIUM* sp. Liliaceae. Onion.

F. 30944. Related to *A. prattii*.

99829 to 99834. *ANDROSACE* spp. Primulaceae. Rock jasmine.

99829. *ANDROSACE DELAVAYI* Franch.

G. F. 55. A caespitose perennial native to Yunnan, where it grows at an altitude of 13,000 feet near the zone of perpetual snow. The leaves are broadly cuneate-obovate, about one eighth of an inch long, and the white or rosy flowers are one third of an inch across.

99830 to 99833. *ANDROSACE SPINULIFERA* (Franch.) Kunth.

A low, densely hairy perennial herb with primrose-like flowers; native to China. The linear-obovate leaves, 3 inches long, are in rosettes, and the numerous purple flowers are in dense clusters on scapes 10 inches high.

99830. G. F. 40. 99832. G. F. 30323.

99831. G. F. 385. 99833. G. F. 30329.

99834. *ANDROSACE* sp.

G. F. 44. Related to *A. chamaejasme*.

99835 to 99840. *ASTER* spp. Asteraceae.

99835. *ASTER STATICEFOLIUS* Franch.

F. 30625. An aster from high altitudes in southwestern China. The stems, about a foot long, are often decumbent, and the oblong-spatulate leaves are more or less basal. The flower heads have yellow disk flowers and violet-blue rays.

99836. *ASTER* sp.

F. 30627.

99837. *ASTER* sp.

F. 30636.

99838. *ASTER* sp.

F. 30637.

99839. *ASTER* sp.

F. 30644.

99840. *ASTER* sp.

F. 30659.

99841. *ASTILBE RUBRA* Hook. f. and Thoms. Saxifragaceae.

F. 30438. A perennial herb 4 to 6 feet high, native to India, with stems and leaves covered with long fulvous hairs. The biternate leaves have obliquely cordate-ovate leaflets 1 to 3 inches long, and the small rose-red flowers are borne in robust panicles.

99842. *CANNA INDICA* L. Cannaceae.

F. 30949.

99843. *CASSIOPE FASTIGIATA* (Wall.) D. Don. Ericaceae.

F. 30488. A beautiful free-flowering alpine shrub about 9 inches high, found in shady situations in moist, peaty, well-drained soil between 11,000 and 13,000 feet altitude. The tiny leaves are imbricated in four rows, giving the stem a four-sided appearance, and have white membranous ciliated margins. The solitary, white, bell-shaped flowers have the corolla segments recurved, showing the pink center and curious awned stamens like those of the arbutus.

For previous introduction see 49623.

99823 to 100103—Continued.

99544. *CASSIOPE SELAGINOIDES* Hook. f. and Thoms. Ericaceae.

F. 30651. A species which closely resembles *C. fastigiata*, but is readily distinguished by the much more slender stems and the longer pedicels. It is native to the alpine slopes of the Himalayas in Sikkim, India, between 10,000 and 13,000 feet altitude.

99845. *CLETHRA DELAVAYI* Franch. Clethraceae.

F. 30518. A Chinese shrub or small tree up to 50 feet high with red branchlets and oblanceolate leaves which are pubescent beneath. The fragrant white flowers differ from those of the American summersweet (*Clethra alnifolia*) in having red calyxes and in being in solitary axillary racemes, while the summersweet has the racemes grouped together to form a panicle.

For previous introduction see 78372.

99846. *CODONOPSIS MACROCALYX* Diels. Campanulaceae.

F. 30943. A twining shrub, 1 to 2 feet high, with membranous, ovate, irregularly crenate leaves 1 to 2 inches long. The green flowers, tinged with maroon at the base, are less than an inch long. Native to the high mountains of southwestern China.

99847. *CODONOPSIS TUBULOSA* Kom. Campanulaceae.

F. 30505. A twining perennial, native to grassy meadows in the mountains of Yunnan at 7,000 feet altitude. The nearly sessile leaves are ovate-lanceolate, and the small tubular white flowers are solitary on very short peduncles.

99848. *COLURIA ELEGANS* Cardot. Rosaceae.

F. 30654. An alpine perennial, with a basal rosette of finely cut pinnate leaves 3 to 4 inches long and yellow flowers, nearly an inch across, on stems up to 8 inches high. Native to alpine meadows in Yunnan.

99849. *CORNUS CONTROVERSA* Hemsl. Cornaceae.
Giant dogwood.

F. 30457. This Chinese dogwood is one of the most striking of the genus; in its native home it sometimes becomes a tree 60 feet in height with a trunk 7 feet in girth. The numerous long branches extend at right angles to the trunk, with the lowest sometimes touching the ground. The white or slightly yellow flowers are in flat clusters 6 or 7 inches in diameter, appearing from late May to early June. As fast as they ripen, the black shining fruits which follow are eaten by birds.

For previous introduction see 90789.

99850. *COTONEASTER* sp. Malaceae.

F. 30634. Closely related to *C. acuminata*.

99851 to 99855. *CREMANTHODIUM* spp. Asteraceae.

99851. *CREMANTHODIUM CAMPANULATUM* (Franch.) Diels.

F. 30450. A low hairy perennial alpine with thick long-stemmed reniform basal leaves somewhat 7- to 10-lobed and small linear stem leaves. The tubular yellow flowers are in nodding heads. Native to Yunnan.

99852 to 99854. *CREMANTHODIUM RHODOCEPHALUM* Diels.

An alpine composite, 3 to 9 inches tall, with long-stemmed, rounded-reniform leaves, purple beneath, and gray-pink ray florets. Native to limestone cliffs in Yunnan.

99852. F. 30448.

99854. F. 30523.

99853. F. 30511.

99855. *CREMANTHODIUM* sp.

F. 30507.

99823 to 100103—Continued.

99856. *CYANANTHUS LONGIFLORUS* Franch. Campanulaceae.

F. 30947. A many-stemmed perennial form about 8 inches high, having lanceolate entire leaves with revolute margins, and sky-blue tubular flowers nearly 2 inches long. Native to Yunnan.

99857. *DIAPENSIA PURPUREA* Diels. Diapensiaceae.

F. 30497. A low caespitose bushy evergreen shrub with small leathery glabrous oblong-spatulate leaves less than an inch long and small rose-purple flowers. Native to western China.

Forma *albida*; a white-flowered form.

99858 to 99860. *DIDISSANDRA* spp. Gesneriaceae.

99858. *DIDISSANDRA GRANDIS* Craib.

F. 30611. A perennial herb about 10 inches high, with a rhizome half an inch thick. The flat leathery lanceolate leaves 2 to 4 inches long are in a rosette. The purple-blue and white flowers, less than an inch long, are in small clusters on stalks 6 inches high. Native to rocky places on the Chungtien Plateau, southwestern China.

For previous introduction see 93888.

99859 and 99860. *DIDISSANDRA SERICEA* Craib.

A rock plant with blue flowers and leaves forming rosettes.

For previous introduction see 83982.

99859. F. 30609.

99860. F. 30615.

99861. *DIPLARCHE MULTIFLORA* Hook. f. and Thoms. Ericaceae.

F. 30453. A low alpine shrub native to the Sikkim Himalayas in India, at an altitude of 11,000 feet. The crowded leathery linear-oblong leaves are less than one fourth of an inch long, and the small tubular rosy flowers are borne in dense clusters of 8 to 20 at the ends of the branches.

99862 and 99863. *ENKIANTHUS DEPLEXUS* (Griffith) C. Schneid. Ericaceae.

The whorled branches of this Himalayan shrub are characteristic of the entire genus and give the plant a peculiar appearance. The branchlets are red, and the margins and petioles of the obovate leaves, 1 to 3 inches long, are red when the leaves are young. The flowers, produced in dense drooping racemes, have yellow corollas, striped dark red with darker lobes.

For previous introduction see 93207.

99862. F. 30464.

99863. F. 30465.

99864. *EUPTLEA PLEIOSPERMA* Hook. f. and Thoms. Trochodendraceae.

F. 30481. A tree 30 to 40 feet high, native to Tibet, with ovate-crenate leaves which are glaucous beneath and have very long acuminate tips. The slender-stalked, red flowers, in axillary fascicles, appear before the leaves.

For previous introduction see 94002.

99865 to 99875. *GENTIANA* spp. Gentianaceae.
Gentian.

99865. *GENTIANA DETONSA* Rottb.

G. F. 65. A biennial gentian, with a very short stem and oblong leaves arranged more or less in a basal rosette. The flowers, borne singly, are deep blue with the corolla lobes waxy at the tips. It is native to the cold regions of northwestern China and is related to *G. crinita*.

For previous introduction see 79237.

99823 to 100103—Continued.

99866 and 99867. *GENTIANA PHYLLCALYX* C. B. Clarke.

A low alpine herb, 1 to 5 inches high, native to the slopes of the Himalayas in Sikkim, India, between 13,000 and 15,000 feet altitude. The obovate leaves are less than an inch long, and the tubular blue flowers, 1 to 2 inches long, are inflated in the middle and contracted at the mouth.

99866. G. F. 58. 99867. G. F. 59.

99868 and 99869. *GENTIANA STYLOPHORA* C. B. Clarke.

For previous introduction and description see 99663.

99868. G. F. 61. 99869. F. 30766.

99870. *GENTIANA* sp.

G. F. 62.

99871. *GENTIANA* sp.

G. F. 63. Related to *G. phyllocalyx*.

99872. *GENTIANA* sp.

G. F. 64 (Chungtien).

99873. *GENTIANA* sp.

F. 30596. An annual.

99874. *GENTIANA* sp.

F. 30601. An annual.

99875. *GENTIANA* sp.

F. 31008. Closely related to *G. microdonta*.

99876. *ILEX VENULOSA* Hook. f. Aquifoliaceae.
Holly.

F. 30479. A handsome tree native to the Khasia Hills in India. The elliptic-oblong glabrous leaves, 5 to 8 inches long, are abruptly contracted at the tip into a taillike appendage nearly 2 inches long. The crowded green-white flowers are followed by small red fruits.

99877. *INCARVILLEA GRANDIFLORA BREVIPES* Sprague. Bignoniaceae.

F. 30655. A low perennial herb native to Yunnan, China. The pinnately divided leaves, 1 foot long, are made up of ovate, nearly entire segments, and the brilliant-crimson, trumpet-shaped flowers, 2 to 3 inches long, are borne in clusters of 8 to 12 on scapes a foot high.

99878. *INCARVILLEA LUTEA* Bur. and Franch. Bignoniaceae.

F. 30642. A perennial herb native to southwestern China at altitudes between 10,000 and 12,000 feet. The long-petioled radical leaves, 8 to 15 inches long, are pinnately divided into broad-lanceolate crenate segments, and the pendulous yellow flowers, 2 inches across, are borne in clusters of 6 to 20 on scapes 2 to 4 feet high.

For previous introduction see 59418.

99879. *INULA HOOKERI* C. B. Clarke. Asteraceae.

F. 30439. A simple or branched perennial herb native to the Sikkim Himalayas in India between 7,000 and 10,000 feet altitude. The shaggy stem is 1 to 2 feet high, with elliptic-lanceolate membranous leaves 3 to 5 inches long and terminal clusters of 1 to 3 sunflowerlike heads 1 to 2 inches across.

99880 to 99882. *IRIS* spp. Iridaceae.

99880. *IRIS CHRYSOPHAGES* Dykes.
Goldvein iris.

F. 30516. One of the handsomest of the beardless irises: the velvety dark-purple flowers are

99823 to 100103—Continued.

brightened by golden reticulations at the throat, running into a signal patch in the blade.

For previous introduction see 93902.

99881. *IRIS FORRESTERI* Dykes. Yunnan iris.

F. 30626. An iris native to the Likiang Mountains, in Yunnan, between 12,000 and 13,000 feet altitude. The stem, 12 to 18 inches high, bears a single head of two flowers, although a lateral flowered branch sometimes develops. The short haft bears two central lines and broken lateral veins of brown-purple on a clear yellow ground. The oblong, ovate blade of the falls is often very long and drooping, of a clear lemon-yellow which becomes deeper around the end of the style branches, and is there marked with brown-purple veins. The oblanceolate yellow blade of the standards narrows to a deeply channeled yellow haft, shorter than the falls and slightly divergent. The broad, short-keeled deep-yellow styles, often discolored with purple, curve down onto the falls.

For previous introduction see 66577.

99882. *IRIS DELAVAYI* Micheli. *Delavay iris*.

F. 30662. An iris 2 to 4 feet high, with violet and white flowers. Native to southwestern China.

For previous introduction see 91431.

99883. *ISOPYRUM GRANDIFLORUM* Fisch. Ranunculaceae.

F. 30629. A low alpine perennial herb native to the western Himalayas in India at altitudes between 13,000 and 17,000 feet. The densely tufted radical leaves, 3 to 4 inches long, are finely ternately divided into cuneate-obovate lobes, and the solitary white flowers, an inch across, are borne on scapes 3 to 4 inches high.

99884 to 99903. *LILIUM* spp. Liliaceae. Lily.

99884 to 99886. *LILIUM BAKERIANUM DELAVAYI* (Franch.) Wilson.

A bell-shaped lily native to alpine meadows between 8,500 and 11,500 feet altitude in Yunnan. The stems are 2 to 3 feet high, the sessile leaves, 2 to 3 inches long, are linear to lanceolate, and the fragrant nodding cream-white flowers, 2 to 4 inches long, are heavily spotted and splashed with reddish purple on the inside.

99884. F. 30167. 99886. F. 30181.

99885. F. 30172.

99887 and 99888. *LILIUM BROWNII COLCHESTERI* Wilson.

A trumpet-flowered lily, native throughout China from sea level to an altitude of 5,000 feet, often cultivated for the bulbs, which are considered a table delicacy. The stems are 3 to 4 feet high, and the fragrant flowers, 4 to 6 inches long, are rose purple outside and creamy white inside, with the reflexed ends of the segments pure white.

99887. F. 29898. 99888. F. 30144.

99889 to 99891. *LILIUM DUCHARTREI* Franch.

A lily of the section Martagon, native to alpine and subalpine regions of western China. The stems are 2 to 5 feet high, the scattered lanceolate leaves are 2 to 4 inches long, and the fragrant nodding marble-white flowers, spotted and lined with vinous purple, are borne in umbels of 1 to 12.

99889. F. 30138. 99891. F. 30162.

99890. F. 30140.

99892 and 99893. *LILIUM GIGANTEUM* Wall.
Giant lily.

For previous introduction and description see 98740.

99892. F. 30151. 99893. F. 30168.

99823 to 100103—Continued.

99894. *LILIUM GIGANTEUM* YUNNANENSE Leichtlin.

F. 30143. A variety characterized by the dark stem, the horizontally spread leaves often tinged and blotched with brown purple, and the horizontally disposed flowers which are pure white outside. It is native to shady ravines and moist woods on the mountains of Hupeh and Yunnan.

99895 and 99896. *LILIUM HYACINTHINUM* Wilson.

An alpine lily, native to western China at altitudes between 10,000 and 12,000 feet. The stout erect shining-green stems are 3 to 4 feet tall, the scattered oblong-lanceolate leaves are 6 to 8 inches long, and the slightly fragrant, rose-lilac, funnel-shaped flowers, 1 to 2 inches long, are borne in racemes of 12 to 24.

99895. F. 29923. 99896. F. 30157.

99897 and 99898. *LILIUM NEPALENSE BURMANICUM* W. W. Smith.

A tall lily, 5 to 8 feet high, having a perianth intermediate between the Martagon and Eulirion sections and heavily blotched inside with purple.

For previous introduction see 95621.

99897. F. 29943. 99898. F. 29944.

99899. *LILIUM OCHRACEUM* Franch.

F. 30145. A rare and beautiful lily from Burma, not hardy in England except in the most favorable districts; it is an admirable cool greenhouse plant. This is a very variable species, producing flowers which range in color from deep golden yellow to pale yellow stained in varying degrees with deep wine purple.

For previous introduction see 95622.

99900 to 99902. *LILIUM TALIENSE* Franch.

A Martagon lily native to subalpine meadows in western China between 9,000 and 11,000 feet altitude. The stout gray-green stems, 3 to 5 feet high, are clothed with dense white scabrid pubescence, and the linear to lanceolate leaves are 2 to 4 inches long. The fragrant nodding purple-spotted white flowers, 2 inches long, are in subverticillate clusters of 2 to 12.

99900. F. 30156. 99902. F. 30176.

99901. F. 30161.

99903. *LILIUM* sp.

G. F. 68.

99904. *LONICERA HENRYI* Hemsl. Caprifoliaceae.
Henry honeysuckle.

F. 30477. A vine, native to western China, with long dark-green leaves and axillary clusters of odorless flowers which are rose colored when they first open, but soon change to orange-red.

For previous introduction see 93909.

99905. *MAGNOLIA INSIGNIS* Wall. Magnoliaceae.

F. 30508. A large tree, native to India, with lanceolate coriaceous leaves 8 inches long and fragrant pink flowers followed by bright-purple fruits 3 to 4 inches long.

For previous introduction see 95624.

99906. *MALUS YUNNANENSIS* (Franch.) C. Schneid. Malaceae. Apple.

F. 30476. A tree up to 30 feet high, native to western China. The slightly cordate-ovate leaves, 3 to 6 inches long, are sharply doubly serrate, sometimes with 3 to 5 pairs of short lobes, and are tomentose beneath. The small white flowers are in dense clusters 2 inches across and are followed by subglobose red fruits one-half inch in diameter. The leaves turn orange and scarlet in the autumn.

99823 to 100103—Continued.

99907. *MALUS* sp. Malaceae. Apple.

F. 30485 (near *M. theifera*).

99908 to 99943. *MECONOPSIS* spp. Papaveraceae.

99908 to 99910. *MECONOPSIS CONCINNA* Prain.

An attractive little alpine biennial with a rosette of small narrow deep-green leaves and deep purple-blue flowers nearly an inch across on numerous slender scapes 3 to 6 inches high. Native to southwestern China at high altitudes.

99908. F. 30088.

99910. F. 30113.

99909. F. 30106.

99911. *MECONOPSIS DELAVAYI* Franch.

F. 30080. A poppylike annual 6 to 10 inches high, with large drooping indigo-blue flowers; found in moist meadows on gravelly slopes between 11,000 and 12,500 feet altitude, usually in small groups or clumps.

For previous introduction see 58425.

99912 and 99913. *MECONOPSIS EXIMIA* Prain.

A very handsome poppylike biennial with nodding deep-blue-purple flowers with anthers of grayish yellow. It is found in open stony pastures in southwestern China at altitudes between 12,000 and 14,000 feet.

99912. F. 30084.

99913. F. 30085.

99914. *MECONOPSIS FORRESTII* Prain.

F. 30107. An alpine herb from southwestern China, covered throughout with yellow bristles. The small pale-green leaves are all basal, and the pale-blue flowers are in racemose cymes.

99915 to 99923. *MECONOPSIS HORRIDULA* Hook. f. and Thoms.

A low alpine perennial herb, native to the Sikkim Himalayas in India at altitudes between 14,000 and 17,000 feet. The lanceolate, nearly entire, prickly leaves are 3 to 5 inches long, and the blue-purple poppylike flowers, 1 to 2 inches across, are borne singly on scapes 4 to 8 inches high.

99915. F. 29934.

99920. F. 30100. A form with primrose flowers.

99916. F. 30089.

99917. F. 30092.

99921. F. 30104.

99918. F. 30093.

99922. F. 30105.

99919. F. 30099.

99923. F. 30112.

99924 to 99927. *MECONOPSIS IMPEDITA* Prain.

An alpine biennial, native to Yunnan, with ovate-lanceolate pinnately lobed deep-green basal leaves about 2 inches across and deep-blue flowers over an inch across on numerous scapes 6 to 15 inches high.

99924. F. 30095.

99926. F. 30101.

99925. F. 30097.

99927. F. 30111.

99928 to 99935. *MECONOPSIS INTEGRIFOLIA* (Maxim.) Franch. Yellow Chinese poppy.

A fine alpine plant over 2 feet high, found rather commonly at altitudes of 14,000 to 14,500 feet among limestone boulders. The leaves are linear, with the basal ones forming a rosette, and covered with red hairs. The large bright-yellow flowers are 4 inches across.

For previous introduction see 95446.

99928. F. 30076.

99932. F. 30102. A large form.

99929. F. 30083.

99933. F. 30115.

99930. F. 30091.

99934. F. 30087.

99931. F. 30094. A form with long styles.

99935. F. 30108. A magnificent form.

99823 to 100103—Continued.

99936. *MECONOPSIS RUDIS* Prain.

F. 30079. An annual alpine plant 2 to 3 feet high, native to southwestern China at altitudes between 13,000 and 15,000 feet. The stems and leaves are covered with straw-colored spreading spines, the nearly entire leaves are oblong-lanceolate, and the bright-blue flowers, in racemes 2 to 3 inches across, have numerous stamens with blue filaments and yellow anthers.

99937. *MECONOPSIS SPECIOSA* Prain.

F. 30103. An alpine perennial up to 3 feet high, with spiny oblong-lanceolate leaves and light-blue flowers 2 inches across in racemose 10- to 15-flowered cymes. Native to Yunnan.

99938 and 99939. *MECONOPSIS VENUSTA* Prain.

A charming alpine biennial with deep-purple to wine-colored flowers with orange anthers and roundish petals an inch long. The numerous scapes are 6 to 8 inches high, and the oblong-ovate leaves are in a basal rosette. Native to Yunnan.

99938. F. 30078. 99939. F. 30114.

99940. *MECONOPSIS* sp.F. 30086 (near *M. lepidia*).99941. *MECONOPSIS* sp.F. 30110 (near *M. lancifolia*).99942. *MECONOPSIS* sp.F. 30117 (near *M. lancifolia*).99943. *MECONOPSIS* sp.

G. F. 144.

99944. *NEILLIA SINENSIS* Oliver. Rosaceae.

Tube neillia.

F. 30475. A shrub 4 to 6 feet high, native to central China. The ovate leaves, 2 to 3 inches long, are incised-serrate and usually lobed, and the tubular pink flowers, less than an inch long, are in terminal racemes 2 to 3 inches long.

99945 to 99962. *NOMOCHARIS* spp. Liliaceae.99945. *NOMOCHARIS APERTA* (Franch.) Smith and Evans.

F. 30148. An erect alpine plant about a foot high, with a slender rhizome and small lanceolate leaves, often ternate at the upper end of the stem. The pink flowers, purplish punctate within, are at first nodding, then erect. Native to high altitudes near Tali, Yunnan.

99946. *NOMOCHARIS EUXANTHA* Smith and Evans.

F. 30155. A bulbous alpine plant 6 to 15 inches high, with linear-lanceolate leaves over an inch long and solitary nodding fragrant golden-yellow flowers spotted with purple. Native to western China.

99947. *NOMOCHARIS HENRICI* (Franch.) Wilson.

F. 30158. A lilylike plant with a slender stem 3 feet or more high with scattered linear-lanceolate, long-pointed leaves and axillary flowers 2 inches long, with a white or pinkish bell-shaped perianth, dusky red at the base. Native to Yunnan.

99948 to 99953. *NOMOCHARIS LOPHOPHORA* (Bur. and Franch.) Balf. f.

A bulbous plant with ovate to lanceolate leaves about 3 inches long and yellow somewhat lilylike flowers, often red punctate, borne singly on a scape 6 to 12 inches high.

For previous introduction see 95384.

99948. F. 30139. 99951. F. 30165.

99949. F. 30163, speckled. 99952. F. 30182.

99950. F. 30164. 99953. F. 30170.

99823 to 100103—Continued.

99954 to 99957. *NOMOCHARIS MAIREI* Leville.

A white-flowered, lilylike plant scarcely 2 feet high, with ovate verticillate leaves. Native to southwestern China.

99954. F. 30142. 99956. F. 30149.

99955. F. 30171. 99957. F. 30169.

99958. *NOMOCHARIS MELEAGRINA* Franch.

F. 30154. A large bulbous lilylike plant several feet high, native to the mountains of Szechwan. The linear-lanceolate leaves are long stemmed, and the rosy, brown-spotted flowers, 3 inches across, are on peduncles 6 inches long.

99959. *NOMOCHARIS NANA* (Klotzsch) Wilson.

F. 30152. A Himalayan lily about 6 inches high, with grasslike leaves 3 inches long and a small white nodding flower over an inch across.

99960 and 99961. *NOMOCHARIS PARDANTHINA* FARRERI W. E. Evans.

A plant about 2 feet high, with whorls of dark-green lanceolate leaves and from 1 to 10 rose-pink to white flowers of variable shade, color, and spotting. Native to alpine slopes among dwarf bamboos in Upper Burma. It differs from the type in having fimbriate inner perianth segments.

99960. F. 29815. 99961. F. 29942.

99962. *NOMOCHARIS* sp.F. 384. Closely related to *N. saluense*.99963. *OSBECKIA CAPITATA* Benth. Melastomaceae.

F. 30952. A perennial herb 1 to 2 feet high, native to India. The cordate to ovate leaves, 1 inch long, are hairy on both sides, and the mauve flowers, 1 inch across, are in heads.

99964. *PERANTHA* sp. Gesneriaceae.

F. 30612. The perianths are perennial herbs with the leaves all in a basal rosette and yellow flowers on a pilose peduncle. Three species are known from Yunnan—*P. minor*, *P. forrestii*, and *P. cordatula*.

99965. *PHILADELPHUS DELAVAYI* L. Henry. Hydrangeaceae. Mockorange.

F. 30619. A shrub 15 to 20 feet high, native to Yunnan. The remotely serrate ovate leaves, 2 to 4 inches long, are dark green above and gray tomentose beneath. The very fragrant flowers, nearly 2 inches across, have a violet-purple calyx and white petals slightly tinged with purple on the outside, and are borne in racemes.

99966. *PHOTINIA PRIONOPHYLLA* (Franch.) C. K. Schneid. Malaceae.

F. 30474. A shrub 3 to 4 feet high, with the habit of *Photinia arbutifolia*. The branches are white tomentose, the obovate leathery shining green leaves are about 3 inches long, and the small flowers are in corymbose cymes. Native to southwestern China.

99967. *POLYGONUM CALOSTACHYUM* Diels. Polygonaceae.

F. 30451. An alpine plant 1 to 2 feet high, with elliptic papyry long-petioled basal leaves 2 to 3 inches long, shorter-petioled stem leaves, and deep crimson flowers. Native to moist mountain meadows at 10,000 feet altitude in southwestern China.

99968 to 99974. *POTENTILLA* spp. Rosaceae.99968. *POTENTILLA FRUTICOSA* L. Shrubby cinquefoil.

F. 30442. A pale form.

99823 to 100103—Continued.

99969 and 99970. *POTENTILLA FRUTICOSA* VEITCHII (Wils.) Bean. Veitch cinquefoil.

A very fine form from Hupeh, with silky hairy gray-green leaves and white flowers.

99969. F. 30621. 99970. F. 30623.

99971 to 99973. *POTENTILLA FRUTICOSA* L. Shrubby cinquefoil.

99971. F. 30622. A form with yellow flowers.

99972. F. 30624. A form with orange-yellow flowers.

99973. F. 30649. A dwarf variety.

99974. *POTENTILLA SAUNDERSIANA* Royle. Cinquefoil.

F. 30607. A dwarf alpine perennial herb native to Tibet. The palmately 3- to 5-foliolate leaves have deeply incised leaflets less than an inch long, white tomentose beneath. The yellow flowers, in corymbs, are about one half inch across.

99975. *POPULUS* sp. Salicaceae. Poplar.

F. 30646.

99976 to 100086. *PRIMULA* spp. Primulaceae. Primrose.

99976. *PRIMULA AEMULA* Balf. and Forr.

F. 30211. A stout alpine primula 2 feet or more in height, of the section Maximowiczii. The narrow oblong-obovate, somewhat fleshy leaves are up to a foot long, and the bright-yellow flowers are on a stout scape over 2 feet high. Native to Yunnan, at an altitude of about 11,000 feet.

99977 and 99978. *PRIMULA AMETHYSTINA* Franch.

An alpine primula from southwestern China with papery, ovate-oblong leaves an inch long, and amethyst-colored flowers, half an inch across, in small umbels, on scapes 2 to 4 inches high.

99977. F. 30186. 99978. F. 30198.

99979 and 99980. *PRIMULA ANISODORA* Balf. and Forr.

A primrose about a foot and a half high, native to Yunnan, with broadly oval membranous leaves up to 8 inches long and whorls of aromatic flowers which are rich maroon crimson with a bright-yellow zone. This primrose belongs to the section Candelabra.

99979. F. 30217. 99980. F. 30272.

99981. *PRIMULA AURANTIACA* W. W. Smith.

F. 30293. A Chinese primrose of the section Candelabra, with a rosette of large serrate leaves 6 to 9 inches long and whorls of orange-yellow flowers on a spike nearly a foot high. Native to marshy places in southwestern China.

99982. *PRIMULA BATHANGENSIS* Petitm.

A Chinese primrose with heart-shaped, intensely green leaves and numerous clusters of yellow flowers borne on weak scapes.

99983. *PRIMULA BEESIANA* Forrest.

F. 30304. A remarkable free-flowering and hardy primrose found growing close to the snow line in the mountainous parts of Yunnan. Under favorable circumstances the scape rises to a height of over 3 feet, and produces, in the early summer, its whorls of showy glowing velvety purple flowers with conspicuous yellow eyes.

For previous introduction see 93925.

99984. *PRIMULA BEESIANA* × *BULLEYANA*.

A natural hybrid.

99823 to 100103—Continued.

99985 and 99986. *PRIMULA BREVIFOLIA* Forrest.

A Chinese primrose with a rosette of bright-green oblong leaves from which rises a purplish scape that ends in a cluster of half a dozen or more drooping flowers; each has a dark-purple calyx and a blue-purple corolla.

99985. F. 30235. 99986. F. 30263.

99987. *PRIMULA BRYOPHILA* Balf. and Forr.

F. 29925. A Burmese primula with somewhat strap-shaped leaves up to 6 inches long, with the lower surfaces densely yellow farinose. The purplish flowers are on a slender scape about 3 inches high. It belongs to the section Nivalis.

99988. *PRIMULA BULLEYANA* Forrest.

F. 30307. A beautiful primrose from Yunnan, where it grows between 9,000 and 11,000 feet altitude, almost up to the snow line. It is a stout plant and in the early summer is covered with splendid orange-scarlet flowers; the stems of these flowers are sometimes 20 inches long. The plant prefers a semi-shaded damp situation.

99989. *PRIMULA BURMANICA* Balf. and Ward.

A stout moisture-loving Candelabra primrose from western China with oblanceolate leaves up to a foot long and red-purple flowers borne on a scape 2 feet high.

For previous introduction see 95385.

99990 to 99994. *PRIMULA CALLIANTHA* Franch.

A primrose 4 to 9 inches high, found in moist open situations in western China from 12,000 to 14,000 feet altitude. The linear-lanceolate leaves are glabrous, thin, and green, and the fragrant flowers vary in color from rose lavender to rich purple.

99990. F. 30194. 99993. F. 30227. A fine form.

99991. F. 30201.

99992. F. 30215. 99994. F. 30244.

99995. *PRIMULA CERNUA* Franch.

F. 30666. Closely allied to *P. pinnatifida*, from which it differs in having broadly ovate leaves with scarcely crenulate margins and blue flowers. It is native to Yunnan.

99996. *PRIMULA CHIONANTHA* Balf. and Forr.

F. 30199. A stout herbaceous plant 1 to 2 feet high, with blunt narrowly oval leaves, sulphur farinose beneath, and clusters of white flowers borne in a many-flowered umbel at the apex of a stout scape. It does best in rich moist soil.

99997. *PRIMULA CHLORODRYAS* W. W. Smith.

F. 30232. A dwarf alpine primula of the *Dryadifolia* series, from Yunnan, with a dense rosette of ovate leaves less than an inch long which have yellow farinose lower surfaces and pale-yellow flowers on slender scapes 2 inches high. It is closely related to *P. dryadifolia* Franch.

99998 to 100000. *PRIMULA CHUNGENSIS* Balf. and Ward.

A primrose from Yunnan, with oval-oblong hairy leaves about 2 inches long and fragrant yellow flowers on a stout scape 18 inches high. It belongs to the section Candelabra.

99998. F. 30203. 100000. F. 30288.

99999. F. 30248.

100001. *PRIMULA CONICA* Balf. and Forr.

F. 30212. A hairy primula with oblong or oblanceolate leaves about 6 inches long and blue-purple flowers less than an inch long on a scape a foot high. Native to open pastures in Yunnan and a typical member of the section Muscarioides.

99823 to 100103—Continued.

100002 to 100004. *PRIMULA DRYADIFOLIA* Franch.

A rather uncommon primrose which forms cushions in the moist rocky places on the eastern slopes of the Likiang Snow Range, Yunnan, at 15,000 feet altitude. The somewhat shrubby plant is only 4 or 5 inches high, with small spatulate leaves, golden below, and long scapes bearing clusters of 3 to 15 nearly sessile flowers varying in color from violet to dark purple and from rose to rich crimson.

100002. [No data.] 100004. F. 30298.

100003. F. 30230.

100005. *PRIMULA DUBERNARDIANA* Forrest.

F. 30269. A handsome primula from southeastern Tibet where it forms dense cushions, 1 to 2 feet in diameter, in dry situations on the ledges and in the clefts of mountain cliffs at altitudes between 8,000 and 9,000 feet. The flowers are a beautiful shade of pale rose with a bright yellow eye.

100006. *PRIMULA ELEGANS* Duby.

F. 30344. A primula from the mountains of Kashmir, with oblanceolate glabrous crenate leaves and large lilac flowers in clusters of 3 to 8 on a slender scape.

100007. *PRIMULA EUOSMA* Craib.

F. 29662. A dwarf primula with a rather dense rosette of elliptic or obovate rounded leaves an inch or more long and fragrant flowers of a soft purple-rose color with a green-yellow eye on a scape 2 to 4 inches high. Native to Yunnan.

100008. *PRIMULA FARREERIANA* Balf. f.

F. 29646. A stout alpine perennial, farinose spatulate throughout, with long-stemmed spatulate leaves up to 9 inches long and small dark-purple fragrant flowers on a stout scape about 10 inches high. It is native to dark cold gullies in Kansu, and belongs to the section Nivalis.

100009 to 100012. *PRIMULA FLORIDA* Balf. and Forr.

A perennial herb, native to Yunnan, with ovate leaves, farinose beneath, which are spread flat on the ground. The scape bears an umbel of short-stalked purple-blue flowers with farinose chalcies.

100009. F. 30216. 100011. F. 30275.

100010. F. 30242. 100012. F. 30312.

100013. *PRIMULA FORRESTERI* Balf. f.

A handsome perennial primula from the mountains of northwestern Yunnan between 9,000 and 11,000 feet altitude, in dry sunny situations. The woody rootstock is said to live over 50 years, the large basal leaves are covered with glandular hairs and have the odor of apples, and the rich orange-yellow flowers are in large umbels.

100014. *PRIMULA FRANCHETH* Pax.

A plant found in moist rocky situations on mountain meadows between 10,000 and 12,000 feet altitude in southeastern Tibet.

100015. *PRIMULA GLACIALIS* Franch.

F. 30204. An attractive Chinese primula with a thick elongated rhizome, oblong-lanceolate obtuse leaves an inch long with white farinose undersurfaces, and violet flowers half an inch long on short peduncles 1 or 2 inches high. Native to Yunnan.

100016. *PRIMULA GRACILENTA* Dunn.

F. 30268. A perennial herb native to Yunnan. The petioled oblong leaves with irregularly wavy dentate margins are in a rosette from which arise the slender scapes 6 to 18 inches

99823 to 100103—Continued.

high. The deflexed lilac flowers, borne in a head, have a cylindrical corolla tube with oblong lobes each terminated by a short tail, giving a fringed effect.

100017. *PRIMULA HELODOXA* Balf.

A large Chinese primrose of the section Candelabra, with flower stalks like those of *P. japonica*, about 3 feet high, which have 7 or 8 tiers of soft-yellow flowers resembling in color and size those of *Jasminum primulinum*. It requires a moist but well-drained site.

For previous introduction see 92500.

100018. *PRIMULA LEPTA* Balf. and Forr.

F. 30273. A small delicate primula of the section Muscarioides, with a rosette of papers oblanceolate or oblong leaves about 2 inches long and deep-purple flowers less than an inch across on a fragile scape about 3 inches high. Native to Yunnan.

100019 and 100020. *PRIMULA LEUCOCHNOA* Hand.-Mazz.

An alpine primula of the section Nivalis, from southwestern China, with small linear-lanceolate somewhat fleshy leaves 5 to 8 inches long and purple flowers half an inch long on scapes about a foot high.

100019. F. 30286. 100020. F. 30290.

100021 to 100024. *PRIMULA LICHANGENSIS* Forrest.

A handsome primrose of the section Cortusoides, from southwestern China, where it reaches a height of 6 to 14 inches, growing on ledges and boulders in dry shady places. The foliage is very variable, and the fragrant flowers vary from rose to almost crimson with green-yellow eyes.

100021. F. 30209. 100023. F. 30253.

100022. F. 30250. 100024. F. 30300.

100025 and 100026. *PRIMULA LITTONIANA* Forrest.

A handsome plant of the section Muscarioides, 2 to 3 feet tall, growing in swampy meadows in southwestern China between 10,000 and 11,000 feet altitude. The gray-green hairy leaves form a rosette from which arise the scapes bearing pendent deep indigo-blue flowers in densely packed spikes sometimes 5 inches long. The blood-red bracts and calyxes of the flowers form a wonderful contrast to the blue flowers.

100025. F. 30249. 100026. F. 30299.

100027. *PRIMULA MALVACEA* Franch.

F. 30255. A primrose from the mountains of Yunnan, densely covered with short hairs; the bright-green leaves are about 3 inches long, and the thick scapes bear 2 or 3 umbels of reddish flowers.

100028 and 100029. *PRIMULA MINOR* Balf. and Ward.

A semialpine primula of the section Pulchella, native to open mountain slopes in dry situations in southwestern China. The broadly oblong-spatulate leaves are only 2 inches long, and the small violet flowers are borne on a scape about 2 inches high.

100028. F. 30338. 100029. F. 30343.

100030. *PRIMULA MULIENSIS* Hand.-Mazz.

F. 30257. A glabrous alpine primula with narrowly obovate acute leaves about 10 inches long, light green and somewhat fleshy, and pale-violet flowers, very fragrant, on a stout scape nearly 2 feet high. Native to Szechwan.

99823 to 100103—Continued.

100031 to 100034. *PRIMULA MUSCARIOIDES* Hemsl.

A primrose with rather fleshy light-green leaves 4 to 5 inches long. The scapes, twice as long as the leaves, bear heads of deep purple-blue or almost violet flowers. Native to moist open places on the edges of forests in Yunnan.

100031. F. 30234. 100033. F. 30274.

100032. F. 30266. 100034. F. 30291.

100035. *PRIMULA PINNATIFIDA* Franch.

F. 30318. A hardy alpine primula 3 to 10 inches high, native to Yunnan, where it is found in swampy alpine meadows between 12,000 and 15,000 feet altitude. The thin leaves are pinnatifid, and the spikes of beautiful bright-blue fragrant flowers are produced as soon as the snow disappears.

100036 to 100040. *PRIMULA POISSONI* Franch.

A glabrous primula with narrow-oblong, rather regularly serrate leaves and purplish flowers in whorls. Native to Yunnan.

100036. F. 30196.

100037. F. 30225.

100038. F. 30303.

100039. F. 30233. Variety *planiflora*.100040. F. 30265. Variety *planiflora*.100041 to 100043. *PRIMULA POLYNEURA* Franch.

A perennial primula with suborbicular, crenate-lobed leaves 1 to 3 inches long and scapes 4 to 16 inches tall, bearing umbels of purple flowers about half an inch across. It is native to central China.

For previous introduction see 93929.

100041. F. 30254. 100043. F. 30311.

100042. F. 30287.

100044 and 100045. *PRIMULA PULCHELLA* Franch.

A handsome primrose growing in limestone soil in rather moist meadows up to 11,000 feet altitude in Yunnan. The lanceolate leaves are yellowish beneath, and the large flowers are bluish purple.

100044. F. 30262. 100045. F. 30320.

100046. *PRIMULA PULCHELLOIDES* F. K. Ward.

F. 30310. A perennial herb native to Yunnan. The narrowly lanceolate leaves, 1 to 3 inches long, have revolute denticulate margins, and the stiff scapes, 6 to 9 inches high, bear umbels of light-violet flowers one half inch across.

100047. *PRIMULA RIGIDA* Balf. and Forr.

F. 30241. A purple-flowered primula with firm oblong-spatulate leaves 2 inches long, densely farinose beneath. The purple flowers, one half inch long, are on a stout rigid scape more than 2 inches high. A member of the section *Nivalis* and native to the Muli Mountains, Szechwan.

100048 and 100049. *PRIMULA ROCKII* W. W. Smith.

A small woody primula at 10,000 feet altitude in southwestern China. It is related to the section *Bullatae*, to which *P. forrestii* belongs, but very distinct from it. The leaves are smaller and darker green, and the large deep-orange flowers are single, on short peduncles, and droop.

For previous introduction see 95388.

100048. F. 30280. 100049. F. 30339.

99823 to 100103—Continued.

100050 to 100053. *PRIMULA SECUNDIFLORA* Franch.

A very fine perennial primula found on alpine meadows up to 15,000 feet altitude, almost the snow line, in southwestern China. When young, the ovate-oblong finely serrulate papery leaves, 2 to 4 inches long, are golden farinose beneath, and the stout scape, 8 to 14 inches high, bears a one-sided, 6- to 10-flowered umbel of flowers nearly an inch across which vary in color from bright violet to rich reddish purple.

100050. F. 30219.

100052. F. 30315.

100051. F. 30283.

100053. [No data.]

100054 to 100056. *PRIMULA SERRATIFOLIA* Franch.

A very attractive primula, native to western China, where it grows along the banks of streams. The leaves are bright green, and the lovely yellow flowers are striped with orange.

100054. F. 30193.

100055. F. 30224. A very fine form.

100056. F. 29886.

100057 to 100061. *PRIMULA SIKKIMENSIS* Hook.

A primrose found in moist meadows and along streams in the Himalayas at 13,000 feet altitude. The lanceolate drooping leaves are dull green on both sides, and the large bell-shaped rich-yellow flowers, on stalks up to 2 feet high, appear in June. It has the habit of *P. secundiflora*, and should be treated as a short-lived perennial.

For previous introduction see 93930.

100057. F. 30222.

100060. F. 30289.

100058. F. 30277.

100061. F. 30292.

100059. F. 30278.

100062. *PRIMULA SINOLISTERI* Balf. f.

A Chinese primrose of the type of *P. obconica*, which promises to be of horticultural value, since it does not have the irritant hairs. The acutely lobed leaves form compact masses, and the many trusses of flowers vary from white to lilac in color.

100063 to 100065. *PRIMULA SINOPLANTAGINEA* Balf. f.

A Chinese primula of the section *Nivalis*, native to Yunnan. The acute lanceolate leaves are yellow-farinose beneath, and the deep-purple flowers are on a thick scape 5 inches high.

100063. F. 30206.

100065. F. 30220.

100064. F. 30213.

100066 to 100070. *PRIMULA SINOPURPUREA* Balf. f.

This, one of the most striking primroses of the section *Nivalis*, is a stout herbaceous plant from 4 inches to 3 feet high, growing in acid soil in boggy meadows up to 14,000 feet altitude in southwestern China. The thin papery narrow leaves are bright green above and golden yellow beneath, and the large dense umbels of rich-purple or violet flowers appear in April and May.

100066. F. 30200.

100069. F. 30243.

100067. F. 30205.

100070. F. 30316.

100068. F. 30223.

99823 to 100103—Continued.

100071 and 100072. *PRIMULA SONCHIFOLIA* Franch.

A primrose with obovate-oblong, doubly sinuate, papery leaves 6 to 8 inches long, native to southwestern China. The simple umbel of short-campanulate violet flowers is borne on a pilose scape as long as the leaves.

For previous introduction see 95390.

100071. F. 30279. 100072. [No data.]

100073 and 100074. *PRIMULA SOULEI* Franch.

A Chinese primula, native to Szechwan, with long-stemmed, ovate-obtuse, crenulate leaves about an inch long and purple-violet flowers less than an inch long, on a scape 3 to 5 inches high.

100073. F. 30341. 100074. F. 30342.

100075 to 100077. *PRIMULA SZECHUANICA* Pax.

A glabrous perennial herb, native to central China, with thin ovate-oblong slightly dentate leaves 2 to 3 inches long. The stout scape, 8 inches high, bears an umbel of 5 to 10 nodding yellow flowers about half an inch across with reflexed lobes.

100075. [No data.] 100077. F. 30285.

100076. F. 30267.

100078. *PRIMULA VINCIFLORA* Franch.

F. 30334. A perennial primrose, native to China, and found in moist shady meadows at 12,000 feet altitude. The thin papery oblong dull-green leaves, covered with reddish glands, are all erect, or nearly so, forming a narrow erect crown. The scapes, up to 15 inches high, bear solitary purple-violet, vincalike flowers, 1 to 2 inches across.

For previous introduction see 93933.

100079. *PRIMULA VITTATA* Bur. and Franch.

F. 30240. A Chinese herbaceous perennial primrose with narrow leaves 6 inches long and purple flowers borne on a stout scape 8 inches high.

100080. *PRIMULA WILSONI* Dunn.

F. 30191. An aromatic perennial herb native to Yunnan. The bright-green lanceolate leaves, 6 to 8 inches long, are recurved, and the small rosy flowers have short rounded crenulate lobes.

100081 to 100084. *PRIMULA YARGONGENSIS* Petitm.

A primrose from eastern Tibet, with ovate-oblong obtuse leaves 1 to 2 inches long and 1 to 3 deep-lilac flowers on a thick scape 4 inches high.

For previous introduction see 93932.

100081. F. 30238. 100083. F. 30282.

100082. F. 30261. 100084. F. 30306.

100085. *PRIMULA YUNNANENSIS* Franch.

F. 30210. A dwarf alpine primrose native to Yunnan. The obovate leaves are less than one-half inch long, and the 1 or 2 purple flowers, an inch across, are borne on a scape only 2 or 3 inches high.

100086. *PRIMULA* sp.

F. 30665. A primrose near *P. malvacea*.

100087 to 100089. *RHODODENDRON* spp. Ericaceae.

100087. *RHODODENDRON CHRYSSEUM* Balf. and Ward.

F. 30942. A small shrub, 1 to 3 feet high, with densely scaly branchlets, native to Yunnan. The ovate-elliptic leaves, one-half inch long, are scaly on both sides and are aromatic. The

99823 to 100103—Continued.

bright-yellow openly campanulate flowers are one-half inch across and are borne in terminal clusters of 4 or 5.

100088. *RHODODENDRON* sp.

F. 30941. Series *Lapponicum*.

100089. *RHODODENDRON MOLLICOMUM* Balf. and Smith.

F. 30940. A small shrub with softly pubescent branchlets, native to Yunnan. The narrowly lanceolate leaves, 1 to 2 inches long, are softly pubescent on both sides, and the narrowly tubular crimson flowers are in small axillary clusters near the ends of the branchlets.

100090. *ROETTLEA FORRESTII* Diels. Gesneriaceae.

F. 30617. An alpine plant with a basal rosette of densely hairy narrow ovate leaves 3 to 5 inches long, and small canary-yellow flowers, one-third inch across, on scapes 3 to 9 inches high. Native to mossy boulders in very shady places in Yunnan.

100091 to 100093. *SORBUS* spp. Malaceae.

Mountain-ash.

100091. *SORBUS* sp.

F. 30492. A mountain-ash near *S. vestita*.

100092. *SORBUS* sp.

F. 30509.

100093. *SORBUS* sp.

F. 30635.

100094. *SPIRAEA CANESCENS GLAUCOPHYLLA* Franch. Rosaceae.

F. 30620. A white-flowered shrub, native to Yunnan, with broadly obovate leaves and many-flowered corymbs.

100095. *SYMPLOCOS PANICULATA* Miquel. Symplocaceae.

F. 30458. A shrub or small tree up to 35 feet high, native to China and Japan. The obovate sharply serrulate leaves are 1 to 3 inches long, the fragrant white flowers are in panicles 2 to 4 inches in length, and the bright-blue ellipsoid fruits are nearly half an inch long.

For previous introduction see 93963.

100096. *SYRINGA YUNNANENSIS* Franch. Oleaceae.

Yunnan lilac.

F. 30486. A handsome shrub of open spreading growth, related to *Syringa wilsonii*, but with pale-pink flowers in large panicles. The downy leaves have a distinct red midrib, the color being continued through the leafstalk. It is native to China.

For previous introduction see 91834.

100097. *TETRACENTRON SINENSE* Oliver. Magnoliaceae.

F. 30489. A tree up to 100 feet high, native to western and central China. The elliptic-ovate leaves, 3 to 5 inches long, are subordinate with closely serrulate margins, and the minute yellowish flowers are in racemes 4 to 8 inches long.

100098. *THERMOPSIS* sp. Fabaceae.

F. 30630. A form near *T. inflata*.

100099 to 100101. *TROLLIUS* spp. Ranunculaceae.

100099. *TROLLIUS PUMILUS* D. Don. Dwarf globeflower.

F. 30647. An alpine herbaceous perennial 1 foot high, native to the Himalayas in India. The thick orbicular leaves, 1 to 2 inches across, are five-parted into broadly three-lobed segments, and the solitary yellow flowers are 1 inch across.

99823 to 100103—Continued.

100100 and 100101. *TROLIUS YUNNANENSIS* (Franch.) Ulbr. Yunnan globeflower.

A large stout perennial, native to Yunnan, about 2 feet high, with trilobate-reniform, long-stemmed basal leaves with blades 3 inches long and yellow flowers 1 to 2 inches across.

100100. F. 30506. 100101. F. 30643.

100102. *VIBURNUM FLAVESCENS* W. W. Smith. Caprifoliaceae.

F. 30678. A shrub 6 to 10 feet high, native in dry places in the mountains of Yunnan. The rhomboid-ovate leaves are 2 to 3 inches long, with serrate margins, and the fragrant deep cream-yellow flowers are in terminal corymbs about 2 inches across. It is closely allied to *Viburnum oatifolium*.

100103. *XOLISMA OVALIFOLIA* (Wall.) Rehd. Ericaceae.

F. 30437.

For previous introduction and description see 99759.

100104 and 100105. *PHOENIX RECLINATA* Jacq. Phoenicaceae.

Senegal date palm.

From Africa. Seeds presented through the Royal Botanic Gardens, Kew, England. Received June 14, 1932.

A tropical and South African date palm, 20 to 30 feet high, with green reclinate pinnate leaves 6 to 9 feet long with rigid leaflets and yellowish fruits half an inch long with a sweetish pulp.

For previous introduction see 82666.

100104. From Bathurst, Gambia, Africa.

100105. From Zomba, Nyasaland, Africa.

100106. *ANANAS SATIVUS* Schult. f. Bromeliaceae. Pineapple.

From the West Indies. Plants presented by G. W. Ford, Haytian Pineapple Co., Cape Haitien, Haiti. Received June 14, 1932.

Smooth Cayenne.

100107 to 100113.

From Australia. Seeds presented by the experiment farm at Bathurst, at the request of the Department of Agriculture, Sydney, New South Wales. Received June 10, 1932.

A collection of forage grasses introduced for the use of Department specialists.

100107 to 100109. *DACTYLIS GLOMERATA* L. Poaceae. Orchard grass.

100107. *Scandia cocksfoot*; originally from Sweden.

100108. No. 2; from Wales.

100109. Originally from Spain.

100110 to 100112. *LOLIUM PERENNE* L. Poaceae. Perennial ryegrass.

100110. Originally from Spain.

100111. An evergreen form; originally from Scotland.

100112. *Victoria* ryegrass; originally from Sweden.

100113. *PHALARIS TUBEROSA* L. (*P. stenophylla* Hort.), Poaceae. Grass.

For previous introduction see 99332.

100114 to 100118. *CINCHONA* spp. Rubiaceae.

From British India. Seeds purchased from the Government cinchona plantation, Munsong, Kalimpong, Bengal. Received June 13, 1932.

Introduced for the use of Department specialists working with drug plants.

100114. *CINCHONA LEDGERIANA* Moens.

A tree, native to the Andes, yielding a bark remarkably rich in quinine which crystallizes readily as quinine sulphate. The percentage of the other alkaloids present is relatively small. The bark of this species matures in the fifth or sixth year and does not increase its quinine content after that.

For previous introduction see 78602.

100115. *CINCHONA LEDGERIANA* × *OFFICINALIS*.

100116. *CINCHONA LEDGERIANA* × *SUCCIRUBRA*.

100117. *CINCHONA OFFICINALIS* L.

100118. *CINCHONA SUCCIRUBRA* Pavon.

The bark of this tree contains a large quantity of alkaloids, of which a relatively large percentage is cinchonidine, which retards the separation of the quinine as sulphate. The bark of this species matures in the fourth or fifth year and does not increase in quinine content thereafter.

100119 to 100124. *HORDEUM VULGARE PALLIDUM* Seringe. Poaceae.

Six-rowed barley.

From India. Seeds presented by F. J. F. Shaw, Imperial economic botanist, Imperial Institute of Agricultural Research, Pusa, Bihar. Received June 14, 1932.

Introduced for the use of Department specialists interested in cereal investigations.

100119. Type 7. 100122. Type 14.

100120. Type 12. 100123. Type 20.

100121. Type 13. 100124. Type 21.

100125 to 100130. *ORYZA SATIVA* L. Poaceae. Rice.

From Madagascar. Seeds presented by Maison Grobot & Simphal, Paris, France. Received June 16, 1932.

A collection of rice introduced for the use of Department specialists interested in cereal investigations.

Samples of Vary-Lava, the finest rice of Madagascar. This rice closely resembles the *Java Giant* rice.

100131 to 100140. *ACACIA* spp. Mimosaceae.

From Italy. Seeds presented by Dr. Mario Calvino, Stazione Sperimentale di Floricoltura, San Remo. Received June 17, 1932.

100131. *ACACIA* sp. 100136. *ACACIA* sp.

Bon accueil precoce. *Joffre.*

100132. *ACACIA* sp. 100137. *ACACIA* sp.

Bon accueil tardive. *Mirabilia.*

100133. *ACACIA* sp. 100138. *ACACIA* sp.

Bon accueil hybrida. *Rustica.*

100134. *ACACIA* sp. 100139. *ACACIA* sp.

Decurrens hybrida. *Tournaire A.*

100135. *ACACIA* sp. 100140. *ACACIA* sp.

Gaulois. *Tournaire No. 1.*

100141 to 100226.

From China. Seeds collected by the sixth Forrest expedition, 1930-32, to southwestern China, and presented by Maj. Lionel de Rothschild, London, England. Received June 17, 1932.

100141 to 100144. *ACONITUM* spp. Ranunculaceae. Monkshood.

100141. *ACONITUM DIELSIANUM* Hort.

F. 30953. A name for which a place of publication and a description have not been found.

100142. *ACONITUM* sp.

F. 30776. Related to *A. Forrestii*.

100143. *ACONITUM* sp.

G. F. 34.

100144. *ACONITUM* sp.

G. F. 35. Related to *A. Forrestii*.

100145. *ALLIUM POLYASTRUM* Diels. Liliaceae. Onion.

F. 30587. A stout herbaceous plant up to 2 feet high, with broad-linear leaves and rosy flowers, 30 to 60 in a head. Native to southwestern China.

100146. *ALLIUM* sp. Liliaceae. Onion.

F. 30844.

100147 to 100153. *ANEMONE* spp. Ranunculaceae.

100147 to 100149. *ANEMONE DEMISSA* Hook. f. and Thoms.

A lovely alpine plant, common in limestone soil in mountain meadows at altitudes between 11,000 and 13,000 feet in Yunnan. The leaves form a basal rosette, and the large white flowers are in umbels.

For previous introduction see 93876.

100147. G. F. 392.

100148. F. 29665. Variety *villosa*.

100149. F. 29686. Near variety *villosa*.

100150. *ANEMONE GLAUCIFOLIA* Franch.

G. F. 45. A plant 1 to 2 feet high, native to the mountains of southwestern China. The leaves are deeply pinnatifid, up to 6 inches long, and the showy violet flowers are 1 to 2 inches across.

100151. *ANEMONE NARCISSIFOLIA* L.

F. 30830. A stout herbaceous perennial with petioled 3- to 5-parted, deeply cut basal leaves sessile involucreal leaves, and an umbel of several white flowers an inch across, with yellow anthers. It is native to Europe and Asia.

For previous introduction see 91387.

100152. *ANEMONE* sp.

F. 29776 and F. 29865. Near to *A. demissa*.

100153. *ANEMONE* sp.

G. F. 53. A variety with white flowers, near to *A. demissa*.

100154. *ASTER STATICIFOLIUS* Franch. Asteraceae.

F. 30827.

For previous introduction and description see 99835.

100155. *ASTER* sp. Asteraceae.

F. 30814. Closely related to *A. Forrestii*.

100156. *ASTRAGALUS* sp. Fabaceae. Milkvetch.

F. 30819.

100141 to 100226—Continued.

100157. *BRIGGSIA MUSICOLA* (Diels) Craib. Gesneriaceae.

F. 30604. A stemless plant with hairy, oblong-lanceolate leaves 3 to 5 inches long and deep-orange flowers half an inch wide on scapes about 10 inches high. Native to southwestern China.

100158. *CASSIOPE FASTIGIATA* (Wall.) D. Don. Ericaceae.

F. 30874.

For previous introduction and description see 99843.

100159. *CASSIOPE SELAGINOIDES* Hook. f. and Thoms. Ericaceae.

F. 30791.

For previous introduction and description see 99844.

100160 to 100162. *CHIRITA* spp. Gesneriaceae.

100160. *CHIRITA* sp.

F. 29599.

100161. *CHIRITA* sp.

F. 29736. Related to *C. trailliana*.

100162. *CHIRITA* sp.

F. 29834. Related to *C. trailliana*.

100163 to 100165. *CODONOPSIS* spp. Campanulaceae.

100163. *CODONOPSIS BULLEYANA* Forrest.

G. F. 50. A malodorous perennial about a foot high, with an ascending stem, hairy heart-shaped leaves 4 to 6 inches long, and pale watery blue flowers nearly half an inch long. Native to southwestern China.

100164. *CODONOPSIS* sp.

F. 30823.

100165. *CODONOPSIS* sp.

G. F. 51.

100166. *CRAWFURDIA BULLEYANA* Forrest. Gentianaceae.

F. 30551. A climbing plant 10 to 20 feet high, with a 4-angled, often purplish stem and cordate or broadly ovate leaves about 3 inches long. The large blue-purple flowers are 2 inches long. Native to Upper Burma.

100167 to 100181. *CREMANTHODIUM* spp. Asteraceae.

100167. *CREMANTHODIUM NOBILE* (Franch.) Diels.

F. 30935. A very fragrant alpine plant, native to Yunnan, with thick broadly obovate leaves and yellow flowers in large nodding heads.

100168. *CREMANTHODIUM RHODOCEPHALUM* Diels.

F. 30757.

For previous introduction and description see 99854.

100169. *CREMANTHODIUM* sp.

F. 29868.

100170. *CREMANTHODIUM* sp.

F. 29875.

100171. *CREMANTHODIUM* sp.

F. 29885.

100172. *CREMANTHODIUM* sp.

F. 29889.

100141 to 100226—Continued.

100173. CREMANTHODIUM SP.
F. 29926.
100174. CREMANTHODIUM SP.
F. 30758.
100175. CREMANTHODIUM SP.
F. 30770.
100176. CREMANTHODIUM SP.
F. 30792.
100177. CREMANTHODIUM SP.
F. 30825.
100178. CREMANTHODIUM SP.
F. 30913.
100179. CREMANTHODIUM SP.
F. 31011.
100180. CREMANTHODIUM SP.
G. F. 41.
100181. CREMANTHODIUM SP.
G. F. 43. Closely related to *C. nobile*.
- 100182 to 100184. DELPHINIUM spp. Ranunculaceae. **Larkspur.**
100182. DELPHINIUM SP.
F. 30815. Closely related to *D. mosoyense*.
100183. DELPHINIUM SP.
F. 30775. Closely related to *D. yunnanense*
100184. DELPHINIUM LIKIANGENSE Franch.
G. F. 57. One of the finest larkspurs; the dark-green glossy leaves are in cushionlike rosettes, the large rich-blue flowers are an inch across, and there are several spikes of a plant at one time. Found in glacial gravel up to 13,000 feet altitude.
100185. DIDISSANDRA GRANDIS Craib. Gesneriaceae.
F. 30745.
For previous introduction and description see 99858.
100186. DICRANOSTIGMA SP. Papaveraceae.
F. 30077.
- 100187 to 100189. DRACOCEPHALUM spp. Menthaceae. **Dragonhead.**
- 100187 and 100188. DRACOCEPHALUM BULLATUM Forrest.
An alpine perennial 3 to 7 inches high, with rather stiff ovate-elliptic leaves, pale purple beneath, an inch or more in length, the lower one long-petioled, and bright-blue flowers in dense racemes. Native to southwestern China.
100187. F. 30762. 100188. G. F. 430.
100189. DRACOCEPHALUM ISABELLAE Forrest.
F. 30798. A mintlike perennial 12 to 18 inches high, native to China, with leaves 1 inch long, divided into 5 to 7 linear segments, and spikes, 5 to 6 inches long, made up of verticillate clusters of dragon-shaped, deep blue-purple flowers 1 to 2 inches long.
For previous introduction see 97603.
100190. ERIGERON MULTIRADIATUS (Lindl.) C. B. Clarke. Asteraceae. **Himalayan fleabane.**
F. 30846. A beautiful alpine composite native to wet grassy places the whole length of the Himalayan range from 7,000 to 12,000 feet altitude. It is a pubescent or hirsute herb up to 10 inches high,

100141 to 100226—Continued.

- with simple scapellike leafy stems and numerous radical leaves. The oblanceolate leaves, narrowed into a rather long petiole, are 4 to 8 inches long.
100191. HALENIA ELLIPTICA D. Don. Gentianaceae.
G. F. 30. An alpine herbaceous perennial 1 to 2 feet high, native to the temperate slopes of the Himalayas in India. The elliptic leaves are 2 to 3 inches long, and the pale-blue flowers are in a lax terminal panicle. The bell-shaped corolla, 1 inch long, is lobed half-way to the base, and at the base of each lobe is a spur about one-third inch long with a recurved tip.
100192. HEDYSARUM SP. Fabaceae.
F. 30747.
100193. IMPATIENS DELAVAYI Franch.
G. F. 31. A glabrous annual with erect branched stems a foot high, broadly ovate or rounded crenate leaves 1 to 2 inches long, and large showy rose-lilac flowers over an inch long. Native to southwestern China.
- 100194 to 100196. INCARVILLEA spp. Bignoniaceae.
100194. INCARVILLEA LUTEA Bur. and Franch.
G. F. 105.
For previous introduction and description see 99878.
100195. INCARVILLEA SP.
F. 30842. Closely related to *I. delavayi*.
100196. INCARVILLEA SP.
G. F. 32.
100197. INULA HOOKERI C. B. Clarke. Asteraceae.
F. 30550.
For previous introduction and description see 99879.
- 100198 to 100203. IRIS spp. Iridaceae.
100198. IRIS COLLETTII Hook. f.
F. 30545. A practically stemless iris, closely related to *I. nepalensis*, native to northeastern India and southwestern China. The leaves have two prominent veins on one side and three on the other, and the lilac flowers are 1 to 2 inches across and are borne on stems only 1 to 2 inches high.
100199. IRIS DELAVAYI Micheli. **Delavay iris.**
G. F. 82.
For previous introduction and description see 99882.
100200. IRIS FORRESTII Dykes. **Yunnan iris.**
F. 30741.
For previous introduction and description see 99881.
100201. IRIS SP.
F. 30866. A plant with blue flowers.
100202. IRIS SP.
F. 30867. A plant with blue flowers.
100203. IRIS SP.
G. F. 47. A plant closely related to *I. chrysographes*.
- 100204 and 100205. MEGACARPAEA DELAVAYI Franch. Brassicaceae.
An alpine perennial with a thick rhizome and an erect stem 1 to 2 feet high. The pinnatisect leaves are up to 6 inches long, and the small violet

100141 to 100226—Continued.

or purplish flowers are in dense corymbs. Native to southwestern China.

100204. F. 30843.

100205. F. 30877.

100206. *PAEONIA* sp. Ranunculaceae. Peony.

F. 30998. A plant closely related to *P. lutea*.

100207. *PAEONIA* sp. Ranunculaceae. Peony

G. F. 39. A plant closely related to *P. potaninii**

100208. *PODOPHYLLUM* sp. Berberidaceae.

Mayapple.

F. 30804. A plant closely related to *P. aurantiaca*.

100209 to 100212. *POLYGONUM* spp. Polygonaceae. Fleeceflower.

100209. *POLYGONUM* *EMODI* Meisn.

F. 31013. A trailing and creeping perennial herb native to the Himalayas at altitudes between 8,000 and 11,000 feet in India. The branches are 6 to 10 inches long, with rigid linear-lanceolate leaves 1 to 2 inches long and short ascending branches bearing racemes of small red flowers.

100210. *POLYGONUM* *FORRESTII* Diels.

F. 30860. A low herbaceous plant with a long creeping rootstock, found on hillsides in Yunnan. It is from 2 to 4 inches high, with white or cream-white flowers.

100211. *POLYGONUM* *SPHAEROSTACHYUM* Meisn.

F. 30795. A perennial herb 6 to 12 inches high, native to the Himalayas at an altitude of 15,000 feet in India and Tibet. The long-petioled radicle leaves are linear-lanceolate with crenulate margins, and small drooping crimson flowers are borne in solitary erect cylindrical or capitate spikes.

100212. *POLYGONUM* sp.

F. 30835.

100213. *CONVOLVULUS* sp. Convolvulaceae.

F. 30847.

100214 to 100218. *POTENTILLA* spp. Rosaceae. Cinquefoil.

100214. *POTENTILLA* *ARTICULATA* Franch.

F. 30755. A low alpine perennial with a thick rhizome, digitately trifoliate hairy pale-green leaves only half an inch long, and light-yellow flowers half an inch across, on stems 2 to 3 inches high. Native to southwestern China.

100215. *POTENTILLA* *CORIANDRIFOLIA* D. Don.

F. 30782. Variety *dumosa*; a bushy variety of *P. coriandrifolia* which is a tufted herb 4 inches in diameter, found in rock crevices and open thin turf at Bhutan, India, at 13,000 feet altitude. The white flowers have dark-red centers.

100216. *POTENTILLA* *ERICARPA* Wall.

F. 30821. A perennial herb with a stout rootstock from which arise branches 4 to 10 inches long, densely clothed with imbricating woolly stipular sheaths. From the tips of these branches grow the slender suberect flowering stems bearing thin three-lobed and incised leaves about 1 inch long and solitary yellow flowers 1 to 2 inches across. It is native to northern India.

For previous introduction see 93924.

100217. *POTENTILLA* *SAUNDERSIANA* Royle.

F. 30773.

100141 to 100226—Continued.

For previous introduction and description see 99974.

100218. *POTENTILLA* *STENOPHYLLA* (Franch.) Diels.

F. 30836. A plant 3 to 4 inches high, with a thick rhizome, pinnate leaves 2 or 3 inches long, and orange-yellow flowers on scapes 4 inches high. Native to Yunnan.

100219 to 100222. *SAXIFRAGA* spp. Saxifragaceae. Saxifrage.

100219. *SAXIFRAGA* sp.

F. 30837.

100220. *SAXIFRAGA* sp.

F. 30839.

100221. *SAXIFRAGA* sp.

F. 30840. A form closely related to *S. montana*.

100222. *SAXIFRAGA* sp.

F. 30921.

100223. *SOLMS-LAUBACHIA* *PULCHERRIMA* Muschler. Brassicaceae.

G. F. 37. A dwarf alpine? to 4 inches high, with ovate or ovate-lanceolate leaves an inch long, appressed to the stem, and bright turquoise-blue aromatic flowers 2 inches or more long on one-flowered scapes. Native to southwestern China.

100224. *SOLMS-LAUBACHIA* sp. Brassicaceae.

F. 30803.

100225. *SPENCERIA* *RAMALANA* Trimen. Rosaceae.

G. F. 49. A free-flowering and attractive herbaceous perennial about a foot high, with erect or ascending stems, covered with silvery hairs. The stem leaves are reduced to 1 or 2 pairs of narrowly oval leaflets, and the golden or red-yellow flowers are in stiff open racemes. Native to dry upland pastures of western Szechwan and Yunnan.

100226. *TROLLIUS* sp. Ranunculaceae. Globeflower.

G. F. 70. A form closely related to *T. patulus*.

100227. *BAMBUSA* *MULTIPLEX* (Lour.) Raeusch. Poaceae. Hedge bamboo.

From Florida. Plants presented by Harold Mowry, Agricultural Experiment Station, Gainesville. Received June 21, 1932.

Plants from a bamboo hedge at the Gainesville station, grown under the name *Arundinaria nitida*. The hedge is kept pruned to a height of about 4½ feet, but the culms probably would grow eventually to 15 feet or more if permitted. The new culms appear early in May.

100228 to 100230. *CINCHONA* spp. Rubiaceae.

From Jamaica, West Indies. Cuttings presented by Col. Victor E. Ruehl, Caldwell, N.J. Received June 18, 1932.

100228. *CINCHONA* sp.

No. 1. Ruehl.

100229. *CINCHONA* sp.

No. 2. Jamaica.

100230. *CINCHONA* sp.

No. 3. Jamaica.

100231 to 100251.

From New Zealand. Seeds presented by Bruce Levy, agronomist, Plant Research Station, Palmerston North. Received June 13, 1932.

Introduced for the use of Department specialists interested in forage crops.

100231 and 100232. *AGROSTIS TENUIS* Sibth. Poaceae. **Bentgrass.**

100231. Brown top Bt 526 (ordinary New Zealand brown top).

100232. Brown top Bt 539 (New Zealand dry-land type).

100233 to 100235. *DACTYLIS GLOMERATA* L. Poaceae. **Orchard grass.**

100233. Cocksfoot Bc 193. A native variety.

100234. Cocksfoot Bc 216. A native variety.

100235. Cocksfoot Bc 217. An imported variety.

100236 to 100241. *LOLIUM PERENNE* L. Poaceae. **Perennial ryegrass.**

100236. Ba 74. Bad false perennial.

100237. Ba 192. Average false perennial.

100238. Ba 1748. Good false perennial.

100239. Ba 1815. Italian ryegrass sold as perennial.

100240. Ba 2734. New Zealand certified.

100241. Ba 1871. New Zealand selection.

100242 and 100243. *TRIFOLIUM PRATENSE* L. Fabaceae. **Red clover.**

100242. Aa 172. New Zealand broad red clover.

100243. Aa 201. New Zealand broad red clover.

100244 to 100251. *TRIFOLIUM REPENS* L. Fabaceae. **White clover.**

100244. Ac 138. New Zealand white clover, type no. 2.

100245. Ac 617. New Zealand Dutch white clover.

100246. Ac 621. Average New Zealand commercial.

100247. Ac 654. Average New Zealand commercial.

100248. Ac 706. New Zealand Dutch white clover.

100249. Ac 827. New Zealand certified, type no. 1.

100250. Ac 910. New Zealand white clover, type no. 2.

100251. Ac 2008. New Zealand certified, type no. 1.

100252. *ANABASIS APHYLLA* L. Chenopodiaceae.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Plant Industry, Leningrad, at the request of Dr. N. I. Vavilov. Received June 21, 1932.

An upright shrub 2 feet high with green branches, scalalike leaves, and inconspicuous flowers. It is native to the Mediterranean region and is used as a sand binder.

100253 to 100267. *IPOMOEA BATATAS* (L.) Poir. Convolvulaceae. **Sweetpotato.**

From the Union of Soviet Socialist Republics. Tubers presented by the Sukhum subtropical branch of the All-Union Institute of Plant Indus-

100253 to 100267—Continued.

try, through V. P. Alekseev, chief of the Bureau of Introduction, Leningrad. Received June 21, 1932.

A collection of new varieties developed at the Sukhum station; introduced for the use of Department specialists interested in sweetpotatoes.

100253. No. 33.	100281. No. 95.
100254. No. 36.	100282. No. 108.
100255. No. 39.	100283. No. 162.
100256. No. 47.	100284. No. 168.
100257. No. 51.	100285. No. 184.
100258. No. 66.	100286. No. 191.
100259. No. 82.	100287. No. 196-A.
100260. No. 91.	

100268 to 100278.

From the Union of Soviet Socialist Republics. Seeds presented by the Sukhum subtropical branch of the All-Union Institute of Plant Industry, Sukhum, Caucasus. Received June 21, 1932.

100288. *BUTIA CAPITATA* (Mart.) Becc. (*Cocos capitata* Mart.). **Phoenixaceae. Palm.**

No. 135554. A large coconutlike palm, native to Argentina, with a spineless trunk, pinnate leaves, and large bunches of small edible fruits. It is said to be harder than any other species of *Butia*.

For previous introduction see 98891.

100269 to 100275. *BUTIA CAPITATA* × *ERIOSPATHA*. **Phoenixaceae. Palm.**

A natural hybrid combining characters of both parents. The fruit very closely resembles in flavor the best Japanese loquats. The tree will probably thrive wherever the Satsuma orange is a commercial crop.

For previous introduction see 98230.

100269. No. 135311.	100273. No. 135526.
100270. No. 135312.	100274. No. 135527.
100271. No. 135313.	100275. No. 135529.
100272. No. 135316.	

100276. *JUGLANS REGIA* L. **Juglandaceae.**

Persian walnut.

No. 135519. A variety native to the Caucasus region.

100277. *BUTIA CAPITATA ODORATA* (Barb.-Rodr.) Becc. **Phoenixaceae. Palm.**

No. 135553. A palm about 15 feet high, much like the date palm, bearing large bunches of edible fragrant fruits about an inch in diameter. It is native to Brazil.

100278. *VACCINIUM ARCTOSTAPHYLOS* L. **Vacciniaceae. Caucasian whortleberry.**

No. 135937. A deciduous shrub up to 10 feet high, native to the Caucasus region. The oblong-ovate finely toothed leaves are 2 to 4 inches long and turn purple red in the autumn. The small bell-shaped flowers are borne in racemes 2 inches long and are white with a purple tinge. The globose purple berries are nearly one-half inch in diameter.

100279 and 100280. *EPIDENDRUM BICORNUTUM* Hook. **Orchidaceae. Orchid.**

From the West Indies. Plants collected by David Fairchild and P. H. Dorsett, agricultural explorers, with the 1931-32 Allison V. Armour expedition. Received April 11, 1932.

100279 and 100280—Continued

The virgin orchid: from the rocks near the sea-coast at Man of War Bay, Tobago, Windward Islands. A tropical American epiphytic orchid with pseudobulbs 1 to 2 feet long and short leathery leaves. The fragrant white flowers, with small crimson spots on the three-lobed lip, are borne in slender racemes.

100279. No. 2943. February 21, 1932.

100280. No. 2930. February 19, 1932.

100281 to 100364.

From China. Seeds collected by the sixth Forrest expedition, 1930-32, to southwestern China and presented by Maj. Lionel de Rothschild, London, England. Received June 23, 1932.

100281. *CORYLOPSIS* sp. Hamamelidaceae.

F. 29915.

100282 to 100287. *PRIMULA* spp. Primulaceae. Primrose.

100282. *PRIMULA* sp.

F. 29916.

100283. *PRIMULA CHUNGENSIS* Balf. and Ward.

F. 29932.

For previous introduction and description see 99998-100000.

100284. *PRIMULA BRYOPHILA* Balf. and Farr.

F. 29925.

For previous introduction and description see 99987.

100285. *PRIMULA BURMANICA* Balf. and Ward.

F. 29919.

For previous introduction and description see 99989.

100286. *PRIMULA PLANIFLORA* Hort.

G. F. 457. A name for which a place of publication and a description have not been found.

100287. *PRIMULA SECLUSA* Balf. and Forr.

F. 29917. A large, rather coarse, hairy primula with rounded cordate membranous leaves up to 10 inches long and numerous bright-red flowers one-half inch long on a stout hairy scape a foot or more tall. Native to southwestern China.

100288 to 100362. *RHODODENDRON* spp. Ericaceae.

100288. *RHODODENDRON* sp.

G. F. 6.

100289. *RHODODENDRON* sp.

G. F. 8.

100290. *RHODODENDRON* sp.

G. F. 9.

100291. *RHODODENDRON* sp.

G. F. 11.

100292. *RHODODENDRON* sp.

G. F. 12.

100293. *RHODODENDRON* sp.

G. F. 13.

100294. *RHODODENDRON* sp.

G. F. 14.

100295. *RHODODENDRON* sp.

G. F. 15.

100296. *RHODODENDRON* sp.

G. F. 17.

100281 to 100364—Continued.

100297. *RHODODENDRON* sp.

G. F. 18.

100298. *RHODODENDRON* sp.

G. F. 19.

100299. *RHODODENDRON* sp.

G. F. 20.

100300. *RHODODENDRON* sp.

G. F. 22.

100301. *RHODODENDRON* sp.

G. F. 24.

100302. *RHODODENDRON* sp.

G. F. 25.

100303. *RHODODENDRON* sp.

G. F. 27.

100304. *RHODODENDRON* sp.

G. F. 28.

100305. *RHODODENDRON* sp.

G. F. 29.

100306. *RHODODENDRON* sp.

G. F. 100.

100307. *RHODODENDRON* sp.

G. F. 101.

100308. *RHODODENDRON* sp.

F. 29559.

100309. *RHODODENDRON* sp.

F. 29666.

100310. *RHODODENDRON* sp.

F. 29763.

100311. *RHODODENDRON* sp.

F. 29894.

100312. *RHODODENDRON* sp.

F. 29937.

100313. *RHODODENDRON* sp.

F. 30394.

100314. *RHODODENDRON* sp.

F. 30526.

100315. *RHODODENDRON* sp.

F. 30527.

100316. *RHODODENDRON* sp.

F. 30528.

100317. *RHODODENDRON* sp.

F. 30532.

100318. *RHODODENDRON* sp.

F. 30540.

100319. *RHODODENDRON* sp.

F. 30889.

100320. *RHODODENDRON* sp.

F. 30892.

100321. *RHODODENDRON* sp.

F. 30896.

100322. *RHODODENDRON* sp.

F. 30910.

100323. *RHODODENDRON* sp.

F. 30967.

100281 to 100364—Continued.

100324. RHODODENDRON sp.

F. 30877.

100325. RHODODENDRON sp.

F. 7.

100326. RHODODENDRON ADENOPHORUM Balf. and Smith.

F. 30888. A shrub up to 7 feet high, with thick lanceolate leaves 5 inches long and rose-colored flowers over an inch long in lax umbels. Native to Yunnan.

For previous introduction see 94101.

100327. RHODODENDRON APERANTUM Balf. and Ward.

F. 29938. A dwarf spreading shrub 6 to 20 inches high, native to northeastern Burma, at altitudes between 12,000 and 14,000 feet. The oval to oblanceolate leaves, 2 inches long, are almost sessile in whorls at the ends of the branchlets. The tubular-campanulate flowers, in various shades from white to rose, deep-rose, orange, and yellow, are about 2 inches long and are borne in 1- to 4-flowered lax umbels.

100328. RHODODENDRON ARIZELUM Balf. and Forr.

F. 29785. A shrub or small tree 10 to 20 feet high, native to Burma and Tibet. The branchlets are clothed in cinnamon or gray tomentum, and the oval to oblanceolate leaves, 6 inches long, are dark green and rugulose above and cinnamon or brown tomentose beneath. The obliquely campanulate flowers, 2 inches across, are white, creamy yellow, or yellow tinged with rose, with crimson blotches at the base, and are borne in racemose umbels of 15 to 25 flowers.

100329. RHODODENDRON BEESIANUM Diels.

F. 30894. A shrub 15 to 20 feet high, with leathery, purple-green narrowly oblanceolate leaves about 6 inches long and deep rich-rose flowers up to 2 inches across. Allied to *R. delavayi* and native to Yunnan.

For previous introduction see 94108.

100330 and 100331. RHODODENDRON GRIERSONIANUM Balf. and Forr.

A shrub 5 to 10 feet high, native to western Yunnan. The narrowly lanceolate leaves, 4 to 8 inches long, are green above and covered beneath with a loose whitish to buff woolly tomentum. The funnel-campanulate flowers, in clusters of 5 to 12, are 2 to 3 inches long and are bright geranium-scarlet, dappled inside with darker spots.

For previous introduction see 97665.

100330. F. 29762.

100331. F. 30392.

100332 and 100333. RHODODENDRON BULLATUM Franch.

A loosely branched shrub up to 8 feet high, native to Yunnan. The branchlets are densely and softly woolly, the elliptic-ovate leaves, 2 to 4 inches long, are puckered above and loosely woolly pubescent beneath, and the broadly tubular pink-tinged white flowers, 2 to 3 inches long, are borne in terminal clusters.

100332. F. 30393.

100333. G. F. 16.

100334. RHODODENDRON CALOXANTHUM Balf. and Farr.

F. 29647. A shrub 3 to 5 feet high, native to northeastern Burma between 11,000 and 12,000 feet altitude. The leathery broadly elliptic to orbicular leaves, 2 inches across, are dark green above and pale glaucous green beneath with scattered glandular hairs. The campanulate

100281 to 100364—Continued.

citron or sulphur-yellow flowers, over 1 inch long, are borne in 4- to 6-flowered umbels.

100335. RHODODENDRON CANTABILE Balf. f.

F. 30395.

For previous introduction and description see 98459.

100336. RHODODENDRON CHAETOMALLUM Balf. and Forr.

F. 30539. A shrub 4 to 5 feet high, with thin twiggy branches densely clothed with branched bristly hairs. The oblong-ovate leathery leaves are about 4 inches long, dark olive green above, and covered beneath with tawny wool. The deep-crimson tubular-campanulate flowers, 2 inches long, are borne in 4- to 6-flowered terminal umbels. It is native to Tibet and Yunnan between 11,000 and 13,000 feet altitude.

100337. RHODODENDRON DECORUM Franch.

F. 30887. A western Chinese evergreen shrub with glabrous leaves, glaucous beneath, and broadly bell-shaped white or pink flowers 2 inches across.

For previous introduction see 97661.

100338. RHODODENDRON EUCHAITES Balf. and Forr.

F. 29545. A shrub or small tree 15 to 20 feet high, closely related to *R. neriflorum*, native to northeastern Burma and adjacent Yunnan. The oblong to oval leaves, 2 to 4 inches long, are dark green and smooth above and white waxy beneath. The bright-crimson fleshy tubular-campanulate flowers are 1 to 2 inches long and are borne in umbels of 5 to 12.

100339 and 100340. RHODODENDRON FACETUM Balf. and Ward.

A tree 15 to 20 feet high, with the branchlets covered with fine white or tawny farinose pubescence, native to rain forests at 9,000 feet altitude in northeastern Burma and adjacent Yunnan. The oblong-elliptic to oblong-lanceolate leathery leaves are 5 to 8 inches long, and the fleshy tubular-campanulate flowers, 2 inches long, are scarlet with deeper spots.

100339. F. 29926.

100340. F. 30375.

100341. RHODODENDRON FICTOLACTEUM Balf. f.

F. 30893. A tree up to 45 feet high, with cinnamon-tomentose branchlets, native to Yunnan. The oblong-ovate to oblanceolate leaves are 6 to 12 inches long, dark green and rugulose above and clothed with buff to rusty brown tomentum beneath. The obliquely campanulate flowers, 2 inches long and twice as broad, vary from white to creamy white or rose tinted, with a deep-crimson basal blotch and radiating spots, and are borne in corymbs of 12 to 15 flowers each.

100342. RHODODENDRON GLISCHRUM Balf. and Smith.

G. F. 2. A tree up to 25 feet high, native to Yunnan and Burma. The oblanceolate leaves, 4 to 10 inches long, are bright green above and are densely hispid with long curved setae beneath. The campanulate flowers, 2 inches long, are deep rose with a crimson blotch at the base and are borne in a racemose umbel of about 10.

100343. RHODODENDRON HABROTTRICHUM Balf. and Smith.

F. 29588. A shrub 4 to 10 feet high, with branchlets densely clothed with coarse glandular bristles. The elliptic-oblong leathery leaves, 4 to 7 inches long, are dark green above and pale green beneath, and the funnel-campanulate flowers, 2 inches long, are white or

100281 to 100364—Continued.

pale-rose and are borne in compact, many-flowered umbels. It is native to Yunnan.

100344 and 100345. RHODODENDRON HIPPOPHAEOIDES Balf. and Smith.

For previous introduction and description see 98465.

100344. G. F. 5. 100345. G. F. 21.

100346. RHODODENDRON KYAWI Lace and Smith.

F. 29929. A shrub 15 to 20 feet high, native to northeastern Burma. The oblong to oblong-oval leaves, 6 to 12 inches long, are bright green above and pale green beneath, and the tubular-campanulate flowers, 2 to 3 inches long, are deep crimson and are borne in racemose corymbs of 12 to 16.

100347. RHODODENDRON LEPTOTHRIUM Balf. and Forr.

G. F. 23. A shrub 2 to 5 feet high, with leaves bright green on both sides and purple-red flowers; found at 10,500 feet altitude in Yunnan.

For previous introduction see 94042.

100348. RHODODENDRON LITIENSE Balf. and Forr.

G. F. 3. A shrub 4 to 9 feet high, with densely glandular branchlets, native to Yunnan. The thin, leathery, oblong to oblong-oval leaves, 2 to 3 inches long, are green above and glaucous beneath, and the widely campanulate clear-yellow flowers, 1 inch long, are borne in racemose umbels of 5 or 6.

100349. RHODODENDRON MEGALYX Balf. and Ward.

F. 29809. A bushy tree 10 to 16 feet high, native to northeastern Burma between 7,000 and 9,000 feet altitude. The elliptic to obovate-elliptic leaves, 4 to 6 inches long, are glabrous above and glaucous with small scales beneath. The fragrant white flowers, in clusters of about five, have a bell-shaped calyx 1 inch long, and the broadly funnel-shaped corolla is more than 2 inches long.

100350. RHODODENDRON PRONUM Tagg. and Forr.

G. F. 26. A stunted prostrate shrub 3 to 10 feet high, native to Yunnan between 12,000 and 15,000 feet altitude. The oblong-elliptic to oblanceolate leaves, 1 to 3 inches long, are dull and slightly rugulose above and covered beneath with dull-gray to fawn loosely felted tomentum. The obliquely campanulate flowers, more than an inch long, are creamy yellow with copious deep-crimson markings and are borne in a racemose umbel of 8 to 12 flowers surrounded by the persistent bud scales and bracts.

100351 and 100352. RHODODENDRON PROSTRATUM W. W. Smith.

A prostrate shrub with bristly branchlets 4 inches high, native to Yunnan between 15,000 and 16,000 feet altitude. The broadly oblong-elliptic leaves, less than 1 inch long, are glossy and reticulate above and densely covered beneath with brown scales. The pink-violet, red-spotted flowers, less than 1 inch long, are widely funnel-shaped and are borne in small terminal clusters.

100351. F. 30543. 100352. F. 30891.

100353. RHODODENDRON RACEMOSUM Franch. **Mayflower rhododendron.**

G. F. 10.

For previous introduction and description see 98471.

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100281 to 100364—Continued.

100354. RHODODENDRON SPERABILE Balf. and Farr.

F. 30912. A shrub 3 to 6 feet high, native to northeastern Burma between 10,000 and 12,000 feet altitude. The lanceolate to elliptic leaves, 2 to 4 inches long, are dark green above and clothed beneath with pale-cinnamon to tawny thick woolly tomentum. The fleshy tubular-campanulate flowers, 1 to 2 inches long, are scarlet, marked at the base with dark spots, and are borne in 4- or 5-flowered terminal umbels.

100355 to 100358. RHODODENDRON STEWARTIANUM Diels.

A graceful shrub 3 to 7 feet high, native to the Burma-Yunnan border between 10,000 and 14,000 feet altitude. The leathery elliptic to obovate leaves, 2 to 5 inches long, are bright green above and covered beneath with a thin cream-yellow farinose indumentum. The tubular-campanulate flowers, 2 inches long, vary from pure white or soft yellow through white flushed rose to deep rose margined with deep crimson.

100355. G. F. 4. 100357. F. 29685.

100356. F. 29663. 100358. F. 30533.

100359. RHODODENDRON SUB-EROSUM Balf. and Forr.

F. 29687. A shrub 5 to 7 feet high, closely resembling *R. yunnanense*, native to Yunnan. The evergreen oblanceolate to obovate leaves, 2 to 3 inches long, are smooth above but bristly on the margin, with fleshy scales beneath. The slightly irregular flowers, about 1 inch long, are faintly flushed rose with deep-rose markings and are borne in terminal or lateral 3- to 5-flowered clusters.

100360. RHODODENDRON TALIENSE Franch.

G. F. 1. A loosely branched shrub 4 to 8 feet high, native to Yunnan. The broadly lanceolate to oblong-ovate leaves, 2 to 5 inches long, are dark green and rugulose above and covered beneath with a tawny feltlike tomentum. The funnel-campanulate flowers, 1 to 2 inches long, are clear cream yellow or flushed rose with deep-crimson markings and are borne in umbels of 10 to 15 flowers.

100361. RHODODENDRON TEPHROPEPLUM Balf. and Farr.

F. 29655. A flow shrub 2 to 4 feet high, with stiff branches, native to the Burma-Tibet border at 14,000 feet altitude. The oblong-ovate leaves, 1 to 2 inches long, are slightly scaly above and densely scaly beneath with small black scales. The magenta-rose flowers, with crimson-purple tubes 1 inch long, are borne in terminal clusters of 3 or 4 flowers each.

100362. RHODODENDRON TRAILLIANUM Forr. and Smith.

F. 30531. A shrub or small tree, up to 30 feet high, native to Yunnan. The elliptic to broadly oblong-lanceolate leaves, 3 to 6 inches long, are glabrous above and clad beneath with a suedelike green-gray or dull tawny tomentum. The funnel-campanulate flowers, 1 to 2 inches long, are white or rose white with deep-crimson spots and are borne in racemose umbels of 10 to 15 flowers.

100363. RUBUS LINEATUS Reinw. Rosaceae.

F. 29971. A perennial herb with very few prickles, native to the Himalayas in India and Java. The palmately divided leaves have 3 to 5 coriaceous lanceolate leaflets, 5 inches long, silky silvery tomentum beneath, and the white flowers, 1 inch across, borne in elongated silvery panicles, are followed by edible pink to yellow fruits.

100281 to 100364—Continued.

100364. *STACHYURUS HIMALAICUS* Hook. f. and Thoms. Stachyuraceae.

F. 29930. A small tree, native to the eastern temperate slopes of the Himalayas in India. The ovate membranous leaves, 6 inches long, have serrate margins, and the small flowers, in erect spikes 2 to 3 inches long, are followed by fleshy berries the size of a small pea.

100365 to 100368.

From Guatemala City, Guatemala. Cuttings presented by Col. Victor E. Ruehl, Caldwell, N.J. Received June 24, 1932.

100365 to 100367. *CINCHONA* spp. Rubiaceae.

100365. *CINCHONA* sp.

Cautarea; Quina blanca from Yutiopa.

100366. *CINCHONA* sp.

No. 5.

100367. *CINCHONA* sp.

No. 4.

100368. *EUPHORBIA LANCIFOLIA* Schlecht. Euphorbiaceae.

Irbut. A fleshy plant with broadly lanceolate dark-green leaves about 3 inches long and inconspicuous small flowers in terminal and axillary cymes. Native to southern Mexico. Introduced for its medicinal properties.

100369. *SACCIOLEPIS CONTRACTA* (Wight and Arn.) Hitchc. Poaceae.
Grass.

From Hawaii. Seeds presented by J. M. Westgate, director, through C. P. Wilsie, agronomist, Hawaii Agricultural Experiment Station, Honolulu. Received June 22, 1932.

Glennwood grass; an annual glabrous grass with erect stems up to 3 feet high and flat leaves 2 to 4 inches long. The spike-like panicle is about 2 inches long. Native to Hawaii.

100370 to 100376. *ORYZA SATIVA* L. Poaceae. Rice.

From Australia. Seeds presented by the Rice Research Station, Yanco, New South Wales. Received June 16, 1932.

Introduced for the use of Department specialists interested in cereal investigations.

100370. *Caloro*. Selection 21.

100371. *Caloro*. Selection 46.

100372. *Caloro*. Selection 316.

100373. *Colusa*. Selection 180.

100374. *Colusa*. Selection 188-1.

100375. Selection 2179-6.

100376. Selection 2188.

100377. *CEDRELA ODORATA* L. Meliaceae. Cigarbox-cedar.

From Hawaii. Seeds presented by Harold Lyon, in charge, department of botany and forestry, experiment station of the Hawaiian Sugar Planters' Association, Honolulu. Received June 16, 1932.

For previous introduction and description see 98824.

100378. *CASTANEA HENRYI* (Skan) Rehd. and Wils. Fagaceae. Chestnut.

From China. Seeds collected by Peter Liu and sent through Owen L. Dawson, agricultural commissioner, Shanghai. Received January 7, 1932. Numbered in June 1932.

Chu Lee or *Chun Lee*, pearl chestnut; an edible chestnut from Chekiang Province. The tree becomes 25 to 30 feet high, with oblong-lanceolate long-acuminate leaves, green on both sides. The burs are either solitary or two in a bunch and contain usually but one seed.

For previous introduction see 95633.

100379 to 100467. *SOLANUM TUBEROSUM* L. Solanaceae. Potato.

From Peru. Tubers collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received June 28, 1932.

Nos. 100379 to 100413 were collected in May 1932 in the region of Cuzco, at 11,000 feet altitude.

100379. No. 281. Small round pink tubers with deep round eyes and yellow-white flesh.

100380. No. 282. Large round pink tubers with deep eyes having long brows and white flesh.

100381. No. 283. Small long flattened pink tubers with pink eyes, medium deep and yellow-white flesh.

100382. No. 284. Small irregularly round purple tubers with deep round small eyes and yellow-white flesh.

100383. No. 285. Small long white tubers with shallow elongated eyes and white flesh.

100384. No. 286. Small elongated purple tubers with thick skin, long shallow eyes, and white flesh.

100385. No. 287. Elongated red tubers of medium size with elongated red eyes and white flesh.

100386. No. 288. Elongated purple tubers of medium size with shallow elongated eyes and white flesh with slightly purple vascular ring.

100387. No. 289. Medium size, irregularly round white tubers with deep round white eyes and yellow-white flesh.

100388. No. 290. Large round pink and white mottled tubers with round shallow eyes and yellow-white flesh.

100389. No. 291. Large elongated black tubers with slightly elongated shallow eyes and white flesh with a purple vascular ring.

100390. No. 292. Large irregularly round pink tubers mottled with white, deep round pink eyes, and white flesh.

100391. No. 293. Small elongated pink tubers mottled with white, shallow elongated eyes, and white flesh.

100392. No. 294. Irregularly round yellow tubers of medium size with medium shallow pink eyes and yellow flesh.

100393. No. 295. Curved elongated yellow-white tubers with shallow white eyes and yellow-white flesh.

100394. No. 296. Ovate flattened black tubers mottled with white, which have medium shallow eyes and very white flesh.

100395. No. 297. Small ovate, pink and white mottled tubers with round shallow eyes and white flesh.

100379 to 100467—Continued.

100396. No. 298. Irregularly round white tubers with deep round white eyes and yellow-white flesh. Found in black soil.
100397. No. 299. Large ovate smooth red and white mottled tubers with round shallow eyes and white flesh.
100398. No. 300. Small dark-red elongated pointed tubers with shallow elongated eyes and white flesh with a red vascular ring.
100399. No. 301. Small white elongated tubers slightly mottled with red with shallow elongated eyes and very white flesh.
100400. No. 302. Large irregularly round pink tubers with deep round red eyes and white flesh.
100401. No. 303. Medium-sized irregularly round red-purple tubers with round shallow eyes and yellow flesh.
100402. No. 304. Medium-sized irregularly round red-purple tubers with deep elongated eyes and yellow flesh.
100403. No. 305. Irregularly ovate medium-sized, black-purple tubers with deep long eyes and white flesh flecked with purple.
100404. No. 306. Large red elongated tubers with deep elongated eyes and yellow flesh.
100405. No. 307. Medium-sized red and white mottled ovate tubers with deep elongated eyes and white flesh.
100406. No. 308. Medium-sized ovate tubers, very much mottled with red and white, which have shallow elongated eyes and white flesh.
100407. No. 309. Small irregularly round red and white mottled tubers with a thick skin, deep eyes, and yellow-white flesh.
100408. No. 310. Flattened ovate smooth tan tubers with shallow eyes and white flesh.
100409. No. 311. Small irregularly round pink tubers with deep round eyes and very white flesh.
100410. No. 312. Small irregularly round white tubers with deep round eyes and white flesh.
100411. No. 313. Small elongated and pointed red tubers with shallow eyes and white flesh.
100412. No. 314. Large round white tubers with shallow eyes and white flesh.
100413. No. 315. Small elongated mottled red tubers with numerous bright red eyes and white flesh.
100414. No. 316. A wild variety collected in the region of Ckaira, Peru, May 15, 1932, at 11,000 feet altitude. Small round white tubers with shallow eyes and white flesh.
- Nos. 100415 to 100423 were bought in a market May 23, 1932, in the region of Machu Picchu.
100415. No. 327. Small round tubers with white skin, deep eyes, and white flesh.
100416. No. 328. Small round white tubers with deep and pink eyes and white flesh.
100417. No. 329. Medium-sized, dark-purple ovate tubers with shallow eyes and white flesh.
100418. No. 330. Medium-sized, dark-red ovate tubers with deep eyes and white flesh.
100419. No. 331. Medium-sized ovate pink tubers with deep eyes and white flesh.
100420. No. 332. Medium-sized, flattened-oval red tubers with long shallow eyes and white flesh.

100379 to 100467—Continued.

100421. No. 333. Medium-sized, flattened-oval red and white mottled tubers with shallow eyes and white flesh.
100422. No. 334. Small oval pink tubers with deep round eyes and white flesh.
100423. No. 335. Small round pink tubers with shallow eyes and white flesh.
- Nos. 100424 to 100466 were collected May 25, 1932, in the Cuzco Valley, Peru, at 11,000 feet altitude.
100424. No. 336. *Yurac-Suyto*. Narrow elongated purple tubers with shallow eyes and yellow flesh.
100425. No. 337. *Huayruro*. Large oval pink and purple mottled tubers with shallow eyes and white flesh.
100426. No. 338. *Sullu-sullu*. Small round purple tubers with very deep eyes and yellow-white flesh.
100427. No. 339. *Huallata-cusi*. Elongated purple tubers with medium deep eyes and white flesh with purple center and vascular ring.
100428. No. 340. *Puca-Tiquilla*. Large irregularly ovate purple tubers with deep eyes and white flesh.
100429. No. 341. *Yana-cusi*. Small ovate purple tubers with medium deep eyes and white flesh.
100430. No. 342. *Lequecho*. Small oval purple tubers mottled with white which have medium deep eyes and yellow flesh.
100431. No. 343. *Tomira-pueva*. Large dark-red oval tubers with deep eyes and white flesh.
100432. No. 344. *Socco-huayco*. Small round black tubers with deep eyes and yellow flesh with purple center.
100433. No. 345. *Verundones*. Large long purple tubers with deep eyes and yellow flesh.
100434. No. 346. *Chuño-ñahuí*. Small round white tubers mottled with purple which have deep eyes with prominent brow and white flesh.
100435. No. 347. *Trompus*. Large oval purple tubers with shallow eyes and white flesh streaked with purple.
100436. No. 348. *Sali-tomira*. Round medium-sized purple tubers with deep eyes and white flesh.
100437. No. 349. *Mora-Kompis*. Small round black and white mottled tubers with shallow eyes and white flesh.
100438. No. 350. *Chaquilla*. Medium-sized, dark-red elongated tubers with shallow eyes and white flesh.
100439. No. 351. *Yana-gguchillo*. Long narrow curved black tubers with thick skin, shallow eyes, and white flesh with purple in the center and a purple vascular ring.
100440. No. 352. *Paspa-Succho*. Small round white tubers with shallow pink eyes and white flesh.
100441. No. 353. *Puca-pumamaqui*. Narrow elongated pink tubers with shallow eyes and white flesh.
100442. No. 354. *Yana-ggucco*. Round purple medium-sized tubers with shallow eyes and yellow flesh flecked with purple.
100443. No. 355. *Yurac-tomira*. Small round white tubers with shallow eyes and white flesh.
100444. No. 356. *Tomira*. Small round pink tubers with deep eyes and yellow flesh.

100379 to 100467—Continued.

109445. No. 357. *Yana-Ruaña*. Medium-sized round purple tubers with deep eyes and yellow-white flesh.
102446. No. 358. *Puca-mama*. Small round dark red tubers with very deep eyes and yellow-white flesh.
100447. No. 359. *Huaycu-muscacha*. Round medium-sized purple tubers with deep eyes and white flesh.
100449. No. 360. *Puca-cusi*. Small round white tubers mottled with purple with deep eyes and white flesh.
100449. No. 361. *Kcompis*. Small round pink tubers with shallow eyes and white flesh.
100450. No. 362. *Yana-tiquilla*. Small round purple tubers with deep eyes and white flesh.
100451. No. 363. *Pogque-cusi*. Small round tubers with white skin tinged with purple, shallow eyes, and white flesh.
100452. No. 364. *Orcco-huaña*. Long narrow white tubers tinged with purple, deep eyes with wide brows, and very white flesh.
100453. No. 365. *Aequiñas-chipetinas*. Round purple medium-sized tubers with deep eyes and yellow-white flesh.
100454. No. 366. *Mora-Kompis*. Small round white tubers mottled with pink which have deep eyes and white flesh.
100455. No. 367. *Kanqueras*. Round medium-sized red tubers with deep eyes and white flesh.
100456. No. 368. *Yana-huaña*. Small round dark-red tubers with deep eyes and yellow-white flesh.

100379 to 100467—Continued.

100457. No. 369. *Mora-Quehuillo*. Very long curved white tubers mottled with purple with wide narrow eyes and white flesh with a purple vascular ring.
100458. No. 370. *Kcompis*. Small round pink tubers with shallow eyes and yellow-white flesh.
100459. No. 371. *Yana-Qquecco*. Round medium-sized purple tubers with deep eyes and yellow-white flesh with a pink vascular ring.
100460. No. 372. *Cuchauma*. Oblong purple tubers with deep eyes and white flesh.
100461. No. 373. *Yurac-Awa-caya*. Long narrow white tubers with shallow eyes and white flesh.
100462. No. 374. *Qquello-huaccoto*. Small round white tubers with medium deep eyes and white flesh.
100463. No. 375. *Huaccanquilla*. Small round pink tubers with shallow eyes and white flesh.
100464. No. 376. *Huasq-uiña*. Long red tubers with deep eyes and white flesh which is red at the eyes.
100465. No. 377. *Yurac-compis*. Small round white tubers with pink shallow eyes and yellow-white flesh.
100466. No. 378. *Tomira-veru*. Round medium-sized tubers with thick red skin, deep eyes, and white flesh.
100467. No. 280. Collected May 17, 1932, in the region of Cuzco, Peru, at 11,060 feet altitude. Small irregularly round red-purple tubers with deep round eyes and yellow-white flesh.

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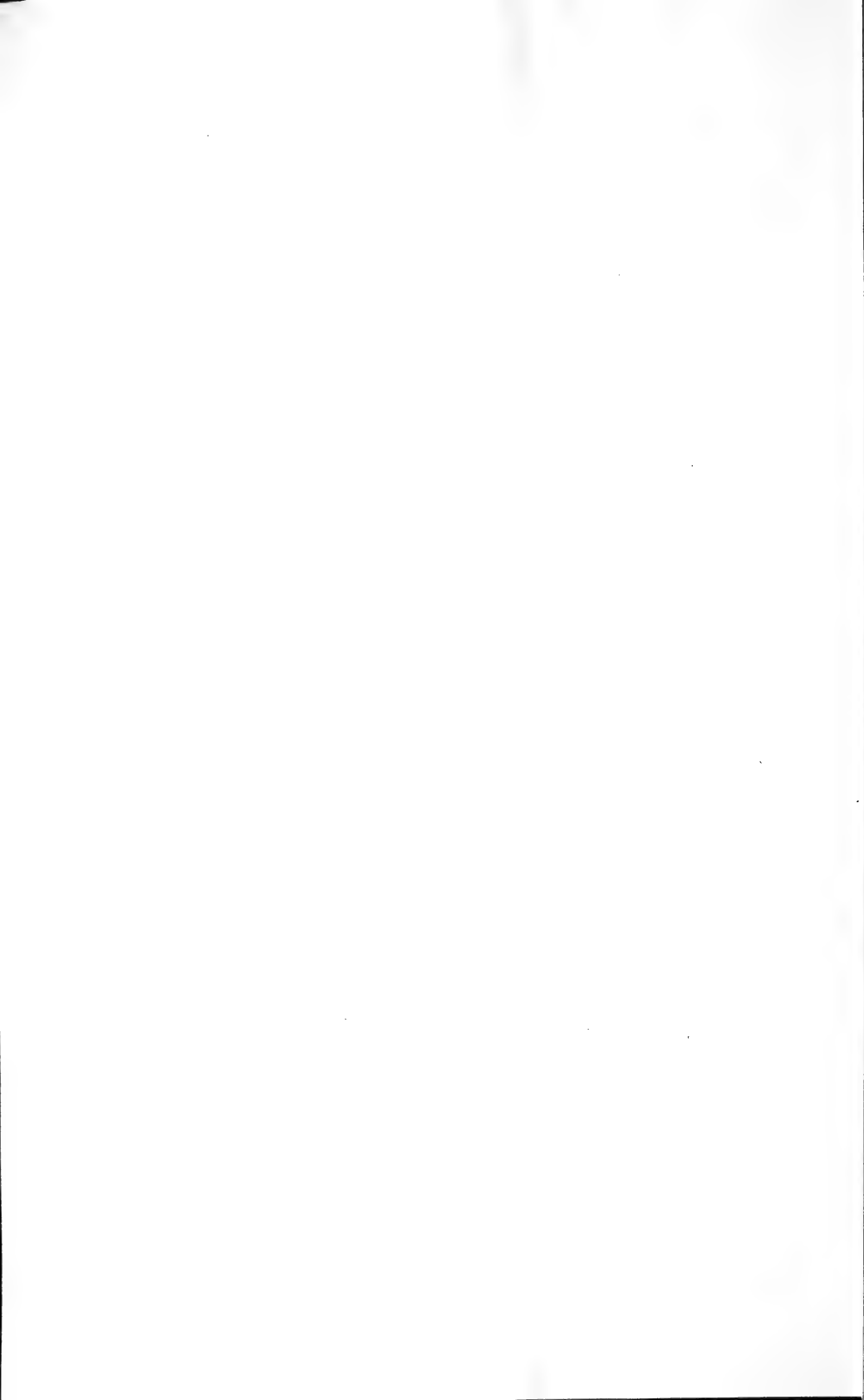
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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 112



Washington, D. C.



Issued September 1934

PLANT MATERIAL INTRODUCED BY THE DIVISION OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, JULY 1 TO SEPTEMBER 30, 1932 (Nos. 100468-101157)

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INTRODUCTORY STATEMENT

Inventory no. 112 lists the introductions (nos. 100468-101157) received by the Division of Foreign Plant Introduction during the period from July 1 to September 30, 1932. It records the further kindness of Maj. Lionel de Rothschild and the Honorable Henry MacLaren in presenting additional seeds from the sixth Forrest expedition to southwestern China.

Nos. 100724-100798, *Solanum tuberosum*, collected by C. O. Erlanson and H. G. MacMillan, represent the last collection from that expedition to South America, together with various miscellaneous collections (100688-100709, 100713-100718, 100833-100837) gathered in the same territory.

The principal collections represent very large special collections made for Department specialists, as, for example, two sugar collections, one from Charles H. Thrall, Habana, Cuba (101115-101130), and one from the experiment station of the Hawaiian Sugar Planters' Association, Hawaii (101028-101057); forage plants, chiefly grasses, from New Zealand (100660-100676), and from Wales (100678-100681); a collection of cinchona, Guatemalan cuttings, from Colonel Ruehl (100799-100832); and seeds purchased from the Hindustan Nursery Co., Calcutta, India (100986-100988), and the Chandra Nursery, Rhenock, Sikkim State, Bengal (101064).

The botanical determinations of these introductions have been made and the nomenclature determined by the late H. C. Skeels,¹ who had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

DIVISION OF FOREIGN PLANT INTRODUCTION,
Washington, D.C., November 15, 1933.

¹ Died Jan. 3, 1934.



INVENTORY²

100468 and 100469.

From Palestine. Cuttings presented by A. Khazanoff, Jewish Colonization Society, Haifa. Received July 2, 1932.

100468. *CERATONIA SILIQUA* L. Caesalpiaceae.
Carob.

100469. *FICUS SYCOMORUS* L. Moraceae.
Sycomore fig.

100470 to 100475. *FRAGARIA* spp. Rosaceae. Strawberry.

From Australia. Plants presented by Herbert J. Rumsey & Sons, Ltd., Dundas, New South Wales. Received June 29, 1932. Numbered in July 1932.

A collection of Australian strawberries, introduced for the use of Department specialists.

100470. *FRAGARIA* sp.

Captain Cook.

100471. *FRAGARIA* sp.

Creswell's Seedling. A variety which forms few runners.

100472. *FRAGARIA* sp.

Illawarra.

100473. *FRAGARIA* sp.

Port Macquarie.

100474. *FRAGARIA* sp.

Phenomenal.

100475. *FRAGARIA* sp.

Rhodes Special. A very early variety.

100476 to 100478. *CAPSICUM ANNUM* L. Solanaceae. Common redpepper.

From Spain. Seeds from the Murcia district, presented through Señor Miquel de Echegaray, agricultural attaché, Spanish Embassy, Washington, D.C. Received June 22, 1932. Numbered in July 1932.

A collection of the best commercial varieties of redpeppers grown in the Murcia district of Spain.

100476. *Pimiento del pico.*

100477. *Pimiento gordo.*

100478. *Pimiento morrón.*

100479. *LOLIUM PERENNE* L. Poaceae. Perennial ryegrass.

From Manchuria. Seeds presented by L. Pftisin. Received June 27, 1932. Numbered in July 1932.

Collected near Harbin in March 1932 and introduced for the use of Department specialists.

100480. *ARGANIA SPINOSA* (L.) Skeels (*A. sideroxylon* Roem. and Schult.). Sapotaceae. Argan.

From Morocco. Seeds presented by H. Brayard. Ingenieur Horticole, Directeur de la Ferme Experimentale, Marrakech. Received June 24, 1932. Numbered in July 1932.

The Argan tree of western Morocco is endemic to that part of the African Continent. It grows to a large size and bears an abundance of very acid fruits, somewhat resembling small plums, that are eaten by cattle and goats. The seeds are very thick-walled and contain an oil which is used by the natives as a food and also for illuminating purposes.

For previous introduction see 91650.

100481. *IPOMOEA BATATAS* (L.) Poir. Convolvulaceae. Sweetpotato.

From Peru. Tubers collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received June 28, 1932. Numbered in July 1932.

No. 317. Collected May 17, 1932, in the region of Cuzco at 11,000 feet altitude. Large, elongated, red tubers with white flesh mottled with purple and purple centers.

100482 to 100496.

From China: Seeds collected by the sixth Forrest expedition, 1930-32, to southwestern China and presented by Maj. Lionel de Rothschild, London, England. Received July 1, 1932.

100482. *ANAPHALIS CUNEIFOLIA* Hook. f. Asteraceae.

No. 30519. A perennial alpine herb 6 to 12 inches high, native to Sikkim, India. The slender ascending stems are soft woolly, the linear-oblong to spatulate leaves are 1 to 2 inches long, and the small woolly flower heads are borne in corymbose clusters.

100483 to 100485. *ASTER* spp. Asteraceae.

² It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Foreign Plant Introduction, and, further, that the printing of such names here does not constitute their official publication and adoption to 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 seed samples or 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 identification, 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 division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

100482 to 100496—Continued.

100483. *ASTER FUSCESCENS* Bur. and Franch.

No. 30444. A stout rigid perennial about a foot high, with ascending stems and broadly ovate or roundish leaves about 2 inches long, the lowermost with long petioles, and flower heads half an inch across in rather dense corymbs. Native to Szechwan, China.

100484. *ASTER* sp.

No. 30443.

100485. *ASTER* sp.

No. 30524.

100486. *DORONICUM YUNNANENSE* Hort. Asteraceae.

No. 30434. A name for which a place of publication and a description have not been found.

100487. *ERIGERON MULTIRADIATUS* (Lindl.) C. & B. Clarke. Asteraceae. Himalayan fleabane.

No. 30517. A beautiful alpine composite native to wet grassy places the whole length of the Himalayan range from 7,000 to 12,000 feet altitude. It is a pubescent or hirsute herb up to 10 inches high, with simple scapellike leafy stems and numerous radical leaves. The oblanceolate leaves, narrowed into a rather long petiole, are 4 to 8 inches long.

For previous introduction see 100190.

100488. *HEDYSARUM* sp. Fabaceae.

No. 30525.

100489. *MEGACARPAEA DELAVAYI* Franch. Brassicaceae.

No. 30514. An alpine perennial with a thick rhizome and an erect stem 1 to 2 feet high. The pinnatisect leaves are up to 6 inches long, and the small violet or purplish flowers are in dense corymbs. Native to southwestern China.

For previous introduction see 100205.

100490. *NARDOSTACHYS JATAMANSI* (W. M. Jones) DC. (*N. grandiflora* DC.). Valerianaceae.

No. 30435. A low perennial herb 1 to 2 feet high, native to the alpine Himalayas in Sikkim, India. The lanceolate-spatulate radical leaves are 6 to 8 inches long, and the tubular-campanulate rosy flowers, one fourth inch long, are in small heads which are gathered into cymes.

100491. *PEGAEOPHYTON SINENSE* (Hemsl.) Hayek and Hand.-Mazz. Brassicaceae.

No. 30428. A stemless plant, possibly a biennial, 2 to 3 inches high, with a rather dense rosette of very narrow leaves and small flowers, half an inch across, borne singly on short peduncles. Native to western China.

100492. *SALVIA EVANSIANA* Hort. Menthaceae. Sage.

No. 30433. A name for which a place of publication and a description have not been found.

100493. *SAXIFRAGA* sp. Saxifragaceae. Saxifrage.

No. 30441. A species which somewhat resembles *S. rufescens*.

100494 to 100496. *SENECIO* spp. Asteraceae.10494. *SENECIO STENOGLOSSUS* Franch.

No. 30431. A perennial herb with very slender hairy stems, 1 to 2 feet high, and reniform or cordate leaves about 5 inches long. The brownish flower heads are in corymbose racemes. Native to Yunnan.

100495. *SENECIO* sp.

No. 30430.

100496. *SENECIO* sp.

No. 30455.

100497 to 100499.

From Australia. Seeds presented by R. Allsop manager, Queensland Acclimatisation Society. Received June 30, 1932. Numbered in July 1932.

100497. *CARICA PAPAYA* L. Papayaceae. Papaya.

Long Tom (2 A.S. strain).

100498. *CARICA PAPAYA* L. Papayaceae. Papaya.

New Era (2 D.S. strain).

100499. *PASSIFLORA QUADRANGULARIS* L. Passifloraceae. Giant granadilla.

Long type (2 D.S. strain).

100500 to 100618.

From China. Seeds collected by the sixth Forrest expedition, 1930-32, to southwestern China and presented by Maj. Lionel de Rothschild, London, England. Received July 2, 1932.

100500. *ABIES CHENSSENSIS* Van Tiegh. Pinaceae. Fir.

No. 30663. A tree up to 120 feet high, native to central China. The horizontally spreading, two-ranked leaves, about 1 inch long, are shining dark-green above, with two gray-green bands beneath. The cinnamon-brown, ovoid-oblong cones are 3 to 5 inches long.

100501. *ABIES DELAVAYI* Franch. Pinaceae. Fir.

No. 30975. A tall tree, often 100 feet high, native to western China. The slightly grooved branchlets are lustrous red brown, and the emarginate linear leaves, about 1 inch long, are revolute on the margin, dark green above and with two white bands beneath. The violet-black, cylindrical to ovoid cones are 2 to 4 inches long, and the scales are nearly 1 inch wide.

For previous introduction see 98365.

100502 to 100508. *ACER* spp. Aceraceae. Maple.100502. *ACER CAMPBELLII* Hook. f. and Thoms.

No. 29743. Variety *yunnanense* of one of the principal maples of the northeastern Himalayas, where it grows at altitudes over 7,000 feet. The beautiful green leaves with their red stalks make this tree decidedly ornamental. The light-gray, moderately hard wood is used for planking and for cabinetwork.

100503. *ACER DAVIDI* Franch.

No. 29881. A native Chinese maple, 50 to 60 feet high, with large, oval, heart-shaped, coarsely toothed leaves and long pendent clusters of samaras.

For previous introduction see 97498.

100504. *ACER LAXIFLORUM* Pax. (*A. Forrestii* Diels).

No. 30726. A tree up to 50 feet high, with cordate-oblong leaves 4 inches long, having 2 to 4 short lobes near the base and serrate margins. The yellowish flowers are borne in slender pendulous racemes and are followed by fruits with the wings spreading at right angles. It is native to western China.

For previous introduction see 99826.

100505. *ACER* sp.

G. F. 96.

100506. *ACER* sp.

G. F. 462.

100507. *ACER* sp.No. 29592. Closely related to *A. laevigatum*.100508. *ACER* sp.No. 30721. Closely related to *A. pazii*.

100500 to 100618—Continued.

100509 to 100511. *AMYGDALUS* spp. Amygdalaceae.

100509. *AMYGDALUS KANSUENSIS* (Rehder) Skeels.

G. F. 85-a. A thorny shrub, 6 to 10 feet high, with black stems and pink flowers which appear before the leaves. The small fruits, the size of a marble or larger, contain no flesh. This species occurs on dry arid loess slopes and endures temperatures of -10° to -20° F. It is an early flowering shrub, blooming at an altitude of 8,500 to 9,000 feet when the country is still covered with snow and the streams are frozen.

100510. *AMYGDALUS PERSICA* L. Peach.

G. F. 85.

100511. *AMYGDALUS* sp.

G. F. 316.

100512. *BERBERIS* sp. Berberidaceae. **Barberry.**

G. F. 75. Closely related to *B. yunnanensis*.

100513. *BERBERIS* sp. Berberidaceae. **Barberry.**

F. 30717.

100514. *BETULA* sp. Betulaceae. **Birch.**

F. 29410.

100515. *BETULA* sp. Betulaceae. **Birch.**

F. 30831.

100516. *BUDDLEIA FALLOWIANA* Balf. and Smith. Loganiaceae.

F. 30932. A graceful shrubby plant with silvery woolly foliage and small, white, fragrant flowers, with orange centers, in dense cylindrical spikes.

100517. *CARAGANA* sp. Fabaceae.

G. F. 95. Flowers yellow.

100518. *CARPINUS* sp. Betulaceae. **Hornbeam.**

F. 29607.

100519. *CARPINUS* sp. Betulaceae. **Hornbeam.**

G. F. 74.

100520. *CATALPA DUCLOUXII* Dode. Bignoniaceae.

G. F. 324. A small tree, native to central and western China, with ovate-cordate leaves 4 to 8 inches long. The rose-pink flowers, more than an inch long, are borne in corymbose clusters.

100521. *CEPHALOTAXUS FORTUNEI* Hook. Taxaceae. **Chinese plum-yew.**

G. F. 88. A small tree up to 30 feet high, native to central China. The linear leaves, 2 to 3 inches long, spread nearly horizontally and are glossy green above with two pale bands beneath, and the ovoid purple fruits are 1 inch long.

100522 to 100525. *CLEMATIS* spp. Ranunculaceae.

100522 and 100523. *CLEMATIS MONTANA* Buch-Ham. **Anemone clematis.**

An ornamental vigorous climber, 30 feet or more in length, with solitary, pure-white flowers. It is native to the Himalayas.

100522. F. 30725. A variety with large flowers.

100523. F. 30505. A variety with small flowers.

100524. *CLEMATIS RANUNCULOIDES* Franch.

G. F. 91. A clematis from southwestern China, with a short thick woody rhizome and an erect simple flowering stem 1 to 2 feet high. The prominently nerved leathery leaves are trifid or trilobed and from 1 to 2 inches long, and the 1 to 3 nodding flowers are rose colored. The plant strongly suggests a ranunculus.

100500 to 100618—Continued.

100525. *CLEMATIS* sp.

F. 30743.

100526 to 100528. *CLETHRA* spp. Clethraceae.

100526 and 100527. *CLETHRA DELAVAYI* Franch.

A Chinese shrub or small tree up to 50 feet high, with red branchlets and oblanceolate leaves which are pubescent beneath. The fragrant white flowers differ from those of the sweet pepperbush, *Clethra alnifolia*, in having red calyxes and in being in solitary racemes, while the sweet pepperbush has the racemes grouped together to form a panicle.

100526. F. 30956. The typical form.

100527. F. 30974.

100528. *CLETHRA* sp.

F. 29866.

100529. *CORYLOPSIS* sp. Hamamelidaceae.

F. 30968.

100530 to 100533. *COTONEASTER* spp. Malaceae.

100530. *COTONEASTER* sp.

F. 30553. Closely related to *C. acuminata*.

100531. *COTONEASTER* sp.

F. 30598.

100532. *COTONEASTER* sp.

G. F. 77. Closely related to *C. pannosa*.

100533. *COTONEASTER* sp.

G. F. 94. Closely related to *C. pannosa*.

100534. *CRATAEGUS HENRYI* Dunn. Malaceae. **Hawthorn.**

F. 30713. A handsome hawthorn from southwestern China, 10 to 20 feet high, with unarmed branches, leathery toothed but not lobed ovate leaves 1 to 3 inches long. The white flowers are followed by globose red fruits half an inch in diameter.

100535 to 100537. *DAPHNIPHYLLUM* spp. Euphorbiaceae.

100535. *DAPHNIPHYLLUM* sp.

F. 30409.

100536. *DAPHNIPHYLLUM* sp.

G. F. 90. Closely related to *D. beddomei*.

100537. *DAPHNIPHYLLUM* sp.

G. F. 332.

100538. *DECAISNEA FARGESII* Franch. **Lardizabalaceae.**

F. 30466. A handsome deciduous shrub up to 15 feet high, with large drooping pinnate leaves 3 feet long, greenish flowers in pendulous racemes a foot or more long, and deep-blue fruits 3 to 4 inches long. Native to western China.

For previous introduction see 99160.

100539. *DIAPENSIA PURPUREA* Diels. **Diapensiaceae.**

F. 30806. Forma *rosea*: a pink-flowered form of this low caespitose bushy evergreen shrub with leathery glabrous oblong-spatulate leaves less than an inch long. Native to western China.

For previous introduction see 99857.

100540. *DICHOTOMANTHES TRISTANIAECARPA* Kurz. **Amygdalaceae.**

F. 30966. A shrubby plant with oblong-ovate strongly serrate mucronate leaves an inch long, smooth above and woolly beneath, and flowers in terminal cymes. Native to southwestern China.

100500 to 100618—Continued.

100541. ENKIANTHUS DEFLEXUS (Griffith) C. Schneid. Ericaceae.

F. 29710. The whorled branches of this Himalayan shrub are characteristic of the entire genus and give the plant a peculiar appearance. The branchlets are red, and the margins and petioles of the obovate leaves, 1 to 3 inches long, are red when the leaves are young. The flowers, produced in dense drooping racemes, have yellow corollas, striped dark red, with darker lobes.

For previous introduction see 99862.

100542. ENKIANTHUS sp. Ericaceae.

G. F. 300.

100543. EPILOBIUM sp. Onagraceae.

G. F. 346.

0544. EUONYMUS sp. Celastraceae.

G. F. 42.

00545. EUONYMUS sp. Celastraceae.

G. F. 337.

100546. VIBURNUM sp. Caprifoliaceae.

F. 29497.

100547. EUONYMUS sp. Celastraceae.

F. 30716. Closely related to *E. crebria*.

100548. EUPTELEA PLEIOSPERMA Hook. f. and Thoms. Trochodendraceae.

G. F. 73. A tree 30 to 40 feet high, native to Tibet, with ovate-crenate leaves which are glaucous beneath and have very long acuminate tips. The slender-stalked red flowers, in axillary fascicles, appear before the leaves.

For previous introduction see 99864.

100549. FRAXINUS sp. Oleaceae. Ash.

F. 30563.

100550 to 100552. GAULTHERIA spp. Ericaceae.

100550 and 100551. GAULTHERIA TRICHOPHYLLA Royle.

A low evergreen shrub of densely tufted habit, 3 to 6 inches high, spreading by means of underground shoots; the slender, wiry, bristly stems are covered with small leaves, 12 or more to the inch. The narrow-oblong stalkless leaves, one fourth inch long and about one eighth inch wide, are smooth on both surfaces but bristly on the margins, glossy dark green above and pale beneath. The solitary bell-shaped pink flowers are borne in the leaf axils and are followed by blue-black fruits. Native to the Himalayas up to 13,000 feet altitude.

100550. F. 30556.

100551. F. 30879.

100552. GAULTHERIA sp.

F. 29803.

100553 to 100555. GORDONIA spp. Theaceae.

Closely related to *G. chrysantra*.

100553. G. F. 98.

100554. G. F. 103.

100555. F. 30964.

100556 to 100558. HYDRANGEA spp. Hydrangeaceae.

100556 and 100557. HYDRANGEA YUNNANENSIS Rehd.

A shrub about 3 feet high, with membranous oblong or oblong-lanceolate dentate light-green leaves 3 to 5 inches long. The white sterile flowers are over an inch across, and the blue fertile flowers are in nearly flat cymes. It is

100500 to 100618—Continued.

closely related to *H. davidii* and is native to Yunnan.

100558. F. 29755.

100557. F. 29842.

100558. HYDRANGEA sp.

F. 29624.

100559. HYPERICUM PATULUM HENRYI Veitch. Hypericaceae. Henry hypericum.

F. 30989. This variety is hardier than the typical form and sturdier in habit. The ovate dark-green leaves are 2 to 3 inches long, and the rich yellow flowers are about 2 inches wide. Native to Yunnan.

100560. HYPERICUM sp. Hypericaceae.

F. 29674. Closely related to *H. hookeri*.

100561. ILEX MICROCOCCA Maxim. Aquifoliaceae. Holly.

F. 29908. A holly with oblong papery leaves 3 to 4 inches long and very small red berries one sixth inch in length. Native to Japan and China.

100562. ILEX sp. Aquifoliaceae. Holly.

F. 30561. Closely related to *I. corallina*.

100563. ILICICUM sp. Magnoliaceae.

G. F. 76. Closely related to *I. yunnanensis*.

100564 to 100570. JUNIPERUS sp. Pinaceae. Juniper.

100564. JUNIPERUS RECURVA Buch.-Ham. Himalayan juniper.

F. 29591. A prostrate or erect shrub, or sometimes an erect tree up to 30 feet high, native to the temperate and alpine slopes of the Himalayas in India. The fastigate branches are decurved and then ascending with pendulous branchlets.

For previous introduction see 99736.

100565. JUNIPERUS SQUAMATA Buch.-Ham.

F. 30847. A decumbent shrub, native to the eastern Himalayas and western China. The thick branchlets are ascending at the tip and bear crowded blue-green leaves with two gray-white bands above. The globose-ovoid, blue-black fruits are one-fourth to one-third inch across.

100568 and 100567. JUNIPERUS SQUAMATA FARGESII Rehd. and Wils.

A tree up to 70 feet high with longer, narrower, and more spreading leaves than the usual shrub form, F. 30847 (No. 100565), and the fruits are ovoid. It is native to the China-Tibet border.

100568. F. 30560.

100567. F. 30972.

100568. JUNIPERUS SQUAMATA WILSONII Rehd.

F. 30918. An upright shrub up to 6 feet high, native to western China. The short branchlets are recurved at the tip, and the broadly lanceolate leaves, about one sixth inch long, are broader, shorter, and more crowded than those of the usual form.

100569 and 100570. JUNIPERUS WALLICHIANA Hook. f.

Varying from a shrub up to a tree 60 feet high, this juniper is native to the eastern Himalayas and western China. The slender branchlets bear bright-green scalelike leaves, and the blue-black ovoid erect fruits are nearly one half inch long.

100569. F. 30554.

100570. F. 30855.

100500 to 100618—Continued.

100571. *KETELEERIA DAVIDIANA* (Bertrand) Beissn. Pinaceae.

F. 30961. A coniferous tree, native to 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.

100572. *LEPTODERMIS* sp. Rubiaceae.

F. 29657.

100573. *LESPEDEZA FORMOSA* (Vogel) Koehne. Fabaceae. Purple bushclover.

F. 30580. An erect semishrubby plant 6 to 12 feet high, with trifoliate leaves of oblong leaflets and racemes of rose-purple flowers. It is native to Chosen.

For previous introduction see 94006.

100574. *LIGUSTRUM IONANDRUM* Diels. Oleaceae. Privet.

G. F. 321. A compact shrub 10 to 12 feet high, found among limestone boulders at 10,000 feet altitude in southwestern China. It has elliptical leaves and short terminal clusters of fragrant cream-colored flowers.

100575 to 100577. *PAEONIA* spp. Ranunculaceae. Peony.

100575 and 100576. *PAEONIA DELAVAYI* Franch.

A very attractive vigorous shrub 4 feet high, growing on steep slopes among limestone boulders and in alpine meadows between 10,000 and 13,000 feet altitude. The deep-crimson flowers are 3 inches in diameter. Native to southwestern China.

100575. G. F. 81.

100576. G. F. 322.

100577. *PAEONIA LUTEA* Delavay. Golden peony.

F. 30848. A shrubby Chinese peony with a short woody stem 1 or 2 feet high and deep-green, leathery, three-parted leaves, white beneath, and about a foot in length. The golden-yellow single or slightly double flowers are over 2 inches across.

100578. *PARASYRINGA SEMPERVIRENS* (Franch.) W. W. Smith. Oleaceae.

F. 30859. An evergreen rather privetlike shrub, up to 9 feet high, found in mountainous regions of Yunnan, up to 12,000 feet altitude. The foliage is leathery, the fragrant flowers are light creamy yellow, and the berries are black.

100579 to 100581. *PHILADELPHUS DELAVAYI* L. Henry. Hydrangeaceae. Mockorange.

A shrub 15 to 20 feet high, native to Yunnan. The remotely serrate ovate leaves, 2 to 4 inches long, are dark green above and tomentose beneath. The very fragrant flowers, nearly 2 inches across, have a violet-purple calyx and white petals slightly tinged with purple on the outside, and are borne in racemes.

For previous introduction see 99965.

100579. G. F. 343.

100580. F. 30377.

100581. F. 30723.

100582. *PHOEBE* sp. Lauraceae.

F. 30729.

100583. *PHOTINIA* sp. Malaceae.

F. 29760.

100500 to 100618—Continued.

100584. *PICEA LIKIANGENSIS* (Franch.) E. Pritz. Pinaceae. Spruce.

G. F. 104. A tree up to 80 feet high, native to western China. The light yellow-gray branchlets are sparingly hairy, the quadrangular, slightly compressed leaves, one half inch long, are white above, and the cones, about 2 inches long, have rhombic-ovate, erose, flexible scales.

100585. *PIERIS* sp. Ericaceae.

G. F. 72.

100586. *PINUS YUNNANENSIS* Franch. Pinaceae. Yunnan pine.

G. F. 86. A large forest tree, native to Yunnan. The long slender, drooping leaves are up to 10 inches long, and the cones, 2 to 4 inches long, have flat scales.

For previous introduction see 98378.

100587. *PIPTANTHUS* sp. Fabaceae.

G. F. 99.

100588. *PITTSOPORUM* sp. Pittosporaceae.

F. 30720.

100589. *POTENTILLA FRUTICOSA VEITCHII* (Wilson) Bean. Rosaceae. Veitch cinquefoil.

F. 30767. A very fine form from Hupé, with silky, hairy, gray-green leaves and white flowers.

For previous introduction see 99970.

100590. *PRUNUS* sp. Amygdalaceae.

F. 30705. A plum.

100591. *PRUNUS* sp. Amygdalaceae.

F. 30706. A plum.

100592. *PTEROLOBIUM* sp. Caesalpiniaceae.

F. 29972.

100593. *RHODOLEIA* sp. Hamamelidaceae.

G. F. 102. Closely related to *R. championii*.

100594 to 100600. *ROSA* spp. Rosaceae. Rose.

100594. *ROSA LONGICUSPIS* Bertol.

F. 30988. A rambling bush about 20 feet high, native to western China, with sparse short prickles, large, dark-green leaves, and white flowers 2 inches wide, in very large lax corymbs.

100595. *ROSA PRAELUCENS* Hort.

G. F. 79. A name for which a place of publication and a description have not been found.

100596. *ROSA* sp.

G. F. 92. Closely related to *R. moyesii*.

100597. *ROSA* sp.

G. F. 93. Flowers white.

100598. *ROSA* sp.

F. 97.

100599. *ROSA* sp.

F. 30549. Closely related to *R. sericea*.

100600. *ROSA* sp.

F. 30993. Closely related to *R. moyesii*.

100601 to 100603. *SORBUS* spp. Malaceae. Mountain-ash.

100601. *SORBUS HARROWIANA* (Balf. and Smith) Rehder.

F. 29775. A tree up to 40 feet high, native to China, with compound leaves made up of 3 to 9 oblong serrulate coriaceous leaflets 8 inches

100500 to 100618—Continued.

long. The small white flowers, in compound terminal corymbs 6 to 8 inches across, are followed by ovoid fruits a quarter of an inch in diameter.

For previous introduction see 93951.

100602. *SORBUS* sp.

F. 30970.

100603. *SORBUS* sp.

F. 30991.

100604 to 100606. *SPIRAEA* spp. Rosaceae. **Spirea.**

100604. *SPIRAEA* sp.

G. F. 80. Closely related to *S. canescens glaucophylla*.

100605. *SPIRAEA* sp.

F. 30863. Closely related to *S. sinobrahuaica*.

100606. *SPIRAEA* sp.

F. 31001. Closely related to *S. arcuata*.

100607. *STACHYURUS HIMALAICUS* Hook. f. and Thoms. Stachyuraceae.

F. 29930. A small tree native to the eastern temperate slopes of the Himalayas in India. The ovate membranous leaves, 6 inches long, have serrate margins, and the small flowers in erect spikes, 2 to 3 inches long, are followed by fleshy berries the size of a small pea.

For previous introduction see 100364.

100608. *SYRINGA* sp. Oleaceae. **Lilac.**

F. 30898. Closely related to *S. yunnanensis*.

100609. *TILIA CHINENSIS* Maxim. Tiliaceae. **Linden.**

F. 30558. A Chinese linden with long-stemmed roundish serrate leaves, ashly pubescent beneath, and oblong-linear bracts about as long as the petioles. Native to Kansu, western China.

100610. *TRIPTERYGIUM FORRESTII* Loesner. Celastraceae.

F. 30971. A shrub about 3 feet high, with oval crenulate serrate papery leaves 2 to 3 inches long and terminal panicles of small green-brown flowers. Native to open situations in the Tali Range, Yunnan.

100611 to 100614. *TSUGA* spp. Pinaceae. **Hemlock.**

100611. *TSUGA CHINENSIS* (Franch.) Pritz. **Chinese hemlock.**

G. F. 87. A large forest tree up to 150 feet high, native to western China. The branchlets are yellowish at first, later turning pale yellow-gray. The linear leaves, 1 inch long, are glossy, dark green above and have broad whitish bands beneath which later become inconspicuous. The ovoid cones, 1 inch long, have lustrous yellow-brown scales.

For previous introduction see 98384.

100612 and 100613. *TSUGA YUNNANENSIS* (Franch.) Masters. **Yunnan hemlock.**

A forest tree up to 150 feet high, with trunks 6 to 7 feet in diameter. The branchlets are covered with a rufous-gray pubescence, and the leaves, up to an inch long, are rounded at the apex and have white lines beneath. The small dull cones, 1 inch long, have fewer scales than those of *T. chinensis*. Native to western China at 11,000 feet altitude.

100612. G. F. 78.

100613. F. 30976.

100500 to 100618—Continued.

100614. *TSUGA* sp.

G. F. 83.

100615. *VACCINIUM DELAVAYI* Franch. **Vacciniaceae. Blueberry.**

F. 30986. A bushy shrub with grayish bark, leathery, shining-green, obovate leaves half an inch long, very small white flowers in small racemes, and small globose capsules. Native to Yunnan.

100616. *VACCINIUM* sp. **Vacciniaceae. Blueberry.**

F. 30688. Closely related to *V. fragile*.

100617. *VIBURNUM* sp. **Caprifoliaceae.**

F. 30727.

100618. (Undetermined.)

F. 29882.

100619 to 100632.

From Australia. Seeds presented by Edwin Ashby, Wittunga, Blackwood, South Australia. Received June 28, 1932. Numbered in July 1932.

100619. *ALYOGYNE HAKEAEFOLIA* (Giordano) Alefeld. **Malvaceae.**

An erect evergreen shrub, native to Australia, with narrow-lobed or deeply serrate leaves and large purple-lilac flowers with dark centers. It is closely related to cotton.

For previous introduction see 93829.

100620 to 100622. *CASSIA* spp. **Caesalpiniaceae.**

100620. *CASSIA ARTEMISIOIDES* Gaud.

Wormwood senna.

An erect bushy shrub covered with silky white tomentum. The leaves are made up of 3 to 6 pairs of linear-terete leaflets 1 inch long, and the yellow flowers are in short dense racemes. It is native to Australia.

For previous introduction see 90850.

100621. *CASSIA PLEUROCARPA* F. Muell.

A tall, erect Australian shrub with 4 or 5 rather distinct pairs of thick, oblong leaflets and loose racemes of yellow flowers.

100622. *CASSIA* sp.

100623. *CHORIZEMA ILLICIFOLIUM* Labill. **Fabaceae.**

A showy, graceful shrub from Western Australia, from 3 to 4 feet high, with brilliant orange-red, pea-shaped flowers. It blooms for many months in winter and spring.

100624. *CHORIZEMA NERVOSUM* T. Moore. **Fabaceae.**

An erect rigid shrub 12 inches high with pubescent branchlets, native to Western Australia. The broadly cordate leaves, one-half inch long, have undulate margins, and the small, orange-red, pea-shaped flowers are in loose racemes.

100625. *CLIANTHUS PUNICEUS* (Don) Soland. **Fabaceae. Red parrothead.**

A drooping undershrub, native to New Zealand, with dark-green pinnate leaves and long, pendulous racemes of bright-scarlet flowers.

100626 to 100628. *GREVILLEA* spp. **Proteaceae.**

100626. *GREVILLEA BIPINNATIFIDA* R. Br.

A prostrate or diffuse evergreen shrub 3 to 4 feet high, native to Western Australia. The broadly ovate leaves, 4 inches long and 3 inches wide, are twice divided into wedge-shaped segments. The silky pubescent, red flowers are in loose racemes 4 inches long or gathered together in a large terminal panicle.

100619 to 100632—Continued.

100627. *GREVILLEA BUXIFOLIA* (J. E. Smith) R. Br.

An evergreen shrub about 6 feet high, which stands cutting back well and produces an abundance of small pink flowers. It is native to South Australia.

100628. *GREVILLEA WILSONI* A. Cunn.

An erect shrub 3 to 5 feet high, with glabrous and glaucous branchlets, native to Western Australia. The leaves are 1 to 3 times ternately divided into narrow-linear or subulate, rigid, pungent-pointed segments 1 inch long. The brilliant-red flowers are borne in loose, erect, often-branched racemes.

100629. *HIBISCUS HUEGELII* Endl. Malvaceae.

Variety *alba*. A tall shrub, native to Australia, with 3- to 5-lobed coarsely toothed leaves 1 to 3 inches long and large white flowers, 4 to 5 inches across, with twisted petals.

For previous introduction see 95327.

100630. *HOVEA FUNGENS* Benth. Fabaceae.

A rigidly erect evergreen shrub up to 3 feet high, with linear-lanceolate, coriaceous, sharp-pointed leaves less than an inch long. The branches are covered from the bottom to the top with clusters of brilliant deep-blue flowers. The flowering season is long.

100631. *OXYLOBIUM LANCEOLATUM* (Vent.) Druce (*O. callistachys* Benth.). Fabaceae.

A tall evergreen shrub, native to Australia, with whorls of lanceolate leaves, 3 to 5 inches long, and yellow flowers in dense terminal racemes 6 inches long.

For previous introduction see 90862.

100632. *VIMINARIA DENUDATA* J. E. Smith. Fabaceae. Rush-broom.

An Australian shrub with rushlike stems up to 20 feet high, long, wiry, pendulous branches, leaves reduced to filiform petioles 6 to 9 inches long, and long, terminal racemes of orange-yellow flowers.

100633. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.

From Africa. Seeds presented by C. C. Taylor, American agricultural attaché, United States Department of Agriculture, Pretoria, Union of South Africa. Received June 24, 1932. Numbered in July 1932.

Vaull Mammoth. Introduced for the use of Department specialists interested in fruit breeding.

100634 to 100636. *SESAMUM ORIENTALE* L. Pedaliaceae. Sesame.

From Morocco. Seeds presented by Dr. E. Miede, Chef du Service de l'Agriculture, Directeur de la Station de Selection et d'Essais de Semences, Rabat. Received June 28, 1932. Numbered in July 1932.

100634. *Rouge de Damas*.

100635. *Du Haouz* (Maroc).

100636. *Rouge de Palestine*.

100637 to 100645.

From the Union of Soviet Socialist Republics. Seeds presented by the Nikita Botanic Garden, through the Bureau of Introduction, Institute of Plant Industry, Leningrad. Received June 30, 1932. Numbered in July 1932.

100637. *ASPARAGUS VERTICILLATUS* L. Convolvulariaceae.

No. 266. A semiwoody climbing vine, with stems 10 to 15 feet long, green, angled, flexuose

100637 to 100645—Continued.

branches, and filiform cladodes 2 inches long. The funnel-shaped, green-yellow flowers are in clusters of 1 to 4 and are followed by red berries a quarter of an inch in diameter. Native to Persia and Siberia.

For previous introduction see 91398.

100638. *EREMURUS TAURICUS* Stev. Liliaceae. Desertcandle.

No. 271. A large xerophytic perennial with a rosette of broadly linear, acute leaves a foot or more long and white flowers in a simple dense raceme over a foot long on a stout scape as long as the leaves. It is native to the mountains of Turkey and closely related to the yellow-flowered *E. spectabilis*.

100639. *LACTUCA SALIGNA* L. Cichoriaceae.

No. 71. A stiff, erect, biennial plant, 2 to 4 feet high, native to Europe. The lanceolate to oblong leaves are toothed or lobed on the margin and are upright against the stem. The small heads of pale-yellow flowers are crowded so as to appear to be clustered in a simple spike.

100640. *PAEONIA TENUIFOLIA* L. Ranunculaceae. Fringed peony.

No. 325. A hardy herbaceous perennial a foot or more high, densely leafy, with ternate, much-divided leaves and an erect dark-crimson flower about 3 inches across. It is native to the Caucasus region.

For previous introduction see 90640.

100641. *PAEONIA TRIERNATA* Pall. Ranunculaceae. Peony.

No. 324. A perennial herb, native to Siberia, usually about 3 feet high, with triternate leaves and purple flowers.

For previous introduction see 90641.

100642. *ROSA SPINOSISSIMA* L. Rosaceae. Scotch rose.

No. 350. A low shrub usually 3 to 4 feet high, with spreading or recurving branches and densely prickly branchlets. It is native to Europe. The compound leaves are made up of 5 to 11 orbicular serrate leaflets about an inch long, and the pink, white, or yellow flowers, 2 inches across, are solitary but borne on numerous short branchlets along the stems.

For previous introduction see 90645.

100643 to 100645. *TULIPA* spp. Liliaceae. Tulip.

100643. *TULIPA ALTAICA* Pall.

No. 601. A tulip from the Altai Mountains, with oblong-lanceolate leaves slightly exceeding the flowers. The flower segments are alternately lanceolate and spatulate-oblong.

100644. *TULIPA MICHELIANA* Hoog.

No. 604. A tulip, native to the Caspian region, with a pubescent scape 12 inches high. The lanceolate to linear-lanceolate leaves, usually four, are striped with brown and have undulate margins. The large, single flowers are lilac-scarlet outside and vermilion-scarlet inside, with black, lanceolate blotches at the base.

100645. *TULIPA SCHRENKII* Regel.

No. 281. A tulip from Turkistan, with broadly campanulate yellow or purple-yellow flowers borne on a stem nearly a foot high. The leaves are wavy margined.

100646 to 100658.

From the Philippine Islands. Seeds presented by Arthur F. Fischer, director, Bureau of Forestry, Manila. Received June 27, 1932. Numbered in July 1932.

100646 to 100658—Continued.

100646. *ALBIZZIA ACLE* (Blanco) Merr. Mimosaceae.

Akle. A large tree up to 100 feet high and 3 to 4 feet in diameter, native to the Philippines. It bears bipinnate leaves, with two pinnae each bearing 3 to 6 pairs of ovate leaflets 2 to 6 inches long, and yellow-green flowers, borne in small heads, followed by flat pods 10 to 15 inches long, constricted between the seeds.

For previous introduction see 94178.

100647. *ARTOCARPUS BLANCOI* (Elmer) Merr. Moraceae.

Antipolo. This tree, which closely resembles the true breadfruit, *A. communis*, is strictly wild, never cultivated, and has inedible fruits.

100648. *EUPHORIA DIDYMA* Blanco. Sapindaceae.

Alpay or *alupog*. A small attractive tree up to 50 feet high, with compound leaves made up of prominently veined leathery leaflets and compact terminal clusters of small flowers followed by green warty fruits an inch in diameter having a shell-like rind and juicy sweet translucent pulp enclosing a large seed. Native to the Philippine Islands.

100649. *GARDENIA PSEUDOPSISIDUM* (Blanco) Vill. Rubiaceae.

A small tree, 9 to 12 feet high, native to the Philippine Islands. The opposite leaves are lanceolate and acuminate, and the solitary, axillary, white flowers are followed by round fruits resembling guavas, but not edible.

100650. *HERITIERA LITTORALIS* Ait. Sterculiaceae.

Duñigon-late. A medium-sized tree with a dense crown and entire leathery leaves which are dark green above and silvery beneath. The hard durable wood is classed among the best of the Philippine hardwoods. The tree is a good ornamental and makes an excellent windbreak.

100651. *MYRISTICIA PHILIPPENSIS* Lam. Myristicaceae.

Duguan. A Philippine tree up to 75 feet high, with a slightly buttressed, somewhat irregular trunk. It has alternate entire evergreen leaves and small inconspicuous flowers in axillary clusters. The soft wood is not durable and is used locally for temporary construction, boxes, and dry measures.

100652. *PAHUDIA RHOMBOIDEA* (Blanco) Prain. Caesalpiniaceae.

Tindalo. A tree up to 4 feet in diameter, straight but not tall. The wood is hard, heavy, seasons well, and is rarely attacked by termites. It is a well-known Philippine cabinetwood.

100653. *PALAUQUIM LUZONIENSE* (Vill.) Vidal. Sapotaceae.

Nato. A large tropical evergreen tree with lanceolate or obovate acute leathery, dark-green leaves 5 inches long and small axillary brownish flowers. Native to Luzon, Philippine Islands.

100654. *PARKIA JAVANICA* (Lam.) Merr. (*P. timoriana* Merr.). Mimosaceae. **Kupang.**

A huge and remarkably handsome, quick-growing tree, attaining a height of over 120 feet, with a clear smooth trunk and beautiful, fine-leathery pinnate leaves. Native to the Malay Peninsula, Burma, etc. It has been introduced into Ceylon, where it has become well established. The long pods, which grow in clusters, contain a quantity of white, powdery, farinaceous substance.

100655. *SAPIUM LUZONICUM* (Vidal) Merr. Euphorbiaceae.

Balakat-gubat. An evergreen tree with alternate oval leathery elliptic leaves about 4 inches

100646 to 100658—Continued.

long, very small yellowish flowers, subtended by large bracts an inch long, in spike-like racemes. Native to the Philippines.

100656. *STREBLUS ASPER* Lour. Moraceae.

Malios or *aludig*. A drought-resistant tree with drooping branches and dark-green foliage. It produces small, yellowish, rather sweet fruits somewhat resembling corn kernels in appearance. Native to tropical Asia.

100657. *TERMINALIA NITENS* Presl. Combretaceae.

Sakat. A tropical evergreen tree, native to Luzon, Philippine Islands. The alternate, very smooth leaves are obovate, abruptly acuminate, and shining green above. The small inconspicuous flowers are in racemes about the same length as the leaves.

100658. *WRIGHTIA LANITI* (Blanco) Merr. Apocynaceae.

Lanete. A medium-sized tree native to the Philippines, with opposite, unequally pinnate leaves which have about four pairs of lanceolate, hairy leaflets. The fruit is a cylindrical follicle about 4 inches long. The tree exudes a milky sap.

100659. *SOJA MAX* (L.) Piper. Fabaceae. **Soybean.**

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 6, 1930. Numbered in July 1932.

No. 3820. *Chichibu duizu*. Purchased in Kumagaya, Japan, February 11, 1930. Large, oval, yellow-green beans, with pale hilum, which are used quite extensively in the Saitama Prefecture in Japan for the manufacture of green flour, utilized in the making of confections.

100660 to 100676.

From New Zealand. Seeds purchased from R. E. Alexander, director, Canterbury Agricultural College, Lincoln. Received July 1, 1932.

A collection of New Zealand forage plants introduced for the use of Department specialists.

100660 and 100661. *DACTYLIS GLOMERATA* L. Poaceae. **Orchard grass.**

100660. *Cocksfoot* strain.

100661. *Akaroa*.

100662 to 100674. *DANTHONIA* spp. Poaceae. **Grass.**

100662. *DANTHONIA BUCHANANI* Hook. f.

Strain C. A. C. 30: 10.8.

100663 to 100670. *DANTHONIA PILOSA* R. Br.

A perennial Australian grass, said to be an excellent pasture grass. It seeds freely and gives good fodder in early spring. This grass does well on dry clay hills or stony flats and is considered equally good either for sheep or cattle.

100663. A commercial variety.

100664. C. A. C. 31: 253.1.

100665. C. A. C. 31: 32.3.

100666. C. A. C. 31: 30.4.

100667. C. A. C. 31: 54.2.

100668. C. A. C. 31: 225.2.

100669. C. A. C. 31: 139.3.

100670. C. A. C. 31: 136.1.

100660 to 100676—Continued.

100671 to 100674. *DANTHONIA SEMIANNULARIS* (Labill.) R. Br. Wallaby grass.

A perennial, fine-leaved, tussocky grass, 1 to 2 feet high, which provides feed for the greater part of the year. It is said to be a good winter grass, will stand a great amount of grazing, and its palatability both for cattle and sheep is well known.

100671. A New Zealand commercial variety.

100672. C. A. C. 30: 5.1.

100673. C. A. C. 31: 114.3.

100674. C. A. C. 31: 28.8.

100675. *LOLIUM PERENNE* L. Poaceae. Perennial ryegrass.

2/2. A commercial strain.

100676. *TRIFOLIUM PRATENSE* L. Fabaceae. Red clover.

A New Zealand commercial strain.

100677. *ANANAS SATIVUS* Schult. f. Pineapple. Bromeliaceae.

From the American Virgin Islands. Plants presented by J. B. Thompson, director, Agricultural Experiment Station, St. Croix. Received May 20, 1930. Numbered in July 1932.

Blue Bond. The leaves of this variety are without marginal spines, and the small to medium-sized fruits, purple-green before they are ripe, are of excellent quality. The fruits are smaller and quite unlike the *Smooth Cayenne*.

100678 to 100681.

From Wales. Seeds purchased from the Welsh Plant Breeding Station, University College of Wales, Aberystwyth. Received July 6, 1932.

Introduced for the use of Department specialists.

100678 and 100679. *DACTYLIS GLOMERATA* L. Poaceae. Orchard grass.

100678. S.-26. Pasture-hay type.

100679. S.-29. *Cocksfoot*, a pasture type.

100680 and 100681. *PHLEUM PRATENSE* L. Poaceae. Timothy.

100680. S.-43. Pasture-hay type.

100681. S.-51. Leafy-hay type.

100682. *CASSIA TIMORIENSIS* DC. Caesalpinaceae.

From the Philippine Islands. Seeds presented by Manuel L. Roxas, director, Bureau of Plant Industry, Manila. Received July 6, 1932.

A rather low tree with slender, downy branches, pale-green leaves up to 9 inches long, bright-yellow flowers, and thin glossy flexible pods sometimes 6 inches long. The tree is distributed throughout the Malay Archipelago and the Philippine Islands.

For previous introduction see 94095.

100683 to 100687.

From the Philippine Islands. Seeds presented by Arthur F. Fischer, director, Bureau of Forestry, Manila. Received July 6, 1932.

100683. *CALOPHYLLUM BLANCOI* Planch. and Triana. Clusiaceae.

Bitanhol. An attractive tropical tree with opposite entire, linear-oblong, papery leaves about 8 inches long and small flowers in dense terminal and axillary racemes. Native to the Philippines.

100684. *DIPLODISCUS PANICULATUS* Turcz. Tiliaceae.

Baloho. A large shrub or small tree with alternate, oblong-elliptic, entire leaves, green above

100683 to 100687—Continued.

and densely white punctate beneath. The reddish flowers are in lax axillary and terminal panicles. Native to the Philippines.

100685. *MALLOTUS PHILIPPENSIS* (Lam.) Muell. Arg. Euphorbiaceae.

Banato. A small dioecious tree with long-stalked leaves, glabrous above, rusty tomentose beneath, and minutely scarlet dotted. The globose scarlet capsules, one third inch in diameter, are covered with a bright-red powder which is collected for export to be used in dyeing silk and in medicine. Native to India up to 4,500 feet altitude.

100686. *MANGIFERA ALTISSIMA* Blanco. Anacardiaceae.

Pahutan. A Philippine relative to the mango, which is found from northern Luzon to southern Mindanao, where it forms a large tree, sometimes 100 feet in height. The leaves are long, narrow, and pointed at both ends, and the small, fragrant, white flowers are borne in large numbers in branched clusters. The smooth, green or yellow mangolike fruits, 2 to 3 inches long, are used for making pickles.

100687. *TOONA CALANTAS* Merr. and Rolfe. Meliaceae.

Kalantas. A tall, ornamental, tropical tree with handsome pinnate foliage and whitish inconspicuous flowers in large terminal panicles. The capsule is over an inch long. In the Philippines, where this tree is native, the fragrant wood is of considerable commercial importance.

100688 to 100709.

From South America. Seeds collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received June 28, 1932. Numbered in July 1932.

100688. *ANNONA CHERIMOLA* Mill. Annonaceae. Cherimoya.

No. 269. From the market at Arequipa, Peru, May 10, 1932. Origin of fruit not known.

100689. *ANNONA MURICATA* L. Annonaceae. Soursop.

No. 273. *Guanabana.* From the market at Arequipa, Peru, May 8, 1932. Origin of fruit not known.

100690. *CAPSIUM ANNUM L.* Solanaceae. Common redpepper.

No. 380. From the market of Cuzco, Peru, May 18, 1932. A locally grown yellow redpepper, 3 inches long, grown at 11,000 feet altitude.

100691. *CUCUMIS MELO L.* Cucurbitaceae. Melon.

No. 29. *Melones limeños.* From the market of Temuco, Chile, February 23, 1932. A muskmelon about 6 inches in diameter, flattened endwise, striped longitudinally orange and green. The flesh is yellow and sweet.

100692. *ESCALLONIA MACRANTHA* Hook. and Arn. Escalloniaceae.

No. 34. *Siete Camisas.* From Ancud, Chiloe Island, Chile, March 6, 1932. A dense evergreen shrub, 6 to 10 feet high, native to the island of Chiloe. The shining dark-green, obovate leaves are 1 to 3 inches long, and the bright rose-red flowers, more than half an inch across, are in terminal racemes.

100693. *FRANCOA* sp. Saxifragaceae.

No. 118. From near Ancud, Chiloe Island, Chile, March 13, 1932. An herb with a rosette of leaves and a spike of capsules, growing in moist shaded places. Flowers not seen.

100694. *LIBERTIA* sp. Iridaceae.

No. 35. From Ancud, Chiloe Island, Chile, March 6, 1932. An herb 2 feet high, found on moist banks near the seashore. Flowers not seen.

100688 to 100709—Continued.

100685. *LIBERTIA* sp. Iridaceae.

No. 119. From near Ancud, Chiloé Island, Chile, March 13, 1932. A plant about 2 feet high, with narrow linear leaves; the fruit is a 3-valved capsule. Found in moist shaded situations. Flowers not seen.

100686. *SILENE ARMERIA* L. Silenaceae.
Sweet-william catchfly.

No. 32. Collected March 2, 1932, near Puerto Montt, Chile. A naturalized herb 8 inches high, with pink flowers, found in moist meadows.

100697. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

No. 321. From the market at Cuzco, Peru, May 17, 1932. Small round red tomatoes less than an inch in diameter. Grown at 11,000 feet altitude.

100698. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

No. 31. A cultivated variety from a garden near Temuco, Chile, February 26, 1932. An herb 3 feet high, with the stems covered with long-haired pubescence, yellow flowers, and round, perfectly smooth red fruits over an inch in diameter. It is said to be indigenous.

100699. *MUTISIA VICIAEFOLIA* Cav. Asteraceae.

No. 276. From the roadside near Cuzco, Peru, at 11,500 feet altitude, May 4, 1932. A composite from 3 to 6 feet high, with sub-woody purplish stems, vetchlike foliage, and solitary, terminal, or axillary large yellow flowers.

100700. *NEMASTYLIS PEARCEI* Baker. Iridaceae.

No. 323. Collected May 20, 1932, in open meadow at 11,500 feet altitude in the hills near Cuzco, Peru. A bulbous herb 8 inches high, with large dark-blue flowers very similar to an iris. The single root leaf is linear and plicate, and the blue flowers, less than an inch long, are 1 to 4 on the spathe.

100701. *PASSIFLORA MOLLISSIMA* (H. B. K.) Bailey. Passifloraceae. Softleaf passionflower.

No. 318. From the market at Cuzco, Peru, May 17, 1932. An edible variety with ovate pointed yellow fruits.

For previous introduction see 99783.

100702 to 100705. *PHASEOLUS* spp. Fabaceae.100702 and 100703. *PHASEOLUS LUNATUS* L. Lima bean.

Introduced for comparison with types now being grown on the Pacific coast.

100702. No. 268. From the market at Arequipa, Peru, May 7, 1932. White beans.

100703. No. 322. *Pallares*. Bought at Cuzco, Peru, May 24, 1932, but grown at Ica, Peru. A cultivated variety.100704 and 100705. *PHASEOLUS VULGARIS* L. Common bean.

100704. No. 320. From the market at Cuzco, Peru, May 17, 1932. A mixed sample of beans, grown at 11,000 feet altitude.

100705. No. 270. From the market at Arequipa, Peru, May 7, 1932. A mixed sample.

100706. *ROSA* sp. Rosaceae. Rose.

No. 30. From near Lago Puyehue, about 25 miles east of Osorno, Chile, February 26, 1932. A shrub 6 feet high, with pink flowers and bright-orange, pyriform-ovate hips, slightly bristly at the base. Growing wild in light loam in a roadside thicket.

100688 to 100709—Continued.

100707. *SISYRINCHIUM* sp. Iridaceae.

No. 324. From Cuzco, Peru, May 20, 1932. A small herb 6 inches high, suitable for the rock garden, found in an open meadow in the hills at 11,500 feet altitude. The flowers are blue.

100708. *SOLANUM* sp. Solanaceae.

No. 279. From near Cuzco, Peru, May 19, 1932. A low herb 6 inches high, with purple flowers and yellow berries, collected in moist loam at 11,500 feet altitude.

100709. *SOLANUM* sp. Solanaceae.

No. 381. From near Cuzco, Peru, May 18, 1932. A plant 4 feet high, with green-white berries, found in open meadow at 11,000 feet altitude.

100710. *PENNISETUM CHILENSE* (Desv.) Jacks. Poaceae. Grass.

From Chile. Seeds presented by C. de la Barra, commercial secretary, Chilean Embassy, Washington, D.C. Received July 12, 1932.

Ratonera. A glaucous perennial 4 to 7 feet high, native to Chile, with flat or folded leaves and dense, rather stiff, gray to pale-purple panicles 6 to 8 inches long.

100711. *ANNONA SQUAMOSA* L. Annonaceae. Sugar-apple.

From the West Indies. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the Allison V. Armour expedition, 1931-32. Received February 2, 1932. Numbered in July 1932.

Introduced for comparison with the hybrid cherimoyas now growing in southern Florida.

100712. *CARICA PAPAYA* L. Papaya-ceae. Papaya.

From the Philippine Islands. Seeds presented by the director of Plant Industry, Manila. Received January 4, 1931. Numbered in July 1932.

No. 137. A variety with purple fruits.

100713 to 100718.

From Bolivia. Tubers collected by H. G. Mac-Millan and C. O. Erlanson, Bureau of Plant Industry. Received July 12, 1932.

100713 to 100717. *OXALIS TUBEROSA* Molina. Oxalidaceae.

Oca. A plant native to South America, related to the woodsorrel of the United States. It is grown in the Andes for its edible tubers.

100713 to 100716. Collected at La Paz at 12,500 feet altitude, June 10, 1932.

100713. No. 425. Short yellow tubers with red eyes.

100714. No. 426. Small, thin, irregular, red and white tubers.

100715. No. 427. Short, thick, red tubers.

100716. No. 428. Very long, thin, dark-red tubers.

100717. No. 394. From Cochabamba, June 5, 1932, at 8,300 feet altitude. Long, slim, round, yellow tubers with closed red eyes and yellow, carrotlike flesh.

100718. *CANNA INDICA* L. Cannaceae.

No. 468 *Ajira*. From La Paz, June 20, 1932, at 10,000 feet altitude. A root regarded as a great delicacy among the Bolivians. It is used to flavor ice cream.

100719. CINNAMOMUM BURMANNI
Blume. Lauraceae.

From Sumatra. Seeds presented by Edward Jacobson, Fort de Kock. Received July 9, 1932.

An evergreen tree, native to Java, with shining green, ovate-oblong, papery leaves of variable size, usually 2 to 6 inches long, emitting a cinnamon aroma.

For previous introduction see 94258.

100720. LIGUSTRUM JAPONICUM ROTUNDFOLIUM Blume (*L. coriaceum* Carr.). Oleaceae. Dwarf privet.

From South Carolina. Cuttings presented by the Pinehurst Nursery, Summerville. Received July 14, 1932.

A compact form of the Japanese privet, up to 6 feet high, with crowded, suborbicular, lustrous, evergreen leaves 2 to 3 inches long, and dense panicles, 2 to 4 inches long, of small white flowers followed by small, blue-black, subglobose fruits.

100721. SESAMUM ORIENTALE L. Pedaliaceae. Sesame.

From Palestine. Seeds presented by the director of Agriculture, Forests, and Fisheries, Jerusalem. Received July 13, 1932.

From the Government Experiment Station at Beisan. One of the best types grown.

100722. CARYOPHYLLUS JAMBOS (L.) Stokes (Eugenia jambos L.). Myrtaceae. Rose-apple.

From the West Indies. Seeds presented by Stephen Haws, Mount Joy, Dominica, British West Indies. Received June 19, 1931. Numbered in July 1932.

A medium-sized handsome tree, native to India and the Malay Peninsula, but cultivated in many tropical countries for the edible, fragrant, pinkish fruits which are about the size of a hen's egg, of a sweetish acid taste, and said to be used as preserves. It thrives best in moist regions at elevations up to 3,000 feet, preferring a deep rich soil; it is propagated by seed.

For previous introduction see 93358.

100723. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

From Turkey. Seeds presented by Charles E. Allen, American consul, Istanbul, through the State Department. Received July 20, 1932.

Turkish alfalfa, introduced for the use of Department specialists interested in forage crops.

100724 to 100798. SOLANUM TUBEROSUM. Solanaceae. Potato.

From South America. Tubers collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received July 12, 1932.

100724 and 100725. Collected in the region of Cuzco, Peru, May 25 and 26, 1932, at 11,000 feet altitude.

100724. No. 382. Medium-sized, elongated, gray-purple tubers, with heavy-browed, shallow eyes and white flesh with purple vascular ring.

100725. No. 383. Medium-sized, ovate, flattened tubers, with white skin mottled with red, shallow eyes and white flesh.

100726 to 100735. Collected June 5, 1932, at Cochabamba, Bolivia, at 8,300 feet altitude.

100728. No. 384. Round, purple and red mottled tubers, which have yellow-white flesh and deep eyes with pink buds.

100724 to 100798—Continued.

100727. No. 385. Round white tubers tinted with pink, deep open eyes and white flesh.

100728. No. 386. Long, slim, curved or curled, twisted tubers, with thick dark skin, deep closed eyes, and white flesh with the center purple.

100729. No. 387. Long, cylindrical tubers, with thick gray-black skin which becomes purple when cut, shallow eyes, and yellow-white flesh.

100730. No. 388. Long, cylindrical, pink tubers with deep white eyes.

100731. No. 389. Round, pink and white tubers, flat at the bud end, with open, medium flat eyes and white flesh.

100732. No. 390. Large, long, cylindrical, tan-white tubers, with deep eyes and lightly mottled white flesh.

100733. No. 391. Round white tubers, some spotted with pink, with open flat eyes, some showing pink, and white flesh.

100734. No. 392. Small, round yellow tubers spotted with red, shallow eyes with long eyebrows, and flesh yellow at vascular region, fading to white at center of potato.

100735. No. 393. Round, small to medium-sized, dark-purple tubers, with deep open eyes full of red buds, and yellow-white flesh with purple spots in the vascular ring.

100736 to 100798. Collected from June 9 to June 19, near La Paz, Bolivia, at 12,500 feet altitude.

100736. No. 401. *Chaclo Chaclo*. Medium to small pink tubers generally pointed at the bud end, with numerous deep, straight eyes and yellow-white flesh flecked with red inside the vascular ring.

100737. No. 402. *Cunduma*. Small, round, black tubers, except around the numerous deep eyes, where they are yellowish white, and yellowish flesh with purple flecks, heaviest at the stem end. This is locally known as a sweetpotato, *papa dulce*.

100738. No. 403. *Rinkel*. Round, medium-sized tubers, yellowish to dirty white and black around the stem; the center of the medium to deep eyes is white, surrounded by black, and the flesh is clear yellow. Known locally as a sweetpotato, *papa dulce*.

100739. No. 404. *Chapallo*. Small-sized, round brown-tan tubers with clear yellowish flesh and deep, brown-tan eyes with bulging eyebrows.

100740. No. 405. *Thuila Nimilla*. Medium-sized, round, pink tubers with deep, pink eyes and white flesh.

100741. No. 406. *Cholo Colorado*. Small-sized round red tubers with eyes exceptionally deep, open at the stem end, deeply notched at the bud end. The yellowish flesh is flecked throughout with red.

100742. No. 407. *Follhaco*. Tubers medium-sized, round, eyes medium deep, bulging between the eyes, skin red, white below the eyes. Flesh clear white.

100743. No. 408. *Choquefrit*. Round, medium-sized, white tubers, tinted pink at the stem end, medium to shallow eyes with very long eyebrows and clear white flesh. This is known as a bitter variety.

100744. No. 409. *Pidriaja*. Medium-sized, round, flat, pink to purple tubers with white flesh. The deep open eyes have short eyebrows and vary in color as the tuber does.

100745. No. 410. *Pulo Colorado*. Long, cylindrical, medium-sized, red tubers with thick skin, which is slightly darker at the few shallow eyes; the flesh is yellowish white.

100724 to 100798—Continued.

100748. No. 411. *Piño llulluchi*. Long, cylindrical, medium-sized tubers with thick, red skin, medium closed, long eyes, and white flesh with a yellow tinge and a red vascular ring.
100747. No. 412. *Kunurana*. Small, round, white tubers tinted with pink, which have deep, open, bright pink eyes and yellow-white flesh. Known as a sweetpotato, *papa dulce*.
100748. No. 413. *Piño Blanco*. Long, cylindrical, medium-sized, yellow-white tubers with medium to deep, partly closed eyes with long eyebrows, and white flesh.
100749. No. 414. *Fina Yunka Tujro*. Small, long, cylindrical, gray-purple tubers with thick skin, shallow to medium eyes, nearly closed with long eyebrows, and yellow-white flesh. It is known as a sweetpotato, *papa dulce*.
100750. No. 415. *Laisalla*. Long, cylindrical, bright-purple tubers with shallow, closed eyes and extra long eyebrows, and clear white flesh.
100751. No. 416. *Lague*. Long, cylindrical, white tubers with a faint tinge of pink, shallow eyes and pure white flesh. This is known as a bitter potato.
100752. No. 417. Long, pointed, medium-sized, gray-black tubers with medium-closed, short eyes and white flesh, with sharply defined irregular purple areas, especially at the center of the tuber.
100753. No. 418. Small, long, cylindrical, tan white tubers with white flesh and medium to shallow open eyes with short eyebrows.
100754. No. 419. *Fina Sulimana*. Small, long, cylindrical tubers with the skin sharply mottled with white and purple, shallow half-closed eyes with curved eyebrows, and clear white flesh. A sweetpotato, *papa dulce*.
100755. No. 420. *Piño Huila*. Small, cylindrical, long, pointed, pink-red tubers with shallow, open, bright pink eyes and yellow-white flesh. Regarded as a very fine sweet-potato.
100756. No. 421. Round purple tubers which vary in size from large to small, with deep, open eyes and pale yellow flesh.
100757. No. 422. Medium-sized, cylindrical, long, pointed, white tubers with numerous deep to medium, closed eyes and white flesh.
100758. No. 423. Cylindrical, long, pointed, gray to purple tubers with numerous medium to deep, closed eyes and white flesh.
100759. No. 424. Flat, round, purple tubers with dirty, white flesh and open, shallow, purple eyes with exceptionally long eyebrows.
100760. No. 429. Medium-sized, long, oval tubers with thin pink-tan skin and shallow eyes.
100761. No. 430. Smooth, round, medium-sized, yellow tubers with clear yellow flesh and medium-open eyes with pink buds.
100762. No. 431. Large, round to long, oval tubers with smooth gray-tan skin overlaid with faint purple, white flesh, and shallow open eyes which are generally pink.
100763. No. 432. Medium-sized long cylindrical smooth light-yellow tubers with clear light-yellow flesh and shallow open eyes with pink buds.
100764. No. 433. Smooth tubers which vary in shape from round to rough cylindrical and in color from red to purple. The eyes are generally deep and closed and of bright color; the

100724 to 100798—Continued.

- light-yellow flesh is mottled with red inside the vascular ring.
100765. No. 434. Large, long, pointed, smooth white tubers with patches of red, the shallow open eyes are distinctly red, and the clear white flesh is of heavy consistency.
100766. No. 435. Medium to large, long, exceptionally flat, white tubers with occasional purple spots, with very shallow flat colorless eyes, and yellow watery flesh with light fleckings of purple at the bud end.
100767. No. 436. Large, long, pointed, dark-gray tubers with a tendency to curve, white flesh with the vascular ring and the center of the tubers purple, and medium to shallow, open eyes with, usually, purple buds.
100768. No. 437. Medium-sized, round, black-gray tubers with clear yellow flesh and deep, open, purple eyes with dark buds.
100769. No. 438. Large, round to flat-oblong, smooth tubers with thin red-gray skin, medium-opened eyes with red buds, and light-yellow flesh mottled throughout with red.
100770. No. 439. Medium-sized, round tubers, white at the bud end, red-purple at the stem end, with medium to deep eyes, closed at the stem end, open at the bud end, and with white buds; the flesh is clear white.
100771. No. 440. Medium-sized, round, red-purple tubers, distinctly marked with tan around the eyes; the flesh is dirty white, and the very deep, nearly closed eyes have no color in the buds.
100772. No. 441. Medium-sized, round tubers, pink at the stem end, white to tan at the bud end, with medium to deep, open eyes which have no color in the buds.
100773. No. 442. Round, medium-sized, smooth, pink tubers with medium to deep eyes with pink buds.
100774. No. 443. Round, flat tubers with white skin faintly streaked crosswise with purple, and which vary in size from medium to large, with shallow, bulging, colorless eyes and clear white flesh.
100775. No. 444. Large, round, deep-red, uniformly smooth tubers with medium to deep, open, red eyes.
100776. No. 445. Long, thin-pointed, tan and purple spotted tubers with shallow closed eyes having long eyebrows, and white flesh flecked with purple inside the vascular ring towards the bud end.
100777. No. 446. Long, cylindrical, pointed, dark-red, uniformly smooth tubers with a tendency to be flat. The shallow eyes have long eyebrows and light-red buds, and the dark-red flesh is lightly mottled with white.
100778. No. 447. Large, round, white tubers with deep closed eyes and white flesh.
100779. No. 448. Long, cylindrical, blunt, white tubers, faintly spotted with purple, with numerous, very deep, closed eyes and white flesh with distinct stippings of purple in the vascular ring.
100780. No. 449. Round, medium-sized, tan tubers with a pink tinge, deep colorless eyes, and yellow flesh.
100781. No. 450. Large, cylindrical, long, smooth tubers, pink-tan at the stem end, merging to purple-tan at the bud end, with medium open eyes which have very long eyebrows and colorless buds, and clear white flesh.
100782. No. 451. Medium-sized, round, uniformly dark-red tubers with white flesh and deep, open eyes with very long eyebrows.

100724 to 100798—Continued.

100783. No. 452. Round, oval, medium-sized, white tubers, faintly pink at the shallow open eyes, with clear white flesh.
100784. No. 453. Round, smooth, medium-sized, white tubers with shallow colorless eyes and white flesh, faintly tinged with yellow.
100785. No. 454. Long, cylindrical, pointed, purple tubers with deep, closed eyes and white flesh with a yellowish tinge and purple mottling near the epidermis in the bud-end half.
100786. No. 455. Medium-sized, round, dark-pink tubers with medium to deep, open eyes of a brighter pink and white flesh.
100787. No. 456. Medium-sized, flat, oval, bright-purple tubers with dirty-white flesh and flat, open eyes with long eyebrows.
100788. No. 457. Large, round, uniformly red tubers with deep wide-open eyes and white flesh, the center of which has a water-soaked appearance.
100789. No. 458. Small, long, pointed, pink tubers, some of which are curved, with medium, closed eyes and white flesh, which is red inside the vascular ring.
100790. No. 459. Round to cylindrical, medium-sized, smooth white tubers with shallow, open, pink eyes and white flesh.
100791. No. 460. Medium-sized, round, tan-white tubers with small, open, light-pink eyes and light-pink eyebrows. The flesh is a uniform yellow.
100792. No. 461. Small, smooth, flat oval, pointed, white tubers with very flat, colorless eyes and yellow-white flesh.
100793. No. 462. Medium to small, round, gray-tan tubers with medium, open eyes and yellow-white flesh.
100794. No. 463. Round to cylindrical tubers, spotted purple at the stem end and tan-white at the bud end, shallow, open eyes with purple buds and white flesh.
100795. No. 464. Small, cylindrical, pointed, white tubers with deep, semiopen eyes and clear white flesh.
100796. No. 465. Medium-sized, round, pink-purple tubers with medium, open eyes which are pink at the bud end, and yellow-white flesh.
100797. No. 466. Medium to small, round to cylindrical, white tubers with clear white flesh and medium to shallow, open eyes, which are pink around the buds.
100798. No. 467. Small, long, pointed, white tubers, faintly pink around the lenticels, with a tendency to be flat and curved, shallow, closed eyes, and dirty-white flesh.

100799 to 100832. CINCHONA spp.
Rubiaceae.

From Guatemala. Cuttings presented by Col. Victor E. Ruehl, Caldwell, N.J. Received July 13, 1932.

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|----------------------|----------------------|
| 100799. CINCHONA sp. | 100803. CINCHONA sp. |
| No. 6. | No. 10. |
| 100800. CINCHONA sp. | 100804. CINCHONA sp. |
| No. 7. | No. 11. |
| 100801. CINCHONA sp. | 100805. CINCHONA sp. |
| No. 8. | No. 12. |
| 100802. CINCHONA sp. | 100806. CINCHONA sp. |
| No. 9. | No. 13. |

100799 to 100832—Continued.

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| 100807. CINCHONA sp. | 100820. CINCHONA sp. |
| No. 14. | No. 29. |
| 100808. CINCHONA sp. | 100821. CINCHONA sp. |
| No. 15. | No. 30. |
| 100809. CINCHONA sp. | 100822. CINCHONA sp. |
| No. 17. | No. 31. |
| 100810. CINCHONA sp. | 100823. CINCHONA sp. |
| No. 18. | No. 32. |
| 100811. CINCHONA sp. | 100824. CINCHONA sp. |
| No. 19. | No. 33. |
| 100812. CINCHONA sp. | 100825. CINCHONA sp. |
| No. 20. | No. 34. |
| 100813. CINCHONA sp. | 100826. CINCHONA sp. |
| No. 21. | No. 36. |
| 100814. CINCHONA sp. | 100827. CINCHONA sp. |
| No. 22. | No. 37. |
| 100815. CINCHONA sp. | 100828. CINCHONA sp. |
| No. 23. | No. 39. |
| 100816. CINCHONA sp. | 100829. CINCHONA sp. |
| No. 25. | No. 40. |
| 100817. CINCHONA sp. | 100830. CINCHONA sp. |
| No. 26. | No. 41. |
| 100818. CINCHONA sp. | 100831. CINCHONA sp. |
| No. 27. | No. 50. |
| 100819. CINCHONA sp. | 100832. CINCHONA sp. |
| No. 28. | Rootslips. |

100833 to 100837.

From Bolivia. Seeds collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received July 12, 1932.

Collected at Cochabamba, Bolivia, June 5, 1932, at 8,300 feet altitude.

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|---------------------------------------|----------------------|
| 100833. ARACHIS HYPOGAEA L. | Fabaceae. |
| No. 398. | Peanut. |
| 100834. ANNONA CHERIMOLA Mill. | Annonaceae. |
| No. 399. | Cherimoya. |
| 100835. LENS ESCULENTA Moench. | Fabaceae. |
| No. 397. | Lentil. |
| 100836. LYCOPERSICON ESCULENTUM Mill. | Solanaceae. |
| No. 400. | Tomato. |
| 100837. PHASEOLUS COCCINEUS L. | Fabaceae. |
| | Scarlet runner bean. |

No. 396. *Porotos*. Large white beans. Introduced for comparison with the types now being grown on the Pacific coast.

100838 and 100839.

From Tasmania. Seeds collected by the late Gustave Weindorfer in Cradle Valley and presented by L. A. Evans, Department of Agriculture, Hobart. Received July 25, 1932.

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| 100838. ATHROTAXIS CUPRESSOIDES Don. | Pinaceae. |
| | An evergreen tree about 40 feet high, somewhat resembling cryptomeria, with ascending branches covered with closely appressed, broad, obtuse leaves one sixth of an inch long and small woody spherical cones half an inch in diameter. |

100838 and 100839—Continued.

100839. RHAGODIA NUTANS R. Br. Chenopodiaceae.

A slender prostrate or procumbent perennial herb, native to Australia, with stems 2 to 3 feet long. The opposite or alternate leaves, 1 inch long, vary from broadly hastate to lanceolate, and the inconspicuous flowers are borne in axillary and terminal clusters.

100840. TRIFOLIUM PRATENSE L.
Fabaceae. Red clover.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Applied Botany, Leningrad. Received July 26, 1932.

Double-crop Ukrainian variety of red clover from the Kiev grain elevator. Introduced for the use of Department specialists.

100841. MANGIFERA sp. Anacardiaceae.

From the Philippine Islands. Seeds presented by S. N. Parmelee through L. A. Whitney, Honolulu, Hawaii. Received July 28, 1932.

This variety of mango produces luscious fruit and is adapted to localities in which *M. indica* will not thrive.

100842 to 100846. LONICERA spp.
Caprifoliaceae. Honeysuckle.

From Jamaica Plain, Mass. Cuttings presented by the Arnold Arboretum. Received August 1, 1932.

100842. LONICERA ALTMANNII PILOIUSCULA Reherder.

A hardy deciduous shrub, eventually about 6 feet high, with broadly or narrowly ovate, acute leaves 1 to 2 inches long, pale and softly pubescent beneath. The yellow-white flowers are followed in June or July by globose orange-red berries one-third inch in diameter. Native to Turkistan.

100843. LONICERA GYNOCLAMYDEA Hemsl.

An upright deciduous shrub, with purplish branchlets and narrow lanceolate acuminate pubescent leaves 2 to 4 inches long. The pink-tinted white flowers, half an inch long, are followed by pale-purple or white berries. Native to western China.

100844. LONICERA KOROLKOVII Stapf.
Blueleaf honeysuckle.

A spreading shrub 10 to 12 feet high, with blue-green, ovate or elliptic leaves about 1 inch long, slightly pubescent above and densely so beneath. The pink flowers, over one-half inch long, are succeeded by bright-red berries. Native to Turkistan.

100845. LONICERA MAXIMOWICZII SACHALINENSIS Schmidt.

A Manchurian honeysuckle which develops into a shrub 9 feet high, with elliptic or oblong, dark-green leaves 2 inches long. The violet-red flowers, about one-half inch long, are followed by ovoid red berries.

100846. LONICERA TENUIPES Nakai.

A spreading bush 5 feet high, with shining dark-green, elliptic or oblong, hairy leaves, 1 or 2 inches long, numerous small, deep-pink flowers, and ellipsoid red berries. Native to Japan.

100847. RHAPHIS ACICULATA (Retz.)
Desv. Poaceae. Grass.

From Guam. Seeds presented by C. W. Edwards, director, Guam Agricultural Experiment Station. Received July 28, 1932.

A grass generally distributed throughout tropical Asia, the Polynesian Islands, and Australia. At

100847—Continued.

Hong Kong it is used extensively for lawns. In the Philippines and India it furnishes a good deal of native pasturage, but is objectionable from the fact that when it is allowed to fruit, the fruits are sharp-pointed, like needles, causing some injury to the animals and a nuisance in sticking to clothing. It has been tried in Florida, where it succeeds well enough, but thus far has not proved to be aggressive.

100848 to 100907.

From China. Seeds collected by the sixth Forrest expedition, 1930-32, to southwestern China, and presented by Henry McLaren, Bodnant, Tal-y-Cafn, North Wales. Received August 1, 1932.

100848. ABIES CHENSSENSIS Van Tiegh. Pinaceae. Fir.

F. 30663. For previous introduction and description see 100500.

100849. ABIES GEORGEI Hort. Pinaceae. Fir.

A name for which a place of publication and a description have not been found.

For previous introduction see 99823.

100850 to 100852. ACER spp. Aceraceae. Maple.

100850. ACER DAVIDI Franch.

F. 29881.

For previous introduction and description see 100503.

100851. ACER LAXIFLORUM Pax. (*A. forrestii* Diels).

F. 30726.

For previous introduction and description see 100504.

100852. ACER sp.

F. 29592.

100853 to 100858. ASTER spp. Asteraceae.

100853. ASTER STATICEFOLIUS Franch.

F. 30625. An aster from high altitudes in southwestern China. The stems, about a foot long, are often decumbent, and the oblong-spatulate leaves are more or less basal. The flower heads have yellow disk flowers and violet-blue rays.

For previous introduction see 100154.

100854. ASTER sp.

F. 30627.

100855. ASTER sp.

F. 30644.

100856. ASTER sp.

F. 30633.

100857. ASTER sp.

F. 30637.

100858. ASTER sp.

F. 30814. Closely related to *A. forrestii*.

100859. BUDDLEIA FALLOWIANA Balf. and Smith. Loganiaceae.

F. 30932.

For previous introduction and description see 100516.

100860. CARPINUS sp. Betulaceae. Hornbeam.

G. F. 74.

100861. CHRITA sp. Gesneriaceae.

F. 29436. A form closely related to *C. trailliana*.

100848 to 100907—Continued.

100862. *CLETHRA DELAVAYI* Franch. Clethraceae.

F. 30518.

For previous introduction and description see 100526.

100863. *CODONOPSIS TUBULOSA* Kom. Campanulaceae.

F. 30505. A twining perennial, native to grassy meadows in the mountains of Yunnan at 7,000 feet altitude. The nearly sessile leaves are ovate-lanceolate, and the small tubular white flowers are solitary on very short peduncles.

For previous introduction see 99847.

100864. *CODONOPSIS* sp. Campanulaceae.

G. F. 51.

100865. *CRATAEGUS HENRYI* Dunn. Malaceae.
Hawthorn.

F. 30713.

For previous introduction and description see 100534.

100866 to 100869. *CREMANTHODIUM* spp. Asteraceae.

100866 to 100868. *CREMANTHODIUM RHODOCEPHALUM* Diels.

An alpine composite, 3 to 9 inches tall, with long-stemmed, rounded-reniform leaves, purple beneath, and gray-pink ray florets. Native to limestone cliffs in Yunnan.

For previous introduction see 99852.

100866. F. 30448.

100867. F. 30523.

100868. F. 30757.

100869. *CREMANTHODIUM* sp.

F. 29868.

100870. *DAPHNIPHYLLUM* sp. Euphorbiaceae.

G. F. 332.

100871. *DECAISNEA FARGESH* Franch. Lardizabalaceae.

F. 30466.

For previous introduction and description see 100538.

100872. *DICRANOSTIGMA* sp. Papaveraceae.

F. 30077.

100873. *DIDISSANDRA SERICEA* Craib. Gesneriaceae.

F. 30615. A rock plant with leaves forming rosettes, and blue flowers.

For previous introduction see 99860.

100874. *EPILABIUM* sp. Onagraceae.

G. F. 345.

100875. *EUPTELEA PLEIOSPERMA* Hook. f. and Thoms. Trochodendraceae.

G. F. 73.

For previous introduction and description see 100548.

100876 and 100877. *HYDRANGEA YUNNANENSIS* Rehder. Hydrangeaceae.

For previous introduction and description see 100556.

100876. F. 29755.

100877. F. 29842.

100848 to 100907—Continued.

100878. *JUNIPERUS RECURVA* Buch.-Ham. Pinaceae.
Himalayan juniper.

F. 29591.

For previous introduction and description see 100564.

100879. *LESPEDEZA FORMOSA* (Vogel) Koehne. Fabaceae.
Purple bushclover.

F. 30850.

For previous introduction and description see 100573.

100880. *PARASYRINGA SEMPERVIRENS* (Franch. W. W. Smith. Oleaceae.

F. 30859.

For previous introduction and description see 100578.

100881. *PHOTINIA FLAVIDIFLORA* W. W. Smith. Malaceae.

F. 29542. An evergreen shrub 12 to 20 feet high, with thick, leathery, oblanceolate or elliptic leaves 6 to 8 inches long, and small cream-yellow flowers in dense terminal corymbs about 4 inches long. Native to southwestern China.

100882. *PICEA LIKIANGENSIS* (Franch.) E. Pritz. Pinaceae.
Spruce.

G. F. 104.

For previous introduction and description see 100584.

100883. *POPULUS* sp. Salicaceae. Poplar.

F. 30646.

100884 to 100886. *POTENTILLA* spp. Rosaceae.
Cinquefoil.

100884. *POTENTILLA ERIOCARPA* Wall.

F. 30821. A perennial herb with a stout rootstock from which arise branches 4 to 10 inches long, densely clothed with imbricating woolly stipular sheaths. From the tips of these branches grow the slender, suberect, flowering stems bearing thin three-lobed and incised leaves about 1 inch long, and solitary yellow flowers 1 to 2 inches across. It is native to northern India.

For previous introduction see 100216.

100885. *POTENTILLA FRUTICOSA* L. Shrubby cinquefoil.

F. 30442. A pale form.

For previous introduction see 99973.

100886. *POTENTILLA FRUTICOSA VEITCHII* (Wils.) Bean. Veitch cinquefoil.

F. 30621.

For previous introduction and description see 100589.

100887. *MALUS* sp. Malaceae. Apple.

F. 30739. Closely related to *M. theifera*.

100888 to 100901. *RHODODENDRON* spp. Ericaceae.

100888 and 100889. *RHODODENDRON BULLATUM* Franch.

For previous introduction and description see 100333.

100888. G. F. 16.

100889. F. 30393.

100890. *RHODODENDRON EUCHAITES* Balf. and Forr.

F. 29545.

For previous introduction and description see 100338.

100848 to 100907—Continued.

100891. *RHODODENDRON FACETUM* Balf. and Ward.
F. 29926.
For previous introduction and description see 100339.
100892. *RHODODENDRON GRIERSONIANUM* Balf. and Forr.
F. 29762.
For previous introduction and description see 97665.
100893. *RHODODENDRON HIPPOPHAEOIDES* Balf. and Smith.
G. F. 21.
For previous introduction and description see 100344.
100894. *RHODODENDRON KYAWI* Lace and Smith.
F. 29929.
For previous introduction and description see 100346.
- 100895 and 100896. *RHODODENDRON LITIENSE* Balf. and Forr.
For previous introduction and description see 100348.
100895. G. F. 7.
100896. G. F. 3.
100897. *RHODODENDRON MOLLIICUM* Balf. and Smith.
F. 30940.
For previous introduction and description see 100089.
- 100898 and 100399. *RHODODENDRON STEWARTIANUM* Diels.
For previous introduction and description see 100357.
100898. F. 29663.
100899. F. 29655.
100900. *RHODODENDRON TEPHROPEPLUM* Balf. and Farr.
F. 29655.
For previous introduction and description see 100361.
100901. *RHODODENDRON* sp.
G. F. 17. Selense series.
100902. *SCHIZANDRA CHINENSIS* (Turcz.) Baill. Magnoliaceae.
F. 30468. A woody vine, native to northeastern China, with shining dark-green, oval leaves and clusters of coral-colored berries.
For previous introduction see 94045.
100903. *SORBUS* sp. Malaceae. Mountain-ash.
F. 30970.
100904. *SPIRAEA* sp. Rosaceae. Spirea.
G. F. 80. Closely related to *S. canescens glaucophylla*.
100905. *SYRINGA YUNNANENSIS* Franch. Oleaceae. Yunnan lilac.
F. 30486.
For previous introduction and description see 100096.
100906. *VACCINIUM FRAGILE* Franch. Vacciniaceae.
F. 30688. A low shrub, native to western China, with small rigid, broadly oval leaves about one half inch long and small rose-purple flowers in

100848 to 100907—Continued.

- dense thyrsoid racemes, 1 to 2 inches long, followed by small globose fruits.
100907. *VIBURNUM* sp. Caprifoliaceae.
F. 30719.
100908. *MANGIFERA ODORATA* Griffith. Anacardiaceae.
From the Philippine Islands. Seeds presented by S. N. Parmelee, Hawaii, through L. A. Whitney, Honolulu. Received August 1, 1932.
This Philippine tree is very similar to the mango in habit, foliage, and flowers. The fruits, about the size of a carabao mango, but more rounded, are green, thick-skinned, sweet, and juicy, very aromatic, with yellow flesh containing numerous coarse fibers.
- 100909 and 100910. *PERSEA AMERICANA* Mill. Lauraceae. Avocado.
From Pasadena, Calif. Scions purchased from Carter Barrett, avocado specialist. Received August 2, 1932.
100909. *Kanola*. Small, round, purple fruit with yellow flesh, free from fiber and of rich flavor. The seed is comparatively small for a fruit of this form.
100910. *Mayapan*. This variety possesses several excellent commercial characteristics—round form, desirable size (nearly 1 pound), attractive purple color, thick firm skin, and flesh of excellent quality; the seed is not large.
100911. *PHOENIX ACAULIS* Buch.-Ham. Phoeniceae. Date palm.
From India. Seeds collected in the Dehra Dun forests and presented through the Royal Botanic Gardens, Kew, England. Received August 2, 1932.
A low pinnate-leaved palm, native to northern and central India. The short bulbous trunk is 6 to 8 inches in diameter, the leaves are 2 to 6 feet long with the rigid leaflets arranged in clustered fascicles, and the elliptic-oblong fruits, less than an inch long, are bright red to blue-black.
100912. *BALSAMOCITRUS PANICULATA* (Schum.) Swingle. Rutaceae.
From Africa. Seeds presented by the Agricultural Department, Ibadan, Nigeria, through W. T. Swingle, Bureau of Plant Industry. Received August 2, 1932.
A spiny shrub, native to western tropical Africa, with membranous trifoliolate leaves consisting of oblong-ovate leaflets, 1 to 3 inches long, small, white flowers, and globose woody fruits.
- 100913 to 100933. *ORYZA SATIVA* L. Poaceae. Rice.
From China. Seeds presented by F. A. McClure, Lingnan University, Canton. Received August 3, 1932.
A collection of native rices, introduced for the use of Department specialists.
- | | |
|-------------------|-------------------|
| 100913. No. 2465. | 100924. No. 2476. |
| 100914. No. 2466. | 100925. No. 2477. |
| 100915. No. 2467. | 100926. No. 2478. |
| 100916. No. 2468. | 100927. No. 2479. |
| 100917. No. 2469. | 100928. No. 2480. |
| 100918. No. 2470. | 100929. No. 2481. |
| 100919. No. 2471. | 100930. No. 2482. |
| 100920. No. 2472. | 100931. No. 2483. |
| 100921. No. 2473. | 100932. No. 2484. |
| 100922. No. 2474. | 100933. No. 2485. |
| 100923. No. 2475. | |

100934 to 100941.

From Guam. Seeds and scions presented by S. R. Vandenberg, associate entomologist at the Guam Agricultural Experiment Station, through the director, C. W. Edwards. Received August 8, 1932.

100934. CITRUS HYSTRIX DC. Rutaceae.
Cabuyao.

Seeds of a large thorny tree, 20 to 30 feet high, with leaves 6 to 8 inches long. The fruits vary in shape from oblate to pyriform-turbinate or oblong; the smooth or more or less corrugated thick rind is greenish lemon-yellow, and the greenish flesh is juicy and sharply acid. The tree is said to be resistant to the citrus canker.

For previous introduction see 99321.

100935. MANGIFERA INDICA L. Anacardiaceae.
Mango.

Seeds of the *Carabao* and *Saigon* mangoes.

100936 to 100941. PERSEA AMERICANA Mill.
Lauraceae. Avocado.

Nos. 100936 to 100938 were scions collected on the ranch of T. Villagomez, near Barrigado.

100938. No. 1. Largest tree west of ranch.

100937. No. 2. Tree north of largest tree west of ranch.

100938. No. 3. Tree closest to the road near the patrol quarters.

100939. No. 4. Scions from a small tree east of the mango trees at the ranch of Juan Taitano, Barrigado.

Nos. 100940 and 100941 were scions collected at Dededo.

100940. No. 5. From the ranch of José Luga.

100941. No. 6. From the ranch of Joe Tames.

100942 to 100944. PERSEA spp. Lauraceae.

From Costa Rica. Scions collected by H. E. Stork, professor of botany, Carleton College, Northfield, Minn. Received August 5, 1932.

100942. PERSEA sp.

Collected at 5,500 feet altitude between Station Maria Dota and Estrella, Costa Rica.

100943. PERSEA sp.

The best native variety of *aguacuate*, from Estrella, Costa Rica, at 4,800 feet altitude.

100944. PERSEA sp.

A red fruit collected July 23, 1932, at Estrella, Costa Rica, at 5,000 feet altitude.

100945 to 100947. PHASEOLUS VULGARIS L. Fabaceae. Common bean.

From South America. Seeds collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received August 2, 1932.

Locally grown varieties.

100948 to 100950.

From Honduras. Plants presented by Wilson Popenoe, research department, United Fruit Co., Tela. Received August 6, 1932.

100948. GARCINIA MANGOSTANA L. Clusiaceae.
Mangosteen.

100949. GUADUA ANGUSTIFOLIA Kunth. Poaceae.

A giant bamboo, 60 to 90 feet tall, which grows wild from Honduras to Paraguay. The slender

100948 to 100950—Continued.

foliage is of great beauty, comparing with that of ordinary trees as ostrich feathers do with goose quills. The hollow culm is up to 6 inches in diameter, with nodes as much as 20 inches apart, and the wood is sometimes nearly an inch thick. The branches are very thorny.

100950. MUSA PARADISIACA SAPIENTUM (L.)
Kuntze. Musaceae. Banana.

A large commercial variety of good quality.

100951. SESAMUM CAPENSE Burm. f. Pedaliaceae.

From Africa. Seeds presented by Dr. I. B. Pole Evans, chief, Bureau of Plant Industry, Pretoria, Union of South Africa. Received August 4, 1932.

Collected on the Springbok Flats in the Transvaal, where the average annual rainfall is 4 inches. An erect simple or branched herbaceous plant up to 6 feet high, native to southern Africa. The leaves are palmately divided into 3 to 5 ovate to linear leaflets 1 to 3 inches long, and the tubular violet flowers are 1 inch long; the lobes spread about 1 inch.

100952. WITHANIA SOMNIFERA (L.)
Dunal. Solanaceae.

From Africa. Seeds presented by D. C. Edwards, Scott Agricultural Laboratories, Department of Agriculture, Nairobi, Kenya. Received August 4, 1932.

An erect much-branched shrub with round stems 3 to 4 feet high, native to tropical Africa and India. The oblong to obovate, slightly sinuate leaves are 2 to 3 inches long, and the small flowers, in axillary clusters, are followed by globose berrylike fruits one-fourth inch in diameter, surrounded by the inflated calyx. In India the powdered fruit is used as a vegetable rennet.

100953. PHASEOLUS LUNATUS L. Fabaceae. Lima bean.

From India. Seeds purchased through Winfield H. Scott, American consul, Rangoon, Burma. Received August 8, 1932.

Burma butter. A native variety largely grown in the vicinity of Rangoon. Introduced for comparison with types now being grown on the Pacific coast.

100954 to 100968. ANTIRRHINUM spp. Scrophulariaceae. Snapdragon.

From Germany. Seeds presented by Dr. Erwin Baur, Kaiser Wilhelm Institut für Züchtungsforschung, Münchenberg (Mark). Received August 5, 1932.

100954 and 100955. ANTIRRHINUM GLUTINOSUM
Boiss. and Reut.

100956. ANTIRRHINUM HISPANICUM Chav.

100957. ANTIRRHINUM IBANJEZI Hort.

100958. ANTIRRHINUM LATIFOLIUM Mill.

100959 and 100960. ANTIRRHINUM MOLLE L.

100961. ANTIRRHINUM MEONANTHUM Hoffm.
and Link.

100962. ANTIRRHINUM SICULUM Mill.

100963. ANTIRRHINUM TORTUOSUM Bosc.

100964. ANTIRRHINUM VALENTINUM Hort.

100965 to 100968. ANTIRRHINUM spp.

100969 to 100979.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Plant Industry, Leningrad. Received August 8, 1932.

100969 to 100978. CICER ARIETINUM L. Fabaceae. Chickpea.		100974 to 100978. Fabaceae. Chickpea.	
F.P.I.	Leningrad No.	F.P.I.	Leningrad No.
100969.....	114	100974.....	646
100970.....	160	100975.....	662
100971.....	283	100976.....	851
100972.....	449	100977.....	882
100973.....	596	100978.....	918

100979. PRUNUS sp. Amygdalaceae.

A cherry.

100980. GLAUCOTHECA ARMATA (S. Wats.) O. F. Cook. Phoenicaceae. Blue palm.

From Mexico. Seeds purchased from Howard E. Gates, Anaheim, Calif. Received August 9, 1932.

From the Rancho Catacifu, Baja California. A stout fan palm with a robust trunk up to 8 feet in diameter and 20 feet high, crowned by numerous glaucous-blue leaves nearly circular in outline and deeply cut into many segments. The flowers are dull purple.

100981 and 100982. LEUCOCORYNE IXIODES (Sims) Lindl. Liliaceae.

From South America. Bulbs presented by Señor Salvador Izquierdo, Santiago, Chile. Received May 23, 1932. Numbered in August 1932.

Huilla. A bulbous plant with linear-convex leaves and green-violet flowers about an inch across, with yellow anthers on a scape 5 or 6 inches high. Native to Chile.

100981. A form with white flowers.

100982. A form with violet flowers.

100983 and 100984. PHOENIX spp. Phoenicaceae.

From England. Seeds presented by the curator of the Royal Botanic Gardens, Kew. Received August 9, 1932.

100983. PHOENIX ACAULIS Buch.-Ham. Date palm.

For previous introduction and description see 100911.

100984. PHOENIX RUPICOLA T. Anders. Cliff date palm.

A Himalayan palm with a solitary, slender, naked stem 15 to 20 feet high, bright-green leaves 10 feet long, and shining yellow oblong fruits.

For previous introduction see 99748.

100985. (Undetermined.)

From Madagascar. Seeds collected by Rev. A. Burgess and presented by V. B. Stolee, St. Paul, Minn. Received July 14, 1932.

Of possible value as a source of rubber.

100986 to 100988. CINCHONA spp. Rubiaceae.

From India. Seeds purchased from Barnard & Co., Hindustan Nursery, Calcutta, through A. C. Frost, American consul-general, Calcutta. Received August 10, 1932.

Introduced for the use of Department specialists working with drug plants.

100986 to 100988—Continued.

100986. CINCHONA LEDGERIANA Moens.

A tree, native to the Andes, yielding a bark remarkably rich in quinine which crystallizes readily as quinine sulphate. The percentage of the other alkaloids present is relatively small. The bark of this species matures in the fifth or sixth year and does not increase its quinine content after that.

For previous introduction see 100114.

100987. CINCHONA OFFICINALIS L.

A small tree only 20 feet high, native to Peru and Ecuador in the high valleys of the Andes. It is now the most important species grown in the Nilgiri Hills in India.

For previous introduction see 100117.

100988. CINCHONA SUCCIRUBRA Pavon.

The bark of this tree contains a large quantity of alkaloids, of which a relatively large percentage is cinchonidine, which retards the separation of the quinine as sulphate. The bark of this species matures in the fourth or fifth year and does not increase in quinine content thereafter.

For previous introduction see 100118.

100989. MALUS SYLVESTRIS Mill. (Pyrus malus L.). Malaceae. Apple.

From Canada. Budsticks presented by W. S. Blair, Experimental Farm, Kentville, Nova Scotia. Received August 15, 1932.

A red sport of the Gravenstein apple. Introduced for the use of Department specialists.

100990 and 100991. SESAMUM spp. Pedaliaceae. Sesame.

From Africa. Seeds presented by the director, Botanic Garden, Eala, Belgian Congo. Received August 11, 1932.

100990. SESAMUM ORIENTALE L.

A species possessing considerable drought resistance.

100991. SESAMUM RADIATUM Schum.

An erect-growing, oil-producing species.

100992 to 101002.

From the Canal Zone. Budsticks and plants presented by J. E. Higgins, Canal Zone Experiment Gardens, through Walter R. Lindsay, in charge. Received August 16, 1932.

100992. ANNONA sp. Annonaceae.

100993 to 101002. PERSEA AMERICANA Mill. Lauraceae. Avocado.

100993. *Cauthers*; a seedling tree, brought from Haiti about 12 years ago and planted at Pedro Miguel. The red pyriform smooth fruits weigh up to a pound, the yellow buttery flesh is free from fiber and has a pleasant nutty flavor; the seed is large and loose in the cavity; and the fruit keeps well.

100994. *Enoi*; a seedling introduced from Honolulu, Hawaii. The smooth, light-green, pyriform fruits, 12 inches long, have a long, slightly curved neck; the light-yellow flesh is free from fiber and has a rich flavor. The seed is medium to large. This is not considered a good commercial variety on account of its large size and poor keeping qualities.

100995. *Gerrans*; a seedling probably of Haitian stock. The smooth, purple, oval fruits have smooth, fine-grained flesh, free from fiber and of excellent flavor, yellow near the seed but tinged to green near the rind. The small seed is loose in its cavity; the fruits weigh about a pound each, and their keeping quality is very good.

100992 to 101002—Continued.

100996. *Haley*; a seedling of the Guatemala race which was planted in Hawaii in 1913. The trees are prolific and produce fruit in clusters which ripen in November and December. The rough green fruits, with a slightly purplish tinge when fully ripe, have a thick tough skin, are oval to obovate in shape, 6 inches long by over 4 inches thick, and weigh up to 40 ounces. The flesh is creamy yellow, free from fiber, and of a rich nutty flavor. The seed is small to medium in size and fits tightly in the cavity.

100997. *Lupfer*; a seedling, probably of the Ecuadoran race. The small fruits, weighing up to a pound and a half, have slightly rough, thin, green skin and greenish flesh, free from fiber and of a very pleasing flavor.

100998. *Moanalua*; a seedling from Hawaii whose small fruits vary in shape from round to pyriform. The thick, hard, coriaceous, dark-green rind is pitted with small yellowish dots. The fine-grained, melting, somewhat buttery yellowish flesh is tinged to green near the rind. The medium large seed fits tightly in the cavity.

100999. *Nicaragua*.

101000. *San Clemente*.

101001. *Trinidad*. Plants brought from Trinidad.

101002. *Tumaco*. Plants received from Colombia in 1925 by Mr. Johansen.

101003. DAMNACANTHUS INDICUS Gaertn. f. Rubiaceae.

From Japan. Plants collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received March 26, 1930. Numbered in August 1932.

No. 4391. *Tuge*; a spiny evergreen shrub, native to India and Japan. The small, opposite, leathery leaves are broadly ovate, and the small, fragrant, axillary, white flowers are followed by coral-red berries which remain on the bush until the flowers of the next season appear.

101004 to 101007. ESCALLONIA spp. Escalloniaceae.

From England. Seeds presented by the director, Botanic Garden, University of Cambridge, Cambridge. Received August 19, 1932.

101004. *ESCALLONIA EXONIENSIS* Veitch.

A hybrid between *E. pterocladon* and *E. rubra*, which forms an evergreen shrub or small tree up to 20 feet high. The ovate, glossy green, serrate leaves are 1 to 2 inches long, and the small, white or rose-tinted flowers are produced from June to October in England.

101005. *ESCALLONIA FLORIBUNDA* H. B. K.

An evergreen shrub or small tree, native from Venezuela to Peru. The obovate, nearly entire leaves are 2 to 4 inches long, and the pure white flowers, one half inch across, are borne in compound panicles up to 9 inches long and have a fragrance like hawthorn.

101006. *ESCALLONIA MACRANTHA* Hook. and Arn.

For previous introduction and description see 100692.

101007. *ESCALLONIA PTEROCLADON* Hook.

A bushy evergreen shrub 4 to 8 feet high, native to Patagonia. The narrowly obovate leaves, 1 inch long, are slightly toothed, and the small white flowers are in slender racemes 1 to 3 inches long terminating the short leafy rigid twigs.

For previous introduction see 91817.

101008. VERBENA sp. Verbenaceae. Vervain.

From the British West Indies. Plants presented by the director of agriculture, Hope, Kingston, Jamaica. Received August 19, 1932.

Introduced for the use of Department specialists working with drug plants.

101009. SACCHARUM OFFICINARUM L. Poaceae. Sugarcane.

From South America. Cuttings presented by Dr. Cross, from the experiment station at Tucuman, Argentina. Received August 8, 1932.

A variety of cane which should prove excellent for Louisiana. Introduced for the use of Department specialists.

101010. MANGIFERA INDICA L. Anacardiaceae. Mango.

From Puerto Rico. Budwood presented by Edmund H. Twight, specialist in fruits, Insular Experiment Station, Rio Piedras. Received August 20, 1932.

Introduced for the use of Department specialists working with fruit breedings.

101011. ERYTHRINA POEPPIGIANA (Walp.) O. F. Cook (E. micropteryx Poepp.). Fabaceae.

From the West Indies. Seed presented by E. J. H. Thomas, Charlotteville, Tobago, Windward Islands. Received August 17, 1932.

Mountain immortelle; a handsome, tender, leguminous tree with red flowers, native to Peru.

101012. LONCHOCARPUS sp. Fabaceae.

From the West Indies. Seeds presented by E. J. H. Thomas, Charlotteville, Tobago Island, through David Fairchild. Received August 17, 1932.

Black Mahoe; an attractive leguminous tree which may be useful as a street tree.

101013. ALCHORNEA CORDIFOLIA (Schum.) Muell. Arg. Euphorbiaceae.

From Cuba. Cuttings presented by Dr. Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received August 22, 1932.

Christmas bush; so called because of the long pendent spikes of brilliant red berries produced at Christmas time. It is an ornamental tropical shrub native to western Africa.

101014 to 101018. ORYZA SATIVA L. Poaceae. Rice.

From South America. Seeds presented by J. Sydney Dash, director, Department of Agriculture, Georgetown, Demerara, British Guiana. Received August 17, 1932.

A collection of locally grown, long-grained varieties.

101014. *Demerara Creole*. 101017. No. 75.

101015. *Blue Stick*. 101018. No. 79.

101016. No. H 7.

101019 to 101023. AVENA spp. Poaceae. Oats.

From Africa. Seeds presented by the Stellenbosch-Elsenburg College of Agriculture, University of Stellenbosch, Union of South Africa. Received August 25, 1932.

A collection of oat varieties introduced for the use of Department specialists.

101019 to 101023—Continued.

101019 to 101022. AVENA BYZANTINA Koch.

101019. Boer. 101021. Sidonian.

101020. River Platte. 101022. Smyrna.

101023. AVENA BYZANTINA X SATIVA.

Langgewens.

101024 to 101026.

From Cuba. Seeds presented by Dr. Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received August 22, 1932.

101024. CORDIA LEUCOSEBESTENA Griseb. Boraginaceae.

A Cuban tree with small, rounded-obtusuleaves and white flowers in corymblike cymes.

101025. ESPADAEA AMOENA A. Rich. Solanaceae.

A tree, native to Cuba, very common along the seacoast. The black and yellow wood is very hard and durable, and the fruits are small and bright yellow.

101026. MALPIGHIA URENS L. Malpighiaceae.

A shrub 5 to 15 feet high, native to the West Indies. The elliptical leaves, 1 to 5 inches long, have lines of stringing hairs beneath, and the umbels of small purple flowers are followed by purple berries about one-half inch in diameter.

101027. ANDROPOGON AMBOINICUS (L.) Merr. Poaceae. Grass.

From Australia. Seeds presented by the agronomist, Department of Agriculture, Sydney, New South Wales. Received August 23, 1932.

A tall, perennial, East Indian grass, about 4 feet high, with narrowly linear leaves up to 20 inches in length. It is of possible value as a forage grass.

101028 to 101057. SACCHARUM OFFICINARUM L. Poaceae. Sugarcane.

From Hawaii. Cuttings presented by the experiment station of the Hawaiian Sugar Planters' Association, Honolulu. Received August 30, 1932.

101028. Akilolo. 101044. Molakai no. 1194.

101029. Aueta. 101045. Molakai no. 1231.

101030. Halatii. 101046. Molakai no. 1338.

101031. Hinahina. 101047. Molakai no. 1395.

101032. Iliopua. 101048. Opukea.

101033. Kea. 101049. Parkaweli.

101034. Lahi (pink striped). 101050. Pohina.

101035. Latu. 101051. Uahi-a-Pele.

101036. Lehu. 101052. U B 1.

101037. Laukona. 101053. U B 14.

101038. Maikaiko. 101054. U D 75.

101039. Maikaiko (striped). 101055. Udiiio.

101040. Manutele. 101056. U H 3.

101041. Mikioi. 101057. 29-3458.

101042. Moano. 101057. 29-3458.

101043. Molakai no. 1191.

101058. GOSSYPIUM BARBADENSE L. Malvaceae. Cotton.

From Egypt. Seeds presented by the Department of Agriculture, Giza, through André Cattani,

101058—Continued.

attaché, Royal Egyptian Legation, Washington, D.C. Received August 27, 1932.

Giza No. 5.

Introduced for the use of Department specialists.

101059 to 101062. PHASEOLUS LUNATUS L. Fabaceae. Lima bean.

From the Netherland East Indies. Seeds presented by A. M. Cramer, Wonosobo, Java. Received August 26, 1932.

A collection of lima beans, introduced for comparison with types now being grown on the Pacific coast.

In Java the lima bean bears for several years and then dies down to the ground, but later it sprouts from the old roots and becomes as vigorous as before. The beans are used both fresh and dried.

101059. A dark-tan bean heavily marked with black.

101060. A dark-tan bean with scattered black markings.

101061. A light-tan bean.

101062. A dark-tan bean.

101063. WARIONIA SAHARAE Benth. and Coss. Asteraceae.

From Africa. Seeds presented by H. Brayard, Directeur de la Ferme Experimentale, Marrakech, Morocco. Received August 29, 1932.

A striking tree composite, native to the Sahara Desert of western Algeria and Morocco, which becomes more than 10 feet high and bears great yellow flowers which are almost as large as those of the artichoke.

101064. CINCHONA CALISAYA Wedd. Rubiaceae.

From British India. Seeds purchased from the Chandra Nursery, Rhenock, Sikkim State, Bengal. Received August 29, 1932.

A tropical shrub with opposite, oblong or oblong-lanceolate, shining green leaves, and terminal panicles of small white and pink flowers. It is one of the sources of quinine and is native to Bolivia.

101065 to 101074.

From the Union of Soviet Socialist Republics. Seeds presented by the chief of the Bureau of Introduction, Institute of Plant Industry, Leningrad. Received August 29, 1932.

101065. EUCALYPTUS CINEREA F. Muell. Myrtaceae.

No. 140714. *Silver stringybark*. A moderate-sized Australian tree with white-brown bark, opposite cordate leaves 2 to 4 inches long, and terminal corymbs of small flowers followed by small subglobose fruits.

101066. EUCALYPTUS URNIGERA Hook. f. Myrtaceae.

No. 140715. A tall shapely tree, native to the mountains of Tasmania, and said to be one of the hardiest of the eucalypts. The pale-yellow flowers in clusters of three are followed by urn-shaped capsules.

101067 to 101074. PARTHENUM ARGENTATUM A. Gray. Asteraceae. Guayule.

A spreading much-branched subtropical shrub, rarely 3 feet high, with small, silvery green-gray leaves and a profusion of small yellow flowers borne in loose clusters on slender stems. The shrub is native to a comparatively small area in southwestern Texas and northern Mexico. The dried plants are ground, and the rubber is extracted by chemical processes.

101065 to 101074—Continued.

- | | |
|---------------------|---------------------|
| 101067. No. 140719. | 101071. No. 140723. |
| 101068. No. 140720. | 101072. No. 140724. |
| 101069. No. 140721. | 101073. No. 140725. |
| 101070. No. 140722. | 101074. No. 140726. |

101075. *SESAMUM ORIENTALE* L.
Pedaliaceae. Sesame.

From Africa. Seeds presented by the director of the Botanic Garden, Eala, Belgian Congo. Received August 30, 1932.

Introduced for breeding investigations being carried on by Department specialists.

101076. *SASA VEITCHII* (Carr.) Rehder.
Poaceae. Bamboo.

From New Jersey. Plants presented by W. A. Manda, South Orange. Received September 1, 1932.

A large-leaved, shade-loving bamboo of running habit which grows to a maximum height of 2½ feet. The leaves, usually five to a branch, are up to 7 inches long by 1½ inches wide. In autumn they have the peculiar habit of drying out and bleaching in a rather narrow and regular strip around the margin, which gave rise to one of the specific synonyms, *albo-marginata*.

101077. *CASSIA GRANDIS* L. f. *Caesalpinhiaceae*. Pink-shower.

From Cuba. Seeds collected at the Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, by T. A. Fennell, Bureau of Plant Industry. Received May 9, 1930. Numbered in August 1932.

A leguminous tree that produces masses of pale-pink flowers in the early spring, before the leaves appear. It is adapted for park and garden work in Florida where *Cassia fistula* and others of the genus have done well.

101078 to 101080.

From Africa. Seeds presented by Moses Albert Azancot, Tangier, Morocco. Received September 1, 1932.

101078. *COUSINIA* sp. Asteraceae.

Taimat. A prickly leaved thistlelike plant growing wild around wheat fields. The flower buds are boiled in salted water and eaten, tasting something like asparagus. The uncooked juice of the plant is used with apparent success as a substitute for rennet by the local cheese manufacturers of Tangier.

101079. *VICIA FABA* L. Fabaceae. Broadbean.

A small bean used in Morocco as feed for cattle and goats. They are sown broadcast.

101080. *SCOLYMUS* sp. Cichoriaceae.

Tagarneena. A wild plant used by the natives as a vegetable.

101081. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.

From Africa. Scions presented by O. S. H. Reinecke, Department of Pomology, College of Agriculture, Stellenbosch, Union of South Africa. Received September 8, 1932.

Inkoos, an early, white-fleshed, freestone peach which originated in South Africa and is said to withstand warm weather during a normal cold winter.

For previous introduction see 93826.

101082 and 101083.

From South America. Seeds from Surinam, presented through David Fairchild. Received September 1, 1932.

101082 and 101083—Continued.

101082. *EUTERPE OLERACEA* Mart. *Phoenicaceae*. Palm.

Manac or *manaque*; a tall graceful forest palm with a trunk seldom more than 4 inches in diameter. The pinnate leaves droop gracefully and the tree is found singly, not in clusters. It is said that fats suitable for oils and soaps can be derived from the blue-black, berrylike fruits.

For previous introduction see 99567.

101083. *RAVENALA GUYANENSIS* Steud. *Musaceae*.

There are only two species of this genus, one in Madagascar and the other in tropical South America. This species is not so large as the Madagascar one, but it rises to a height of 25 feet, making a fanlike head. Its enormous flower spike is 9 feet long and as much as a man can carry. Unlike the Madagascar species, the seeds of which have a deep-blue aril, the seeds of this have an orange aril.

For previous introduction see 98880.

101084. *ARALIA CHINENSIS* L. *Araliaceae*. Chinese aralia.

From Washington, D.C. Seeds collected by Paul Russell in the park west of the Department of Commerce Building. Received September 12, 1932.

A tall shrub up to 25 feet high, native to China, with bipinnate leaves made up of ovate, closely serrate leaflets 2 to 4 inches long and panicles of small white flowers followed by small black fruits. While the typical form has prickly stems, this plant is absolutely unarmed.

For previous introduction see 93878.

101085 to 101090.

From Africa. Seeds presented by Alfred Bircher, Middle Egypt Botanic Station, El Saf, Egypt. Received September 8, 1932.

101085. *DOYYALIS CAFFRA* (Hook. and Harv.) Warb. (*Aberia caffra* Hook. and Harv.). *Flacourtiaceae*. Kei-apple.

A very prickly shrub or small tree, native to tropical Africa, where it is used as a hedge. The pale-green leaves are over an inch long and nearly an inch wide. The edible fruit resembles a small yellow apple and is so exceedingly acid when fresh that it is said to be used as pickles without adding vinegar.

For previous introduction see 99415.

101086. *DOYYALIS MACROCALYX* (Oliver) Warb. *Flacourtiaceae*.

A small tree native to Angola, Africa. The thinly coriaceous leaves, 2 to 3 inches long, are elliptical to ovate, and the inconspicuous flowers, in small axillary clusters, are followed by orange-scarlet ovoid berries one half inch long. The fruit is surrounded by the persistent calyx which is fimbriate-ciliate with slender capitate glandular hairs.

101087. *EUGENIA PUNGENS* Berg. *Myrtaceae*. Guabiyu.

A bush native to South America, with pungent leaves and myrtlelike flowers. The black fruits, generally in pairs, are about an inch across and contain a sweet yellow flesh, enclosing 1 or 2 large green seeds.

101088. *GREWIA TILIAEFOLIA* Vahl. *Tiliaceae*.

A small tree, native to India and tropical Africa, with purple branchlets and dentate, obliquely cordate leaves 4 inches long. The small flowers are in axillary clusters and the 1- to 4-lobed black fruits, about the size of small peas, are eaten by the natives.

101085 to 101090—Continued.

101089. *MADHUCA INDICA* Gmel. (*Bassia latifolia* Roxb.). Sapotaceae. **Mahwa.**

A tree, native to India, with a short trunk and many spreading branches, forming a dense rounded crown 40 to 50 feet high. The flowers have a velvety chocolate-colored calyx and a pale-cream colored corolla with thick juicy petals which are used as food.

101090. *SORINDEIA JUGLANDIFOLIA* (Rich.) Planch. Anacardiaceae.

A glabrous shrub or small tree, native to tropical Africa. The unequally pinnate leaves are made up of 7 to 11 oblong-elliptical coriaceous leaflets 2 to 4 inches long, and the inconspicuous flowers are followed by fleshy fruits that are said to be eaten by the natives.

101091. *BAUHINIA MALABARICA* Roxb. Caesalpiniaceae.

From French Indo-China. Seeds presented by M. Poilane, Institut des Recherches Agronomiques de l'Indochine, Division de Botanique, Tonkin. Received September 9, 1932.

A small, erect, bushy tree, native to southeastern Asia, with thick rigid deeply bifid somewhat heart-shaped leaves 2 to 3 inches long. The small white flowers are in dense sessile axillary clusters. The rather turgid straight firm narrow pods are a foot long.

For previous introduction see 94181.

101092. *AGASTACHE RUPESTRIS* (Greene) Standl. Menthaceae.

From Arizona. Seeds collected near Payson by Mrs. W. B. Collom and presented by W. R. Maxon, Smithsonian Institution, Washington, D. C. Received September 12, 1932.

An aromatic perennial herb 1 to 3 feet high, native to the mountains of southwestern New Mexico. The linear-lanceolate entire leaves are about 2 inches long, and the greenish, red-purple tubular flowers, 1 inch long, are borne in loose panicles.

101093. *PERSEA AMERICANA* Mill. Lauraceae. **Avocado.**

From Mexico. Plants raised from seed obtained in Mexico by A. G. Galloway, Bureau of Plant Quarantine. Received September 9, 1932.

A collection of thin-skinned types.

101094. *PHOENIX HANCEANA* Naudin. Phoenicaceae. **Date palm.**

From England. Seeds presented by the Royal Botanic Gardens, Kew. Received September 7, 1932.

A Chinese relative of the date palm; it has short tufted stems and pinnate foliage.

101095. *ARUNDINARIA* sp. Poaceae. **Bamboo.**

From Japan. Seeds purchased from T. Sakata & Co., Yokohama. Received September 13, 1932.

Received as *Bambusa chino*.

101096 to 101100. *AMYGDALUS COMMUNIS* L. Amygdalaceae. **Almond.**

From Africa. Seeds presented by J. B. Plessis, Chef du Jardin d'Essais, Sfax, Tunisia. Received September 15, 1932.

A collection of almonds from trees in the Botanical Garden of Sfax.

101098. *Abiod*.

101097. *Constantini*.

101096 to 101100—Continued.

101098. *Grosse Tendre*.

101099. *Guernatzei Corne de Gazelle*.

101100. *Zanf*.

101101 to 101108.

From New Zealand. Seeds presented by J. W. Hadfield, agronomist, Fields Division and Plant Research Station, Department of Agriculture, Palmerston North. Received September 16, 1932.

A collection of New Zealand-grown certified pasture seeds, introduced for comparison with varieties and strains generally used in this country.

101101. *AGROSTIS TENUIS* Sibth. Poaceae. **Brown top.**

For previous introduction see 100232.

101102 and 101103. *DACTYLIS GLOMERATA* L. Poaceae. **Orchard grass.**

New Zealand cocksfoot, a permanent pasture grass.

101104 and 101105. *LOLIUM PERENNE* L. Poaceae. **Perennial ryegrass.**

101104. Certified mother seed.

101105. Permanent pasture seed.

101106. *TRIFOLIUM PRATENSE* L. Fabaceae. **Red clover.**

New Zealand certified Montgomery Late.

101107 and 101108. *TRIFOLIUM REPENS* L. Fabaceae. **White clover.**

101107. Certified mother seed.

101108. Certified permanent pasture seed.

101109. *SCHISMOCARPUS PACHYPUS* Blake. Loasaceae.

From Mexico. Plants collected by G. N. Collins and J. H. Kempton, with the Allison V. Armour expedition to Mexico and the West Indies, 1931. Received April 15, 1931. Numbered in September 1932.

No. 9192. A rather fleshy, herbaceous perennial about 20 inches high, with a tuberous root about 3 inches in diameter, alternate ovate leaves, and a terminal panicle of rather large yellow flowers. Native to Oaxaca, Mexico.

101110 and 101111. *FRAGARIA* spp. Rosaceae. **Strawberry.**

From Germany. Plants presented by Karl Lüpke, Lemgo in Lippe. Received September 20, 1932.

101110. *FRAGARIA* sp.

Deutsch Ebern.

101111. *FRAGARIA* sp.

Oleeschlesien.

101112 to 101114. *ALLIUM* spp. Liliaceae.

From China. Seeds and bulbs presented by Tai Yih Wang, of the Sun Yat Sen Memorial Park Commission. Received September 20, 1932.

101112 and 101113. *ALLIUM CEPA* L. **Onion.**

Australia-Brown; the variety most commonly grown in this region was introduced and distributed by the University of Nanking about 20 years ago.

101112. Seed collected in the Sun Yat Sen Memorial Park.

101113. Seed collected from farmers.

101112 to 101114—Continued.

101114. *ALLIUM SATIVUM* L. Garlic.

Bulbs collected in the Sun Yat Sen Memorial Park.

101115 to 101130. *SACCHARUM OFFICINARUM* L. Poaceae. Sugarcane.

From Cuba. Cuttings presented by Charles H. Thrall, Club Azucarero de Cuba, Habana. Received September 22, 1932.

101115. *Bamboo Blanca*.

101116. *Batjan*.

101117. *Batjan Green sport*.

101118. *Bocoyo*.

101119. *Bravade Perico*.

101120. B-208.

101121. *Green Stripe Preanger*.

101122. *Negrita*.

101123. *Pundia*.

101124. *Red Preanger*.

101125. *Red Tip*.

101126. Striped sport of P.O.J. 2714.

101127. *Tibboo Mird*.

101128. *Uba Natal*.

101129. *Yellow Bamboo*.

101130. *Yellow Tip*.

101131 to 101134.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received September 16, 1932.

101131. *ARIKURYROBA SCHIZOPHYLLA* (Mart.) Bailey (*Cocos schizophylla* Mart.). Phoenicaceae. Palm.

A slender, straight-stemmed palm with pinnate leaves.

For previous introduction see 91775.

101132. *ARISTOLOCHIA OBLONGATA* Jacq. Aristolochiaceae.

A tropical climber, native to Venezuela, with oblong, cordate, obtuse, dull-green leaves 1 to 2 inches long and odorless pale-yellow flowers about 4 inches long.

101133. *CLUSIA MINOR* L. Clusiaceae.

A tropical American tree 25 feet high, often starting as an epiphyte, with thick obovate leaves 4 to 6 inches long and axillary solitary showy pink flowers.

101134. *KOPSIA FRUTICOSA* (Ker) A.D.C. Apocynaceae.

A large evergreen shrub with elliptic leaves 4 to 8 inches long. The flowers, over an inch long and 2 inches across, have pink corolla tubes with red mouths and grow in cymes. The pyriform fruits, 1 inch long, are greenish purple. It is native to Burma.

101135 to 101138. *ELAEIS GUINEENSIS* Jacq. Phoenicaceae. African oil palm.

From Africa. Seeds presented by Laurentino Pereira Coelho, Chefe da Divisão Técnica dos Serviços Agrícolas, Luanda, Angola. Received September 22, 1932.

101135. *Difumbe*. 101137. *Dissombo*.

101136. *Diholo*. 101138. *Ussu*.

101139. *DIOSPYROS DISCOLOR* Willd. Diospyraceae. Mabelo.

From Hawaii. Seeds presented by W. T. Pope, senior horticulturist, Agricultural Experiment Station, United States Department of Agriculture, Honolulu. Received September 19, 1932.

A medium-sized Philippine tree of vigorous growth, with shining leaves 5 to 10 inches long, pubescent beneath. The velvety dull-reddish, thin-skinned fruits, 3 inches long and nearly 4 inches in diameter, have firm, rather dry sweet flesh of a rather indefinite flavor and 4 to 8 large seeds. Notwithstanding its size and attractive appearance, it has never gained favor with Europeans, although very popular with the natives.

For previous introduction see 95086.

101140 to 101143.

From Manchuria. Seeds collected by L. Ptitin. Received September 20, 1932.

A collection of fodder grasses collected on the Manchurian prairie grasslands between Anda and Harbin. Introduced for the use of Department specialists.

101140. *AGROPYRON STRIGOSUM* (Bieb.) Boiss. Poaceae. Grass.

101141. *GLYCERIA REMOTA JAPONICA* Hack. Poaceae. Grass.

101142. *POA COMPRESSA* L. Poaceae. Canada bluegrass.

101143. *POA PRATENSIS* L. Poaceae. Kentucky bluegrass.

101144 and 101145.

From India. Seeds presented by the Agri-Horticultural Society of India, Calcutta. Received September 22, 1932.

101144. *PHOENIX RECLINATA* Jacq. Phoenicaceae. Senegal date palm.

A tropical and South African date palm, 20 to 30 feet high, with green reclinate pinnate leaves 6 to 9 feet long, with rigid leaflets and yellowish fruits half an inch long having a sweetish pulp.

For previous introduction see 100105.

101145. *PHOENIX SYLVESTRIS* (L.) Roxb. Phoenicaceae. India date palm.

A pinnate-leaved palm, 25 to 40 feet high, with leaves about 15 feet long and orange-yellow fruits. Native to India.

101146 to 101155.

From New Zealand. Seeds presented by A. Wilkinson, secretary, New Zealand Alpine and Rock Garden Society, Nelson. Received September 27, 1932.

101146. *GENTIANA CORYMBIFERA* T. Kirk. Gentianaceae. Gentian.

A perennial herb with usually simple stems 6 to 20 inches high, native to New Zealand. The radical leaves, 2 to 4 inches long, are oblong-spatulate, and the stem leaves, 1 to 2 inches long, are linear-lanceolate. The large white flowers, nearly an inch across, are borne in large compact terminal umbels 2 to 6 inches in diameter.

101147. *IXERBA BREXIODES* A. Cunn. Escalloniaceae.

Tawari. A beautiful evergreen tree sometimes 70 feet tall, with thick, leathery, coarsely serrate leaves 3 to 7 inches long and very handsome waxy white flowers over an inch wide, occurring in flat panicles. In New Zealand, where it is not common, it is considered by some to be the most beautiful tree indigenous to that country.

101146 to 101155—Continued.

101148. *NOTOSPARTIUM CARMICHAELIAE* Hook. f. Fabaceae.

Pink broom. A beautiful, moderate-sized, leguminous shrub with leafless, broomlike branches on which the short racemes of pink or purplish flowers are freely produced. It is native to New Zealand.

101149. *OLEARIA MACRODONTA* Baker. Asteraceae.

A shrub or small tree, up to 20 feet high, native to New Zealand. The rigid, coriaceous, ovate, or oblong leaves, 2 to 4 inches long, are glabrous above and covered beneath with closely appressed white tomentum. The small heads of whitish or reddish flowers are borne in large much-branched corymbs.

101150. *PITTIOSPORUM DALLI* Cheeseman. Pittosporaceae.

A round-topped tree up to 18 feet high, native to New Zealand, with sharply toothed, oblong, leathery leaves 2 to 4 inches long and dense, terminal, compound clusters of fragrant white flowers half an inch broad.

101151. *RHOPALOSTYLIS SAPIDA* (Soland.) Wendl. and Drude. Phoeniceae. Mikan palm..

A New Zealand palm 30 feet high, with a green-tinged stem, pinnate leaves 14 feet long, and large clusters of pale-pink flowers.

101152. *RUBUS SCHMIDELIOIDES* A. Cunn. Rosaceae.

A scrambling or climbing shrub native to New Zealand. The 3- to 5-foliolate leaves have coriaceous, broadly cordate-serrate leaflets 2 to 4 inches long, and the small white flowers, in panicles 2 to 8 inches long, are followed by pale-yellow edible fruits about one-third inch in diameter.

101146 to 101155—Continued.

101153. *SENECIO CRUSTII* Hort. Asteraceae.

A name for which a place of publication and a description have not been found.

101154. *SENECIO PERDICIOIDES* Hook. f. Asteraceae.

A round-topped New Zealand shrub 2 to 6 feet high, with toothed oblong leaves 2 inches long and leafy corymbs of top-shaped yellow flower heads.

101155. *SOPHORA PROSTRATA* J. Buch. Fabaceae.

A rigid much-branched shrub 2 to 5 feet high, native to New Zealand. The compound leaves are made up of 2 to 4 pairs of very small oblong-ovate leaflets, and the bright-yellow flowers, nearly an inch long, are in clusters of 2 to 3, or solitary.

101156. *ANNONA RETICULATA* L. Annonaceae. Custard-apple.

From India. Seeds presented by Rev. A. L. Grey, superintendent, Sind-Baluchistan District, Methodist Episcopal Church, Karachi. Received September 29, 1932.

Sita Phal, or custard-apple. An excellent local variety.

101157. *PHASEOLUS VULGARIS* L. Fabaceae. Common bean.

From Oslo, Norway. Seeds collected by W. E. Whitehouse, Bureau of Plant Industry. Received September 20, 1932.

Introduced for the use of Department specialists.

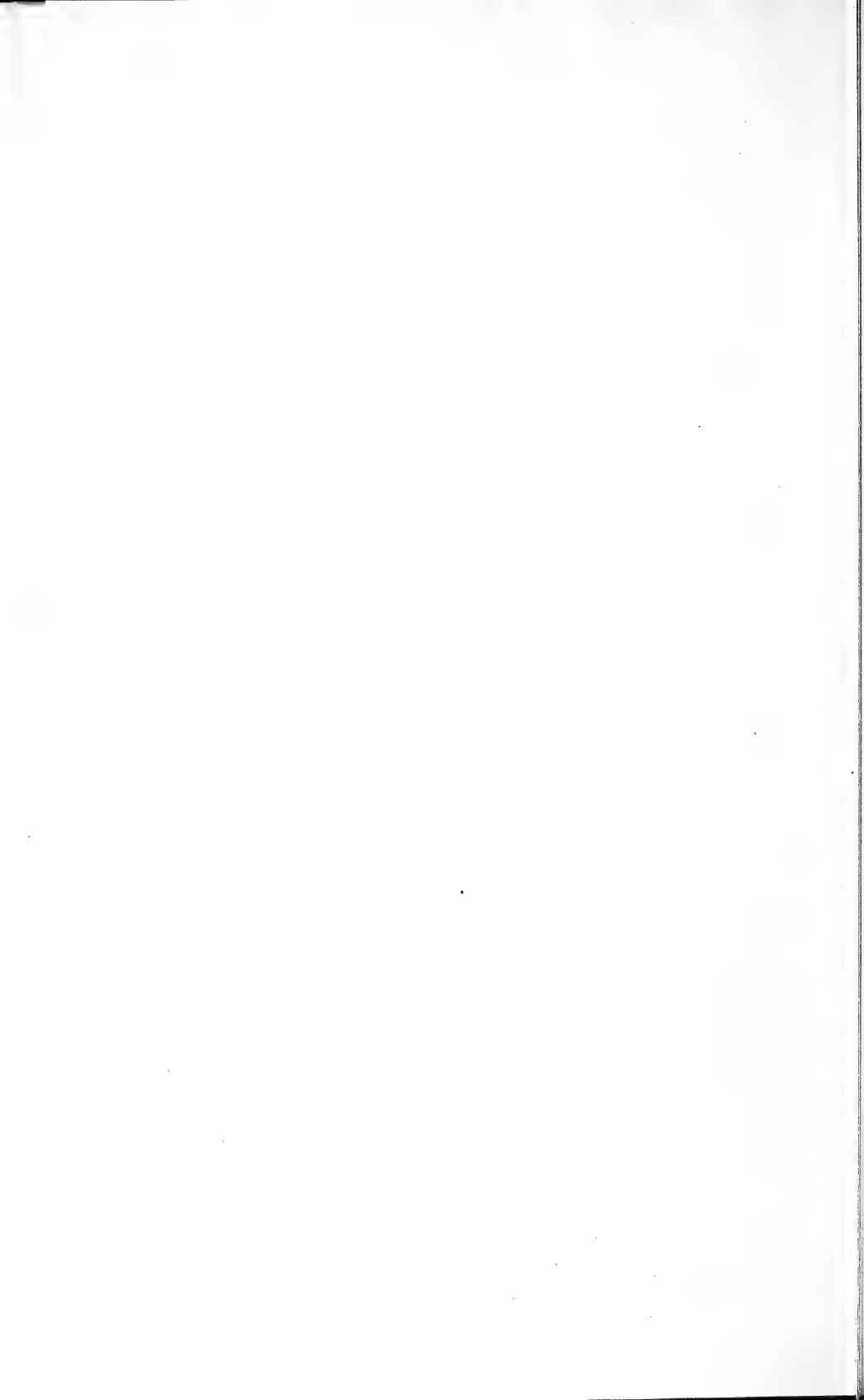
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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 113



Washington, D. C.

Issued September 1934

PLANT MATERIAL INTRODUCED BY THE DIVISION OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, OCTOBER 1 TO DECEMBER 31, 1932 (Nos. 101158-101584)

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INTRODUCTORY STATEMENT

Inventory no. 113 records the material received by the Division of Foreign Plant Introduction between October 1 and December 31, 1932, a total of 427 numbers (101158-101584), part of which represents material for the use of the Division and part for other divisions and agencies.

Although possibly not obvious to the uninformed reader, the great number of entries of material from Robert M. Grey, superintendent of the Atkins Institution of the Arnold Arboretum at Soledad, Cienfuegos, Cuba (101159-101162, 101212-101215, 101243-101252, 101257, 101260-101265, 101292-101295, 101435-101437, 101462-101464), represent the growing interrelation of that garden and the Department's garden at Coconut Grove, Fla., from which considerable collections of seeds and plants have gone to the garden at Soledad. By this interchange of material each garden is able to increase its collection and study new plants under different climatic conditions—a relation that is cordially appreciated.

Less conspicuous but as important are the contributions, from several sources, of seeds and bulbs of various species of *Allium*, eventually intended for the use of cooperating specialists in California, also of cats and cottons for Department specialists.

The studies of bamboo are assisted by the accession of 5 numbers, 3 from a French nursery and 2 from an old planting in Florida, all species or forms that contribute to the studies of the difficult variations of this group.

Through the courtesy of Dr. H. Humbert, Muséum National d'Histoire Naturelle, Paris, France, our succulent collection is increased by a collection of species of *Bryophyllum*, *Kalanchoe*, and *Kitchingia* native to Madagascar (101356-101374), for comparative study with previous introductions. From France also, through Prof. D. Bois, of the Muséum National d'Histoire Naturelle, Paris, was received a large collection of cuttings of *Ficus* species (101309-101343), intended for the work with that genus now under way at Coconut Grove, Fla. Unfortunately, this admirable collection was largely lost, as most of the cuttings did not root.

In a miscellaneous collection of seeds sent by the courtesy of B. V. Skvortzov, Harbin, Manchuria (101395-101406) are several interesting herbs, not spectacular but of garden value. The *Agastache rugosa* is a nepetalike plant with a long period of summer blooming; another, *Scutellaria baicalensis*, has much more showy blue-purple flowers than any of its relatives grown here.

Although there are other collections of plants from that area, the two collections from Edwin Ashby, Wittunga, Blackwood, South Australia (101195-101204, 101346-101354) contain seeds of many interesting species and varieties of

Callistemon and *Calothamnus*. These are plants that have been recognized in California, but have not been as well tested in the Gulf States, although some species seem more than promising within rather restricted areas.

The botanical determinations were made and the nomenclature determined by the late H.C. Skeels,¹ who had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

DIVISION OF FOREIGN PLANT INTRODUCTION,
Washington, D.C., December 20, 1933.

¹ Died Jan. 3, 1934.

INVENTORY²

101158. *NEPHELIUM LAPPACEUM* L. Sapindaceae. Rambutan.

From Central America. Seeds presented by Wilson Popenoe, research department, United Fruit Co., Tela, Honduras. Received October 6, 1932.

An erect stately tropical tree 35 to 40 feet high, native to the Malay Archipelago and not yet extensively cultivated elsewhere. The compound leaves are composed of 5 to 7 pairs of elliptic, obovate or oblong, glabrate leaflets about 4 inches long, shining and dark green above, paler beneath. The small flowers are in loose axillary and terminal panicles. The fruits, which are produced in clusters of 10 or 12, are oval, about 2 inches in length, and covered with soft fleshy spines less than an inch long. They are crimson, somewhat greenish, yellowish, or orange-yellow. The outer covering from which the spines arise is thin and leathery and is easily torn off, exposing the white translucent flesh (aril) which adheres to the oblong and flattened seed. The flavor is mild acid, somewhat suggesting that of the grape.

For previous introduction see 95367.

101159 to 101162.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received October 3, 1932.

101159. *CITHAREXYLUM CAUDATUM* L. Verbena- ceae.

A shrub 10 to 12 feet high, native to the West Indies. The elliptical to oblong leathery leaves are 3 to 5 inches long, and the white tubular flowers, borne in erect racemes 4 to 9 inches long, are followed by ovoid-oblong black fruits about one-fourth inch long.

101160. *EUGENIA* sp. Myrtaceae.

101161. *JATROPHA HASTATA* Jacq. Euphorbia- ceae.

A shrubby perennial about 3 feet high with obovate to oblanceolate hastate leaves and umbel-like cymes of small scarlet flowers. It is native to Cuba.

For previous introduction see 90983.

101159 to 101162—Continued

101162. *OCOTEA CORIACEA* (Swartz) Britton. Lauraceae.

An evergreen tree 30 to 40 feet high with oblong-lanceolate coriaceous leaves 2 to 6 inches long and panicles of small whitish flowers followed by dark-blue fruits nearly an inch long with red or yellow persistent calyx bases. It is native to the West Indies.

For previous introduction see 90929.

101163. *FIGUS CARICA* L. Moraceae. Common fig.

From Florida. Cuttings presented by H. E. Ellis, Jacksonville. Received February 1, 1930. Numbered in October 1932.

A seedless fig developed by George E. Shepherd, Riverside, Jacksonville, Fla.

101164 to 101168.

From Greece. Seeds and bulbs presented by Prof. P. Th. Anagnostopoulos, École Supérieure d'Agriculture, Athens. Received October 7, 1932.

101164 to 101166. *CROCUS* spp. Iridaceae.

101164. *CROCUS BORYI* J. Gay.

An autumn-flowering crocus with 3 to 6 linear-lanceolate leaves and white flowers somewhat lilac lined at the base outside and having a yellow throat. The anthers are white and somewhat longer than the filaments, and the scarlet style branches are divided into capillary segments.

101165. *CROCUS CARTWRIGHTIANUS* Herb.

An autumn-flowering crocus with 1 to 4 violet flowers and narrow slightly ciliate leaves. It is very close to *C. hadriaticus* and is native to arid hills near the sea in Greece.

101166. *CROCUS* sp.

101167. *ORNITHOGALUM ARABICUM* L. Liliaceae. Star-of-Bethlehem.

Bulbs of a herbaceous perennial, native to the Mediterranean region. The thick ovoid bulb

² 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 Division 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 seed samples or 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 division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

101164 to 101168—Continued

produces 5 to 8 glaucous green leaves 12 to 18 inches long and a scape 1 to 2 feet high, bearing a 6- to 12-flowered raceme of fragrant white flowers. The pistil is black and adds to the attractiveness of the flowers. This species is very popular for pot culture.

101168. *TULIPA HAGERI* Heldr. Liliaceae. Tulip.

Bulbs of a tulip with a flowering stem about a foot high which bears a single flower up to 2 inches long. The perianth segments are brownish on the outside and intensely scarlet within. The 3 or 4 leaves are narrow and grooved. Native to the mountains of Greece.

101169. *TRAGOPOGON* sp. Cichoriaceae.

From Turkistan. Seeds presented by the Tuggourt Botanic Garden. Received October 7, 1932.

101170. *CROCUS SIEBERI* J. Gay. Iridaceae.

From Greece. Seeds presented by Prof. P. Th. Anagnostopoulos, École Supérieure d'Agriculture, Athens. Received October 8, 1932.

A bulbous perennial, native to Greece, with 4 to 6 linear-lanceolate leaves, glaucous beneath, and lilac flowers with a yellow glabrous throat. The orange anthers are twice as long as the filaments, and the orange-red style branches are nearly entire.

101171. *ALLIUM CEPA* L. Liliaceae. Onion.

From India. Seeds presented by the director of agriculture, Imperial Institute of Agricultural Research, Pusa. Received October 8, 1932.

Introduced for breeding studies of Department and experiment-station workers.

101172. *ACER SIEBOLDIANUM MICROPHYLLUM* Maxim. Aceraceae. Maple.

From Amherst, Mass. Seeds from trees growing on the campus of the Massachusetts Agricultural College, presented by Prof. L. L. Blundell. Received October 8, 1932.

A shrub or small tree, native to Japan, with 7- to 9-lobed leaves only 2 inches broad. The small yellowish flowers are borne on nodding peduncles and the winged fruits, less than an inch long, spread at an obtuse angle.

101173 to 101175.

From France. Plants purchased from V. Lemoine & Sons, Nancy. Received October 11, 1932.

101173. *THAMNOCALAMUS* sp. (*Bambusa gracilis* Hort.). Poaceae. Bamboo.

A somewhat tender bamboo of the Himalayas, very similar to *Thamnocalamus falcata*. The thin leaves are linear-lanceolate, and the ligules of the sheaths are rather prominent. The slight purple coloring of the sheath extends around the finely serrulate margin of the blade. The blade is very slightly cross-veined. The genus *Thamnocalamus* is closely allied to *Arundinaria* and is often considered as only a section of the latter.

101174. *SASA DISTICHA* (Mitf.) E. G. Camus (*Bambusa nana* Hort.). Poaceae. Bamboo.

A dwarf bamboo of running habit growing 3 to 5 feet high, with rather narrow leaves 2 to 4 inches long, in pronouncedly distichous arrangement.

101175. *SHIBATAEA KUMASASA* (Zoll.) Makino (*Bambusa viminalis* Hort.). Poaceae. Bamboo.

This odd little bamboo, which in the past has carried several different botanical names and which looks but little like a bamboo, grows 2 to 6 feet in height. The branches, usually five in

101173 to 101175—Continued

number, are diminutive, and each bears a single, terminal, ovate-lanceolate, dark-green leaf 2 to 3 inches long and nearly an inch wide. The foliage is more or less injured at temperatures of 5° to 10° F.

101176 to 101179.

From Africa. Seeds presented by Charles S. Dole, Bahamas Plantations Co., Ltd., Nassau, New Providence Island, Bahamas, British West Indies. Received October 7, 1932.

A collection of seeds from the National Botanical Gardens at Kirstenbosch, Cape Colony, Union of South Africa.

101176 to 101178. *ALOE* spp. Liliaceae.

101176. *ALOE KRAPOHLIANA* Marloth.

A small aloe with a basal rosette of 20 to 30 leaves each about 4 inches long and armed with very numerous small white teeth. The brick-red flowers are on a scape 18 inches high.

101177. *ALOE LONGISTYLIA* Baker.

A stemless southern African perennial with a dense rosette of about 30 lanceolate green leaves 6 inches long tapering to a horny point and having a pale-brown prickly margin. The bright-red tubular flowers are borne in a dense raceme 3 to 5 inches long.

101178. *ALOE SCHLECHTERI* Schoenl.

An aloe with olive-green leaves about 8 inches long, armed on the margin with brown horny deltoid prickles. The light-yellow flowers, on short pedicels, are in dense racemes about 6 inches long.

For previous introduction see 98010.

101179. *THRYALLIS GRACILIS* (Bartl.) Kuntze. Malpighiaceae.

A shrub, native to Central America and naturalized in the West Indies. The narrowly elliptical leaves are 1 to 2 inches long, and the yellow flowers, 1 inch across, are borne in ample panicles.

101180. *CITRUS* sp. Rutaceae.

From French Indo-China. Seeds presented by M. Poilane, Arboretum de Erang Bôm, Province de Bienhoa, Cochinchina. Received October 12, 1932.

101181 to 101184. *AVENA SATIVA* L. Poaceae. Oats.

From Scotland. Seeds presented by William Robb, director of research, Scottish Society for Research in Plant-Breeding, Craigs House, Corstorphine, Edinburgh. Received October 12, 1932.

101181. *Bell.* 101183. *Potato.*

101182. *Elder.* 101184. *Tam Finlay.*

101185 and 101186.

From Australia. Seeds presented by the Botanic Gardens, Darwin, Northern Territory. Received October 12, 1932.

101185. *ALYSICARPUS VAGINALIS* (L.) DC. Fabaceae.

An annual legume from 3 to 6 feet high. Under favorable circumstances it may be cut 2 or 3 times a season.

101186. *STYLOSANTHES MUCRONATA* Willd. Fabaceae.

A much-branched undershrub, 1 to 2 feet high, native to southern Asia and tropical Africa. The rigidly coriaceous trifoliate leaves have oblong leaflets about one half inch long, and the inconspicuous flowers are in small dense heads. Of possible value as a forage crop.

101187. SESAMUM ORIENTALE L. Pe-
daliaceae. Sesame.

From Africa. Seeds presented by D. C. Edwards, Scott Agricultural Laboratories, Nairobi, Kenya. Received October 13, 1932.

Black Sim-Sim. Collected in the coast region of Kenya, and introduced for the use of Department specialists working with drug plants.

101188. (Undetermined.)

From Peru. Seeds collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received July 12, 1932. Numbered in October 1932.

No. 198. Collected April 16, 1932, at Rio Colorado, near Merced, Peru, at 2,800 feet altitude. A leguminous shrub up to 4 feet high, with flowers which vary from white to light violet.

101189. DIOSCOREA ALATA L. Dios-
coreaceae. Winged yam.

From Australia. Tubers presented by J. A. Hamilton, Carbesen via Cairns, North Queensland. Received October 17, 1932.

Tubers generally cylindrical, with reddish inner skin and white flesh partly colored with red-purple. It is a good table variety, very prolific, and has proved well adapted to the dry conditions of Queensland, where there is a short wet season from about Christmas to the beginning of March, and the remainder of the year has very little rain.

101190 to 101193.

From Manchuria. Seeds purchased from L. Ptitin, Harbin. Received October 13, 1932.

101190. *CRATAEGUS* sp. Malaceae. Hawthorn.

101191. *RIBES* sp. Grossulariaceae. Gooseberry.

101192. *RUBUS* sp. Rosaceae. Raspberry.

101193. *SOJA MAX* (L.) Piper. Fabaceae. Soybean.

Wild soybeans.

101194. PUYA CHILENSIS Molina. Bro-
meliaceae. Puya.

Seeds presented by William Hertrich, superintendent, Huntington Botanic Garden, San Marino, Calif., from plants growing in the garden. Received October 13, 1932.

Titanca in Peru and *cardon* in Chile. A shrub 4 to 5 feet high with a yuccalike mass of foliage. The narrow, often recurved leaves, 2 to 4 feet long, are armed along the margins with strong glaucous recurved spines or thorns. The compound spike of large yellow flowers, each 2 inches across and sessile or nearly so, terminates a perfectly straight flower stalk 3 to 5 feet tall.

101195 to 101204.

From Australia. Seeds presented by Edwin Ashby, Wittunga, Blackwood, South Australia. Received October 13, 1932.

101195 to 101199. *CALLISTEMON* spp. Myrtaceae.

101195. *CALLISTEMON ACUMINATUS* × ?

A hybrid of *C. acuminatus* having flowers which vary from pink to deep crimson.

101196. *CALLISTEMON LILACINUS* E. Cheel.

A shrub about 8 feet high with alternate, linear-lanceolate, mucronate leaves. The flowers, in dense cylindrical spikes, are characterized by long conspicuous purple-lilac filaments. It is native to New Zealand and Western Australia.

101197. *CALLISTEMON PALUDOSUS* × ?

A hybrid of *C. paludosus* with pink flowers.

101195 to 101204—Continued

101198. *CALLISTEMON RUGULOSUS* DC.

A shrub up to 12 feet high with narrowly lanceolate leaves 1 to 3 inches long and clusters of flowers having crimson filaments and yellow anthers.

101199. *CALLISTEMON SALIGNUS* (J. E. Smith) Sweet.

A tall shrub or small tree up to 40 feet high with distinctly penni-nerved, lanceolate leaves 1 to 3 inches long and small flowers, in spikes 1 to 2 inches long, which have bright-yellow stamens usually not more than half an inch in length.

For previous introduction see 99403.

101200 to 101204. *CALOTHAMNUS* spp. Myrtaceae.

Native Western Australian shrubs very much like the *Callistemons* but with a much longer flowering period.

101200. *CALOTHAMNUS ASPER* Turcz.

A hairy evergreen shrub with crowded linear flat leaves and short dense clusters of flowers which have crimson stamens.

101201. *CALOTHAMNUS HOMALOPHYLLUS* F. Muell.

An erect shrub 4 to 6 feet high with thick flat oblanceolate to linear leaves 1 to 2 inches long; the small flowers in 1-sided spikes have rich-crimson stamens more than an inch long.

101202. *CALOTHAMNUS LONGISSIMUS* F. Muell.

A low shrub with softly pubescent, corky branchlets. The terete leaves are 6 to 12 inches long, and the small flowers, immersed in the swollen corky stem, have several bundles of stamens nearly an inch long.

101203. *CALOTHAMNUS QUADRIFIDUS* Ait.

An erect evergreen bush 7 feet high with crowded linear leaves about 1 inch long, somewhat like those of *Hakea*, and dense spikes of flowers which are conspicuous because of the long rich-crimson stamens.

For previous introduction see 93834.

101204. *CALOTHAMNUS SANGUINEUS* Labill.

A tall evergreen shrub 6 to 12 feet high with subulate terete leaves about an inch long and flowers with blood-red stamens as long as the leaves.

101205. SESAMUM ORIENTALE L. Pe-
daliaceae. Sesame.

From Africa. Seeds presented by D. C. Edwards, Scott Agricultural Laboratories, Department of Agriculture, Nairobi, Kenya. Received October 17, 1932.

Sim-Sim. From the native market at Bukura; grown at 4,800 feet altitude where the annual rainfall is 52 inches. Introduced for the use of Department specialists.

101206 to 101211.

From Huancayo, Peru. Bulbs and seeds presented by Paul G. Ledig, Huancayo Magnetic Observatory, Carnegie Institution of Washington, D. C. Received October 19, 1932.

101206. (Undetermined.)

A lily with large red or green-yellow flowers.

101207. *URCEOLINA MINIATA* (Herb.) Benth. and Hook. Amaryllidaceae.

A bulbous perennial native to the Andes of Peru and Bolivia. The solid scape, 1 foot high, bears 2 to 6 pendent urn-shaped scarlet flowers 2 inches long, after which appear the narrowly ovate leaves 1 foot long.

For previous introduction see 93770.

101206 to 101211—Continued

101208. *LUPINUS MUTABILIS* Sweet. Fabaceae.
South American lupine.

Tallhue or *ullush*. A handsome half-woody shrub about 6 feet high which is usually broad and bushy in habit. Above the attractive foliage rise numerous spikes of varicolored pea-shaped flowers. The predominant colors are blue, lilac, white, and yellow.

For previous introduction see 99821.

101209 to 101211. *OXALIS* spp. Oxalidaceae.

101209. *OXALIS* sp.

A form with yellow flowers, found on well-drained cliff sides.

101210. *OXALIS* sp.

A form with yellow flowers, found in rocky well-drained situations above 13,000 feet altitude.

101211. *OXALIS* sp.

A form with white flowers, found in clay soil near the observatory.

101212 to 101215.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received October 17, 1932.

101212. *HETEROSPATHE ELATA* Scheff. Phoeniceaceae. Palm.

A tall unarmed palm with a straight slender stem and long pinnate leaves, growing in protected situations and where the rainfall is evenly distributed. It is one of the most attractive and graceful palms and will make a good plant for the conservatory and possibly a good house plant.

For previous introduction see 94191.

101213. *ONCoba ECHINATA* Oliver. Flacourtiaceae.

A smooth shrub with thin leathery oval leaves, small inconspicuous flowers, and round prickly fruits about 1 inch in diameter. It is native to eastern tropical Africa. The seeds contain 46.6 percent of fat, and an analysis of this fat has shown that it contains 87.5 percent of chaulmoogric acid, which is used in the treatment of leprosy.

101214. *PALURUS RAMOSISSIMUS* (Lour.) Lam. Rhamnaceae.

A shrub, native to China and Japan, resembling the Christ-thorn, *P. spina-christi*, but having both spines straight and larger pubescent leaves.

101215. *TABERNAEMONTANA AMBYLOCARPA* Urban. Apocynaceae.

A tropical tree, native to Cuba, with elliptic or oblong leaves up to 5 inches long and small inconspicuous flowers in terminal clusters.

101216 to 101223.

From Costa Rica. Seeds collected by Prof. H. E. Stork, Carleton College, Northfield, Minn. Received October 17, 1932.

101216. *BOMAREA CALDASHI* (H. B. K.) Herb. Amaryllidaceae.

No. 2873. Collected at 11,000 feet altitude on the Irazu volcano, Costa Rica. A twining ornamental plant, native to the Andes as far south as Peru. The thin spreading leaves are 3 to 6 inches long, and the orange-red to red flowers, about an inch long, are borne in many-flowered pendulous clusters.

101217 to 101221. *RUBUS* spp. Rosaceae.

101217. *RUBUS ALPINUS* Macfad.

Alpine bramble.

No. 3315. Collected July 29, 1932, at 9,000 feet altitude on the Poas volcano. A climbing or trailing shrub with strong canes. The

101216 to 101223—Continued

trifoliolate leaves have elliptical serrate leaflets 2 to 4 inches long, and the purple-tinged white flowers, in narrow pubescent panicles, are followed by small blue-black fruits, reported to be the sweetest flavored of any wild fruit in Costa Rica.

101218. *RUBUS GLAUCUS* Benth.

Andes raspberry.

No. 3033. From Cerro de la Muerta, June 27, 1932, at 10,000 feet altitude. A red-fruited raspberry with canes 6 feet high.

101219 and 101220. *RUBUS IRASUENSIS* Liebm.

From Tierra Blanco, July 23, 1932. A tropical American thorny vine with 5-foliolate leaves consisting of ovate-acuminate, serrulate, dark-green leaflets, 1 to 2 inches long, and small hairy fruits, not known to be edible.

101219. No. 3257. Plants with pinkish flowers and sour fruits, found at 7,000 feet altitude, growing along fence rows.

101220. No. 3258. Large plants, 10 to 12 feet high with rather sour reddish fruits, found at 6,700 feet altitude.

101221. *RUBUS URTICAEFOLIUS* Poir. (*R. trichomallus* Schlecht.).

No. 2860. From Sanjon, south of Fajar, June 10, 1932, at 4,850 feet altitude. Strong-growing canes, 12 feet high and rather thorny. Flowers and fruits in all stages occur on the same plant. The ripe fruits were slightly acid, but with no characteristic flavor.

101222. *TRIMEZA* sp. Iridaceae.

An ornamental plant collected at 10,000 feet altitude.

101223. *VAGNERA PANICULATA* (Mart. and Gal.) Standl. Convallariaceae.

Collected on the Irazu volcano at 11,000 feet altitude. A perennial herb with ovate-lanceolate, long-acuminate leaves 5 to 6 inches long and panicles of snow-white flowers 2 inches long.

101224. *ALLIUM CEPA* L. Liliaceae.

Onion.

From India. Seeds presented by the Punjab Department of Agriculture, Lyalpur, Punjab. Received October 19, 1932.

A mixture of several locally grown varieties.

101225 to 101238. *RHODODENDRON* spp. Ericaceae.

From Jamaica Plain, Mass. Plants presented by William H. Judd, Arnold Arboretum. Received October 24, 1932.

101225. *RHODODENDRON OLDHAMII* Maxim.

A much-branched, partly deciduous red-hairy shrub, 3 to 18 feet high, with thin leathery oblong lanceolate dark-green leaves and red flowers 2 inches wide in terminal umbels. Native to Taiwan.

101226. *RHODODENDRON FULCHRUM CALYGINUM* X *SCABRUM*.

101227. *RHODODENDRON AURICULATUM* Hemsl.

A shrub or small tree up to 20 feet high, native to Hupeh, China. The oblong to oblanceolate auricled leaves, 6 to 12 inches long, are dark green above and clad beneath with flexuous threadlike tomentum. The funnel-shaped flowers, in clusters of 7 to 15, are 2 to 4 inches long and are white or rose pink, splashed with green at the base inside.

101228. *RHODODENDRON FAURIAE* Franch.

A shrub 5 to 10 feet high, native to Japan, the branchlets being clothed with thin loose white floccose tomentum. The oblong elliptic to oblanceolate leaves are 3 to 6 inches long, and the funnel-

101225 to 101238—Continued

campanulate flowers, 1 inch long, borne in racemes of 12 to 15, are white or cream with a pink flush on the median lines of the petals and spotted inside with numerous green spots.

101229. *RHODODENDRON GRIERSONIANUM* Balf. and Forr.

A shrub 5 to 10 feet high, native to western Yunnan. The narrowly lanceolate leaves, 4 to 8 inches long, are green above and covered beneath with a loose whitish to buff woolly tomentum. The funnel-campanulate flowers, in clusters of 5 to 12, are 2 to 3 inches long and are bright geranium-scarlet dappled inside with darker spots.

For previous introduction see 100892.

101230. *RHODODENDRON HYPERYTHRUM* Hayata.

A shrub with stout glabrous branches, native to Taiwan. The oblong to lanceolate leathery leaves, 3 to 5 inches long, are smooth above and dotted beneath with reddish punctulations. The funnel-campanulate flowers, 1 to 2 inches long, are purple spotted and are borne in racemose umbels of about 10.

101231. *RHODODENDRON PULCHRUM MAXWELLI* × *PULCHRUM CALYCINUM*.

101232. *RHODODENDRON MICROPHYTON* Franch.

An upright much-branched shrub, 1 to 6 feet high, the branchlets densely clothed with appressed flattened red-brown hairs. The crowded elliptic to lanceolate leaves, about 1 inch long, are dark green above and pale beneath, with scattered red-brown hairs. The funnel-form flowers, nearly 1 inch across, are rose color to white, flushed pink, with carmine or crimson dots on the three upper lobes. It is native to Yunnan, China.

101233. *RHODODENDRON MICROPHYTON* × *OLDHAMII*.

101234. *RHODODENDRON SCABRUM* × *PULCHRUM CALYCINUM*.

101235. *RHODODENDRON* sp.

This plant is a hybrid between a hybrid resulting from *R. scabrum* and the variety Snowflake of *R. obtusum japonicum*, crossed with *R. oldhamii*.

101236. *RHODODENDRON* sp.

A hybrid between *R. scabrum* and the variety Scarlet Prince of *R. obtusum japonicum*.

101237. *RHODODENDRON* sp.

A hybrid between *R. scabrum* and the variety Snowflake of *R. obtusum japonicum*.

101238. *RHODODENDRON PULCHRUM TEBOTAN* (Komatsu) Rehd.

A form with double rose-red flowers having small green leaves in the center.

101239. *DEGUELIA ELLIPTICA* (Roxb.) Taub. (*Derris elliptica* Benth.). Fabaceae.

From Straits Settlements. Seeds presented by the director of the Botanic Gardens, Singapore. Received October 19, 1932.

A large handsome climbing vine native to southeastern Asia. The compound leaves, 1 foot long, are made up of 9 to 12 thin leathery obovate leaflets 4 to 6 inches long, and the bright-red pea-shaped flowers, 1 inch long, are borne in lax racemes a foot in length. It yields the commercial tuba root used in the manufacture of insecticides. The plant is extensively cultivated in the Malay Archipelago.

For previous introduction see 98918.

101240. *CINCHONA CALISAYA* Wedd. Rubiaceae.

From the Netherland East Indies. Seeds presented by the director of the Government Cinchona Plantations, Tjinjroean. Received October 24, 1932.

A tropical shrub with opposite oblong or oblong-lanceolate shining green leaves and terminal panicles of small white and pink flowers. One of the sources of quinine. Native to Bolivia.

For previous introduction see 101064.

101241. *SCLERACHNE PUNCTATA* R. Br. Poaceae. Grass.

From Java. Seeds presented by the director of the Botanical Garden, Buitenzorg. Received October 24, 1932.

A tropical grass about 2 feet high with a fibrous root and numerous branched stems. The narrow linear-lanceolate leaves vary from 3 to 18 inches in length. Native to Java.

101242. *CALANDRINIA BALONENSIS* Lindl. Portulacaceae. Parakeelya.

From Australia. Seeds presented by Dr. Darnell-Smith, director of the Botanic Gardens, Sydney, through J. B. Cleland, the University, Adelaide, South Australia. Received October 27, 1932.

A perennial herb about a foot high, native to Queensland, Australia. The thick fleshy oblong-spatulate leaves are less than 1 inch long at the base of the plant while the upper ones are 2 inches long and linear-lanceolate. The large purple flowers, 1 to 2 inches across, are borne in loose terminal racemes.

101243 to 101252.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received October 21, 1932.

101243. *ANTIDESMA MONTANUM* Blume. Euphorbiaceae.

A tree up to 40 feet high with softly tomentose branchlets, native to the Malay Peninsula. The oblong to elliptic-lanceolate leaves are 4 to 6 inches long, and the inconspicuous flowers are followed by subglobose red fruits, one tenth of an inch long, borne in spikes 3 inches long.

101244. *ANTIDESMA PLATYPHYLLUM* H. Mann. Euphorbiaceae.

A tree 20 to 30 feet high, native to the Hawaiian Islands. The subcoriaceous, ovate to obovate leaves are 3 to 5 inches long, and the small flowers are followed by compressed suboblique red fruits about one half inch long.

101245. *CITHAREXYLUM CAUDATUM* L. Verbenaceae.

For previous introduction and description see 101159.

101246. *EXSTEMMA LONGIFLORUM* (Lamb.) Roem. and Schult. Rubiaceae.

A small tropical tree, native to northeastern South America, with smooth linear-lanceolate leaves over 2 inches long and fragrant white and pink flowers on stems 4 to 5 inches long.

101247. *EXOTHEA PANICULATA* (Juss.) Radlk. Sapindaceae.

A tree up to 50 feet high, native to the West Indies. The abruptly pinnate leaves have two oblong leaflets 4 inches long, and the small flowers

101243 to 101252—Continued

are followed by globose purple fruits one half inch long.

101243. *HELICTERES SEMITRILOBA* Bert. Sterculiaceae.

A shrub 8 to 12 feet high, native to the West Indies, with cordate, sinuate-toothed or sometimes 3-lobed leaves, 1 to 3 inches long, and small flowers in axillary clusters.

101249. *MOMORDICA COCHINCHINENSIS* (Lour.) Spreng. Cucurbitaceae.

A very vigorous, tall climber, native to the Philippine Islands, producing large round green-yellow, attractive fruits which should make it popular as an ornamental vine. The immature fruits are boiled and eaten by the Filipinos. The numerous large round flat seeds appear to be very rich in oil.

101250. *PICRAMNIA FENTANDRA* Swartz. Simaroubaceae.

A small tree with compound leaves made up of 5 to 9 oblong-obovate, shining leaflets 2 to 3 inches long, and pendulous racemes of small white flowers followed by ovoid red to dark-blue, berrylike fruits. Native to the West Indies.

101251. *SERJANIA GLABRATA* H. B. K. Sapindaceae.

A climbing shrub with alternate biternate leaves; the leaflets are elliptic-oblong and coarsely serrate-crenate. The white flowers are in axillary spikelike racemes. Native to the temperate regions in Peru.

101252. *THRINAX* sp. Phoenicaceae. Palm.

101253 to 101255. *AVENA SATIVA* L. Poaceae. Oats.

From England. Seeds presented by Gartons, Ltd., Warrington. Received October 29, 1932.

101253. *Bountiful*, a black oat.

101254. *Hardy Prolific Black Winter* oat.

101255. *Unique*, a white winter oat.

101256. *ANNONA DIVERSIFOLIA* Safford. Annonaceae. *Ilama*.

From Guatemala. Seeds presented by Don Jorge Garcia Salas, Director General de Agricultura. Received October 27, 1932.

A small tree, native to Mexico and tropical America, with brown-gray aromatic bark. The thin membranous leaves, 5 inches long, are broadly elliptical to oblanceolate. The broadly ovoid fruit, about 6 inches long, is clothed in dense grayish felt-like tomentum and, when mature, is usually covered with stout thick protuberances. The hard smooth golden-brown nutlike seeds are embedded in the edible cream-colored or rose-tinted flesh.

For previous introduction see 98340.

101257. *CALYPTROGYNE OCCIDENTALIS* (Swartz) G. Maza. Phoenicaceae. *Manaca palm*.

From Cuba. Plants presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received October 31, 1932.

A beautiful and rare palm with a straight smooth stem sometimes reaching a height of 50 feet. The pinnate leaves are from 8 to 12 feet long.

For previous introduction see 98165.

101258 and 101259. *LACTUCA SATIVA* L. Cichoriaceae. *Garden lettuce*.

From the Union of Soviet Socialist Republics. Seeds presented by Prof. N. I. Vavilov, through the Department of New Culture and Introduction, Leningrad. Received November 1, 1932.

Ussun, Chinese stem lettuce. A peculiar vegetable of which the thick inner stalk is eaten; this stalk is about 2½ feet long and 2 inches in diameter, and it is cut into slices and boiled. The leaves are discarded, as they are bitter. The original seed was collected by an expedition to central China in 1929.

101258. No. 5.

101259. No. 17.

101260 to 101265.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received October 26, 1932.

101260. *ARTOCARPUS INTEGRA* (Thunb.) L. Moraceae. *Jackfruit*.

A very large tree native to southern India and the Malay Archipelago, valued chiefly for its enormous fruits, a single one of which may weigh over 100 pounds. These fruits, which are borne on the trunk and older branches, are usually irregularly oblong and are always green, with the rind consisting of somewhat hexagonal knobs. When ripe the fruits have a powerful odor, and the stronger the latter the better the quality of the fruit. With the exception of the rind and core, the entire fruit is eaten, the white or cream-colored, soft flaky pulp being used either raw or boiled and fried. The large seeds are roasted and used in curries.

For previous introduction see 98799.

101261. *CITHAREXYLUM TRISTACHYUM* Turcz. Verbenaceae.

A spiny tropical shrub with opposite, ovate-lanceolate entire leaves and small white flowers in spikelike racemes. Native to Cuba.

101262. *IXORA FRASERI* Hort. Rubiaceae.

Said to be a hybrid closely resembling *I. chinensis* and having flowers with a scarlet tube and a brilliant salmon limb.

101263. *LIVISTONA HOOGENDORPHI* Andre. Phoenicaceae. *Palm*.

A tall Javanese palm with fan-shaped leaves 4 to 6 feet wide on spiny petioles 3 to 5 feet long, red brown at the base and becoming olive green near the blade. The blades are made up of 10 to 12 plicate pendulous segments with 5 to 7 acute lobes at the apex.

For previous introduction see 98496.

101264. *STROPHANTHUS SARMENTOSUS* DC. Apocynaceae.

An ornamental tropical woody climber with white and purple flowers. The seeds contain a poisonous alkaloid which is used as a heart stimulant.

101265. *VITEX PARVIFLORA* Juss. Verbenaceae. *Chaste-tree*.

Molave. A timber tree native to the Philippine Islands which, under favorable conditions becomes 100 feet high and 20 feet in diameter, although it is usually smaller. The pale-yellow wood is hard and heavy but easy to work and is a good substitute for teak. It is considered one of

101260 to 101265—Continued

the best construction timbers of the islands, as it resists well the action of fungi and sea water, teredo, and white ants.

101266 to 101270. *ORYZA SATIVA* L.
Poaceae. Rice.

From Madagascar. Seeds obtained by Percy G. Kemp, American vice consul, Tananarive. Received October 25, 1932.

A collection of the principal rice varieties grown in Madagascar, introduced for comparison with the varieties now being grown in this country.

101268. *Be.*

101267. *Botry.*

101268. *Mena.*

101269. *Lava*, white, long and thin.

101270. *Vato*, a mixed sample of chalky reddish rice.

101271 to 101291.

From New Zealand. Seeds purchased from A. Wilkinson, Tauranga. Received July 25, 1932. Numbered in November 1932.

101271. *ACIPHYLLA COLENSOI* Hook. f. Apiaceae.

A stout erect perennial herb 2 to 5 feet high, native to New Zealand. The numerous radical leaves form a circle of bayonetlike spikes around the base of the stem, each 1 to 3 feet long, pinnate or bipinnate at the base with few secondary, narrowly linear leaflets 5 to 15 inches long, terminated by a long stout spine. The small white flowers are in a cylindrical panicle made up of numerous umbels.

101272. *ARISTOTELIA FRUTICOSA* Hook. f. Elaeocarpaceae.

An erect or decumbent much-branched shrub, 3 to 8 feet high, native to New Zealand. The coriaceous leaves vary from linear to obovate and are entire, crenate, serrate, or lobed. The small flowers are solitary or in small racemes and are followed by small yellowish berries.

101273. *ARISTOTELIA SERRATA* (Forst.) Oliver. Elaeocarpaceae.

A small tree 6 to 30 feet high with red bark, native to New Zealand. The thin, membranous, cordate leaves, 2 to 5 inches long, are deeply irregularly serrate and are red beneath. The small rose-colored flowers, borne in axillary panicles, are followed by dark-red or almost black berries about the size of a pea.

101274. *ASTELIA NERVOSA* Banks and Soland. Liliaceae.

A stout densely tufted New Zealand perennial often forming extensive masses on swampy grounds in forests. The spreading lanceolate leaves are 2 to 8 feet long with the midrib and several other nerves colored red. The fragrant flowers, borne in large panicles on scapes 1 to 2 feet high, are greenish black and are followed by bright orange-yellow berries.

101275 to 101278. *CLEMATIS* spp. Ranunculaceae.

101275. *CLEMATIS AFOLIATA* J. Buch.

A perennial with wiry leafless stems, native to New Zealand. The flowers are greenish white, nearly an inch across, and are borne in axillary fascicles of 2 to 5. On young plants the leaves are occasionally developed and consist of a persistent petiole and three minute long-stalked ovate to triangular leaflets.

101276. *CLEMATIS FOETIDA* Raoul.

A stout woody vine, often covering small trees native to New Zealand. The slightly coria-

101271 to 101291—Continued

ceous trifoliolate leaves have ovate to cordate leaflets 1 to 2 inches long, and the small yellow flowers, in large panicles, are strongly odorous but are said not to be fetid.

101277. *CLEMATIS HEXASEPALA* DC.

A smaller and more slender vine than *C. indivisa*, with pale-green, coriaceous, trifoliolate leaves having ovate-oblong to ovate-cordate toothed leaflets 1 to 3 inches long. The numerous flowers, 1 to 2 inches across, have 6 to 8 white sepals.

101278. *CLEMATIS INDIVISA* Willd.
New Zealand clematis.

A large woody climber with stout stems often 2 to 3 inches in diameter, native to New Zealand. The coriaceous trifoliolate leaves have cordate to linear-oblong leaflets 1 to 4 inches long, usually entire, and the white flowers are 2 to 4 inches across.

101279. *DIANELLA INTERMEDIA* Endl. Liliaceae.

A perennial herb, native to New Zealand, with numerous sword-shaped leaves, 3 feet long, crowded at the base of a scape 2 feet high. The spreading panicle of small purplish flowers with bright-orange anthers is followed by broadly oblong blue berries nearly an inch in length.

101280. *DODONAEA VISCOSA* (L.) Jacq. Sapindaceae.
Hopbush.

A native New Zealand small tree or large bush with linear-oblong leaves 1 to 3 inches long. The green flowers, in small terminal panicles, are followed by flat dark-brown winged fruits. The plant is used as a hedge, and the hard wood is valued for making mauls, as it does not split.

101281. *DRACOPHYLLUM STRICTUM* Hook. f. Epacridaceae.

A freely-branching New Zealand shrub with erect coriaceous leaves, from a shea hinge base, which taper to a rigid point, and small terminal panicles of numerous white flowers.

101282. *LEPTOPTERIS SUPERBA* (Col.) Presl. Osmundaceae.
Fern.

A fern with a stout rhizome forming an erect caudex 1 to 3 feet high, native to New Zealand. The tripinnatifid fronds, 2 to 4 feet long, are broadly lanceolate, and the closely overlapping linear-oblong pinnules, one half inch long, are pinnatifid almost to the base.

101283. *LEUCOGENES GRANDICEPS* (Hook. f.) Beauverd. Asteraceae.

A densely tufted perennial herb, 2 to 3 inches high, native to New Zealand. The densely imbricated spreading or recurved leaves, one fourth to one third inch long, are obovate-spatulate, flat or concave, and clothed on both surfaces with appressed silvery tomentum. The small flowers are congested into a densely bracteate head.

101284. *MYOSOTIDIUM HORTENSIA* (Decaisne) Basil (*M. nobile* Hook.). Boraginaceae.

A stout succulent perennial herb, 1 to 3 feet high, native to the Chatham Islands. The thick fleshy radical leaves, 6 to 12 inches long, are broadly cordate or reniform, and the blue flowers, one half inch across, are borne in dense corymbose cymes.

101285. *NERTEA DEPRESSA* Banks and Soland. Rubiaceae.
Beadplant.

A creeping perennial herb native to the Andes from the Tropics to Cape Horn and to New Zealand. The broadly ovate leathery leaves are one-sixth inch long, and the small greenish axillary flowers are followed by orange berries the size of a pea, which nearly cover the mat of foliage.

For previous introduction see 98040.

101271 to 101291—Continued

101286. *NOTHOPANAX COLENSOI* (Hook. f.) Seem.
Araliaceae.

A glabrous shrub or small tree up to 15 feet high, native to New Zealand. The palmately compound coriaceous leaves are made up of 3 to 5 obovate, coarsely serrate leaflets 2 to 6 inches long, and the small flowers, borne in large compound umbels, are followed by globular purple-black fruits one-fifth inch in diameter.

101287. *OLEARIA CHEESEMANII* Cockayne and Allen. Asteraceae.

A much-branched shrub 3 to 12 feet high, native to New Zealand. The membranous linear-lanceolate to oblong-lanceolate leaves, 2 to 4 inches long, have sinuate margins, and the small heads of white flowers are borne in large rounded corymbs.

101288. *PACHYSTEGIA INSIGNIS* (Hook. f.) Cheesem. Asteraceae.

A robust spreading New Zealand shrub, 6 to 9 feet high, with stout densely tomentose branches, thick leathery oblong entire leaves, 3 to 7 inches long, white tomentose beneath, and large hemispherical heads, 3 inches in diameter, of white flowers on peduncles a foot long.

101289. *PARSONSIA HETEROPHYLLA* A. Cunn. Apocynaceae.

A tall, slender, branching vine, woody at the base, with coriaceous leaves varying from linear to obovate, 2 to 4 inches long. The terminal and axillary, many-flowered cymes of small, fragrant, white flowers are followed by cylindrical pods 6 inches long. Native to New Zealand.

101290. *PITOSPORUM BUCHANANI* Hook. f. Pittosporaceae.

A shrub or small tree up to 20 feet high, native to New Zealand. The oblong to lanceolate membranous leaves, 2 to 5 inches long, are silky pubescent, and the small, dark-purple flowers are borne in axillary clusters.

101291. *PRATIA ANGULATA* (Forst. f.) Hook. f. Campanulaceae.

A slender, creeping, herbaceous perennial forming broad matted patches. The stems are 2 to 7 inches long, the rather fleshy ovate to orbicular leaves, less than one-half inch long, are sinuate dentate, and the axillary flowers, less than 1 inch long, are white with purple streaks. It is native to New Zealand.

For previous introduction see 91294.

101292 to 101295.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received October 31, 1932.

101292. *POLYGALA OBLONGATA* (Britton) Blake (*Badiera oblongata* Britton). Polygalaceae.

A tropical evergreen shrub, native to Cuba and the Bahama Islands, with oblong-obovate leathery leaves about 1 inch long and small flowers in very short racemes.

101293. *BELAIRIA MUCRONATA* Griseb. Fabaceae.

A thorny shrub with shining-green leaves composed of 3 to 9 linear-oblong mucronate leaflets; the flowers are followed by small membranous pods. It is native to Cuba.

101294. *SOLANUM MACRANTHUM* Dunal. Solanaceae.

A very rapid-growing tree with large, dark-green, spiny leaves and a great profusion of large, blue-violet flowers which change color from day to day, becoming a pale blue and later fading to white.

For previous introduction see 97852.

101292 to 101295—Continued

101295. *ZAMIA INTEGRIFOLIA* Ait. Cycadaceae.

A cycad, native to the West Indies, with a trunk 12 to 18 inches high and a crown of pinnately compound leaves somewhat resembling a palm. The alternate leaflets, in 7 to 16 pairs, are oblong to lanceolate and are sometimes dentate at the apex.

101296 and 101297. *ALLIUM SATIVUM* L. Liliaceae. Garlic.

From China. Bulbs presented by W. M. Hayes, Tenghsien, Shantung. Received November 9, 1932.

Locally grown varieties, introduced for the use of Department specialists.

101298 and 101299.

From Australia. Seeds presented by Arthur F. Street, R. W. Cameron & Co., Inc., Sydney, through Monson Morris, Hollyberry Farm, Aiken, S.C. Received November 4, 1932.

101298. *CALANDRINIA BALONENSIS* Lindl. Portulacaceae. Parakeelya.

For previous introduction and description see 101242.

101299. *CALANDRINIA REMOTA* J. M. Black. Portulacaceae. Parakeelya.

A low procumbent annual, or possibly perennial, 4 to 12 inches high, native to South Australia. The succulent, linear-spatulate leaves are less than an inch long, and the rather large purple to white flowers are 1 to 2 inches across. It is of possible value as a forage plant.

101300. *PHOENIX RECLINATA* Jacq. Phoenicaceae. Senegal date palm.

From Africa. Seeds presented by the director of agriculture, Western Provinces, Zaria, Nigeria. Received November 4, 1932.

A tropical and South African date palm 20 to 30 feet high with green reclinate pinnate leaves 6 to 9 feet long composed of rigid leaflets and yellowish fruits half an inch long with a sweetish pulp.

For previous introduction see 101144.

101301 and 101302.

From India. Seeds presented by W. Head, deputy director of gardens, Saharanpur, United Provinces. Received November 3, 1932.

101301. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.

A good type. Introduced for the use of Department specialists.

101302. *PRUNUS* sp. Amygdalaceae. Plum.

Ladakh.

101303 to 101306.

From Malta. Seeds presented by J. Borg, superintendent, Department of Agriculture, Valletta. Received November 3, 1932.

101303. *AMYGDALUS PERSICA NECTARINA* Ait. Amygdalaceae. Nectarine.

A white nectarine.

101304. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

Alexandrine.

101305. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

101306. *PRUNUS DOMESTICA* L. Amygdalaceae. Common plum.

St. John's.

101307. GOSYPIUM STOCKSII Masters.
Malvaceae. Cotton.

From India. Seeds presented by M. Afzal, Cotton Research Laboratory, Lyallpur, through T. H. Kearney, Bureau of Plant Industry. Received November 10, 1932.

A shrubby tropical Indian cotton, with small yellow flowers, which is native to the Sind district; it is of the 13-haploid-chromosome group and therefore will not cross with the American types. The seed is difficult to germinate. It is sown in India about June, and before sowing the coat is carefully split with a knife or the seed is rubbed upon a piece of fine sandpaper which allows access of water and helps germination.

101308. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. Common wheat.

From China. Seeds presented by Albert N. Steward, College of Agriculture, University of Nanking. Received November 11, 1932.

Nanking no. 716.

Introduced for the use of Department specialists.

101309 to 101343. FICUS spp. Moraceae. Fig.

From France. Scions presented by Prof. D. Bois, Muséum National d'Histoire Naturelle, Paris. Received November 11, 1932.

101309. FICUS AGGREGATA Vahl.

An East Indian woody climber with oval, obtuse, glabrous leaves 3 inches long, punctate above, and clusters of sessile globose fruits.

101310. FICUS BARONI Baker.

A tree, native to central Madagascar, with glossy brown bark and alternate closely set leaves resembling those of *Laurocerasus officinalis* in size and appearance. The sessile roundish fruits are one-half inch in diameter.

101311. FICUS BENGHALENSIS L. Banyan tree.

A large tree 75 to 100 feet high, rooting from the branches. The branchlets are softly pubescent, the broadly ovate coriaceous leaves are 4 to 8 inches long, and the globose red fruits, borne in pairs, are about the size of small cherries. The tree is native to India and northern Africa.

For previous introduction see 98394.

101312. FICUS CANNONII (Bull) N. E. Brown.

A tropical tree with pinnatifid hairy leaves which become entire and ovate-oblong when older. The upper surface of the leaves is dark bronze red on bronzy green with the lower surface vinous purple. The subglobose yellowish fruits are one-half inch in diameter. Native to the Society Islands.

101313. FICUS DIVERSIFOLIA Blume. Mistletoe fig.

A smooth shrub or small tree, native to India. The broadly obovate leaves, 1 to 3 inches long, and the small solitary, dull-red or yellow fruits resemble the mistletoe.

101314. FICUS DUSENII Warb.

A tree up to 40 feet high, native to tropical Africa. The entire obovate to elliptic leaves are 2 to 9 inches long, and the globose or ovoid fruits are borne in sessile axillary pairs. Possibly a form of *F. thollingii*.

101315. FICUS GLABELLA Blume.

A small glabrous tree native to the Malay Peninsula. The thin not very leathery leaves, 2 to 4 inches long, are oblong-ovate and entire, and the sessile fruits, less than one-half inch in diameter, are purple, sometimes with yellow dots.

101309 to 101343—Continued**101316. FICUS GLABERRIMA Blume.**

An East Indian tree with oblong acuminate leaves 3 to 6 inches long and small pea-shaped fruits.

101317. FICUS HETEROPHYLLA L. f.

A creeping shrub, native to tropical India and Ceylon. The leaves, 1 to 3 inches long, vary from lanceolate and entire to broadly cordate with repand, toothed, or deeply lobed margins, and the solitary axillary fruits vary from globose to long pyriform.

101318. FICUS HISPIDA L. f.

A shrub or small tree native to tropical Asia and Australia. The opposite rough-hairy leaves are entire or toothed, and the hispid yellow fruits are borne in clusters on the old wood.

101319. FICUS LUCESCENS Blume (*F. infectoria* Roxb.). Dotted fig.

A low deciduous tree, native to India. The membranous oblong-ovate leaves, 3 to 5 inches long, are slightly subcordate, and the globose fruits, one-fourth inch in diameter, are whitish flushed and dotted with red.

101320. FICUS KERSTINGII Warb.

A tree up to 20 feet high, native to tropical Africa. The rigid leathery leaves, 4 to 6 inches long and broad, are heart shaped and are dark green with red nerves. The obovoid fruits, one-half inch long, are in axillary fascicles at the tips of the shoots.

101321. FICUS LUTEA Vahl.

A tall spreading tree with whorled branches, native to tropical Africa. The ovate-oblong, leathery leaves, 4 to 8 inches long, are finely reticulate with the nerves whitish above and pale green below. The globose axillary yellow fruits, borne in pairs, are smaller than cherries and have a bifid umbo at the apex.

101322. FICUS LYRATA Warb.

A tree up to 40 feet high, native to tropical Africa. The rigid leathery lyre-shaped leaves are 6 to 12 inches long and 5 to 7 inches broad, and the globose fruits, about 2 inches in diameter, are borne in sessile axillary pairs.

101323. FICUS OVATA Vahl.

A large tree with a broad crown and ribbed purple branchlets, native to tropical Africa. The oblong-ovate to broadly cordate leaves are 7 to 10 inches long, and the axillary subglobose fruits, 1 to 2 inches in diameter, are surrounded while young with reddish coriaceous bracts.

101324. FICUS PANDURATA Hance. Fiddleleaf fig.

A low diffuse shrub with leaves 1 to 4 inches long, having rounded cordate bases and rounded-oblong upper portions. The red fruits, nearly as large as cherries, are borne singly in the axils of the leaves. It is native to China.

101325. FICUS PARIETALIS Blume.

An attractive tree, native to tropical Asia. The large oblong leaves are shining deep green above and dull green below, and the golden-yellow fruits are three-fourths of an inch in diameter.

101326. FICUS PIERREI Hort.

A name for which a place of publication and a description have not been found.

101327. FICUS PROLIXA Forst. f.

A tropical tree with oblong-lanceolate acuminate leaves, punctate beneath, and fruits borne in pairs. Native to the Society Islands.

101328. FICUS PUNCTIFERA Warb.

A tree with spreading branches and soft-gray, smooth bark, native to tropical Africa. The

101309 to 101343—Continued

elliptic to obovate parchmentlike leaves are 4 to 6 inches long, scabrous on both surfaces, and the roughly scabrous fruits, solitary or in axillary pairs, are obovoid to subglobose and about half an inch in diameter. This species is referred to *F. exasperata* by some authorities.

101329. *FICUS PYRIFORMIS* Hook. and Arn.

A shrub with pubescent branchlets, native to tropical India and China. The linear-lanceolate to oblong-lanceolate leaves are 2 to 4 inches long, and the solitary axillary pear-shaped fruits are less than an inch long.

101330. *FICUS QUERCIFOLIA* Roxb.

A creeping or decumbent shrub, native to tropical Asia. The coarsely sinuate-crenate, deeply lobed leaves are 2 to 5 inches long, and the red fruits, about half an inch in diameter, vary from egg shape to pea shape.

101331. *FICUS RACEMIGERA* Bur.

A small tree about 30 feet high, native to the forests of New Caledonia. The membranous elliptic entire leaves are 3 to 8 inches long, and the small orange fruits are in long racemes.

101332. *FICUS RETUSA* L.

A large tropical tree with aerial roots, leathery leaves 4 inches long, and red or yellow fruits one-third of an inch in diameter. Native to the East Indies.

101333. *FICUS RUBIGINOSA* Desf. **Rusty fig.**

A tree with wide spreading branches throwing out woody roots like the banyan tree. The elliptical coriaceous leaves, 3 to 4 inches long, are smooth above and covered with rusty tomentum beneath.

For previous introduction see 90711.

101334. *FICUS SCHLECHTERI* Warb.

An East Indian tree with smooth obovate to oblanceolate leaves about 3 inches long and pear-shaped fruits one-third inch in diameter, borne in pairs in the leaf-axils.

101335. *FICUS SUBTRIPLINERVA* Mart. **Gomero.**

A Brazilian forest tree with a dense crown of obtuse papery leaves, prominently three-veined at the base. The small axillary fruits are globular.

101338. *FICUS TELOUKAT* Batand. and Trab.

A large tree with smooth, leathery, entire, oblong-ovate, cordate leaves about 4 inches long and small, fleshy, globose, pinkish fruits scarcely half an inch in diameter. Teloukat is the Touareg name for this tree in northern Africa where it is native.

101337. *FICUS THOLONI* Hort.

A name for which a place of publication and a description have not been found.

101338. *FICUS TILIAEFOLIA* Baker.

A shrub with stout brown branchlets and cordate-triangular, green, entire leaves, scabrous above, 4 to 5 inches long. The leathery fruits are 1 inch in diameter. Native to Madagascar.

101339. *FICUS TRACHYPHYLLA* (Miquel) Fenzl.

A large spreading tree, native to tropical Africa. The broadly cordate leaves, 2 to 5 inches long, are obtusely serrate, and the pear-shaped axillary fruits, 1 to 2 inches long, are densely tomentose. This tree is said to yield a hard reddish rubber.

101340. *FICUS TRIANGULARIS* Warb.

A tropical African tree, closely related to *F. furcata*, with small, triangular, leathery leaves 2 inches long with revolute margins and small, green, brown-spotted fruits one-fourth inch in diameter.

101309 to 101343—Continued

101341. *FICUS TRIMENI* King.

A gigantic tree with very few aerial roots, native to tropical Asia. The elliptic, entire, leathery leaves are 3 to 5 inches long, and the warty, globose fruits, less than one-half inch in diameter, are borne in sessile axillary pairs.

101342. *FICUS UTILIS* Sim. **Zulu fig.**

A medium-sized tree native to eastern Africa from Zululand to Somaliland. It is almost evergreen, except in long droughts. The fruit is worthless, but the natives use the thick bark, when beaten out, for bags, clothing, etc.

101343. *FICUS VILLOSA* Blume.

A strong-climbing shrub, native to the Malay Archipelago, with the branchlets, underside of the leaves, and the fruits covered with red-brown tomentum. The leathery, cordate leaves are 5 to 10 inches long, and the orange-yellow fruits, one-third inch in diameter, are clustered in axillary tubercles.

101344. *RUBUS HAWAIENSIS* A. Gray. **Rosaceae. Akala.**

From Hawaii. Seeds presented by W. T. Pope, senior horticulturist, Agricultural Experiment Station, Honolulu. Received November 9, 1932.

A wild raspberry, native to Hawaii between 3,500 and 5,000 feet altitude, which grows over 15 feet high. The large fruits, 1½ inches long and about 1 inch in diameter, have a rather sharp, but pleasant acid flavor.

101345. *RUBUS IDAEUS* L. **Rosaceae. European raspberry.**

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Plant Industry, Leningrad. Received November 11, 1932.

Grown in the Leningrad district.

101346 to 101354.

From Australia. Seeds presented by Edwin Ashby, Wittunga, Blackwood, South Australia. Received November 10, 1932.

101346 to 101351. *CALLISTEMON* spp. **Myrtaceae.**101346. *CALLISTEMON PALLIDUS* (Bonpl.) DC.

Closely related to *C. salignus*, from which it is said to differ by the upright habit of growth. It is an erect shrub 6 to 8 feet high and is said to be restricted to Tasmania.

101347 and 101348. *CALLISTEMON PALUDOSUS* ?

For previous introduction see 101197.

101347. A hybrid with cream flowers.

101348. A hybrid with lovely pink flowers.

101349. *CALLISTEMON RIGIDUS* R. Br.

A tall shrub, sometimes 30 feet high, native to New South Wales. The narrowly linear leaves are 2 to 5 inches long, and the scarlet flowers, with dark-red stamens an inch long, are borne in large dense spikes.

101350. *CALLISTEMON RUGULOSUS* DC.

For previous introduction and description see 101198.

101351. *CALLISTEMON SALIGNUS* (J. E. Smith) Sweet.

For previous introduction and description see 101199.

101352. *CALLITRIS* sp. **Pinaceae.**101353. *LEPTOSPERMUM SCOPARIUM* Forst. **Manuka.**

Variety *persiciflora*, with pink flowers.

101346 to 101354—Continued

101354. *THRYPTOMENE* sp. Myrtaceae.Closely related to *T. strongylophylla*.101355. *ACACIA LEPTOCLADA* A. Cunn.
Mimosaceae.

From Australia. Seeds presented by Kate O. Sessions, Pacific Beach, Calif. Received November 9, 1932.

A glabrous shrub with compound leaves made up of oblong coriaceous leaflets one-twelfth of an inch long and yellow flowers in round racemes, larger than the leaves, produced at the ends of the branches. It is native to New South Wales, Australia.

101356 to 101374.

From France. Plants presented by Dr. H. Humbert, Muséum National d'Histoire Naturelle, Paris. Received November 11, 1932.

101356 to 101361. *BRYOPHYLLUM* spp. Crassulaceae.101356. *BRYOPHYLLUM ALICIAE* (R. Hamet) Berger (*Kalanchoe aliciae* R. Hamet).

A stout, erect, hairy succulent with opposite, roundish or oval, crenate leaves and rather large flowers in branched cymes. Native to central Madagascar.

101357. *BRYOPHYLLUM DAIGREMONTIANUM* (Ham. and Perr.) Berger (*Kalanchoe daigremontianum* Ham. and Perr.).

A brown-green succulent perennial, native to Madagascar, becoming about 2 feet high. The leaves are petiolate, sometimes peltate, green within, barred with brown, deeply crenate, budding from the angles. The small deep-pink flowers are in lax terminal panicles.

101358 and 101359. *BRYOPHYLLUM MINIATUM* (Hilsenb. and Boj.) Berger. (*Kalanchoe miniata* Hilsenb. and Boj.).

101358. An erect, slender, fleshy plant 1 to 2 feet high, native to Madagascar. The smooth, green, oval-obtuse leaves are up to 3 inches long, with shallow, crenate, sinuous margins and slightly pink petioles. The small flowers, bright red with brown spots, are in a lax terminal panicle.

101359. Received as *Kalanchoe miniata subpeltata*, a form said to have smaller leaves with a longer and more slender petiole, with the leaves in the center of the shoot always peltate.101360. *BRYOPHYLLUM SCANDENS* (Perrier) Berger.

A succulent climbing plant with a slender stem and sensile, linear-lanceolate, thick, dark-green leaves 2 to 3 inches long, bearing 5 or 6 bulbiferous teeth at their apex. The dark-violet flowers, one-third inch long, are in a lax, many-flowered inflorescence. Native to Madagascar.

101361. *BRYOPHYLLUM TUBIFLORUM* Harv.

An erect herb a foot high with terete fleshy leaves 1 to 2 inches long, tipped with three linear erect teeth and two broad reflexed teeth. The scarlet flowers are in terminal clusters. Native to Madagascar.

101362 to 101372. *KALANCHOE* spp. Crassulaceae.101362. *KALANCHOE AROMATICA* Perrier.

A succulent perennial, native to Madagascar, characterized by being covered throughout with viscous red glands and by having a strong aromatic odor. The leaves are triangular-lanceolate, and the small flowers, greenish yellow with red lines, are in terminal cymes.

101356 to 101374—Continued

101363. *KALANCHOE BEHARENSIS* Drake.

A shrubby succulent about 12 feet high with large, thick, fleshy, ovate leaves up to 8 inches long. These are rusty tomentose above and silvery below, both surfaces becoming dingy with age. The pale-yellow flowers are borne in ample terminal panicles. Native to Madagascar.

For previous introduction see 91525.

101364. *KALANCHOE FEDTSCHENKOI* Ham. and Perr.

A rather small succulent about 10 inches high with crenate, rounded-oval leaves 1½ inches long, bluish-green overcast with purple, and small purplish flowers in a loose cluster terminating the slender stem. Native to Madagascar.

101365. *KALANCHOE GLOBULIFERA* Perrier.

A succulent plant with a short, ascending, hairy stem and 6 to 8 crowded obovate-spatulate glabrous leaves about 1 inch long. The small yellow or bright-red flowers, half an inch long, are in a paniced cyme. Native to Madagascar.

101366. *KALANCHOE GLOBULIFERA COCCINEA* Perrier.

A stout, branched, succulent perennial up to a foot high with elongated, thick, irregularly toothed, obovate-spatulate leaves over 2 inches long and numerous bright-scarlet flowers in large terminal cymes. Native to Madagascar.

For previous introduction see 95552.

101367. *KALANCHOE GOMPHOPHYLLA* Baker.An erect perennial about a foot high with fleshy, obovate-cuneate, nearly entire leaves 1 inch long and yellow flowers in a dense corymbose panicle. Native to Madagascar and closely allied to *K. hildebrandtii*.101368. *KALANCHOE LAXIFLORA* Baker.

A somewhat woody succulent plant, native to Madagascar, which becomes 6 feet high, but requires bushes or other support to stand erect. The stem terminates in a large lax corymb of deep-rose flowers.

101369. *KALANCHOE ORGYALIS* Baker.

An erect succulent perennial with stems 6 to 7 feet long, oblong-spatulate leaves 3 to 5 inches long, and yellow flowers, one third inch long, in dense terminal cymes. Native to central Madagascar.

101370. *KALANCHOE SYNSEPALA* Baker.

An erect succulent perennial, native to central Madagascar, with the lower leaves opposite, sessile, oblong-spatulate, and green with a red margin. The small reddish flowers are in dense terminal cymes.

101371. *KALANCHOE TOMENTOSA* Baker.

A fleshy perennial, densely covered throughout with short brown hairs. The sessile elongated leaves are about 2 inches long, and the flowers are in a narrow panicle about 6 inches long. It is native to central Madagascar.

101372. *KALANCHOE WALDHEIMI* Ham. and Perr.

A slender fleshy plant with a rather slender stem up to a foot high and opposite, subsessile, flat, obovate, crenulate leaves over 2 inches long. The rose-colored flowers are in a lax terminal corymblike inflorescence. Native to Madagascar.

101373. *KITCHINGIA CAMPANULATA* Baker.

A stout-stemmed, fleshy plant with sessile, linear-oblong, obtuse, conspicuously crenate

101356 to 101374—Continued

leaves 2 to 3 inches long. The 12 to 20 bright-red flowers are in a lax globose compound terminal cyme. Native to Madagascar.

101374. *KITCHINGIA PELTATA* Baker.

A succulent herbaceous ornamental with leaves petiolate, almost peltate, crenate, 2 to 3 inches long, green with red margins, and pink petioles and stems.

101375 to 101378. *CHAYOTA EDULIS* Jacq. Cucurbitaceae. **Chayote.**

From Guatemala. Fruits purchased from Don Jorge Garcia Salas, Director General of Agriculture, Guatemala City. Received November 15, 1932.

Native name, *quisquil*.

101375. A small round, ivory-white variety.

101376. A small pear-shaped, dark-green variety.

101377. A short, broad, dark-green variety.

101378. A pear-shaped, light-green variety.

101379 and 101380.

From Canada. Scions presented by F. L. Skinner, Dropmore, Manitoba. Received November 16, 1932.

101379. *SYRINGA OBLATA DILATATA* × *VULGARIS*. Oleaceae. **Lilac.**

Excel.

101380. *SYRINGA VILLOSA* × *SWEGINZOWII*. Oleaceae. **Lilac.**

Hermaine.

101381 to 101383.

From Huancayo, Peru. Bulbs and roots presented by Paul G. Ledig, Magnetic Observatory of the Carnegie Institution, Washington, D.C. Received November 16, 1932.

101381. (Undetermined.)

From the Hacienda Acopalca at 13,000 feet altitude. A lily with red blossoms which come just out of the ground like a crocus, but the blossoms are more tubular.

101382. *OXALIS* sp. Oxalidaceae.

No. 2. From the Hacienda Acopalca at 13,000 feet altitude. Found between the stones in an old stone wall along the road fill over a low swampy ditch.

101383. *OXALIS* sp. Oxalidaceae.

No. 4. From the Hacienda Chamiseria at 11,600 feet altitude. An oxalis with a very much thickened leaf stem, apparently as a sort of water storage, as they grow on very precipitous cliffs which dry out completely during the dry season.

101384 and 101385.

From Alaska. Seeds purchased from Walter J. Eyerdam, Seattle, Wash. Received November 15, 1932.

101384. *PHYLLODOCE ALEUTICA* (Spreng.) Heller. Ericaceae.

A low deciduous shrub with imbricated linear serrulate leaves and terminal clusters of small bell-shaped flowers. Native to the Aleutian Islands.

101385. *SORBUS KAMTSCHATCENSIS* КОМОВОЙ. Malaceae. **Mountain-ash.**

A tree about 6 feet high with smooth, gray-brown bark, stout branches, and opaque, ovate-lanceolate, acuminate leaflets. The small pinkish fruits are in clusters 3 to 4 inches across. Native to the Kamchatka Peninsula.

101386. *CORYPHA UMBRACULIFERA* L. Phoenicaceae. **Talipot palm.**

From Ceylon. Seeds presented by T. H. Parsons, curator of the Royal Botanic Garden, Peradeniya. Received November 19, 1932.

A large fan palm up to 80 feet high. The leaves, 12 feet long and 16 feet broad, are made up of lobed segments, and the creamy white flowers are in terminal panicles 20 feet long. It is native to Ceylon.

For previous introduction see 93530.

101387 and 101388. *LUPINUS MUTABILIS* Sweet. Fabaceae. **South American lupine.**

From Huancayo, Peru. Seeds presented by Paul G. Ledig, Magnetic Observatory of the Carnegie Institution, Washington, D.C. Received November 16, 1932.

Tallhue, ullush. A handsome half-woody shrub about 6 feet high which is usually broad and bushy in habit. Above the attractive foliage rise numerous spikes of varicolored pea-shaped flowers. The predominant colors are blue, lilac, white, and yellow.

101387. Speckled seeds. 101388. White seeds.

101389 to 101393. *ALLIUM* spp. Liliaceae.

From China. Seeds presented by Albert N. Steward, College of Agriculture, University of Nanking. Received November 16, 1932.

101389. *ALLIUM CEPA* L. **Onion.**

Australian Brown. A variety introduced into China, probably from Australia.

101390. *ALLIUM FISTULOSUM* L. **Welsh onion.**

From the Sun Tomb. Originally from a foreign source.

101391 and 101392. *ALLIUM PORRUM* L. **Leek.**

Introduced seed which is now being cultivated in China.

101391. From the University Garden.

101392. From the Sun Tomb.

101393. *ALLIUM SATIVUM* L. **Garlic.**

A variety cultivated near the university nursery. The flowers are white, and both leaves and scapes are used as a vegetable.

101394. *BOURRERIA REVOLUTA* H. B. K. Boraginaceae.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received November 18, 1932.

A shrub or small tree native to the West Indies. The leathery ovate leaves are 1 to 2 inches long, and the rather large, white flowers are borne in terminal cymes. The slightly succulent red fruits are about one-third inch in diameter.

101395 to 101406.

From Manchuria. Seeds presented by B. V. Skvortzov, Botanical Department, 2-d High School, Chinese Eastern Railway, Harbin. Received November 18, 1932.

101395. *ACONITUM KUSNEZOFFII* Reichenb. Ranunculaceae. **Monkshood.**

An erect, hardy, herbaceous perennial, native to northeastern Asia, with terminal clusters of bluish flowers.

101395 to 101406—Continued

101396. *ACONITUM LYCOCTONUM* L. Ranunculaceae.
Yellow wolfsbane.

A slender perennial reaching a height of 6 feet, with yellow or whitish flowers. Native to Europe and Siberia.

101397. *CUCURBITA MOSCHATA* Duchesne. Cucurbitaceae.
Cushaw.

Variety *melanocformis*.

101398. *HETEROPAPPUS HISPIDUS* (Thunb.) Less. Asteraceae.

A perennial herb, native to eastern Asia, with rough stems and linear leaves having ciliate margins. The azure-blue, asterlike flower heads form broad corymbose clusters 8 to 10 inches across.

101399. *LATHYRUS DAVIDII* Hance. Fabaceae.

A white-flowered climber, 3 to 4 feet high, with membranous trifoliate leaves. Native to northern China.

For previous introduction see 90548.

101400. *AGASTACHE RUGOSA* (Fisch. and Mey.) Kuntze (*Lophanthus rugosus* Fisch. and Mey). Menthaceae.
Wrinkled giant-hyssop.

A summer-flowering perennial herb, 2 to 4 feet high, with cordate, serrate, rugose, scented leaves and attractive lavender flowers in reddish calyces crowded into dense oblong spikes. Native to China.

101401. *METAPLEXIS JAPONICA* (Thunb.) Makino (*M. stauntoni* Schult.). Asclepiadaceae.

A climbing shrubby milkweed, native to China and Japan, with opposite, cordate, undulate leaves and small, pale-rose to white flowers in axillary clusters.

101402. *PAPAVER NUDICAULE* L. Papaveraceae.
Iceland poppy.

Variety *amurense*, from the Hingan Mountains, with foliage rather coarser than the type and fairly uniform orange-yellow flowers.

101403. *SCUTELLARIA BAICALENSIS* Georgi. Menthaceae.
Baikal skullcap.

Locally known as mountain tea. A low shrubby perennial forming a spreading mass of stems, covered with lanceolate leaves from which ascending shoots 6 to 12 inches high are produced, each terminated in late summer by a head of large and brilliant blue-purple flowers.

101404. *SOJA MAX* (L.) Piper (*Glycine ussuriensis* Sieb. and Zucc.). Fabaceae.
Soybean.

A wild form.

101405. *VIOLA IRCUTIANA* Turcz. Violaceae.
Violet.

A perennial violet, native to dry hilly regions in the Kaja River, Siberia. It has oval-cordate leaves and rose-violet flowers and is similar to *Viola variegata*, but has smaller flowers.

101406. *VIOLA SEOULENSIS* Nakai. Violaceae.
Violet.

A perennial violet with oblong or ovate-oblong, long-stemmed leaves an inch in length and pale violet flowers. Native to Chosen.

101407 to 101409. *CHAYOTA EDULIS* Jacq. Cucurbitaceae. Chayote.

From Guatemala. Fruits presented by Don Jorge Garcia Salas, Director General of Agriculture, Guatemala City. Received November 26, 1932.

Native name, *guisquil*.

101407. Large, round, ivory-white variety.

101408. Small, pear-shaped, ivory-white variety.

101409. Small, ovoid, dark-green variety.

101410 and 101411.

From France. Seeds presented by R. Salgues, directeur de Station Botanique de Brignoles. Received November 29, 1932.

101410. *ASTRAGALUS ONOBYCHIS* L. Fabaceae.

A hairy, gray-green perennial with a thick, woody, branched rhizome and a decumbent stem up to 2 feet in length. The leaves have 8 to 10 pairs of lanceolate leaflets, and the rather large purplish flowers are in clusters of 10 to 12. Native to south-central Europe.

101411. *CALYCOTOME SPINOSA* (L.) Link. Fabaceae.

A low spiny shrub, about 5 feet high, with trifoliate leaves, hairy beneath, and yellow flowers about three fourths of an inch long. Native to the Mediterranean region.

101412. *MENZIESIA GLABELLA* A. Gray. Ericaceae.

From Canada. Seeds presented by Prof. John Davidson, University of British Columbia, Vancouver, British Columbia. Received November 26, 1932.

An erect shrub 6 to 10 feet high, native to north-western America. The elliptic to obovate leaves are 1 to 3 inches long, and the dull-colored, urn-shaped flowers, less than half an inch long, are borne in terminal clusters.

101413. *SESAMUM ORIENTALE* L. Pedaliaceae. Sesame.

From Palestine. Seeds presented by Dr. I. Elazari-Volcani, director of the experiment station at Tel-Aviv. Received November 25, 1932.

A strain of a common local variety, selected by the division of plant breeding because of the larger number of sections in the capsule. The capsules of this strain contain three or four sections instead of the usual two.

101414 to 101425. *GOSSYPIUM* spp. Malvaceae. Cotton.

From Africa. Seeds presented by Dr. Trevor Trought, Plant Breeding Section, Department of Agriculture and Forests, Shambat, Khartoum, Anglo-Egyptian Sudan. Received November 21, 1932.

101414. *GOSSYPIUM* sp.

C. B. 1010. Natural seed.

101415. *GOSSYPIUM* sp.

C. B. 1011. Selfbred seed.

101416. *GOSSYPIUM* sp.

C. B. 1012. Natural seed.

101417. *GOSSYPIUM* sp.

C. B. 1013. Selfbred seed.

101418. *GOSSYPIUM* sp.

C. B. 1014. Natural seed.

101419. *GOSSYPIUM* sp.

C. B. 1015. Selfbred seed.

101420. *GOSSYPIUM* sp.

C. B. 1016. Natural seed.

101421. *GOSSYPIUM* sp.

C. B. 1017. Selfbred seed.

101422. *GOSSYPIUM* sp.

C. B. 1018. Natural seed.

101423. *GOSSYPIUM* sp.

C. B. 1019. Selfbred seed.

101414 to 101425—Continued

101424. *GOSYPIUM* sp.
C. B. 1020. Selfbred seed.
101425. *GOSYPIUM* sp.
C. B. 1021. Selfbred seed.

101426 to 101432. *GOSYPIUM HERBACEUM* L. Malvaceae. Cotton.

From the Union of Soviet Socialist Republics. Seeds presented by N. A. Malinovsky, Central Agricultural Plant Breeding Station, Ganja Station, Azerbaijan, Transcaucasia. Received November 21, 1932.

101426. C. B. no. 1022. U. S. S. R. no. 101.
101427. C. B. no. 1023. U. S. S. R. no. 590 (?)
101428. C. B. no. 1024. U. S. S. R. no. 593.
101429. C. B. no. 1025. U. S. S. R. no. 606.
101430. C. B. no. 1026. U. S. S. R. no. 672.
101431. C. B. no. 1027. U. S. S. R. no. 703.
101432. C. B. no. 1028. U. S. S. R. no. 767.

101433. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

From Florida. Seeds presented by M. D. McNaughton, Coconut Grove. Received December 1, 1932.

A large medium-red tomato up to 4 inches in diameter. The meat is almost solid with very few seeds, and the flavor is very mild, almost no acid. The vine seems to be blight resistant, and the seeds are supposed to have come originally from Africa.

101434. *MELINIS MINUTIFLORA* Beauv. Poaceae. Molasses grass.

From Colombia. Seeds presented by Willis C. McGuire, Medellin, through Raymond Phalen, American vice consul, Medellin. Received November 30, 1932.

Introduced for the use of Department specialists.

101435 to 101437.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received November 28, 1932.

101435. *CASSIA NODOSA* Buch.-Ham. Caesalpiniaceae.

A moderate-sized deciduous tree with long drooping branches and glossy leaves; in the spring it bears a profusion of beautiful pink, rose-scented flowers in dense clusters on long stalks. The leaves and flowers appear at the same time.

For previous introduction see 97868.

101436. *GLORIOSA SPECIOSA* (Hochst.) Engler (*G. abyssinica* A. Rich.). Melanthiaceae. Glorylily.

An erect bulbous perennial 1 to 2 feet high, native to tropical Africa. The lanceolate leaves, 5 to 6 inches long, are sometimes tendril-bearing at the tip, and the yellow flowers, 2 to 3 inches long, have reflexed segments and are borne on nodding pedicels 3 to 4 inches long.

101437. *VOLKAMERIA ACULEATA* L. Verbenaceae.

A spiny climbing shrub 10 to 15 feet high, native to the West Indies. The thin elliptic-ovate leaves are 1 to 2 inches long, and the salverform white flowers with purple stamens are borne in axillary cymes.

101438 to 101446. *HORDEUM DISTICHON* PALMELLA Harlan. Poaceae.

Two-rowed barley

From Hungary. Seeds presented by the Hungarian Commercial and Exchange Bank, Budapest. Received November 28, 1932.

- 101438 to 101442. Hungarian spring seed barley.
101438. No. 2327. 101441. No. 2485.
101439. No. 2439. 101442. No. 2486.
101440. No. 2440.
101443 to 101445. Czechoslovakian spring barley.
101443. No. 3030-A. 101445. No. 3159.
101444. No. 3158.
101446. Hungarian spring seed barley, no. 2305.

101447 to 101453.

From the Philippine Islands. Seeds presented by Arthur J. Fischer, director, Bureau of Forestry Manila. Received November 30, 1932.

101447. *ORMOSIA CALAVENTSIS* Azaola. Fabaceae.

Bahia. A large tropical tree with unequally pinnate leaves consisting of 7 or 9 ovate leaflets. The violet-colored flowers are followed by small woody pods containing 2 or 3 coral-pink seeds. Native to the Philippine Islands.

101448. *PINUS INSULARIS* Endl. Pinaceae.

Benguet pine.

A tall three-needle tropical pine which grows on the highlands in the Philippine Islands between 3,000 and 8,000 feet altitude. The flaccid slender leaves are 7 to 9 inches long, and the ovoid cones are about 3 inches long.

101449. *PTEROCARPUS VIDALIANUS* Rolfe. Fabaceae.

Prickly narra. A tree native to the island of Luzon, with alternate, unequally pinnate leaves composed of 5 to 13 ovate papery pellucid-punctate leaflets 2 to 4 inches long. The small yellow flowers are followed by circular winged pods over an inch in diameter.

101450. *SINDORA SUPA* Merr. Caesalpiniaceae.

Supa. A timber tree, native to the Philippine Islands.

101451. *VITEX PARVIFLORA* Juss. Verbenaceae. Chaste-tree.

For previous introduction and description see 101265.

101452. *WALLACEODENDRON CELEBICUM* Koord. Mimosaceae.

Banuyo. A tall tree, native to the Celebes, with red-brown bark and compound leaves. The flowers resemble those of *Mimosa*, and the large pods are similar to those of *Entada*.

101453. *XANTHOSTEMON VERDUGONIANUS* Naves. Myrtaceae.

Mancone or *palo de hierro*. A large evergreen tree with subopposite or subverticillate, obovate cuneate rounded leathery leaves 1 to 3 inches long, and small red-purple flowers in terminal cymes. Native to the island of Mindanao, Philippines.

101454. *EPHEDRA INTERMEDIA* Schrenk and Mey. Gnetaceae.

From India. Seeds presented by R. N. Parker, forest botanist, Forest Research Institute, Dehra Dun. Received November 28, 1932.

101454—Continued

A shrubby leafless plant with a creeping root-stalk and a short, woody stem, 3 to 4 inches high, simple or with a few branches. It is native to Sungaria.

101455 to 101459. RUBUS spp. Rosa-
ceae. Raspberry.

From the Union of Soviet Socialist Republics. Plants presented by Prof. P. M. Zhukovsky, Institute of Plant Industry, Leningrad. Received December 4, 1932.

101455. RUBUS sp.

Hollandische rote.

101456. RUBUS sp.

Sucr e de Metz.

101457. RUBUS sp.

Rote Riesen.

10.458. RUBUS sp.

*Surpasse Merreille rouge.*101459. RUBUS CRATAEGIFOLIUS Bunge.
Hawthorn raspberry.

An erect or spreading raspberry 3 to 5 feet high, native to China and Japan. The cordate serrate leaves are 3- to 5-lobed, and the white flowers, borne in terminal clusters, are followed by small orange-red fruits.

101460 and 101461. ALLIUM CEPA L.
Liliaceae. Onion.

From India. Seeds presented by P. G. Dani, office of the superintendent, Kirkee, Poona. Received December 5, 1932.

101460. Brown.

101461. White.

101462 to 101464.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received December 9, 1932.

101462. CASSIA EXCELSA Schrad. Caesalpiniaceae

Variety *angustifolia*: a narrow-leaved form of *C. excelsa* which is a rigid shrub over 6 feet high with stout spines half an inch long, leathery leaves less than an inch long, and small red flowers. Native to northern Argentina.

101463. CLUSIA MINOR L. Clusiaceae.

A tropical American tree 25 feet high, often starting as an epiphyte, with thick obovate leaves, 4 to 6 inches long, and axillary solitary showy pink flowers.

For previous introduction see 101133.

101464. SELENICEREUS GRANDIFLORUS (L.) Britton
and Rose. Cactaceae. Queen-of-the-night.

A creeping or clambering vine, native to Jamaica, with stout blue-green stems often 1 inch in diameter, armed with brown spines. The fragrant nocturnal flowers, 6 to 8 inches long, are pale pink with yellow stamens.

101465. COFFEA ARABICA L. Rubi-
aceae. Arabian coffee.

From Java. Seeds presented by A. J. Sitts, N. V. Java Sumatra Handelmaatschappij, at the request of Messrs. Hard and Rand, New York, N.Y. Received December 10, 1932.

Pakantan, a coffee grown in Mandehling district, Sumatra, which is considered, by some, to be the finest coffee-growing district in the world.

101466. POA sp. Poaceae. Grass.

From Canada. Seeds presented by Dr. G. P. McRostie, University of Manitoba, Winnipeg. Received December 14, 1932.

Introduced for the use of Department specialists.

101467. CASTANEA SATIVA Mill. Faga-
ceae. Spanish chestnut.

From Germany. Seeds presented by the Versuchsstation f r Pflanzenschutz, Halle (Saale). Received December 8, 1932.

Introduced for the use of Department specialists.

101468 to 101480. SACCHARUM OFFI-
CINARUM L. Poaceae. Sugarcane.

From the West Indies. Cuttings presented by Mr. McIntosh, Department of Agriculture, Barbados. Received December 7, 1932.

101468. B-3081. 101475. B-3226.

101469. B-3169. 101476. B-3238.

101470. B-3183. 101477. B-3257.

101471. B-3184. 101478. B-3266.

101472. B-3185. 101479. B-3270.

101473. B-3186. 101480. B-3271.

101474. B-3218.

101481 and 101482. ORYZA SATIVA L.
Poaceae. Rice.

From Siam. Seeds presented by J. R. Redfield, Phoenix, Ariz. Received December 2, 1932.

Hill rice, the chief rice of northern Siam, so called because it may be grown on hillsides, is dependent on the rain, and thus does not require that the roots be submerged in water.

101483 and 101484.

From Japan. Seeds presented by the Laboratory of Plant Pathology, Kyushu Imperial University, Fukuoka. Received December 4, 1932.

101483. LESPEDEZA BICOLOR Turcz. Fabaceae.
Shrub bushclover.

A bushy perennial which bears a profusion of rose-purple flowers during the early autumn, practically covering the drooping branches which sometimes become 6 feet in length.

For previous introduction see 93119.

101484. LESPEDEZA CYRTOBOTRYA Miquel. Fab-
aceae. Bushclover.

A shrub about 6 feet high, resembling *L. bicolor* in habit, with oval-oblong leaflets and dense clusters of purple flowers. Native to Japan.

For previous introduction see 90549.

101485. ALLIUM SATIVUM L. Lilia-
ceae. Garlic.

From India. Bulbs presented by the Imperial Agriculturist, Pusa, India, through A. McLean, deputy director of agriculture, East Central Circle, Pynmana, Burma. Received December 9, 1932.

A locally grown variety.

101486 to 101488. PRUNUS SERRULATA
Lindl. Amygdalaceae. Oriental cherry.

From England. Plants purchased from John Waterer Sons & Crisp, Ltd. Twyford, Berks. Received December 10, 1932.

101486 to 101488—Continued

101486. *Ko-fugen*. 101488. *Oshokun*.101487. *Oku-miyako*.

101489 to 101496.

From Egypt. Seeds presented by Alfred Bircher, Middle Egypt Botanic Station, El Saff. Received December 5, 1932.

101489. *ANNONA MACROCARPA* Barb.-Rodr. Annonaceae.

A Brazilian tree 10 to 12 feet high, with a thick trunk, oblong-elliptic leathery leaves about 4 inches long, and large ovoid-cordate fruits about 5 inches in diameter with white pulp. In Matto Grosso the natives call this "araticum grande da serra."

101490. *ARECASTRUM* sp. Phoenicaceae. Palm.101491. *CEREUS HEXAGONUS* (L.) Mill. Cactaceae.

A tall columnar cactus up to 45 feet high, branching at the base, the joints usually six-angled. The flowers are 8 to 10 inches long with the outer segments purple and the inner ones white. The ovoid edible fruits are 3 to 6 inches long and have white or pinkish pulp. It is native to the West Indies and to the northern part of South America.

For previous introduction see 90870.

101492. *NAGEIA ELATA* (R. Br.) F. Muell. (*Podocarpus elata* R. Br.). Taxaceae.

A tree 50 to 100 feet high, native to Australia. The oblong-linear to linear-lanceolate leaves are 2 to 6 inches long, straight or slightly falcate, with a prominent midrib. The inconspicuous flowers are followed by slightly succulent ovoid to globular brown fruits about one-fourth inch in diameter.

101493 to 101495. *PSIDIUM* spp. Myrtaceae. Guava.101493. *PSIDIUM ARACA* Raddi.

A tropical American shrub which bears small edible yellow fruits, said to contain few seeds.

101494. *PSIDIUM CORIACEUM* Mart.

A tropical shrub, 3 to 10 feet high, with leathery obovate leaves and dark-purple fleshy fruits the size of plums. It is native to Brazil.

101495. *PSIDIUM CUJAVILLUS* Burm. f. Dwarf guava.

A small shrub with small yellow fruits resembling those of *Psidium araca* in size and color, but with dry calyx segments. The fruit is very aromatic with much-accentuated strawberry flavor. The leaves resemble the common guava but are broader.

101496. *ZIZIPHUS JOAZEIRO* Mart. Rhamnaceae.

Jua. A tree, native to the eastern part of Brazil, which under favorable conditions forms a beautiful, dense, green, umbrageous head of foliage nearly 30 feet in diameter. The oval to ovate leaves, about 2 inches long, are somewhat hard and brittle in texture. The cream-yellow fruits are nearly an inch in diameter and almost round. The thick layer of mealy flesh is rather insipid and adheres very closely to the seed. Cattle and horses are very fond of both the leaves and fruits of this tree, and its principal value would seem to be as a source of stock food in the dry areas of the southwestern United States.

101497 and 101498. *SESAMUM ORIENTALE* L. Pedaliaceae. Sesame.

From Southern Rhodesia. Seeds presented by H. G. Mundy, chief, Division of Plant Industry,

101497 and 101498—Continued

Department of Agriculture, Salisbury. Received December 8, 1932.

101497. A variety with black seeds.

101498. A variety with white seeds.

101499. *ALLIUM CEPA* L. Liliaceae. Onion.

From India. Seeds presented by the superintendent of the Modi-Bag Agricultural College, Poona, through the horticulturist to the Government, Bombay Presidency, Poona. Received December 8, 1932.

A locally grown variety.

Introduced for the use of Department specialists

101500. *ELEOCHARIS TUBEROSA* (Roxb.) Schult. Cyperaceae.

Tubers presented by Albert P. Ding, Portland, Ore. Received December 14, 1932.

A Chinese vegetable which grows very much in the same manner as wet-land rice. The corms or tuberous rhizomes are mostly eaten raw but are also sliced or shredded in soups and in meat and rice dishes. The plants need a hot summer to mature and are grown on a muck or clay soil.

101501. *MUCUNA BENNETTI* F. Muell. Fabaceae.

From New Guinea. Seeds presented by Anne MacIvaine, through George Muir Smith, Urika, Port Moresby, Papua. Received December 12, 1932.

D'Albertis creeper. A tropical climber with leaves made up of three ovate-lanceolate glabrous leaflets, 3 to 5 inches long, and bearing short racemes of large showy scarlet flowers. It grows in New Guinea on the banks of rivers or in swampy places.

101502 and 101503.

Plants presented by C. E. Pleas, Chipley, Fla. Received December 16, 1932.

101502. *BAMBUSA MULTIPLEX* (LOUR.) Reusch. Poaceae. Hedge bamboo.

These plants represent a distichous or fern-leaved variety of the hedge bamboo which has slender culms with green stripes of various widths on a yellowish or pinkish ground color and is of dwarf habit, usually not more than 5 feet high. However, the variety shows a strong tendency to revert to the species type, in which the leaves are much longer and fewer on the branchlets, and culms up to 30 feet high are produced. The foliage then appears similar in form to that of the well-known varieties *Alphonse Karri* and *Argentea striata*. The new culms of this dwarf variety usually appear during June and extend their branches and leaves within a few weeks, differing in these respects from the type and from the large-growing varieties of the species.

For previous introduction see 99289.

101503. *BAMBUSA MULTIPLEX* (LOUR.) Reusch. Poaceae. Hedge bamboo.

An ordinary, large-growing, green form of the hedge bamboo, reverted from the dwarf variety under F.P.I. 101502.

101504 and 101505. *AVENA SATIVA* L. Poaceae. Oats.

From Wales. Seeds presented by Prof. E. T. Jones, Welsh Plant Breeding Station, Aberystwyth. Received December 16, 1932.

101504. *Aberystwyth white* no. 81, winter oats.101505. *Aberystwyth white* no. 82, winter oats.

101506 and 101507. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. Common wheat.

From England. Seeds presented by G. D. A. Bell, School of Agriculture, University of Cambridge. Received December 13, 1932.

101506. *Iron.* 101507. *Wilhelmina.*

101508 to 101521.

From Argentina. Seeds presented by the Botanic Garden, Buenos Aires. Received December 17, 1932.

101508. *ARECHAHALETAIA URUGUAYENSIS* Speg. Flacourtiaceae.

A large shrub 6 to 10 feet high with alternate, elliptic, entire, shining dark-green leaves 2 to 3 inches long, inconspicuous purplish flowers in spikes, and small pinkish berries. Native to Uruguay.

101509. *ASPIDOSPERMA PEROBA* Sald. Gama.

This tree, whose wood is used in naval construction, has a thin, clear, ash-colored bark, cracked longitudinally; the heartwood is of rare beauty, with a wavy pattern. The tree is distinguished by it spreading, obovate-oblong, undulate leaves.

101510. *BLEPHAROCALYX TWEEDIEI* (Hook. and Arn.) Berg. Myrtaceae.

A subtropical tree, native to Uruguay, with lanceolate acute leaves and axillary flowers in pairs.

For previous introduction see 94768.

101511. *CELTIS SELLOVIANA* Miquel. Ulmaceae. Hackberry.

A much-branched spiny shrub, native to southern Brazil, with narrow, membranous, light green, sharp-pointed leaves less than an inch long and inconspicuous flowers.

101512. *CNICOTHAMNUS LORENTZII* Griseb. Asteraceae.

A handsome shrub about 20 feet high with thick branches, oval leaves about 5 inches long, and purple flowers in large solitary heads. Native to Tucuman, Argentina.

101513. *DAUBENTONIA TRIPETH* Poit. Fabaceae.

A shrub or small tree, native to Argentina, with pinnately compound leaves which are dull green above and paler beneath. The rather large, orange-red flowers are borne in drooping racemes.

For previous introduction see 94773.

101514. *EUPATORIUM GUADALUPENSE* Spreng. Asteraceae.

A West Indian perennial composite with alternate rhomboid-oblong dentate leaves and corymbs of violet flowers.

101515. *GUETTARDA URUGUENSIS* Cham. and Schlecht. Rubiaceae.

A small tree up to 20 feet high with twisted branches. The membranous leaves, of varied forms ranging from ovate to lanceolate, are about 3 inches long and 1 inch across. The axillary, long, pedunculate cymes of white flowers have salver-shaped corollas and are followed by cylindrical ovoid drupes one-third inch in diameter.

101516. *ILEX PARAGUARIENSIS* St. Hil. Aquifoliaceae. *Yerba maté.*

A tender, evergreen, Paraguayan holly the leaves of which are dried and used to make a beverage called maté, or Paraguay tea.

For previous introduction see 94775.

101508 to 101521—Continued

101517. *JODINA RHOMBIFOLIA* Hook. and Arn. Santalaceae.

Quebrachillo. A low, bushy, slender-branched tree with three-pointed spiny leaves. The wood is white and smooth and the bark thick. It is native to Brazil.

101518. *PITHECOLLOBIUM ALBICANS* (Kunth) Benth. Mimosaceae.

A spiny tree up to 60 feet high, native to Mexico. The pinnately compound leaves are made up of 4 to 6 pairs of pinnae each bearing numerous small ovate leaflets, and the inconspicuous flowers are followed by flat pods said to contain about 18 percent of tannin and to yield a black dye.

101519. *RUPRECHTIA TRIFLORA* Griseb. Polygonaceae.

A shrub 6 feet or more in height, with reddish, rigid, ovate, acute leaves about 2 inches long and small dull-reddish flowers. Native to the Gran Chaco, Argentina.

101520. *SCHINUS TEREBINTHIFOLIUS* AROIERA (Vell.) L. Marchand. Anacardiaceae. **Peppertree.**

A shrub 3 to 10 feet high, or, sometimes, a small tree 20 feet high. The variable membranous leaves are unequally pinnate and are composed of 5 to 9 oblong to obovate-oblong leaflets 2 to 3 inches long. The small white flowers are followed by scarlet berries in panicles 2 to 4 inches in length.

For previous introduction see 94784.

101521. *TERMINALIA TRIFLORA* (Griseb.) Lillo, Combretaceae.

Palo amarillo. A tree 30 to 40 feet high, native to Argentina, with papery obovate-oblong leaves 2 inches long.

101522 to 101525. PHASEOLUS LUNATUS L. Fabaceae. Lima bean.

From Puerto Rico. Seeds presented by T. B. McClelland, director, Agricultural Experiment Station, Mayaguez. Received December 15, 1932.

A collection of lima beans from Barrio Cain Alto, of San German. Introduced for comparison with types now being grown on the Pacific coast.

101522. *Isabelina.*

101523. *Carita*, or little face.

101524. *Colorado*, or red.

101525. No. 4, unnamed.

101526 and 101527. GOSSYPIUM PUNCTATUM Schum. and Thonn. Malvaceae. **Cotton.**

From French Equatorial Africa. Seeds presented through T. H. Kearney, Bureau of Plant Industry. Received December 13, 1932.

101526. C. B. 1030. From Lion "Agent Agricole", Zangba.

101527. C. B. 1031. From Fouroumbalan.

101528 to 101532. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. Common wheat.

From Australia. Seeds presented by H. Wenholtz, director of plant breeding, Department of Agriculture, Sydney, New South Wales. Received December 13, 1932.

101528. *Baroota wonder.*

101528 to 101532—Continued

101529. *Cadia*.
 101530. *Duri*.
 101531. *Petalz surprise*.
 101532. *Turvey*.

101533. *ALLIUM CEPA* L. Liliaceae.
Onion.

From Burma. Seeds presented by A. McLean, deputy director of agriculture, East Central Circle, Pynmana. Received December 16, 1932.

A hard compact red onion of medium size.

101534. *DIOSPYROS TUTCHERI* Dunn.
Diospyraceae. Persimmon.

From China. Seeds presented by G. Weidman Groff, Botanic Gardens, Hong Kong. Received December 19, 1932.

A small tree with rough bark, smooth, elliptic, acuminate leaves about 4 inches long, and globose fruits about an inch in diameter. Native to Hong Kong.

101535 to 101558. *LATHYRUS SATIVUS* L. Fabaceae. Bitter vetch.

From India. Seeds presented by F. K. Jackson, director, Institute of Plant Industry, Indore, Central India. Received December 9, 1932.

101535. From Allahabad, United Provinces.
 101536. From Behraich.
 101537. From Behraich.
 101538. From Ballia, United Provinces.
 101539. From Ballia bazar, Parbabgarh, United Provinces.
 101540. From Beraunda bazar, Girzapon.
 101541. From Barabauki, United Provinces.
 101542. From Benares, United Provinces.
 101543. From Benares, United Provinces.
 101544. From Benares bazar, United Provinces.
 101545. From Girzapur, United Provinces.
 101546. From Girzapur, United Provinces.
 101547. From Indore, Central India.
 101548. From Iyzabar.
 101549. From Nanpara.
 101550. From Parbabgarh, United Provinces.
 101551. From Ballia bazar, Parbabgarh, United Provinces.
 101552. From Patti bazar.
 101553. From Patti bazar.
 101554. From Patti bazar.
 101555. From Raebareli, United Provinces.
 101556. From Raebareli, United Provinces.
 101557. From Saltanpur.
 101558. From Tisui, Girzapur, United Provinces.

101559 to 101568.

From France. Seeds presented by A. Guillaumin, Muséum National d'Histoire Naturelle, Paris. Received December 21, 1932.

Seeds of cultivated plants, collected at Urumchi, Sinkiang, in September 1931.

101559. *AMYGDALUS PERSICA* L. Amygdalaceae.
Peach.

101559 to 101568—Continued

101560. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae.
Watermelon.
 101561. *HELIANTHUS ANNUUS* L. Asteraceae.
Common sunflower.
 101562 and 101563. *HORDEUM VULGARE COELESTE* L. Poaceae.
Six-rowed barley.
 101564. *HORDEUM VULGARE NIGRUM* (Willd.) Beaven. Poaceae.
Six-rowed barley.
 101565. *PHASEOLUS VULGARIS* L. Fabaceae.
Common bean.
 101566. *SORGHUM VULGARE* Pers. Poaceae.
 101567. *TRITICUM AESTIVUM* L. (*T. vulgare* Vill.) Poaceae.
Common wheat.
 101568. *ZEA MAYS* L. Poaceae.
Corn.

101569. *CITRUS* sp. Rutaceae.

From French Indo-China. Seeds presented by M. Poilane, Institut des Recherches Agronomique de l'Indochine, Division de Botanique. Received December 21, 1932.

Wild shaddock.

101570 and 101571.

From Palestine. Seeds presented by the acting director of agriculture and forests, Jerusalem. Received December 21, 1932.

101570. *NEPETA CURVIFLORA* Boiss. Menthaceae.

A hairy perennial up to 3 feet high with oblong obtuse crenate leaves about 1 inch long and sky-blue flowers half an inch long in short, rather dense cymes. Native to Asia Minor.

101571. *THYMUS CAPITATUS* (L.) Hoffm. and Link. Menthaceae. Thyme.

A low woody perennial with stout rigid branches, very short, stiff, linear leaves, and rosy flowers in dense ovoid heads. Native to the Mediterranean region.

101572 and 101573.

From Cuba. Scions presented by Charles F. Fetter, Isla de Pinos. Received December 27, 1932.

101572. *FLACOURTIA INDICA* (Burm. f.) Merr. Flacourtiaceae. Ramontchi.

A spiny arborescent Philippine shrub 20 feet high with crenate leaves, small white flowers, and smooth dark-purple fruits containing a sweet juicy pulp.

101573. *VITIS VINIFERA* L. Vitaceae.
European grape.

An Italian wine grape.

101574. *PHOENIX SYLVESTRIS* (L.) Roxb. Phoenicaceae.
India date palm.

From England. Seeds presented by the director of the Royal Botanic Gardens, Kew. Received December 27, 1932.

A pinnate-leaved palm, 25 to 40 feet high, with leaves about 15 feet long and orange-yellow fruits. Native to India.

For previous introduction see 101145.

101575. *ALLIUM CEPA* L. Liliaceae.
Onion.

From India. Seeds presented by the agricultural officer, Northwest Frontier Province, Taru Jabba, Peshawar District. Received December 28, 1932.

A locally grown red onion.

101576 to 101584.

From India. Seeds presented by W. O'Brien, Corsley, Hyderabad, Deccan. Received December 28, 1932.

101576. *CICER ARIETINUM* L. Fabaceae. Chickpea.
Bengal grain.
101577. *CUCUMIS SATIVUS* L. Cucurbitaceae. Cucumber.
101578. *CUCURBITA MOSCHATA* Duchesne. Cucurbitaceae. Cushaw.
Local name, *pumpkin*.
101579. *DOLICHOS BIFLORUS* L. Fabaceae. Twinflower dolichos.
A brown variety.

101576 to 101584—Continued

101580. *DOLICHOS BIFLORUS* L. Fabaceae. Twinflower dolichos.
A dark-purple variety; south Indian horse grain.
101581. *PHASEOLUS MUNGO* L. Fabaceae. Urd.
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101582. *RAPHANUS SATIVUS* L. Brassicaceae. Radish.
101583. *TRICHOSANTHES ANGUINA* L. Cucurbitaceae. Snakegourd.
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101584. *VIGNA SINENSIS* (Torner) Savi. Fabaceae. Cowpea.

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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 114



Washington, D. C.

Issued November, 1934

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, JANUARY 1 TO MARCH 31, 1933 (Nos. 101585-102377)

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INTRODUCTORY STATEMENT

The present Inventory, no. 114, records plant material received by the Division of Plant Exploration and Introduction from January 1 to March 31, 1933 (nos. 101585-102377).

Among the important projects included in the program of this Division is the introduction of the deciduous fruit varieties now grown commercially in various parts of the world. As a step in the fulfillment of this program, several shipments of this type of material were received during the period covered by this inventory. Especially noteworthy are two lots of plants and scions from Morocco (101806-101875, 102002-102062); these include indigenous varieties of figs, olives, apricots, almonds, and grapes, all of which are destined for trial in the subtropical areas of our West and Southwest, where these fruits already form the basis of important industries.

In considering the needs of the colder fruit-growing areas, mention should be made of four lots of scions of apples and sour cherries from the Scandinavian countries (nos. 101881-101890, 102126-102153, and 102164-102180), and one lot of apple scions from Poland (102369-102372). A large number of these are local varieties that represent many years' work in careful selection. From eastern China, where the peach has been grown since the dawn of civilization, there is recorded a lot of 27 scions of peach varieties (101663-101689) collected in small towns and villages where, in many instances, a particular fruit variety is known only in a very limited area.

The nut-growing industry in the United States will be aided, eventually, by the introduction of three lots of filberts (101706-

101711, 101891-101902, and 102121-102125) from the Union of Soviet Socialist Republics, and by 13 types of walnuts (102084-102096) from the same country. Attention should also be called to the introduction of a collection of scions of what are said to be unusually cold-resistant varieties of the Spanish chestnut from Czechoslovakia (101610-101617). For the ultimate benefit of nut growers, but more immediately for use in chestnut-blight investigations, there are recorded four lots of seed of different species of *Castanea* (101587-101607, 101690-101692, 101982-101991, and 102106-102111) received from northeastern China. Most of these are *C. mollissima*, the Chinese hairy chestnut, whose natural resistance to chestnut blight has led to its wide use in hybridizing experiments.

Plants suitable for growing in the colder and drier areas of the western United States are constantly being sought by this division. It is of interest, therefore, to note two shipments of plant material received during this period from Manchuria. One of these, a collection of hardy forage grasses (101645-101660) from the prairie country near Harbin, Manchuria, introduced for Department specialists, should prove of definite value for the colder areas of our stock-raising States. Another lot of plant material (102289-102309), received also from Manchuria but including hardy trees and shrubs native to many different parts of northeastern Asia, such as maples and hollies from Chosen and northern Japan, will prove interesting additions to the introduced flora of our colder regions.

In the field of ornamentals, there are two large collections that deserve special mention. These come from England and Scotland, respectively (101736-101797 and 101923-101962), and consist largely of alpine perennials, including numerous species of such genera as *Anthemis*, *Aquilegia*, and *Dianthus*. These are all intended for testing at the plant introduction gardens of this Division.

The botanical determinations were made and the nomenclature determined by the late H. C. Skeels,¹ who had general supervision of this inventory.

B. Y. MORRISON,
Principal Horticulturist, in Charge.

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D.C., March 30, 1934.

¹ Died Jan. 3, 1934.

INVENTORY²

101585. TRisetum FLAVESCENS (L.) Beauv. Poaceae. Grass.

From France. Seeds purchased from Vil-morin-Andrieux & Cie., Paris. Received January 4, 1933.

A grass resembling tall oatgrass, growing on open ground, in copses and meadows, which may prove valuable as a forage grass. Native to Europe and Asia.

101536. AVENA SATIVA L. Poaceae. Oats.

From Sweden. Seeds presented by Dr. A. Akerman, Swedish Agricultural Society, Svalöf. Received January 5, 1933.

Sirius.

101587 to 101607. CASTANEA spp. Fagaceae. Chestnut.

From China. Seeds collected by Peter Liu, Pe'iping. Received January 4, 1933.

101587. CASTANEA HENRYI (Skan) Rehd. and Wils.

Chu Lee or *Chun Lee*, pearl chestnut. An edible chestnut from Hsiao-feng, Chekiang. The tree becomes 25 to 30 feet high with oblong-lanceolate, long-acuminate leaves, green on both sides. The burs are either solitary or two in a bunch and contain usually but one seed.

For previous introduction see 100378.

101588 to 101606. CASTANEA MOLLISSIMA Blume. Hairy chestnut.

101588 and 101589. From Taian, Shantung.

101588. *Bright.*

101589. *Ts'ao Lee Tzu.* An early chestnut.

101587 to 101607—Continued.

101590 to 101595. From Hopeh.

101590 and 101591. *East Mountain* Late chestnuts from Pocheng, near Santunying.

101592. *Chiufen.* From Panshan.

101593. *Chiufen.* From Tsuik-chuang.

101594. An early chestnut from Fangshan.

101595. From Fuchow, Kiangsi.

101596. *Mao Lee Tzu.* From Taian, Shantung.

101597 and 101598. *Hanlu.* A late chestnut from Hopeh.

101597. From Fahuassu.

101598. From Tsuik-chuang.

101599. A large chestnut from Hsinteng, Chekiang.

101600 to 101606. From Hopeh.

101600. A large chestnut from Fahuassu.

101601. A late chestnut from Fangshan.

101602. *Pailu.* From Tsuik-chuang.

101603 to 101606. From Fahuassu, Hopeh.

101603. *Pailu.*

101604. *Second Ripening.*

101605. A short-flowered late chestnut.

101606. *Tiger paw.*

² 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 Division of Plant Exploration and 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 seed samples or 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

101587 to 101607—Continued.

101607. *CASTANEA SEGUINII* Dode.

A wild bush chestnut from Hangchow, native to east-central China. It is usually a bush or low tree, but occasionally a shapely tree 40 feet high, with deep-green leaves, paler beneath, and small nuts of sweet agreeable flavor.

101608. *CASUARINA TORULOSA* Ait.
Casuarinaceae.

From Australia. Seeds presented by Dr. Alexander McTaggart, Commonwealth Forestry Bureau, Council for Scientific and Industrial Research, Division of Plant Industry, Canberra. Received January 5, 1933.

From the Cooperbrook State Forest, New South Wales, November 14, 1932. A native Australian tree with wood which is close grained and very prettily marked. It is used for shingles and also as veneer for cabinetwork.

For previous introduction see 92486.

101609. *CITRUS* sp. Rutaceae.

From the Society Islands. Scions collected at Papeete, Tahiti, by Gerrit P. Wilder. Received January 10, 1933.

101610 to 101617. *CASTANEA SATIVA* Mill. Fagaceae. Spanish chestnut.

From Czechoslovakia. Scions presented by the Ministry of Agriculture, Bratislava, through Dr. Jan Skalicky, counselor, Czechoslovak Legation, Washington, D.C. Received January 10, 1933.

A collection of scions of very cold-resistant varieties.

101610. From Bratislava.

101611 to 101613. From Zablatie, in the Vah River Valley.

101614. From Drietoma, in the Vah River Valley.

101615. From Pruske, in the Vah River Valley.

101616. From Topolcianky.

101617. From Radosina.

101618. *ALLIUM SATIVUM* L. Liliaceae.
Garlic.

From Manchuria. Bulbs presented by Schinichi Terada, Agricultural Experiment Station of the South Manchurian Railway Co., Yagakujo. Received January 10, 1933.

Introduced for the use of Department specialists.

101619. *TULIPA BIEBERSTEINIANA* Schult. f. Liliaceae. Tulip.

From the Union of Soviet Socialist Republics. Seeds presented by the Nikita Botanic Garden through the chief of the Bureau of Introduction, Leningrad. Received January 9, 1933.

A rather low plant with 2 or 3 lanceolate or linear grooved acute leaves and a smooth stem bearing a single flower, yellow within and greenish-yellow on the outside. Native to southeastern Russia and closely related to *Tulipa celsiana*.

101620 to 101622. *AVENA* spp. Poaceae.

101620 to 101622—Continued.

From Australia. Seeds presented by the New England Experiment Farm, Glen Innes, New South Wales. Received January 12, 1933.

101620. *AVENA SATIVA* L.

Laggan.

101621. *Avena* sp. Burke.

101622. *Avena* sp. Lampton.

101623 to 101627.

From Spain. Scions presented by Ramon Sala, Balaguer, Lerida. Received January 14, 1933.

101623. *OLEA EUROPAEA* L. Oleaceae.
Common olive.

Grossal. A locally grown variety with fruit larger than the average, but the tree is a poor cropper.

101624 to 101627. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

101624. *Canino*. A fruit of rather poor quality, but an enormous yielder and a good shipper. Possibly the most widely grown variety in Spain.

101625. *Moniqui*. The best variety grown in Spain. The fruit is large with white flesh and is quite peculiar and different from the other apricots, but it is a poor yielder.

101626. *Perla*. A very good variety, which is planted quite extensively in Spain.

101627. *Rosa*. The earliest commercial variety of Spain. The fruit is earlier and larger than the *Early Newcastle*.

101628. *ZAMIA PORTORICENSIS* Urban. Cycadaceae.

From Puerto Rico. Tubers presented by T. B. McClelland, director of the Agricultural Experiment Station, Mayaguez. Received January 18, 1933.

A cycad with a short stem 12 to 14 inches high, native to Puerto Rico. The pinnately compound leaves, 2 to 3 feet long, are made up of 20 to 34 smooth shining narrowly linear leaflets, 2 to 8 inches long, which are usually entire but may have 1 or 2 small teeth near the tip. The oblong-cylindric fruiting cone, 10 inches long, is covered with gray tomentose scales.

For previous introduction see 98737.

101629. *HAMAMELIS JAPONICA* Sieb. and Zucc. Hamamelidaceae.

Japanese witch-hazel.

From Japan. Seeds purchased from the Chugai Shokubutsu Yen, nurserymen, Yamamoyo, Kawabegun, near Kobe. Received January 12, 1933.

A shrub or small tree up to 30 feet high, with broadly ovate or obovate leaves 2 to 4 inches long. The flowers, which appear in January and February, are an inch across with revolute sepals, purple inside, and bright yellow petals. Native to Japan.

101630 to 101644. *VITIS VINIFERA* L. Vitaceae. European grape.

From Italy. Cuttings presented by Prof. Giovanni Delmasso, Direttore della R.

101630 to 101644—Continued.

Stazione Sperimentale di Viticoltura e di Enologia, Conegliano, through the American consul general, Naples. Received January 14, 1933.

- 101630. *Aspensorgia* (di Sardegna).
- 101631. *Baresana*.
- 101632. *Carniola di Milazzo*.
- 101633. *Cortese*.
- 101634. *Dolcetto*.
- 101635. *Fogarina* (Reggiano) di Guatieri.
- 101636. *Garganega di Gambellara*.
- 101637. *Insoila* (Sicilia).
- 101638. *Italia* (Incrocio Pirovano 65).
- 101639. *Lambrusco di Sorbara* (Modena).
- 101640. *Lattinario nero*.
- 101641. *Moscato di Terracina*.
- 101642. *Moscato fior d'Arancio*.
- 101643. *Uva Regina*.
- 101644. *Zibibbo siciliano*.

101645 to 101660. Poaceae. Grass.

From Manchuria. Seeds purchased from L. Puitsin, Harbin. Received January 9, 1933.

A collection of forage grasses from the prairie region around Harbin, northern Manchuria.

101645. *AGROPYRON SEMICOSTATUM* Nees.

A perennial fibrous-rooted grass with erect stems and narrowly linear leaves. Native to Asia from Afghanistan to Manchuria.

For previous introduction see 90126.

101646. *AGROPYRON SIBIRICUM* (Willd.) Beauv.

An upright caespitose perennial grass, up to 16 inches high, with linear leaves. It is very drought resistant and is native from the Caucasus region in southern Europe to Manchuria.

For previous introduction see 98536.

101647. *BROMUS INERMIS* Leyss.
Common bromegrass.

101648. *CALAMAGROSTIS EPIGEJOS* (L.) Link.

A stout perennial grass, native to Manchuria, which grows on rather poor soil and is rather abundant.

For previous introduction see 94295.

101649. *CHAETOCCHLOA LUTESCENS* (Weigel) Stuntz (*Setaria glauca* Beauv.).

Found in damp meadows near Harbin.

101650. *CHAETOCCHLOA VIRIDIS* (L.) Scribn.

101651. *CHLORIS VIRGATA* Swartz.
Feather fingergrass.

101652. *CHAETOCCHLOA VIRIDIS* (L.) Scribn.

For previous introduction see 101650.

101653. *DIGITARIA ISCHAEMUM* (Schreb.) Muhl.

101654. *ECHINOCHLOA CRUGALLI* (L.) Beauv.

101645 to 101660—Continued.

101655. *ECHINOCHLOA CRUGALLI* MITIS (Pursh) Peterm.

101656. *ELYMUS DAHURICUS* Turcz.

101657. *ERAGROSTIS CILIANENSIS* (All.) Link.

101658. *ERAGROSTIS PILOSA* (L.) Beauv.

101659. *ERIOCHLOA VILLOSA* (Thunb.) Kunth.

101660. *KOELERIA CRISTATA* (L.) Pers.

101661. *CINCHONA SUCCIRUBRA* Pavon.
Rubiaceae.

From Jamaica. Seeds presented by M. S. Goodman, superintendent of Hope Gardens, Kingston. Received January 14, 1933.

The bark of this tree contains a large quantity of alkaloids, of which a relatively large percentage is cinchonidine, which retards the separation of the quinine as sulphate. The bark matures in the fourth or fifth year and does not increase in quinine content thereafter.

For previous introduction see 100988.

101662. *FERONIA LIMONIA* (L.) Swingle. Rutaceae. Wood-apple.

From French Indo-China. Seeds presented by M. Poilane, Institut des Recherches Agronomique de l'Indochine, Division de Botanique. Received January 17, 1933.

A small very graceful thorny tree, native to India, where it thrives in exhausted soil in which no other tree can grow. The round fruits, about 2 inches in diameter, contain rather dry sweetish aromatic pulp, suitable for making jelly.

For previous introduction see 95594.

101663 to 101694.

From China. Scions collected by Peter Liu, of Peiping, and sent through Owen L. Dawson, agricultural commissioner, Shanghai. Received January 16, 1933.

101663 to 101689. *AMYGDALUS* spp.
Amygdalaceae. Peach.

101663 to 101669. *AMYGDALUS PERSICA* L.

From the village of Shangchihtsun, west of Feicheng, Shantung.

101663 to 101666. *Ta Tao*, or Fel peach.

101663. No. 1. 101665. No. 3.

101664. No. 2. 101666. No. 4.

101667 to 101669. *Ta Tao*, or Fel peach. A large clingstone.

101667. No. 5. 101669. No. 7.

101668. No. 6.

101670 to 101673. *AMYGDALUS PERSICA* PLATYCARPA (Decaisne) Ricker.
Flat peach.

Pien Tzu, from the village of Sunchiachuang, south of Feicheng.

101670. No. 8. 101672. No. 10.

101671. No. 9. 101673. No. 11.

101674 to 101689. *AMYGDALUS PERSICA* L.

101663 to 101694—Continued.

101674 to 101676. *Ku Chu'a Hung*, meaning millet season red peach. Collected near Shangchihsun. A freestone which ripens in August.

101674. No. 12. 101676. No. 14.

101675. No. 13.

101677 to 101689. *Ta Tao*, or Fei peach. A large clingstone which ripens in early September.

101677 to 101686. From near the village of Sunchiachuang, south of Feicheng.

101677. No. 15. 101682. No. 20.

101678. No. 16. 101683. No. 21.

101679. No. 17. 101684. No. 22.

101680. No. 18. 101685. No. 23.

101681. No. 19. 101686. No. 24.

101687 to 101689. From the village of Tiaochiatun, south of Feicheng.

101687. No. 25. 101689. No. 27.

101688. No. 26.

101690 to 101692. *CASTANEA MOLLISSIMA* Blume. Fagaceae. Hairy chestnut.

Collected in an orchard near the village of Chunyangkou, northeast of Tai'an, Shangtung.

101690. *Tsao* or *Ts'ao*; early chestnut. Said to ripen the end of August or early in September.

101691. *Mao Lee Tzu*; hairy chestnut. Said to ripen the middle of September.

101692. *Ming* or *Min Lee Tzu*; late chestnut. A seedling which ripens the middle of September.

101693 and 101694. *DIOSPYROS KAKI* L. f. Diospyraceae. Kaki persimmon.

Secured through Chu Li Chi, a persimmon storage owner, at the village of Hsiangtang, north of Tangshan Hot Spring, Hopeh.

101693. *Ch'u Tou Shih Tzu*; lantern persimmon.

101694. *Tai Kai Shih*; large persimmon.

101695 to 101702.

From Mexico. Seeds presented by Dr. C. A. Purpus, Zacuapam, Huatusco, Vera Cruz. Received January 14, 1933.

101695. *ACROCOMIA MEXICANA* Karw. Palm. Phoeniceaceae.

Collected at 800 feet altitude and found in the cooler regions of Mexico up to 3,000 feet. A prickly palm about 20 feet high, with a brown, woolly trunk over a foot thick and terminal leaves from 6 to 8 feet in length. The sheathing bases of the leaves are armed with long black spines, and the spathe also is very spiny. The fragrant yellow flowers are followed by round fruits in very long clusters.

101696. *ATTALEA COHUNE* Mart. Phoeniceaceae. Cohune.

A magnificent feather-leaved palm native to the West Indies and Central America where it reaches a height of 40

101695 to 101702—Continued.

feet, with leaves 20 feet long produced abundantly at the top of the trunk. The yellowish flowers are borne very freely, and the ovoid fruit, 2 to 3 inches long, contains a seed or nut which yields a valuable oil of high quality, used for cooking purposes.

For previous introduction see 98545.

101697. *CERATOZAMIA MEXICANA* Brongn. Cycadaceae.

A handsome cycad from southeastern Mexico, with a short thick ovoid trunk crowned with a whorl of rich dark-green pinnate leaves several feet in length. An excellent decorative plant, best grown in sandy loam.

101698 to 101701. *CHAMAEDOREA* spp. Palm. Phoeniceaceae.

101698. *CHAMAEDOREA ELATIOR* Mart.

A low palm collected between 800 and 900 feet altitude at Zacuapam, Vera Cruz. It has a flexuous stem 10 to 15 feet high and pinnate leaves 6 to 8 feet long. Native to southern Mexico.

101699. *CHAMAEDOREA ELEGANS* Mart. Pacayito. Phoeniceaceae.

Collected between 800 and 900 feet altitude. A handsome dwarf palm, native to southern Mexico and Central America. It is an excellent ornamental house plant, as it will tolerate shade to a greater extent than many other plants, and often comes into flower when not over a foot high. The deep-green finely pinnate graceful leaves are very attractive.

101700. *CHAMAEDOREA SARTORII* Liebmann.

A palm, native to southern Mexico, with a trunk 8 to 15 feet high, covered with the bases of the leaf petioles. The pinnately compound leaves, 3 to 4 feet long, are made up of alternate falcate pinnae 12 inches long, and the oval black fruits are less than an inch long.

101701. *CHAMAEDOREA TEPEJILOTE* Liebmann.

A palm, native to southern Mexico, up to 10 feet high, with pinnate leaves about 4 feet long. The undeveloped inflorescence is eaten as a vegetable.

For previous introduction see 93281.

101702. *GOSSYPIUM* sp. Malvaceae. Cotton.

Collected in a garden at Rinconada, Vera Cruz.

101703. *ANTIGONON GUATIMALENSE* Meisn. Polygonaceae.

From Cuba. Tubers presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received January 19, 1933.

Throughout the American Tropics one of the most popular and conspicuous ornamental herbaceous climbers is the *Rosa de montana* (*Antigonon leptopus*), with its showy racemes of rose-pink flowers. The species, *A. guatimalense*, while much less common in cultivation, has more numerous flowers that are deeper pink and nearly twice as large.

101704 and 101705. *CASTANEA CRENATA*
Sieb. and Zucc. Fagaceae.
Japanese chestnut.

From Japan. Seeds purchased from the
Yokohama Nursery Co., through their
New York office. Received January 18,
1933.

101704. *Akita-ken*. Collected in Sen-
hoku-gun, Kakudate, Eirimoho, Japan.

101705. *Aomori-ken*. From Sanhohe-gun,
Nakui Mura, Nakuideake, Japan.

101706 to 101724.

From the Union of Soviet Socialist Repub-
lics. Plants and cuttings presented by
the Horticultural Experiment Station at
Sochi, Black Sea district. Received Janu-
ary 19, 1933.

101706 to 101711. *CORYLUS* spp. Betu-
laceae. Filbert.

101706. *CORYLUS AVELLANA* L.

Cherkessky. A locally grown vari-
ety.

101707 to 101709. *CORYLUS MAXIMA*
Mill. Giant filbert.

101707. *Kerasund*; a round variety.

101708. *Kerasund*; a long variety.

101709. *Kerasund*; "X", no. 141861.

101710. *CORYLUS* sp.

Kudravchik. No. 141862.

101711. *CORYLUS AVELLANA* L.

Trapezund. No. 141860.

101712 to 101724. *FICUS CARICA* L. Mo-
raceae. Common fig.

101712. *Arabuly*. No. 141874.

101713. *Borgezet*.

101714. *Dalmatsky*.

101715. *Dor*.

101716. *Eriphera*.

101717. *Golden Drop*. No. 141876.

101718. *Malepira*.

101719. *Neapolitan*.

101720. *Nikiitsky*. No. 1.

101721. *Smirnsky*.

101722. *Violet*.

101723. *Violet Delicate*.

101724. *Zakavkassky Pink*. No. 141864.

101725 to 101735.

From China. Seeds purchased through
Peter Liu, of Peiping, and sent through
Owen L. Dawson, agricultural commis-
sioner, Shanghai. Received January 16,
1933.

101725. *AMYGDALUS PERSICA* L. Amyg-
dalaceae. Peach.

Mao Tao, hairy peach. Collected in
the village of Shangchihstun, Shantung.
The Chinese use this peach as a rootstock.

101726. *PHASEOLUS AUREUS* Roxb. Fa-
baceae. Mung bean.

Ming Lu Tou, or bright-green bean.
Collected near Hsiaokankechuang, north-
east of Luanchow, Hopeh. A bean used
for making vermicelli and also used in
the rice porridge in summer.

101725 to 101735—Continued.

101727. *PRUNUS JAPONICA* Thunb. Amyg-
dalaceae. Chinese bush cherry.

Ouli. A wild cherry purchased in
Peiping, but probably grown in the Ming
Tomb region.

101728 to 101735 were collected Septem-
ber 28, 1932, in the village of Hsiaokan-
kechuang, northeast of Luanchow, Hopeh.

101728 to 101730. *SOJA MAX* (L.) Piper.
Fabaceae. Soybean.

101728. *Hei Chi Huang Tou*, black
and yellow bean. The best variety
in this locality for making bean
curd.

101729. *Hsiao Ching Tou*, small green
bean. A light-green bean which is
a prolific bearer.

101730. *Ta Ching Tou*, large green
bean. Used for making sprouts and
also as a green vegetable.

101731 to 101735. *VIGNA SINENSIS*
(Toner) Savi. Fabaceae. Cowpea.

These cowpeas are mixed with kaoliang
and made into porridge. They are also
used for making sweet bean paste to
be eaten with bread at the New Year
time.

101731. *Hsiao Pai Tou*. A small
white cowpea.

101732. *Hua Yao Chiang Tou*, mean-
ing color girdled bean.

101733. *Ma Chiang Tou*. A mottled
cowpea.

101734. *Ta Pai Tou*. A large white
cowpea.

101735. *Tu Ti Lien*, which means
"face of the God of the earth",
because it is a rather dull-colored
cowpea.

101736 to 101797.

From England. Seeds purchased from W.
E. Th. Ingwersen, Ltd., Birch Farm
Hardy Plant Nursery, Sharpthorne, East
Grinstead, Sussex. Received January 13,
1933.

101736. *TANACETUM ABROTANIFOLIUM*
(L.) Druce (*Achillea abrotanifolia*
(L.). Asteraceae. Tansy.

A perennial composite with an erect
stem about 2 feet high, hairy pinnatisect
leaves, and yellow flower heads in
corymbs. Native to southeastern Asia.

101737 to 101748. *ACHILLEA* spp. As-
teraceae. Yarrow.

101737. *ACHILLEA ALPINA* L.

An attractive much-branched, alpine
perennial, with smooth sessile pin-
natisect leaves and terminal corymbs
of golden-yellow flowers. It is very
similar to *A. ptarmica*. Native to
the Alps.

101738. *ACHILLEA CLAVENNAE* L.

A dwarf alpine perennial herb up
to 10 inches high, native to Europe.
The deeply divided leaves are dentate
at the tip, but the segments are ob-
tuse, and the white flower heads ap-
pear in the spring.

101739. *ACHILLEA DECOLORANS* Schrad.

A perennial with a much-branched
stem, linear-acute serrate leaves, and

101736 to 101797—Continued.

dense corymbs of pale yellow flowers. It is of garden origin.

101740. ACHILLEA HERBAROTA All.

A dwarf tufted aromatic alpine perennial herb, native to the Alps of Europe. The undivided leaves are serrate, and the white flowers appear in May and June.

101741. ACHILLEA KELLERERI C. F. Ball.

A hybrid (*A. clypeolata* × *pseudopectinata*), one of the best for the rock garden, with long silvery leaves and umbels of white flowers.

101742. ACHILLEA KOLBIANA Hort.

A name for which a place of publication and a description have not been found.

101743. ACHILLEA LEWISII S. Arnott.

A hybrid between *A. rupestris* and *A. tomentosa*; one of the choicest of the smaller hybrid yarrows. It has a neat habit and attractive small flat clusters of pale-yellow flower heads.

101744. ACHILLEA NEILREICHHI Kern.

A perennial with a creeping woody rhizome and a stiff upright woolly stem. The gray-green bipinnate leaves are hairy on both sides, and the yellow flowers are in small heads arranged in a flat raceme. Native to eastern Europe and closely related to *A. nobilis*.

101745. ACHILLEA PSEUDO-PECTINATA Janka.

An erect herb with sessile pectinate-pinnatifid leaves and yellow flowers in lax clusters. Native to sandy places in southeastern Europe.

101746. ACHILLEA RUPESTRIS Huter.

A laxly caespitose perennial with erect or ascending stems 3 to 9 inches tall, small gray-green, glandular, spatulate, usually entire leaves less than 1 inch long, and white flower heads in small umbels. Native to Italy.

101747. ACHILLEA SPECIOSA Henckel.

A perennial herb about 3 feet high, with lanceolate sessile serrate leaves and white flowers in terminal and axillary corymbs.

101748. ACHILLEA WILCZEKIANA Vacc.

A hybrid between *A. herbarota ambigua* and *A. nana*, with fine silvery gray, coarsely serrate leaves and long panicles of white flowers.

101749 to 101755. ALYSSUM spp. Brassicaceae.

101749. ALYSSUM DIFFUSUM Tenore.

An alpine plant, native to central Europe, with a widely branched, herbaceous stem, linear-lanceolate hairy leaves, and flowers in simple racemes.

101750. ALYSSUM HALIMIFOLIUM Willd.

A woody procumbent perennial with cuneate, lanceolate or linear, obtuse white-hairy leaves and white flowers. Native to dry places in southern Europe.

101736 to 101797—Continued.

101751. ALYSSUM ROCHELII Andrz.

A laxly procumbent plant with hairy lanceolate leaves and yellow flowers in short dense racemes. It is native to Germany and resembles *A. wulfenianum* in flowers and fruits.

101752. ALYSSUM SAKATILE L. Goldentuft.

Variety *citrinum*.

101753. ALYSSUM SERPYLLIFOLIUM Desf.

A woody perennial with numerous erect slender stems, spatulate rigid ash-colored leaves, and many small yellow flowers in terminal corymbs. Native to the Mediterranean region.

101754. ALYSSUM SPINOSUM L.

Roseum. A rosy flowered form of this European woody-stemmed dwarf perennial, which usually has many small white flowers on spiny branches and lanceolate silvery leaves.

101755. ALYSSUM WULFENIANUM Willd.

An alpine perennial, hairy throughout, with a short ascending stem, oblong-spatulate leaves, yellow flowers, and pods twice as long as *A. montanum*, which it resembles closely. Native to Germany.

101756 to 101761. ANTHEMIS spp. Asteraceae.

101756. ANTHEMIS CARPATICA (*A. styriaca* Vest.) Willd.

An alpine perennial from central Europe which forms a tuft of short leafy stems bearing solitary flower heads with white rays and yellow disks.

For previous introduction see 95465.

101757. ANTHEMIS CUPANIANA Hort.

A name for which a place of publication and a description have not been found.

101758. ANTHEMIS HAUSSKNECHTII Boiss. and Reut.

An annual daisylike plant with erect hairy stems 2 inches or more high, ovate-oblong tripinnatisect leaves, and flowers with white rays and violet centers. Native to Asia Minor.

For previous introduction see 95461.

101759. ANTHEMIS RUDOLPHIANA Adam.

A caespitose perennial with simple stems 3 to 5 inches high, silky pinnatifid leaves, and yellow flower heads. Similar to *A. montana* and native to southeastern Europe.

101760. ANTHEMIS SANCTI-JOHNANNIS Stoy., Steff., and Turfill.

An ornamental perennial herb 3 to 4 feet high, native to the mountain slopes of Bulgaria at 4,000 feet altitude. The few branched woolly stems have 2- to 3-times partly pinnate basal leaves 5 to 7 inches long, the tips of which are armed with hard white acuminate points. The stem leaves are similar but gradually smaller, leaving bare stems 3 to 7 inches below the flower heads, which are solitary and 1 to 2 inches broad. The ray flowers and

101736 to 101797—Continued.

disk are an intense orange, making a brilliant contrast to the woolly leaves.

For previous introduction see 95464.

101761. *ANTHEMIS CARPATICA* Willd. (*A. styriaca* Vest).

For previous introduction and description see 101756.

101762 to 101772. *AQUILEGIA* spp. Ranunculaceae. Columbine.

101762. *AQUILEGIA ALPINA* L. Alpine columbine.

An alpine perennial herb about 12 inches high, native to Switzerland. The biternate leaves have deeply lobed divisions 1 to 2 inches long, and the expanded flowers are 2 inches across with blue sepals and white petals; the incurved spurs are as long as the petals.

101763 and 101764. *AQUILEGIA BERNARDI* Gren. and Godr.

101763. A plant about 2 feet high with large biternate leaves with trifid leaflets and 3 to 7 large blue flowers. Native to France.

101764. Variety *alba*. A form with white flowers.

101765. *AQUILEGIA CLEMATIDIFLORA* Hort.

A name for which a place of publication and a description have not been found.

101766. *AQUILEGIA DISCOLOR* Lev. and Leresche.

An alpine plant, native to Spain, with a thick rhizome, smooth biternate leaves, and flowers with sky-blue petaloid sepals and white petals.

101767. *AQUILEGIA ESCALCARATA* Hort.

A name for which a description and a place of publication have not been found.

101768. *AQUILEGIA EINSELEANA* F. W. Schultz.

A columbine from the Alps of western Germany, with stiff, ternate, incised or crenate leaves and blue flowers, smaller than those of *A. alpina*.

101769. *AQUILEGIA BERTOLONII* Scott (*A. reuteri* Boiss.).

An alpine plant over a foot high, with long stemmed, biternate, incised-lobed basal leaves and pale-blue flowers. Native to the Alps.

101770. *AQUILEGIA STUARTI* Balf. f.

A garden hybrid between *A. glandulosa* and *A. vulgaris* variety *olympica*, with lilac-blue flowers of large size having short incurved spurs.

101771. *AQUILEGIA SUAVEOLENS* P. Bruhl.

A plant up to 2 feet high, with biternate membranous leaves and 5 to 12 purplish or violet flowers, sometimes white, 1 to 2 inches long. Native to northern India.

101772. *AQUILEGIA* sp.

101773. *ASTER FALCONERI* Hutchinson. Asteraceae.

101736 to 101797—Continued.

An aster from high altitudes in Kashmir, India, with a stem a foot or more high. The radical leaves, oblong-lanceolate, are gradually narrowed to a very short petiole. The disk flowers are yellow, the rays bluish or white, and the flower head is 3 inches across.

101774. *BERBERIS FARRERI* Hort. Berberidaceae. Barberry.

A name for which a place of publication and a description have not been found.

101775. *BUPHTHALMUM SALICIFOLIUM* L. Asteraceae. Willowleaf oxeye.

A perennial herb, native to northern Europe, with slightly serrate, willowlike leaves and solitary flower heads with long yellow rays.

For previous introduction see 95669.

101776. *CASSIOPE FASTIGIATA* (Wall.) D. Don. Ericaceae.

A beautiful free-flowering alpine shrub about 9 inches high, native to southwestern China, where it is found in shady situations in moist peaty well-drained soil between 12,000 and 13,000 feet altitude. The tiny leaves are imbricated in four rows, giving the stem a four-sided appearance, and they have white membranous ciliated margins. The solitary, white, bell-shaped flowers have the corolla segments recurved, showing the pink center and curious awned stamens like those of the arbutus.

For previous introduction see 100158.

101777. *CHRYSANTHEMUM MAWII* Hook. f. Asteraceae.

A short woody perennial, native to Morocco, forming bushes up to 2 feet high, like the marguerite, with small woolly gray triangular-oblong pinnatifid leaves. The long-stalked flowers are to 2 inches across and have red-purple disks and three-toothed white rays which are reddish on the back.

For previous introduction see 97600.

101778. *CHRYSANTHEMUM ZAWADSKII* Herbich. Asteraceae.

A tufted herbaceous perennial about a foot high, native to Galicia, with rosetted flowers which appear throughout the summer.

For previous introduction see 95482.

101779. *CREMANTHODIUM FARRERI* W. W. Smith. Asteraceae.

A stately plant with pendulous globular flower heads of pure white that deepen to dark dull claret as they fade. The stems are up to 20 inches high, and the basal leaves, ovate and papery, are 4 to 5 inches long. Native to Upper Burma.

For previous introduction see 95617.

101780. *DAPHNE MEZEREUM* L. Thymelaeaceae. February daphne.

Variety *album*. A form with white flowers.

101781. *HOSTA JAPONICA TARDIFLORA* (Leichtlin) Bailey. Liliaceae.

A form of the narrow-leaved plantainlily with dark-green, long-pointed leaves on short, margined petioles, and light-purple flowers appearing in autumn on

101736 to 101797—Continued.

branched racemes sometimes bearing as many as 50 flowers.

101782. IRIS KUMAONENSIS Wall. Iridaceae.

A dwarf iris 2 to 12 inches high, native to the western Himalayas from Kashmir to Kumaon between 8,000 and 12,000 feet altitude. The flaccid linear leaves are 12 to 14 inches long, and the solitary flowers have a perianth tube 2 to 3 inches long. The bright-lilac falls, 1 to 2 inches long, are blotched with darker lilac, and the claw has a beard of yellow-tipped hairs on a white crest. The erect oblong standards are one-half inch broad.

101783. IRIS NEPALENSIS D. Don. Iridaceae.

A dwarf iris with a slender stem 6 to 12 inches high, native to India and western Tibet between 5,000 and 10,000 feet altitude. The linear leaves, 6 inches long at flowering time, become 2 feet long and are streaked with purple lines and dots. The spathes bear 1 to 3 pale-lilac flowers, the falls having a yellow crest. The erect oblong petals are one third of an inch broad.

101784 to 101788. LILIUM spp. Liliaceae. Lily.

101784. LILIUM ALBANICUM Griseb.

An alpine lily with an erect stem a foot high, lanceolate acuminate leaves about 2 inches long, and solitary nodding yellow flowers an inch or more in length. Native to southeastern Europe.

101785. LILIUM CARNIOLICUM Bernh.

A lily with a stem 2 to 3 feet high, native to southern Europe. The 30 to 40 lanceolate erect leaves are 2 to 3 inches long, the 1 to 10 orange-red flowers, 2 inches across, are dotted with purple black, and the waxy reflexed segments are papillose inside. The odor is said to be rich and heavy but not unpleasant.

101786. LILIUM HELDREICHII Freyn.

A lily, native to Greece, with stems 2 to 3 feet high, bearing narrow scattered leaves and 1 to 4 orange-red flowers, tinged with yellow outside, which appear early in July.

For previous introduction see 95490.

101787. LILIUM MONADELPHUM Bieb. Great Caucasian lily.

Variety *szovitzianum*. A form which differs from the type in having larger yellow flowers more thickly dotted with purple.

101788. LILIUM sp.

101789. NARCISSUS JUNCIFOLIUS RUFICOLUS (Dufour) Baker. Amaryllidaceae.

A small slender bulbous perennial, native to Spain and Portugal. The narrow rushlike leaves are 6 inches long, the slender terete scape is 6 to 12 inches high, the 1 to 4 bright-orange flowers, less than an inch across, have very short pedicels, and the crown is six lobed.

101790 to 101792. PENTSTEMON spp. Scrophulariaceae.

101790. PENTSTEMON CENTRANTHIFOLIUS Benth. Scarlet-bugler.

101736 to 101797—Continued.

A glaucous perennial herb 1 to 3 feet high, native to California. The ovate to oblong-lanceolate leaves, 2 to 3 inches long, have a subcordate clasping base, and the tubular bright-vermilion flowers are 1 inch long.

101791. PENTSTEMON CYRANTHUS Hook.

A glaucous herbaceous perennial, 2 to 3 feet high, native to the Rocky Mountains. The lower leaves are oblong to spatulate and the upper are ovate to subcordate. The slightly bulging funnelliform flowers, an inch long, are bluish purple.

101792. PENTSTEMON FRUTICOSUS (Pursh) Greene.

A perennial herb, 6 to 16 inches high, with simple stems ascending from a branched woody base, native to northwestern America. The glabrous coriaceous leaves, 1 to 2 inches long, are lanceolate to ovate, and the tubular-funnelform, dull-purple flowers, 1 to 2 inches long, are borne in a racemose panicle.

101793. RANUNCULUS GRAMINEUS L. Ranunculaceae. Grassy buttercup.

A smooth herbaceous perennial with rosettes of linear to lanceolate leaves and bright-yellow flowers on stalks 6 to 12 inches high. It is native to Europe.

For previous introduction see 97620.

101794. SALVIA HIANIS Royle. Menthaceae. Sage.

A viscid-hairy perennial herb 2 to 3 feet high, native to the temperate Himalayas in India between 8,000 and 11,000 feet altitude. The cordate, toothed leaves, 4 to 7 inches long, have petioles often 10 inches long, and the blue flowers, 1 to 2 inches long, with very inflated throats, are borne in large spreading panicles.

101795. SALVIA MOORCROFTIANA Wall. Menthaceae. Sage.

A tall robust woolly perennial herb, native to the lower Himalayas in India. The cordate-oblong, doubly crenate leaves are 6 to 12 inches long, the upper ones being 1 inch in diameter and white or rose colored. The slender rose-colored flowers, 1 inch long, are borne in branched panicles.

101796. TRICYRTIS HIRTA Hook. Melanthiaceae. Hairy toadlily.

A perennial herb, 1 to 3 feet high, covered with soft whitish spreading hairs. The cordate-lanceolate leaves clasp the stem, and the white lilylike flowers are covered with purple spots. It is native to Japan.

For previous introduction see 95678.

101797. VIOLA DELPHINANTHA Boiss. Violaceae. Violet.

An alpine violet from the mountains of Greece, with a woody rhizome, an erect stem crowded with linear-lanceolate leaves, and blue flowers appearing in July and August.

101798. SESAMUM ORIENTALE L. Pedaliaceae. Sesame.

101798—Continued.

From Palestine. Seeds presented by the Director of Agriculture, Forests and Fisheries, Jerusalem. Received January 17, 1933.

Introduced for the use of Department specialists.

101799. *SALIX ALBA CAERULEA* (J. E. Smith) Koch. Salicaceae.

Cricketbat willow.

From England. Cuttings presented by Dr. Arthur W. Hill, Director, Royal Botanic Gardens, Kew, through Henry Dawes, secretary to the American Ambassador, London. Received November 4, 1926. Numbered in January 1933.

A form of the white willow with olive-green twigs and leaves with glaucous-blue undersurfaces.

101800 and 101801.

From Indo-China. Seeds collected in Cochinchina and presented by M. Poilane, Institut des Recherches Agronomiques de l'Indochine, Division de Botanique. Received January 17, 1933.

101800. *HIBISCUS* sp. Malvaceae.
Rosemallow.

101801. *SOLANUM MAMMOSUM* L. Solanaceae.

A strikingly ornamental, very spiny shrub covered with large globose orange-colored fruits over 2 inches in diameter.

For previous introduction see 97785.

101802 to 101805. *PHASEOLUS* spp. Fabaceae. Bean.

From Guatemala. Seeds presented by Don Jorge Garcia Salas, Guatemala City. Received January 19, 1933.

A collection of beans introduced for comparison studies with the types now being grown on the Pacific coast.

101802. *PHASEOLUS HIRSUTUS* Mart.

No. 3. Collected near Guatemala City at 4,880 feet altitude. A hairy vine with ovate-rhombic leaflets over 2 inches long, rather large flowers in long-stalked small racemes, followed by subterete pendulous pods nearly 3 inches long. Native to Brazil.

101803 and 101804. *PHASEOLUS LUNATUS* L. Lima bean.

101803. No. 1. *Ixtapacal*. A variety grown by the Indians, who consider it as of first quality. It is cultivated up to 6,000 feet altitude and is a prolific bearer.

101804. No. 2. A form collected in the wild that shows great variation in the color of the seeds. Collected at 3,600 feet altitude.

101805. *PHASEOLUS* sp.

No. 4. A wild species common in cultivated fields near Guatemala City.

101806 to 101875.

From Morocco. Plants presented by H. Brayard, directeur de la Ferme Experimentale, Marrakech. Received January 21, 1933.

Received under the following varietal names and numbers:

101806 to 101875—Continued.

101806 to 101819. *AMYGDALUS COMMUNIS* L. Amygdalaceae. Almond.

101806. H. 1, no. 11.

101807. H. 2, no. 14.

101808. H. 3, no. 13.

101809. H. 7, no. 12.

101810. H. 6, no. 10.

101811. H. 10, no. 4.

101812. H. 11, no. 2.

101813. H. 12, no. 3.

101814. H. 13, no. 1.

101815. H. 14, no. 5.

101816. H. 5, no. 6.

101817. H. 15, no. 7.

101818. H. 16, no. 9.

101819. H. 17, no. 8.

101820 to 101838. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.

101820. *Alberge Jaune*, no. 45.

101821. *Alberge Jaune d'Octobre*, no. 44.

101822. *Amarillo de Calenda*, no. 63.

101823. *Bienvenida*, no. 65.

101824. *Brugnon Adèle*, no. 52.

101825. *Charles Ingouf*, no. 43.

101826. *De Confentes*, no. 57.

101827. *De Reus*, no. 64.

101828. *Dymen*, no. 58.

101829. *Henri Adenot*, no. 67.

101830. *Infante Elisabeth*, no. 61.

101831. *Lima de Dolorès*, no. 62.

101832. *Madeleine Jaune de Brunel*, no. 53.

101833. *Madeleine Jaune Noble*, no. 54.

101834. *Pavis Rouge de la Madeleine*, no. 51.

101835. *Précoce d'Ampuis*, no. 56.

101836. *Peregrine*, no. 59.

101837. *Sélecto del Pring del Junio*, no. 60.

101838. *Suzanne Darmon*, no. 55.

101839. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.

Craoisi de Gascogne, no. 70.

101840 to 101854. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

101840. *Angoumois*, no. 18.

101841. *Blanc rose à confire*, no. 50.

101842. *Bullida*, no. 23.

101843. *Canino*, no. 27.

101844. *Carmelos*, no. 20.

101845. *De Anton*, no. 25.

101846. *Defarge*, no. 24.

101847. *Giletan*, no. 15.

101848. *Gros Précoce*, no. 16.

101849. *H. Brayard*, no. 66.

101806 to 101875—Continued.

101850. *Kaisha*, no. 17.101851. *Précoce d'Alexandrie*, no. 19.101852. *Précoce Bruel*, no. 21.101853. *Primerizo*, no. 26.101854. *Real Fino*, no. 22.101855 to 101859. *PRUNUS DOMESTICA* L.
Amygdalaceae. Common plum.101855. *Akubotankio*, no. 40.101856. *Mirabelle de Metz*, no. 68.101857. *Monsieur Hâtif*, no. 42.101858. *Reine Claude de Juillet*, no. 41.101859. *Reine Claude de Quillins*, no.
69.101860 to 101863. *PYRUS COMMUNIS* L.
Malaceae. Common pear.101860. *Bergamote d'ete*, no. 48.101861. *Blanchet Claude*, no. 47.101862. *Précoce de Trevoux*, no. 46.101863. *Sucre vert*, no. 49.101864 to 101875. *VITIS VINIFERA* L.
Vitaceae. European grape.101864. *Elisabeth Krasznay*, no. 28.101865. *Honigber*, no. 33.101866. *Kossuth Lazos*, no. 38.101867. *Meezes*, no. 35.101868. *Millinaire hongrois*, no. 37.101869. *Milton*, no. 30.101870. *Muscat Ottonel*, no. 36.101871. *Muscat Szanter*, no. 34.101872. *Jean Mathiasz*, no. 39.101873. *Perle de Casserba*, no. 29.101874. *Rieshing* × *Sylvaner*, no. 32.101875. *Souvenir à la Reine Elisabeth*, no. 31.101876. *PHASEOLUS LUNATUS* L. Fabaceae.
Lima bean.

From Madagascar. Seeds purchased through Percy G. Kemp, American vice consul, Tananarive. Received January 20, 1933.

Introduced for comparison with types now grown on the Pacific coast.

101877 to 101879. *CITRUS* spp. Rutaceae.

From Morocco. Scions presented by G. Ducrocq, horticulteur, Casablanca. Received January 27, 1933.

Received under the following varietal names:

101877. *CITRUS MEDICA* L. Citron.
Cedrat Carowant.101878. *CITRUS NOBILIS DELICIOSA* (Ten.) Swingle. Mandarin orange.
Mandarine Commune.101879. *CITRUS SINENSIS* (L.) Osbeck. Orange.*Orange Sanguine ovale. Jouble fine.*101880. *PRUNUS PROSTRATA* Labill. Amygdalaceae. Mountain cherry.

From England. Plants presented by Capt. Collingwood Ingram, Benenden, Kent. Received January 28, 1933.

A low, wide-spreading, deciduous shrub 3 feet or less high, with sharply serrate, broadly ovate leaves, pubescent beneath and over an inch long. The rose-colored flowers are less than an inch across. Native to the Mediterranean region and to western Asia.

101881 to 101890.

From Norway. Scions presented by Dr. P. Stedje, director, Statens Foøgsstasjon for Fruktdyrkning, Njøs, Songnefjord. Received January 30, 1933.

101881 to 101889. *MALUS SYLVESTRIS* Mill. (*Pyrus malus* L.). Malaceae. Apple.

Received under the following varietal names:

101881. *Hardanger Rosenstrips*.101882. *Haugmann*. Origin, Norway. Skin, greenish yellow covered with carmine red stripes and spots on the exposed side. Good cooking and dessert apple. Season, October to Christmas.101883. *Kaupanger*. Origin, Norway. Skin, greenish yellow overlaid on the exposed side with stripes of dark crimson. A good dessert apple. Season, December to February.101884. *Oskaug*. A late red apple.101885. *Red Rosenstrips*. Distributed well over the Scandinavian Peninsula. A beautiful red dessert variety. Season, October to December.101886. *Reinar*.101887. *Rondesveit*.101888. *Torstein*. Grown on the west coast of Norway. Skin, greenish yellow, coloring to a strong carmine red, especially on the exposed side. A good dessert apple. Season, December to June.101889. *Stor Torstein*. Similar to the *Torstein* except that the fruits are larger.101890. *PRUNUS CERASUS* L. Amygdalaceae. Sour cherry.Received as *Skyggekirsebaer*.101891 to 101902. *CORYLUS* spp. Betulaceae. Filbert.

From the Union of Soviet Socialist Republics. Seeds presented by V. Lichagov, horticulturist, Sochi, Black Sea district. Received January 27, 1933.

Received under the following varietal names:

101891 to 101900. *CORYLUS AVELLANA* L. Betulaceae.101891. *Barcelona*, no. 141812.101892. *Barcelona eckige*, no. 141813.101893. *Cherkessky I*, no. 141816.101894. *Cherkessky II*, no. 141817.101895. *Imperatrice Eugene*, no. 141814.

101891 to 101902—Continued.

101896. *Kadetten Zeller nus s*, no. 141808.

101897. *Koodryevchik*, no. 141815.

101898. *Lombardsky red*, no. 141807.

101899. *Lombardsky white*, no. 141811.

101900. *Trapezund*, no. 141810.

101901 and 101902. *CORYLUS MAXIMA* Mill. Giant filbert.

Kerasund. Best of quality and an excellent keeper.

101901. No. 141818. A long variety.

101902. No. 101809. A round variety.

101903 to 101906. *DIOSPYROS KAKI* L. f. *Diospyraceae*. Kaki persimmon.

From China. Scions collected northeast of Taian, Shantung, by Peter Liu, Peiping. Received January 31, 1933.

101903. *Fang Shih*, or square persimmon. From an orchard near Mata village. This rather flat persimmon, about 1 inch high and 2 inches across, is used for making persimmon cakes or as dry persimmons.

101904. *Niu Hsin Shih Tzu*, or heart persimmon. From an orchard near Mata village. The fruit is about 2 inches high and 2 inches thick, and the pointed top makes it somewhat heart-shaped. It is one of the most common varieties of the region and ripens in October.

101905. *Ta Ho Shih*, or large-box persimmon. A large persimmon 2 inches high and sometimes 4 inches wide, collected near the village of Liuchia-chuang. This is a common variety in this region.

101906. *Yo Ho Fang Shih*, the seeded square persimmon. A rather rare variety collected near the village of Liuchia-chuang.

101907. *SACCHARUM OFFICINARUM* L. *Poaceae*. Sugarcane.

From Barbados, British West Indies. Cuttings presented by the Director of Agriculture. Received February 1, 1933.

101908. *SACCHARUM OFFICINARUM* L. *Poaceae*. Sugarcane.

From the Hawaiian Islands. Cuttings presented by the experiment station of the Hawaiian Sugar Planters' Association, Honolulu. Received February 1, 1933.

101909. *VIBURNUM SARGENTI* Koehne. *Caprifoliaceae*. Sargent cranberrybush.

From Japan. Seeds presented by the Director of the forest experiment station, Keijo, Chosen. Received January 30, 1933.

A strong-growing shrub 12 to 15 feet high, somewhat resembling *Viburnum opulus*, with broadly ovate two-lobed leaves and large clusters of bright-red fruits which are very attractive.

For previous introduction see 92071.

101910. *EREMOCITRUS GLAUCA* (Lindl.) Swingle (*Atalantia glauca* Benth.). *Rutaceae*.

Australian desert kumquat.

From Australia. Seeds presented by the Council for Scientific and Industrial Research, Canberra. Received February 2, 1933.

A shrub or small tree about 14 feet high, native to the deserts of northeastern Australia. The small, thick, leathery leaves are gray green, and the fruits are less than an inch in diameter. The acid juice of the fruit forms the basis of an agreeable beverage, and the peel has a sweetish flavor of the kumquat. It is the hardiest of all the evergreen citrus fruits and is of promise to plant breeders.

101911 to 101913. *PHLEUM PRATENSE* L. *Poaceae*. Timothy.

From Scotland. Seeds presented by McGill & Smith, Ltd., Agr. Received February 3, 1933.

101911. No. S 49.

101912. No. S 50.

101913. No. M/S 90.

101914. *PHASEOLUS VULGARIS* L. *Fabaceae*. Common bean.

From Mexico. Seeds presented by Dr. C. A. Purpus, Zacuapam, Huatusco, Vera Cruz. Received February 3, 1933.

An excellent string bean.

101915. *ELEUTHERINE PALMIFOLIA* (L.) Merr. *Iridaceae*.

From the Philippine Islands. Bulbs presented by Dr. W. Dwight Pierce. Received July 25, 1930. Numbered in February 1933.

A tropical irislike plant with white flowers an inch across, borne on a scape about 9 inches high. The 1 or 2 linear-lanceolate leaves are 12 to 18 inches long. Native to the American Tropics and naturalized in the Philippines.

101916 to 101921.

From the Union of Soviet Socialist Republics. Seeds presented by the All Union Institute of Forest Culture and Forest Melioration, Moscow. Received February 3, 1933.

101916. *BUXUS SEMPERVIRENS* L. *Buxaceae*. Common box.

An extra large form.

101917. *ELAEOAGNUS ANGUSTIFOLIA* L. *Elaeagnaceae*. Russian-olive.

101918. *LAUROCERASUS OFFICINALIS* Roemer. *Amygdalaceae*. English cherry-laurel.

From Sukhum, Caucasus. A form with very large fruits.

101919. *LILIUM MONADELPHUM* Bleb. *Liliaceae*. Great Caucasian lily.

Variety *szowitzianum*, from Bakourany, Caucasus.

For previous introduction and description see 101787.

101920. *VACCINIUM ARCTOSTAPHYLOS* L. *Vacciniaceae*.

101916 to 101921—Continued.

From Tiflis, Sachuramo, Caucasus. A deciduous shrub up to 10 feet high, native to the Caucasus region. The oblong-ovate finely toothed leaves are 2 to 4 inches long and turn purple-red in the autumn. The small bell-shaped flowers are borne in racemes 2 inches long and are white with a purple tinge. The globose purple berries are nearly one-half inch in diameter.

For previous introduction see 100278.

101921. *VICIA* sp. Fabaceae. Vetch.

From Bakouryany, Caucasus.

101922. *LOLIUM PERENNE* L. Poaceae.
Perennial ryegrass.

From New Zealand. Seeds presented by Wright, Stephenson & Co., Ltd., Wellington. Received February 7, 1933.

Introduced for the use of forage-crop specialists.

101923 to 101962.

From Scotland. Seeds presented by the Royal Botanic Garden, Edinburgh. Received February 8, 1933.

101923 to 101947. *DIANTHUS* spp. Silenaceae. Pink.

101923. *DIANTHUS ANATOLICUS* Boiss.

A somewhat woody, caespitose perennial with narrow-linear acute leaves and pale-rose flowers on rough stems a foot or more high. Native to Asia Minor.

101924. *DIANTHUS BREVICAULIS* Fenzl.

A low caespitose plant, with erect, glaucous, linear-grooved leaves and small red-purple flowers borne singly. Native to the Taurus Mountains of Asia Minor.

101925. *DIANTHUS CAESIUS* J. E. Smith. Cheddar pink.

A glaucous tufted perennial a foot high native to Europe. The simple or forked four-angled stems have linear-lanceolate leaves and bear 1 or 2 fragrant rose-colored flowers with irregularly dentate petals.

101926. *DIANTHUS CALOCEPHALUS* Boiss.

A perennial herb 2 to 3 feet high, with linear acute leaves 2 to 3 inches long and numerous fire-red flowers. Native to Asia Minor.

101927. *DIANTHUS CRINITUS* J. E. Smith.

A dwarf plant with very short linear leaves and a smooth stem bearing 2 to 4 erect purplish flowers. Native to Armenia.

101928. *DIANTHUS GALLICUS* Pers.

A perennial with a long woody rhizome from which arise several ascending stems 6 to 8 inches high, terminated by 1 or 2 white or pale-pink flowers. The leaves are linear, obtuse, and glaucous. Native to the coast of southwestern France.

101929. *DIANTHUS GRACILIS* Sibth. and Smith.

A more or less woody perennial over a foot high, with rigid linear acute

101923 to 101962—Continued.

leaves and rose-colored flowers in small clusters. Native to the Balkans.

101930. *DIANTHUS LUMNITZERI* Wiesb.

A caespitose perennial with blue-green stems about 8 inches high, narrow-linear blue-green leaves up to 2 inches long, and white flowers with fringed petals. Native to stony places in Austria.

101931. *DIANTHUS MONSPESSULANUS ALPETRIS* (Hoppe and Sternb.) F. N. Williams.

A perennial herb about a foot high, with long grasslike foliage and solitary rosy or white flowers. Native to Montpellier.

101932. *DIANTHUS PALLENS* Sibth. and Smith.

A gray-green plant with simple upright stems, linear almost flat leaves, and white night-blooming flowers with the undersides of the petals greenish purple. Native to Greece.

101933. *DIANTHUS PELVIFORMIS* Heuff.

A caespitose perennial with stems a foot high and linear leaves. The dark purplish flowers are in dense terminal heads. Native to Serbia.

101934. *DIANTHUS SPICULIFOLIUS* Schur (*D. petraeus spiculifolius* Hort.).

A caespitose perennial with numerous branched stems 6 to 12 inches high, green linear-subulate leaves, and white or rosy flowers. Native to Transylvania and Rumania.

101935. *DIANTHUS PUBESCENS* Sibth. and Smith.

A caespitose perennial with numerous decumbent simple stems 6 to 9 inches high, linear acute leaves, and purplish flowers. Native to Greece.

101936. *DIANTHUS PUNGENS* L.

A bushy perennial, native to southern Spain, with linear subulate leaves and flowers in small clusters.

101937. *DIANTHUS RUPICOLUS* Bivona.

A shrubby glabrous perennial about 1 foot high, with lanceolate or linear-lanceolate acute leaves and fragrant red flowers in corymbs. Native to Sicily.

101938. *DIANTHUS SQUARROSUS* Bieb.

A sand-loving perennial with ascending stems, crowded rigid sharp-pointed green leaves, and white flowers similar to those of *D. phumarius*. Native to the Caucasus.

101939. *DIANTHUS STRUMARIUS* Hort.

A name for which a place of publication and a description have not been found.

101940. *DIANTHUS SUBCAULIS* Vill.

A dwarf, somewhat woody, perennial with the habit of *Arenaria juniperina*. The short narrow leaves are glabrous, and the small flowers are purplish pink. Native to France.

101941. *DIANTHUS SUPERBUS* L.

A glabrous light-green perennial herb 10 to 20 inches high, native from

101923 to 101962—Continued.

Norway and Spain to Japan. The soft flat linear-lanceolate leaves are 3- to 5-nerved, and the fragrant lilac deeply lacinate flowers are borne in a lax forking panicle.

101942. *DIANTHUS TENER* Balbis.

A rather low pink with subulate-linear leaves and deep-rose flowers with fimbriate petals. Native to the mountains of Tende in France.

101943. *DIANTHUS TERGESTINUS* (Reichenb.) Kern.

A perennial herb about a foot high with narrow-linear gray-green leaves up to 4 inches long and bright-pink or carmine odorless flowers in pairs. Native to southern Europe in stony chalky situations.

101944. *DIANTHUS VELEBITICUS* Hort.

A name generally referred to *D. carthusianorum*, but without definite description.

101945. *DIANTHUS VELENOWSKYI* Borb.

A caespitose perennial with soft linear-acuminate leaves in a dense basal tuft. The rose or crimson flowers are in a paniculate cyme on stems 2 to 3 feet high. Native to the Balkan region.

101946. *DIANTHUS VIRGINEUS* L.

A perennial herb with upright or ascending stems about 1 foot high, linear three-angled leaves and fragrant red flowers. Native to southern France.

101947. *DIANTHUS WALDSTEINII* Sternberg.

A stout blue-green perennial with stems over a foot high, dichotomously branched above, stiff linear leaves, and purplish or rose-colored flowers in 5- to 13-flowered panicle cymes. Native to southern Europe.

101948 to 101952. *FUCHSIA* spp. Onagraceae.101948. *FUCHSIA BACILLARIS* Lindl.

A compact plant with short-jointed branches and very small, flaring-mouthed, rosy, drooping flowers. Native to Mexico.

For previous introduction see 97608.

101949. *FUCHSIA CODRINGTONII* Hort.

A shrubby hybrid fuchsia, about 18 inches high, with small, oval, pale-green, acute leaves less than an inch long and small, deep rose-red, trumpet-shaped, pendulous flowers borne freely in the summer.

101950 and 101951. *FUCHSIA CORYMBIFLORA* Ruiz and Pav.

For previous introduction see 97609.

101950. A handsome Peruvian fuchsia with large serrate, long-pointed leaves and deep-red flowers. The plant becomes tall but requires support in order to attain full height and is adapted for training on pillars or pergolas in the subtropical parts of the United States.

101951. Variety *alba*. A form with the calyx tube and lobes white.

101923 to 101962—Continued.

101952. *FUCHSIA PARVIFLORA* Lindl.

A shrubby fuchsia, very similar to *F. lycioides*. It has oblong or ovate leaves, sometimes serrate, and purple flowers with pale-pink calyxes. Native to Mexico.

101953. *JASMINUM PUBIGERUM* D. Don. Oleaceae. **Jasmine.**

A softly densely-villous, erect shrub native to India. The compound alternate leaves are made up of 3 to 7 suborbicular to oblong leaflets 2 inches long, and the salverform yellow flowers are borne in dense nearly sessile cymes of about 15 flowers.

101954. *RANUNCULUS GRAMINEUS* L. Ranunculaceae. **Grassy buttercup.**

For previous introduction and description see 101793.

101955 to 101962. *RHODODENDRON* spp. Ericaceae.101955. *RHODODENDRON ADENOGYNUM* Diels.

A shrub up to 9 feet high native to Yunnan, China. The leathery oblong to lanceolate leaves, 2 to 5 inches long, are dark green and rugulose above and covered beneath with a thick woolly olive-tawny indumentum. The fleshy funnel-campanulate flowers, 2 inches long, are white shaded rose at the base with many crimson spots and are borne in terminal umbels of about 12.

101956. *RHODODENDRON CALOSTROTUM* Balf. and Ward.

A low shrub about a foot high, native to northeastern Burma between 11,000 and 12,000 feet altitude. The obovate leaves, 1 inch long, are densely covered above with greenish scales, and the lower surface is pale red with numerous flaky scales. The widely funnel-shaped flowers, 1 inch long, are bright red-purple and are borne in pairs at the ends of the branchlets.

For previous introduction see 98458.

101957. *RHODODENDRON CAUCASICUM* Pall. **Caucasian rhododendron.**

A shrub seldom more than 3 feet high, native to the Caucasus region between 6,000 and 7,000 feet altitude. The ovate, obovate, or oblong leaves, 2 to 5 inches long, with more or less recurved margins, are dark green, glabrous at maturity and slightly rugulose on the upper surface, the undersurface being covered with a thin fawn to tawny or pale-rusty tomentum. The broadly campanulate flowers are yellowish or rose tinted and are borne on long erect stalks in candelabroid trusses.

For previous introduction see 98482.

101958. *RHODODENDRON CHARTOPHYLLUM* Franch.

A distinct species with the general characteristics of *R. yunnanense*, but the leaves are usually deciduous, more narrowly oblanceolate, and entirely wanting in bristles on the upper surface, which are typical of the true *R. yunnanense*. The form with leaves completely deciduous is called *R. char-*

101923 to 101962—Continued.

tophyllum praecox. No doubt the two species, both of which grow in Yunnan, hybridize freely, and this probably explains the confusion between them in gardens.

For previous introduction see 98461.

101959. RHODODENDRON GALACTINUM Balf. f.

A tree 15 to 20 feet high, native to Szechwan, China. The oblong to lanceolate leaves, 5 to 8 inches long, are glabrous and dark green above and covered beneath with buff-gray or pale-cinnamon indumentum. The bell-shaped flowers, over an inch long, are in clusters of about 15 and are pale rose with deep-crimson blotches inside.

For previous introduction see 97624.

101960. RHODODENDRON LONGISTYLUM Rehd. and Wils.

A shrub up to 7 feet high, native to western Szechwan, China. The narrowly oblanceolate coriaceous leaves, 1 to 2 inches long, are glabrous with markedly impressed veins above and are sparsely scaly beneath. The small pink, funnel-shaped flowers, less than an inch long, are borne in racemose umbels of 10 to 20.

101961. RHODODENDRON PENTAPHYLLUM Maxim. Fiveleaf azalea.

A deciduous shrub of the section *Rhodora*, up to 25 feet high, with usually five elliptic-lanceolate leaves at the ends of the branches. The rose-pink flowers, 1 to 2 inches across, are solitary or in twos, appearing before or with the leaves which turn orange or crimson in the autumn. Native to Japan.

For previous introduction see 97626.

101962. RHODODENDRON SMIRNOWII Trautv. Smirnow rhododendron.

A shrub or small tree about 20 feet high, with dark-green leaves, gray-hairy beneath, and compact heads of rose-red flowers each about 3 inches across. Native to the Caucasus region.

For previous introduction see 98476.

101963 and 101964.

From France. Seeds presented by A. Gerard, Loir et Cher. Received February 7, 1933.

101963. DAVIDIA INVOLUCRATA Baill. Cornaceae. Doves tree.

A handsome tree native to central and western China, where it reaches a height of 60 to 70 feet. In habit and foliage it resembles a linden. The bright-green oval leaves, 3 to 6 inches long, are sharply toothed and slender stalked, and the globular heads of small flowers, borne on slender nodding stalks about 2 inches long, are made unusually striking because of the 2 or 3 large white bracts of unequal length.

For previous introduction see 99159.

101964. KETELEERIA DAVIDIANA (Bertand) Beissn. Pinaceae.

A coniferous tree, native to western China, which is closely allied to the firs. It sometimes becomes 100 feet tall, in pyramidal habit, and has handsome green glossy firlike foliage. The tree is

101963 and 101964—Continued.

said to be somewhat tender to frost and, therefore, probably is adapted for growing only in the southern half of the United States.

For previous introduction see 100571.

101965 to 101967.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received February 6, 1933.

101965. ERYTHROXYLON COCA Lam. Erythroxyloaceae. Cocaine-tree.

A tropical shrub, native to Peru, 5 to 6 feet high, with slender rust-brown branches bearing clusters of obovate leaves at their tips. The yellowish flowers are borne in clusters of 3 to 5 in the axils of small scales which line the branchlets. It is grown commercially on a large scale throughout South America, also in Java and Ceylon, for the production of cocaine which is extracted from the dried leaves.

For previous introduction see 99779.

101966. ERYTHROXYLON NOVOGRANATENSE (Morris) Hieron. Erythroxyloaceae.

A tropical shrub about 10 feet high with lanceolate-oblong deep-green mucronate membranous leaves about 2 inches long and small axillary solitary white flowers tinged with green. Native to Colombia.

101967. POEPPIGIA PROCERA Presl. Caesalpinaceae.

A large tropical tree with bipinnate leaves and small yellow flowers in terminal panicles. Native to rather dry woods in Cuba.

101968. ERYTHEA LORETENSIS M. E. Jones. Phoeniceae. Palm.

From California. Seeds collected by Marcus E. Jones, of Pomona College, and presented through Frank A. Thackeray, Indio. Received February 6, 1933.

A fan palm up to 25 feet high, native to Baja California, closely related to *E. edulis*. The edible black fruits have flesh one-fourth of an inch thick, and the shiny black single seed is lozenge-shaped.

101969 to 101975. TRITICUM spp. Poaceae.

From India. Seeds presented by the Office of Crop Botanist to the Government of Bombay, Karjat, Kolaba. Received February 9, 1933.

101969 to 101971. TRITICUM DICOCUM Schrank. Emmer.

101969. No. KK 568.

101970. No. 808.

101971. *Khapli* (ordinary).

101972 to 101975. TRITICUM DURUM Desf. Durum wheat.

101972. No. 168.

101974. No. 807.

101973. No. 806.

101975. No. 809.

101976 to 101980.

From the Union of Soviet Socialist Republics. Seeds presented by Kasiev, directeur de l'Institut de Nourriture des Animaux, Ashkhabad, Turkmen. Received February 8, 1933.

101976 to 101980—Continued.

101976. *AGRIOPHYLLUM LATIFOLIUM* Fisch. and Mey. Chenopodiaceae.

A much-branched annual with ovate or subcordate, long-cuspidate leaves and small inconspicuous flowers in globular axillary clusters. Native to sandy deserts in Turkistan.

For previous introduction see 92958.

101977. *AGROPYRON ORIENTALE* (L.) Roem. and Schult. Poaceae. Grass.

An annual, much-branched grass, prostrate-ascending in habit, native to sandy places in Asia Minor and Turkistan.

101978. *AMMODENDRON CONOLLYI* Bunge. Fabaceae.

An evergreen, silky-leaved, Siberian shrub, used as a sand binder.

For previous introduction see 98202.

101979. *ARISTIDA PENNATA* Trin. Poaceae. Grass.

A grass native to Turkistan and central Asia where it is found in dry sandy places.

101980. *SMIRNOWIA TURKESTANA* Bunge. Fabaceae.

A much-branched shrub with long, almost filiform branches, and leaves reduced to a single obovate leaflet. Native to the deserts of Turkistan.

For previous introduction see 94936.

101981. *ALLIUM SATIVUM* L. Liliaceae. Garlic.

From Burma. Bulbs presented by R. A. Beals, Deputy Director of Agriculture, Irrawaddy Circle, Myaungaya, Lower Burma, through W. Gregson, Deputy Director of Agriculture, Penasserin Circle, Moulmein. Received February 13, 1933. A locally grown variety.

101982 to 101994.

From China. Scions and seeds collected in Hopeh Province by Peter Liu, Peiping. Received February 14, 1933.

101982 to 101991. *CASTANEA MOLLISSIMA* Blume. Fagaceae. Hairy chestnut.

101982. *Ta Lee Tzu*, or large chestnut of Miyun.

101983. *Wan Lee Tzu*, or late chestnut of Miyun.

101984. *Chiufen*, a seedling from an orchard near the village of Lee Yuan, north of Fangshan.

Nos. 101985 to 101991 were collected in the valley of the Silver Mountain near the Fa Hua Ssu Temple, north of Peiping. Nos. 101985 to 101987 are seedlings.

101985. *Chiufen*; ripens the latter part of September.

101986. *Erh Lu*, or second ripening chestnut; ripens in the early part of September.

101987. *Han Lu*, or late chestnut; ripens early in October.

101988. *Hu Chao*, or tiger paw. A grafted chestnut which ripens the latter part of October.

101989. *Pai Lu*, or early chestnut. This variety is always grafted.

101982 to 101994—Continued.

101990. *Short flowered*, a late chestnut.

101991. *Ta Lee Tzu*, or large chestnut; ripens the last of September. This variety is not very common.

101992. *DIOSPYROS KAKI* L. f. Diospyraceae. Kaki persimmon.

Ta Kai Shih, or large persimmon, from an orchard near the Ming Tombs, north of Peiping.

101993 and 101994. *MALUS SYLVESTRIS* Mill. (*Pyrus malus* L.). Malaceae. Apple.

From the valley east of the Fa Hua Ssu Temple to the north of Peiping.

101993. *Hsiang Kuo*, or fragrant apple; about 2 inches in diameter each way; ripens the last of August.

101994. *Summer* apple; this apple is about 3 inches in diameter one way and 2½ inches the other and ripens early in September.

101995. *LILIUM MARTAGON* L. Liliaceae. Martagon lily.

From France. Seeds presented by Dr. A. Guillaumin, Sous-Directeur du Laboratoire de Culture, Museum National d'Histoire Naturelle, Paris. Received February 14, 1933.

The martagon lily grows wild from central and southern Europe to southwestern Siberia. The stem is 3 to 6 feet high, often purple spotted, with horizontal deep-green leaves 3 to 6 inches long. The dull claret-purple flowers spotted purplish black with red anthers appear in late June and July, and from 3 to 20 flowers blossom at one time.

For previous introduction see 91260.

101996 to 101999.

From Madagascar. Seeds presented by R. Decary, Fort Dauphin, through Dr. Leon Croizat, New York, N.Y. Received February 14, 1933.

101996. *ALLUAUDIA PROCERA* Drake. Didiereaceae.

A spiny tree, sometimes 45 feet high, with few cactuslike branches resembling a giant candelabra or "trompe d'elephants." The small fleshy leaves, from the axils of which arise the spines, are obovate and less than an inch long. The very small flowers are in cymes over an inch long. Native to Madagascar.

101997. *ALOE HELENAE* P. Danguy. Liliaceae.

An aloe with a simple erect stem 3 to 12 feet high, crowned by a rosettelike cluster of fleshy leaves 1 to 3 feet long, armed with deltoid marginal prickles. The numerous reddish flowers are on a scape about 10 inches high. Native to Madagascar.

101998. *ALOE* sp. Liliaceae.

101999. *CROTALARIA* sp. Fabaceae.

102000. *TRIFOLIUM GLOMERATUM* L. Fabaceae. Clover.

From Australia. Seeds presented by F. H. Bruning, Melbourne, Victoria. Received February 17, 1933.

102000—Continued.

A clover which is useful because it grows fairly well in sour soils low in phosphate content, when these soils first come under cultivation and before other clovers have established themselves.

For previous introduction see 87469.

102001. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. Cushaw.

From China. Seeds presented by the College of Agriculture, University of Nanking. Received February 16, 1933.

102002 to 102062.

From Morocco. Cuttings presented by H. Brayard, Directeur de la Station Experimentale, Marrakech. Received February 18, 1933.

Received under the following varietal names:

102002 to 102021. FICUS CARICA L. Moraceae. Common fig.

A collection of Lerida figs introduced for the use of Department specialists.

102002. No. 16, *Abique blanche*.

102003. No. 7, *Adam*.

102004. No. 4, *Asborn prolifc*.

102005. No. 17, *Belle dame blanche*.

102006. No. 20, *Blanche de Sid-Yquem*.

102007. No. 5, *Blanquette*.

102008. No. 9, *Celestine grise*.

102009. No. 1, *Col de Signora*.

102010. No. 3, *de Dalmatie*.

102011. No. 14, *de Saint-Jean*.

102012. No. 8, *Figue-fleur*.

102013. No. 15, *Goutte d'or*.

102014. No. 10, *Grosse grise*.

102015. No. 18, *Kemedu*.

102016. No. 6, *Maitre Brugere*.

102017. No. 13, *Marseillaise*.

102018. No. 19, *Pietri*.

102019. No. 12, *Precoce de Barcelone*.

102020. No. 11, *Rolandine*.

102021. No. 2, *Trifere*.

102022 to 102029. OLEA EUROPAEA L. Oleaceae. Common olive.

102022. No. 4, *Ascolano dura*.

102023. No. 5, *Castillano*.

102024. *Cornicabra*.

102025. No. 1, *Dulce del Morocco*.

102026. No. 2, *San Agostino*.

102027. No. 3, *San Francesco*.

102028. No. 6, *Santa Catarina*.

102029. *Verdale*.

102030 to 102062. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.

102030. No. 21, *Cluster*.

102031. No. 15, *Defarge*.

102032. No. 19, *de Jouy*.

102033. No. 16, *de Mongami*.

102002 to 102062—Continued.

102034. No. 2, *de Toledo*.

102035. No. 6, *Dr. Muscle*.

102036. No. 31, *de Haut Sebou*.

102037. No. 24, *Dundonald*.

102038. No. 38, *Gros muscat roux*.

102039. No. 25, *Gros Valla*.

102040. No. 13, *Guiditta Longione*.

102041. No. 36, *Hatif de Donazzan*.

102042. No. 29, *Hatif du Sig*.

102043. No. 20, *Kossuth*.

102044. *Linzel*.

102045. No. 10, *Luizet*.

102046. No. 34, *Luizet special*.

102047. No. 37, *Muscat de Turquie*.

102048. No. 39, *Muscat hatif de Sar-daigne*.

102049. No. 41, *Muscat-peche*.

102050. No. 33, *Muscat Polonaise*.

102051. No. 26, *Orange*.

102052. No. 18, *Peche precocce*.

102053. No. 4, *Pepita dulce*.

102054. No. 23, *Precocce de Montplaisir*.

102055. No. 35, *Precocce de Roussillon*.

102056. No. 14, *Precocce Esperen*.

102057. No. 5, *Quiero piccoz*.

102058. No. 8, *Re Imberto*.

102059. No. 12, *Rouge du Roussillon*.

102060. No. 11, *Souvenir d'Amic*.

102061. No. 30, *Surprise de Mai*.

102062. No. 32, *Topa la Hoja*.

102063. TRIFOLIUM sp. Fabaceae. Clover.

From Africa. Seeds presented by the senior agricultural officer, Moshi, Department of Agriculture, Northeastern Circle, Tanganyika Territory. Received February 20, 1933.

A clover grown locally, introduced for the use of forage-crop specialists.

102064 and 102065.

From India. Seeds presented by W. O'Brien, Corsley, Hyderabad, Deccan. Received February 21, 1933.

102064. CAJANUS INDICUS Spreng. Fabaceae. Pigeonpea.

An edible variety.

102065. VIGNA SINENSIS (Torner) Savi. Fabaceae. Cowpea.

An edible variety.

102066. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

From India. Seeds purchased in Neemuch, Central India, and presented by the editor of The Seed World. Received February 27, 1932.

Introduced for the use of Department specialists.

102067. CINCHONA sp. Rubiaceae.

From Peru. Seeds presented by Col. Victor E. Ruehl, Caldwell, N.J. Received February 28, 1933.

102068. PACHIRA sp. Bombacaceae.

From Cuba. Seeds presented by W. A. Mace, Madruga. Received February 28, 1933.

The pachiras are tropical American trees, allied to Bombax, with showy pinkish or yellowish flowers.

102069. RIBES SATIVUM Syme. Grossulariaceae. Garden currant.

From Norway. Cuttings purchased from Dr. P. Stedje, Director, Statens Forsøksstasjon for Fruktdyrkning, Njøs, Sognefjord. Received February 20, 1933.

Red Holland. Received as *Rød Hollandsk.*

102070. DUBOISIA HOPWOODII F. Muell. Solanaceae. Pituri.

From Australia. Seeds presented by the Director of Agriculture, Perth, Western Australia. Received February 17, 1933.

A shrub or small tree native to Australia. The thick linear leaves are 2 to 4 inches long, and the small inconspicuous flowers, borne in leafy pyramidal panicles, are followed by small black berries. The leaves are said to contain an alkaloid similar to nicotine.

102071 to 102076.

From China. Seeds presented by the Botanic Garden, Dr. Sun Yat Sen's Memorial Park, Nanking. Received February 17, 1933.

102071. ANDROSACE SAXIFRAGAEFOLIA Bunge. Primulaceae.

A biennial, related to *A. rotundifolia*, with rounded-cordate rigid dentate leaves and white flowers the size of those of *A. villosa*. Native to northeastern China.

102072. ANEMONE CERNUA Thunb. Ranunculaceae.

A perennial herb, native to Japan, with pinnately deeply divided hairy leaves and solitary nodding flowers, the color of dragon's blood, on pubescent scapes.

102073. EUONYMUS LONGIFOLIUS Champ. Celastraceae.

A subtropical shrub with opposite narrow-oblong green glossy leaves 4 to 6 inches long, small light-green flowers in small cymes, and reddish capsules. Native to Hong Kong.

102074. EUSCAPHIS JAPONICA (Thunb.) Dipp. Staphyleaceae.

A shrub up to 10 feet high, native to Japan and China. The compound leaves are made up of 7 to 11 ovate-lanceolate serrate leaflets 3 inches long, and the small white flowers, in upright panicles, are followed by brown-red fruits which open, exposing the steel-blue seeds.

102075. ILEX PURPUREA Hassk. Aquifoliaceae. Aquiholly.

An evergreen tree with crenate-serrulate, elliptic-lanceolate leaves, 2 to 3 inches long, and red berries, half an

102071 to 102076—Continued.

inch long, in clusters of 2 to 5. It is native to Japan and central China.

For previous introduction see 91254.

102076. LILIUM BROWNII Poit. Liliaceae. Brown's lily.

A Chinese lily with stems 2 to 3 feet high and lanceolate leaves 3 to 5 inches long. The flowers, usually solitary but sometimes 2 to 4 together, are 6 to 8 inches long and nearly as wide, and are delicately fragrant. The waxy segments are creamy white inside, fading to pure white and tinged with yellow at the base. Outside they are white with brown-purple midribs; the three outer ones are variably tinged with brownish purple.

102077. CUCUMIS MELO L. Cucurbitaceae. Melon.

From Morocco. Seeds presented by H. Brayard, Directeur de la Ferme Expérimentale, Marrakech. Received February 17, 1933.

Charentais. One of the best commercial strains of that region.

102078. CALANDRINIA BALONENSIS Lindl. Portulacaceae. Parakeelya.

From Australia. Seeds presented through Monson Morris, Smithtown, Long Island, N.Y. Received February 20, 1933.

A perennial herb about a foot high, native to Queensland, Australia. The thick fleshy oblong-spatulate leaves are less than 1 inch long at the base of the plant while the upper ones are 2 inches long and linear-lanceolate. The large purple flowers, 1 to 2 inches across, are borne in loose terminal racemes.

For previous introduction see 101298.

102079 and 102080.

From India. Seeds presented by Dr. W. Burns, economic botanist, Department of Agriculture, Poona, Bombay. Received February 21, 1933.

102079. CHRYSOPOGON MONTANUS Trin. Poaceae. Grass.

A handsome perennial grass which becomes from 3 to 5 feet high. In India it has an excellent reputation as a fodder grass, and the seeds are collected and used as food by the natives. This grass has succeeded well in Florida and at Biloxi, Miss., and for the Gulf States it possesses some promise as a pasture grass.

102080. CHIONACHNE KOENIGII (Spreng.) Thwaites (Polytoca barbata Stapf). Poaceae. Grass.

A stout grass 3 to 5 feet high, native to India, Ceylon, and Java. The thick-margined lanceolate leaves are 1 to 2 feet long, and the flowers are borne in spikes 1 to 2 inches long.

102081. RIBES SATIVUM Syme. Grossulariaceae. Garden currant.

From Norway. Cuttings purchased from Prof. Olav Moen, Norges Landbrukskole, Undervisingen i Grosmsakdyrking og Planteskolddrift. Received February 7, 1933.

Red Holland. Received as *Rød Hollandsk.*

For previous introduction see 102069.

102082. *ANDROPOGON AMBOINICUS* (L.) Merr. Poaceae. **Grass.**
From India. Seeds presented by D. Rhind, economic botanist, Mandalay, Burma. Received February 21, 1933.
A tall perennial East Indian grass about 4 feet high, with narrowly linear leaves up to 20 inches in length. It is of possible value as a forage grass.
For previous introduction see 101027.
- 102083 to 102098.
- From the Union of Soviet Socialist Republics. Material presented by Vale Lichagov, horticulturist, Sochi, Black Sea district. Received February 27, 1933.
102083. *CORYLUS AVELLANA* L. Betulaceae. **Filbert.**
Kerasund. Plants of one of the best of their varieties.
- 102084 to 102096. *JUGLANS REGIA* L. Juglandaceae. **Persian walnut.**
Seed of plants growing wild in the mountain zone of the Sochi region.
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| 102084. No. 1. | 102091. No. 8. |
| 102085. No. 2. | 102092. No. 9. |
| 102086. No. 3. | 102093. No. 10. |
| 102087. No. 4. | 102094. No. 11. |
| 102088. No. 5. | 102095. No. 12. |
| 102089. No. 6. | 102096. No. 13. |
| 102090. No. 7. | |
102097. *MALUS SYLVESTRIS* Mill. Malaceae. **Apple.**
Scions; received as *Abasinskoe* (Red Socki).
102098. *PYRUS COMMUNIS* L. Malaceae. **Common pear.**
Scions; received as *Cherkessian* (Socki pear).
102099. *MELINIS MINUTIFLORA* Beauv. Poaceae. **Molasses grass.**
From Central America. Seeds presented by Dr. Luis Cruz B., San José, Costa Rica, through J. L. Colom, chief, Division of Agricultural Cooperation, Pan American Union, Washington, D.C. Received February 24, 1933.
- 102100 to 102105. *CANNABIS SATIVA* L. Moraceae. **Hemp.**
From the Union of Soviet Socialist Republics. Seeds presented by the Pan Union Hemp Institute, Glouthov, Ukraine. Received February 23, 1933.
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| 102100. No. 816, from Irkutsk, Siberia. |
| 102101. From Proskurov, Ukraine. |
| 102102. No. 819, from Shenkursk, northern European Russia. |
| 102103. From the Caucasus region. |
| 102104. From Mosdokskaiia, Ukraine. |
| 102105. From Novgorod-Seversk, Ukraine. |
- 102106 to 102115.
- From China. Scions collected in Hopeh Province by Peter Liu, Peiping. Received February 28, 1933.
- 102106 to 102115—Continued.
- 102106 to 102111. *CASTANEA MOLLISSIMA* Blume. Fagaceae. **Hairy chestnut.**
- 102106 and 102107. *Chiufen*, or middle-opened chestnut. Said to ripen the latter part of September.
102106. From an orchard near the village of Lienhualing, east of Peiping.
102107. From an orchard near Tsuikhechuang, northwest of Luan-chow.
- 102108 and 102109. *Hanlu*, or late chestnut. Said to ripen the end of September.
102108. Collected near the village of Tsuikhechuang, northwest of Luanchow.
102109. Collected near the village of Lienhualing, east of Peiping.
- 102110 and 102111. *Pailu*, or early chestnut. Said to ripen early in September.
102110. Scions from a young tree in an orchard near the village of Tsuikhechuang, northwest of Luanchow.
102111. From an orchard near the village of Lienhualing, east of Peiping.
- 102112 to 102114. *DIOSPYROS KAKI* L. f. Diospyraceae. **Kaki persimmon.**
From an orchard near the village of Lienhualing, east of Peiping.
102112. *Hsi Yang Shih Tzu*, or western persimmon. A variety not very commonly grown in this region.
102113. *Hua Shih Tzu*, or fire persimmon. So-called from its deep-red color.
102114. *Ta Kai Shik*, or large persimmon.
102115. *PYRUS* sp. Malaceae. **Pear.**
Milee, or honey pear. Collected near the foot of the mountain of Panshan. This is the best pear grown in this region.
- 102116 to 102120. *SYRINGA VILLOSA* × *SWEGINZOWII*. Oleaceae. **Lilac.**
From Canada. Scions presented by F. L. Skinner, 'Dropmore, Manitoba. Received March 1, 1933.
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| 102116. S. E. No. 3N. |
| 102117. W. R. No. 2. |
| 102118. W. R. No. 10. |
| 102119. W. R. No. 12. |
| 102120. V. No. 5S. |
- 102121 to 102125. *CORYLUS* spp. Betulaceae.
From the Union of Soviet Socialist Republics. Seeds presented by Vale Lichagov, horticulturist, Sochi, Black Sea district. Received February 27, 1933.
- A collection of seeds of native varieties from the middle mountain zone of Tuapse and Sochi regions of the Black Sea district, received under the following varietal names:

102121 to 102125—Continued.

102121 to 102123. *CORYLUS AVELLANA* L.
Filbert.

102121. *Cherkessian*.

102122. *Early Cherkessian*.

102123. *Trapesund*.

102124 and 102125. *CORYLUS MAXIMA*
Mill. Giant filbert.

102124. *Baden*.

102125. *Kerasund*.

102126 to 102130.

From Sweden. Scions presented by Director Gustaf Lind, Experimentalfätet, Stockholm. Received March 2, 1933.

Received under the following varietal names:

102126 and 102127. *MALUS SYLVESTRIS*
Mill. Malaceae. Apple.

102126. *Maglemer*. Origin, Denmark. Fruits, small to medium large size, variable. Skin light greenish yellow to yellowish white, coloring to a light red with red stripes distinct from the general red color on the exposed side. A dessert apple of good quality. Season, October to January.

102127. *Okna lok*.

102128 to 102130. *PRUNUS CERASUS* L.
Amygdalaceae. Sour cherry.

102128. *Allmand Sur* or *Brunkörsbär*.

102129. *Ostheimer*.

102130. *Skyggmørell*.

102131 to 102153. *MALUS SYLVESTRIS*
Mill. Malaceae. Apple.

From Sweden. Scions presented by Carl G. Dahl, Forestandare for Alnarps Tradgardsskola, Åkarp. Received March 2, 1933.

Received under the following varietal names:

102131. *Allington*. Commonly grown in Germany, but little known in Sweden. Skin greenish yellow, slightly overlaid with red. Used as a cooking apple. Season, October to Christmas.

102132. *Baumann's renett*. Origin, Belgium; now grown in Germany and southern Scandinavia. Skin light yellowish green overlaid with deep red. Good for cooking and dessert. Season, October to March.

102133. *Berner rosenapple*. Origin, Switzerland, later spreading over northern Europe to southern Sweden. Skin greenish yellow overlaid with dark carmine red, slightly striped. Good quality, attractive dessert apple. Season, October to February.

102134. *Blenheim reinette*. Origin, England, later introduced into northern Europe, and grown in Sweden since about 1800. Skin pale yellow, usually covered with bright red stripings and speckles on the exposed side. Flesh sour with little aroma, good for cooking. Season, late fall to following summer.

102135. *Brunnsäpple*. Origin, the Netherlands. Fruit medium to large, variable in size. Skin light green to

102131 to 102153—Continued.

yellow-green overlaid with a red blush on the exposed side. Used for cooking and dessert. Season, November to January.

102136. *Kasselrenett*. Origin, the Netherlands. Fruit small to medium. Skin green to greenish yellow, marbled and finely striped with red. Used for cooking. Season, October to February.

102137. *Cellini*. Grown over northern Europe. Skin light green, almost completely covered with red. Used mainly for cooking, but sometimes for dessert. Season, October to January.

102138. *Cox's Pomona*. Origin, England. Fruit large size. Skin white to yellow-white, almost completely covered with red striping. Flesh tender, good for cooking and dessert. Season, September to January.

102139. *Filippa*. Origin, Denmark. Fruit large size. Skin light greenish yellow, partly overspread with stripes and spots of red. Used as a dessert apple during December.

102140. *Gladstone*. Origin, England, later distributed over northern Europe. Skin yellowish green, overspread with clear dark red. Good quality dessert apple. Season, August to October.

102141. *Husmodor*. Grown over northern Europe. Skin yellowish green, largely overspread with a bright red. Good cooking and dessert apple. Season, October to February.

102142. *Ölands Kungsäpple*. Origin, southern Sweden. Skin yellow, overlaid with strong carmine red, on the exposed side, with darker stripes. Good quality dessert apple. Season, October to January.

102143. *Oranie*. Origin, Sweden. Fruit large size. Skin light green to yellowish green, orange-yellow on the exposed side. Used for dessert. Season, September to October.

102144. *Säfstaholm*. Origin, Sweden, later introduced and widely grown over northern Europe. Skin yellowish white to light red. Excellent dessert apple. Season, September.

102145. *Persikerott sommaräpple*. Said to have originated in France, now grown over northern Europe. Skin white, covered with a beautiful red blush. Good dessert apple. Season, late August; does not keep well.

102146. *Ringstad*. Origin, Sweden. Skin greenish yellow overspread with solid bright red. Season, September to October.

102147. *Rött Ananasäpple*. Widely grown in Denmark and Germany and hardy in Sweden. Skin yellowish white, covered with a bright carmine-red. An aromatic dessert apple of high quality and attractive appearance. Season, middle of September to November.

102148. *Rött järnäpple*. Grown in Germany and southern Sweden. Skin green to a bright red with small yellow dots. Used for cooking. Season, last of October to April.

102149. *Rött Maglemer*.

102150. *Skovfoged*. Grown in Sweden. Skin greenish to dirty yellow over-

102131 to 102153—Continued.

spread partially or entirely with red. Good for cooking or dessert. Season, September to November.

102151. *Stenkyrke*. Origin, Sweden. Skin light yellow overlaid with clear red on the exposed side. Good cooking or dessert apple. Season, October to March.

102152. *Scanetorp*. Origin, Sweden. Fruit small size. Skin light greenish yellow to white-yellow, overlaid with red marbling and striping. Dessert fruit. Season, October to January.

102153. *Wäldikes düvåpple*. Origin, Sweden. Fruit medium large size. Skin white to yellowish, overspread with bright red blush or striping on the exposed side. Dessert apple. Season, September to December.

102154 to 102158.

From Finland. Seeds grown at the experiment station "Tammisto", Helsingfors Parish, and presented by the Hakkija Society through John L. Bouchal, American consul, Helsingfors. Received February 27, 1933.

102154 and 102155. *AVENA SATIVA* L. Poaceae. Oats.

102154. *Esakaura, Viottokaura* × domestic variety. An oat with a moderately large white kernel, full and with thin husks, so that it is especially suitable for oatmeal production. It thrives best in light clay soil, but, on account of its strong stalk, it can also be grown successfully in swampy land.

102155. *Kytökaura, Kultasade* × domestic variety. An oat with a medium-sized yellow kernel. The short strong stalk suits swampy lands better than any other oat variety. It thrives well also on light clay soil. In spite of its maturing early, it is one of the most prolific varieties. Average time of growth, 99 days.

102156. *HORDEUM DISTICHON PALMELLA* Harlan. Poaceae. Two-rowed barley.

Halikonohra. A two-sided drooping variety of barley, with medium strong stalks and large full kernels which mature in about 85 days. It is a heavy yielder and does best in light soil.

102157. *HORDEUM VULGARE PALLIDUM* Seringe. Poaceae. Six-rowed barley.

Olinohra. A northern Finnish domestic barley, with very strong stalk and rather small kernel. It is a very early barley, maturing in about 72 days. In the south of Finland this barley is sown on fallow land and harvested before fall sowing. Due to its strong stalk it is suitable also in swampy lands and as a protective plant for hay.

102158. *TRITICUM AESTIVUM* L. (*T. vulgare* Vill.). Poaceae. Common wheat.

Varmavehna. A cross between the Swedish *Svea* wheat and a domestic wheat. The rather short, strong stalk bears medium long, thick woolly ears with large full kernels. This is a good winter variety which ripens early and gives a good yield.

102159 to 102162.

From England. Plants purchased from W. J. Marchant, Keeper's Hill Nursery, near Wimborne, Dorset. Received March 7, 1933.

102159. *ABELIA FLORIBUNDA* (Mart. and Gal.) Decaisne. Caprifoliaceae.

A shrub 6 to 10 feet high, with oblong to ovate, ciliate entire leaves 1 inch long and terminal cymes of tubular red-purple flowers nearly 2 inches long. It is native to Mexico.

For previous introduction see 90298.

102160. *ACER ARGUTUM* Maxim. Aceraceae. Maple.

A small deciduous tree with erect branches and doubly serrate leaves 2 to 4 inches long. The flowers, produced in April before the leaves, are greenish yellow, and the keys are borne in hanging racemes. This tree is a native to the mountain woods of Japan and makes an elegant appearance with its pale-green leaves during the summer and its purple-brown branches in the winter.

102161 and 102162. *RHODODENDRON OBTUSUM AMOENUM* (Lindl.) Rehd. Ericaceae. *Amoena azalea*.

A bushy evergreen shrub, at times 3 feet high, with elliptic or elliptic-obovate, dark-green leaves up to 1 inch long. Native to Japan.

102161. Variety *Caldwellii*. A form that is covered in May with pale-pink, hose-in-hose flowers.

102162. Variety *Rosea*. The hardiest of the *Amoena* section, with bright-pink, hose-in-hose flowers, freely produced in May.

102163. *NEOMOOREA WALLISII* (Reichb. f.) Schlechter. Orchidaceae. Orchid.

From Trinidad, British West Indies. Plants presented by R. O. Williams, curator, Department of Agriculture, Port-of-Spain. Received March 8, 1933.

An epiphytic orchid, native to Antioquia, Colombia. The two plicate leaves become 2 to 3 feet long and 8 inches wide. The red-brown flowers, about 2 inches in diameter, have a three-lobed, straw-yellow lip lined with dark purple, with the crest bright yellow. This orchid is closely allied to *Houlletia*.

102164 to 102170. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.

From Norway. Scions presented by Prof. H. Misvaer, horticulturist, Landbruks-skolen, Aas. Received March 7, 1933.

Received under the following varietal names:

102164. *Hardanger Rosenstrips*.

For previous introduction and description see 101881.

102165. *Haugmann*.

For previous introduction and description see 101882.

102166. *Kaupanger*.

For previous introduction and description see 101883.

102167. *Oskaug*.

102164 to 102170—Continued.

For previous introduction and description see 101884.

102168. *Rød Rosenstrips*.

For previous introduction and description see 101885.

102169. *Stor Torstein*.

For previous introduction and description see 101889.

102170. *Torstein*.

For previous introduction and description see 101888.

102171 to 102180.

From Norway. Scions presented by Fylkegardner Mörk, Drammen, through Marguard H. Lund, commercial attaché, Legation of the United States of America, Oslo. Received March 8, 1933.

Received under the following varietal names:

102171 to 102177. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.

102171. *Bogarudeple*.

102172. *Retvedteple*. A red apple from Eiker, Buskerud Fylke.

102173. *Rødteple*. A red apple from Alfstad, Østre Toten, Opland Fylke.

102174. A red apple from Lunnatoten, Opland Fylke.

102175. A red striped apple from Alfstad, Østre Toten, Opland Fylke.

102176. From Ål in Hallingdal, Buskerud Fylke.

102177. From Gol in Hallingdal, Buskerud Fylke.

102178 to 102180. *PRUNUS Cerasus* L. Amygdalaceae. Sour cherry.

A collection of cherries from Lier, Buskerud Fylke.

102178. *Rødt Rotekte*.

102179. *Skygekirsebaer*. A very late seedling cherry.

102180. *Sortrotekte*. [Genuine red.]

102181 and 102182. *SOJA MAX* (L.) Piper. Fabaceae. Soybean.

From France. Seeds presented by Prof. L. Rouest, Paris, through J. W. Pincus, New Brunswick, N.J. Received March 6, 1933.

Yakovlev. Two varieties of soybeans, originally from Russia, which Prof. L. Rouest has developed under French conditions.

102181. An olive-yellow bean with a smooth skin.

102182. Olive-yellow beans with wrinkled skins, many of which are split.

102183. *TRIFOLIUM REPENS* L. Fabaceae. White clover.

From England. Plants purchased from Sutton & Sons, Ltd., Reading. Received March 7, 1933.

Variety *pentaphyllum*. A form having five leaflets, often bronzy. Introduced for the use of forage-crop specialists.

102184. *PHASEOLUS LUNATUS* L. Fabaceae. Lima bean.

From Guatemala. Seeds presented by Don Jorge Garcia Salas, Guatemala City. Received February 27, 1933.

A wild bean collected near Guatemala City at 1,580 feet altitude. The small brown seeds have a black ring around the hilum. Introduced for comparison studies with varieties now being grown on the Pacific coast.

102185 and 102186.

From Peru. Seeds presented by Earl Hansen. Received March 1, 1933.

102185. *TECOMARIA* sp. Bignoniaceae.

Pingo Pingo. An erect shrub with pinnate leaves and red flowers in terminal clusters. Collected near Chachapoyas, Peru, between 9,000 and 12,000 feet altitude, in loose sandy soil.

102186. *CHUQUIRAGA SPINOSA* D. Don. Asteraceae.

Huamampinto. From Huancayo, Peru, between 13,500 and 14,000 feet altitude. An erect, densely-branched, spiny shrub 2 feet high, with alternate, sessile, ovate-lanceolate, leathery leaves half an inch long and yellowish flowers in small heads. Found in sheltered places with gravelly soil, usually old river bottoms.

102187. *GOSSYPIUM TOMENTOSUM* Nutt. Malvaceae. Cotton.

From Hawaii. Seeds presented by the horticultural division of the United States Experiment Station, Honolulu. Received March 2, 1933.

A softly pubescent plant with red-brown lint.

102188 to 102190.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received March 2, 1933.

102188. *ARECA GLANDIFORMIS* Lam. Phoenicaceae. Palm.

A slender, spineless, pinnate-leaved palm closely resembling *Linoma* (*Areca*) *alba*. It is native to the Molucca Islands.

102189. *ARECA* sp. Phoenicaceae. Palm.

102190. *PLUMERIA SERICIFOLIA* Wright. Apocynaceae.

A small tropical tree 8 to 14 feet high, with oblong, obtuse leaves, white-hairy beneath and about 5 inches long, and white flowers about 2 inches long in small cymes. Native to western Cuba.

102191 to 102213.

From England. Plants purchased from W. J. Marchant, Keeper's Hill Nursery, near Wimborne, Dorset. Received March 11, 1933.

102191 to 102193. *CASSIOPE* spp. Ericaceae.

102191. *CASSIOPE LYCOPODIODES* (Pall.) D. Don.

A low creeping plant with slender stems, scalelike crowded leaves, and nodding white, bell-shaped flowers borne singly on erect peduncles. Native to northeastern Siberia.

102191 to 102213—Continued.

102192. *CASSIOPE MERTENSIANA* (Bong.) Don.

A low evergreen heathlike shrub 12 to 18 inches high, native to northwestern America from Alaska south to California. The thick glabrous oblong leaves, one-fourth of an inch long, are not furrowed on the back, and the campanulate rose-white flowers, slightly longer than the leaves, are solitary and nodding on erect naked pedicels.

102193. *CASSIOPE TETRAGONA* (L.) D. Don.

An arctic evergreen shrub 1 to 2 feet high, similar to *C. mertensiana*, but the leaves are finely pubescent and ciliate and are deeply furrowed on the back.

102194 to 102213. *COTONEASTER* spp. Malaceae.102194. *COTONEASTER BUXIFOLIA* Wall.

An evergreen shrub eventually about 10 feet high, of spreading upright habit, with elliptic or obovate dark-green leaves almost half an inch long, tomentose on the undersurface, and white flowers, one-third of an inch across, in small corymbs. The globular or ellipsoid red berries are one-fourth inch in diameter. Native to the Nilghiri Hills in India.

102195. *COTONEASTER BUXIFOLIA VEL-LAEA* Franch.

A variety characterized by a procumbent habit, with slightly smaller leaves, conspicuously pubescent above while young. Native to western China.

102196. *COTONEASTER MICROPHYLLA GLACIALIS* Hook. (*C. congesta* Baker).

A variety differing in its low compact habit, with the leaves only sparingly pubescent beneath and the flowers slightly smaller and pinkish white. Native to the Himalayas.

102197. *COTONEASTER EXCELLENS* Hort.

A very small evergreen shrub with small gray leaves and masses of pink-red berries that are retained well into the winter.

102198. *COTONEASTER FARRERI* Hort.

A name for which a place of publication and a description have not been found.

102199. *COTONEASTER FRIGIDA* Wall. Himalayan cotoneaster.

Variety *Vicarii*. Said to be a handsome small tree bearing masses of large scarlet berries in clusters.

102200. *COTONEASTER GLABRATA* Rehd. and Wils.

An evergreen upright shrub ultimately about 15 feet high, with spreading branches, leathery oblong-lanceolate bright-green leaves up to 3 inches long, slightly rugose above, and white flowers in dense corymbs about an inch across. Native to western China and closely allied to *C. salicifolia*.

102201. *COTONEASTER HENRYANA* (C. Schneid.) Rehd. and Wils.

102191 to 102213—Continued.

A stout deciduous or half-evergreen shrub about 10 feet high, with pendulous branchlets, oblong or oblong-lanceolate dark-green leaves from 2 to over 4 inches long, covered beneath with grayish tomentum, and white flowers in loose pubescent corymbs 2 inches across. The ovoid red berries are one-fourth of an inch in diameter. Native to western China.

102202. *COTONEASTER HUPHENSIS* Rehd. and Wils. Hupeh cotoneaster.

A graceful deciduous shrub up to 7 feet high, with ovate or elliptic, obtuse or acute, mucronulate, deep-green leaves up to 1½ inches long, sparingly gray tomentose beneath, and bright-red, subglobose berries one-fifth of an inch in diameter, in numerous corymbs. It is closely related to *C. multiflora* and native to central China.

102203. *COTONEASTER MICROPHYLLA THYMIFOLIA* (Loud.) Koehne.

Thyme rockspray.

A variety that differs from the type in being generally smaller throughout with narrowly oblong-obovate leaves and berries one-fifth of an inch in diameter. Native to the Himalayas.

102204. *COTONEASTER NITENS* Rehd. and Wils.

A rather low rambling deciduous shrub up to 5 feet high, densely branched, with broadly oval, obtuse, dark-green leaves one-half inch long. The fruits, globose or nearly so, are purplish black and one-third of an inch in diameter. It is native to Szechwan, western China.

102205 and 102206. *COTONEASTER PANNOSA* Franch.

Silverleaf cotoneaster.

102205. An evergreen or half-evergreen shrub 3 to 10 feet high, with gracefully arching branches, elliptic or ovate-lanceolate dull-green leaves up to 1 inch long, white tomentose beneath, and dull-red roundish fruits one-fourth inch in diameter, in rather dense corymbs. Native to southwestern China.

102206. Said to be different from the type.

102207. *COTONEASTER RHYTIDOPHYLLA* Rehd. and Wils.

A stout half-evergreen shrub about 5 feet high, with leathery, oblong-elliptic or oblong-lanceolate, acuminate leaves up to 3 inches long, densely white or yellow tomentose beneath, and pear-shaped, orange-red berries one-fourth of an inch long, in small dense corymbs. Native to western China.

102208. *COTONEASTER ROTUNDFOLIA* Wall.

Roundleaf cotoneaster.

A deciduous or half-evergreen shrub 4 to 8 feet high, with stiff more or less two-ranked branches and roundish or broadly oval, dark-green, mucronate leaves less than an inch long, paler beneath. The broadly ovate scarlet berries, usually solitary, are one-half inch long. Native to southwestern China and the Himalayas.

102209. *COTONEASTER SALICIFOLIA* Franch.

Willowleaf cotoneaster.

102191 to 102213—Continued.

A half-evergreen or, in mild climates, evergreen shrub up to 15 feet high, with slender spreading branches, ovate-lanceolate or elliptic-oblong, acute, cuneate leaves up to over an inch long, white tomentose beneath, and bright-red roundish berries one-fifth of an inch in diameter, in densely woolly corymbs 1 to 2 inches across. Native to western China.

102210. COTONEASTER SALICIFOLIA FLOCCOSA Rehd. and Wils.

A variety with narrower leaves, floccose tomentose beneath, and berries of a brighter red.

102211. COTONEASTER SALICIFOLIA RUGOSA (E. Prits.) Rehd. and Wils.

A variety which differs from the type in having smaller, broader, duller green leaves, shaggy pubescent beneath, and larger fruits.

102212. COTONEASTER TOMENTOSA (Ait.) Lindl.

A bushy deciduous shrub 6 to 10 feet high, with elliptic to broadly oval, obtuse, dull-green leaves 1 to nearly 3 inches long, white or grayish tomentose beneath, and pinkish flowers in small nodding cymes with bright-red, subglobose fruits one-third of an inch in diameter. Native to southeastern Europe and western Asia.

102213. COTONEASTER WARDII W. W. Smith.

A deciduous shrub 5 to 8 feet high, with ovate, acute, mucronate leaves over an inch long, densely silvery tomentose beneath. The white flowers, in small corymbs, are followed by fruits of a bright sealing-wax red.

102214. AMERIMNON sp. Fabaceae.

From China. Seeds presented by Dr. H. H. Chung, Department of Biology, National Wu-Han University, Wuchang, Hupeh. Received March 11, 1933.

A good timber tree, becoming over 60 feet high, with a trunk diameter of 12 inches, which fruits abundantly in Hupeh.

102215 to 102238.

From France. Seeds presented by L. Pardé, directeur des Ecoles Forestières de Barres, Nogent-sur-Vernisson, Loiret. Received March 2, 1933.

102215 to 102217. BETULA spp. Betulaceae. Birch.

102215. BETULA ALNOIDES Buch-Ham.

A tree up to 60 feet high, native to northern India and southwestern China between 3,000 and 10,000 feet altitude. The oblong-ovate leaves, 3 to 6 inches long, have appressed teeth on the margins and are nearly glabrous. The slender pendulous fruiting spikes are 3 to 5 inches long and are borne in fascicles.

102216. BETULA JAPONICA SZECHUANICA C. Schneid. Japanese white birch.

A tree up to 60 feet high, native to western China. The rhombic-ovate leaves, 2 to 3 inches long, are unequally dentate-serrate and are densely glandular-punctate beneath. The dark dull-green color of the leaves persists until late autumn.

102215 to 102238—Continued.

102217. BETULA UTILIS D. Don (*B. bhoppattra* Wall.).

A tree 40 to 60 feet high, with red-brown trunk and branches and bark which peels off in papery flakes. It is native to the temperate regions of the Himalayas between 7,000 and 14,000 feet altitude. The oval coarsely toothed, sharp-pointed leaves, 3 inches long, are dark green above and paler beneath. In winter the orange-chocolate color of the twigs is very striking.

For previous introduction see 99654.

102218 to 102221. CLEMATIS spp. Ranunculaceae.

102218. CLEMATIS FUSCA Turcz.

A somewhat woody vine, 12 to 15 feet long, native to eastern Asia, with compound leaves made up of 5 to 7 oblong-ovate leaflets 2 to 3 inches long. The nodding urn-shaped flowers, an inch long, have thick sepals with recurved tips and are densely brownish pubescent outside and violet within. The achenes have brown plumose styles.

102219. CLEMATIS GLAUCA AKEBIODES (Maxim.) Rehd. and Wils.

A slender climber up to 10 feet high, native to western China. The pinnate to bipinnate leaves have 2- to 3-lobed ovate leaflets, and the flowers are bronze yellow.

102220. CLEMATIS KOREANA Komar.

A prostrate vine with trifoliolate leaves composed of coarsely dentate, sharp-pointed leaflets. These are 2 to 4 inches long and usually 3-lobed or 3-parted. The yellow to dull-violet, bell-shaped, nodding flowers are 1 to 2 inches long and are borne singly in the axils. Native to Chosen.

For previous introduction see 92774.

102221. CLEMATIS TANGUTICA OBTUSIUSCULA Rehd. and Wils.

A woody climber 8 to 12 feet long, native to northwestern China. The pinnate or bipinnate leaves have oblong-lanceolate serrate leaflets 1 to 4 inches long, and the bright-yellow flowers, 1 to 2 inches across, are followed by large heads of feathery fruits.

102222 to 102224. INDIGOFERA spp. Fabaceae. Indigo.

102222. INDIGOFERA MACROSTACHYA Vent.

A shrubby plant with hairy leaflets and pink flowers in dense racemes which are longer than the leaves.

For previous introduction see 99429.

102223. INDIGOFERA RETICULATA Franch.

A somewhat shrubby perennial 2 to 3 feet high, native to Yunnan, China. The compound leaves have 7 to 9 elliptic shining dark-green leaflets about 1 inch long, and the pea-shaped flowers, in axillary racemes, are pure white.

102224. INDIGOFERA SPLENDENS Ficalho and Hiern.

102215 to 102238—Continued.

A tropical African tree with pinnate leaves up to 3 inches long, consisting of 6 to 11 pairs of small oval leaflets. The large showy flowers are in axillary spiciform racemes.

102225 to 102229. *LIGUSTRUM* spp. Oleaceae. Privet.

102225. *LIGUSTRUM QUIHOUI* Carr. Quihou privet.

A spreading shrub 6 to 8 feet high, native to China. The somewhat leathery leaves, 1 to 2 inches long, are elliptic to oblong-ovate, and the small white flowers are in long spikes which are collected into panicles 4 to 8 inches long.

102226. *LIGUSTRUM SALICIFOLIUM* Carr.

A vigorous deciduous shrub with opposite decussate leaves up to 6 inches long and 1 inch wide, and numerous white flowers in long lax racemes with an aroma like that of orange flowers. It is often frozen back in the vicinity of Paris.

102227. *LIGUSTRUM* sp.

Originally from Yunnan, China.

102228. *LIGUSTRUM* sp.

No. 4114 MV.

102229. *LIGUSTRUM* sp.

No. 5984 MV.

102230 to 102233. *ROSA* spp. Rosaceae. Rose.

102230. *ROSA FILIPES* Rehd. and Wils. Threadstalk rose.

A shrub with slender prostrate stems up to 15 feet long, native to western China. The leaves have 5 to 7 lanceolate serrate leaflets 2 to 3 inches long, and the fragrant white flowers, 1 inch across, in large loose corymbs, are followed by globose scarlet fruits about one-half inch in diameter.

102231. *ROSA GLUTINOSA* Sibth. and Smith.

A dwarf prickly shrub native to southwestern Europe and western Asia. The densely glandular leaves have 5 to 7 elliptic to obovate leaflets about 1 inch long, and the small pink flowers are followed by small globose fruits.

102232. *ROSA KOCHIANA* Koehne.

A bushy rose about 3 feet high, possibly a hybrid of *R. humilis* × *spinosisima*. The leaves are composed of 9 to 11 glabrous simple lightly serrate leaflets, and the deep-pink flowers, over an inch in diameter, are in small clusters.

102233. *ROSA MOLLISSIMA* Willd.

A bushy rose about the size of *R. villosa*, with bipinnate leaves composed of oblong serrate, densely hairy leaflets. The solitary flowers are deep red [incarnata]. It is native to Asia Minor.

102234. *STAPHYLEA COLCHICA* COULOMBIERI (Andre) Zabel. Staphyleaceae. Bladdernut.

A vigorous form of *Staphylea colchica*, with larger acuminate leaflets.

102215 to 102238—Continued.

This is an upright shrub with five leaflets, 6-inch panicles of white flowers, and obovoid 2- and 3-lobed inflated fruits. Native to the Caucasus region.

102235 to 102238. *SYRINGA* spp. Oleaceae. Lilac.

102235. *SYRINGA JAPONICA* (Maxim.) Decaisne. Japanese tree lilac.

A tree up to 30 feet high, with a short trunk and a round or ovoid head, native to Japan. The broadly ovate leaves, 2 to 5 inches long, are bright green above and paler beneath, and the yellowish flowers are in large panicles a foot or more long.

102236. *SYRINGA LUMINIFERA* Hort.

A name for which a place of publication and a description have not been found.

102237. *SYRINGA REFLEXA* C. Schneid. Nodding lilac.

A shrub 12 to 15 feet high, with rough ovate leaves 3 to 6 inches long and nearly cylindrical drooping panicles crowded with small flowers which are deep carmine in bud, fading as the flowers open to pink outside and white within. The flowers appear in June. Native to central China.

102238. *SYRINGA* sp.

No. 3. de Max Sievers.

102239 and 102240. *CASTANEA MOLLISSIMA* Blume. Fagaceae.

Hairy chestnut.

From China. Scions collected by Peter Liu from an orchard near the village of Chaochuangtzu, northeast of Peiping. Received March 13, 1933.

102239. *Early-ripened* chestnut. Said to ripen the first week of September.

102240. *Late-ripened* chestnut. Said to ripen during the last week of September.

102241 and 102242.

From India. Seeds presented by V. N. Ranganatha Rao, senior botanist, Mysore State Department of Agriculture, Bangalore City, southern India. Received March 11, 1933.

102241. *GOSSYPIUM NANKING* Meyen. Malvaceae. Cotton.

A Chinese long-staple cotton.

For previous introduction see 92840.

102242. *GOSSYPIUM* sp. Malvaceae. Cotton.

A form which resembles *G. herbaceum*.

102243. *CINCHONA SUCCIRUBRA* Pavon. Rubiaceae.

From Guatemala. Seeds presented by Frederico Rodriguez Bonito, Finca Capetillo, near Antigua, through G. H. Donald, American consul general, Guatemala City, at the request of Col. Victor E. Ruehl, Caldwell, N.J. Received March 10, 1933.

For previous introduction and description see 101661.

102244 to 102264.

From England. Plants purchased from W. J. Marchant, Keeper's Hill Nursery, near Wimborne, Dorset. Received March 18, 1933.

102244. *CYBILLA RACEMIFLORA* L. *Cyrtolacae*.

102245. *CYTISUS MULTIFLORUS DURUS* Aschers. and Graebn. *Fabaceae*. **Broom.**

A form which is said to be more resistant to frost than the species.

102246. *CYTISUS MULTIFLORUS INCARNATUS* Sweet. *Fabaceae*. **Broom.**

A shrub up to 10 feet high, native to Spain and northern Africa, with upright slender branchlets bearing trifoliolate leaves below and simple ones above. The white flowers, in axillary clusters of 1 to 3, are produced very profusely.

102247. *DOCYNIA DELAVAYI* (Franch.) C. Schneid. *Malaceae*.

A spiny evergreen tree up to 30 feet high, native to southwestern China, with glossy ovate-lanceolate leaves 2 to 4 inches long and umbels of white flowers which appear in the spring and are followed by ovoid acid fruits about 1 inch long.

102248. *DOCYNIA DOCYNOIDES* (C. Schneid.) Rehd. *Malaceae*.

A half-evergreen tree native to southwestern China. The elliptic to oblong-lanceolate leaves, 2 to 4 inches long, are usually serrate near the apex and are lustrous green above and nearly smooth beneath. The white flowers, 1 inch across, are borne in umbels of 2 to 5.

102249. *GORDONIA AXILLARIS* (Roxb.) Diestr. (*G. anomala* Spreng.). *Theaceae*.

A large evergreen shrub or small tree up to 25 feet high, native to southern China. The oblanceolate leaves, 4 to 6 inches long, are dark green above, and the solitary creamy white flowers are 2 to 3 inches across.

102250 to 102252. *LONICERA PERICLYMENUM* L. *Caprifoliaceae*. **Woodbine.**

102250. A woody vine several feet long, native to southern Europe. The dark-green ovate leaves are 1 to 3 inches long, and the fragrant creamy flowers, purplish outside, are borne in dense heads.

102251. *Belgica*. Dutch woodbine. A form with the flowers pale purple outside.

102252. *Serotina*. Autumn woodbine. A form with the flowers dark purple outside, blooming late and profusely.

102253. *PEROVSKIA ATRIPLICIFOLIA* Benth. *Menthaeae*.

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 sage-like 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.

102244 to 102264—Continued.

102254. *PHILLYREA DECORA* Boiss. and Bal. *Oleaceae*. **Lanceleaf phillyrea.**

An evergreen shrub with upright spreading branches which become 10 feet high. The oblong-lanceolate nearly entire leaves are lustrous dark green above and yellowish green beneath. The small white flowers, in dense clusters, are followed by oblong-ovoid purple-black fruits about one-fourth of an inch long. It is native to western Asia.

102255 to 102259. *PHOTINIA* spp. *Malaceae*.

102255. *PHOTINIA BEAUVERDIANA* C. Schneid.

A deciduous shrub up to 10 feet high, native to central and western China. The oblong-obovate, densely serrulate leaves are 2 to 4 inches long, and the small white flowers, in corymbs 2 inches across, are followed by subglobose scarlet fruits one-fourth of an inch in diameter.

102256. *PHOTINIA BEAUVERDIANA NOTABILIS* (C. Schneid.) Rehd. and Wils.

A shrub similar to *P. beauverdiana*, but with thicker, more prominently veined leaves, longer corymbs of flowers, and slightly larger ovoid fruits.

102257. *STRANVAESIA BENTHAMIANA* (Hance) Merr. (*Photinia benthamiana* Hance).

A Chinese evergreen shrub with leathery, oblong, red-tipped leaves and dense panicles of white flowers, followed by orange or scarlet fruits.

102258. *PHOTINIA DAVIDSONIAE* Rehd. and Wils.

A handsome evergreen tree, 20 to 50 feet high, with dense foliage, native to Hupeh, western China. The leathery oblong or lanceolate leaves are up to 6 inches long, and the white flowers, nearly half an inch across, are in many-flowered terminal corymbs. The globose orange-red berries are about one-third of an inch in diameter.

102259. *PHOTINIA VILLOSA* (Thunb.) DC.

A deciduous shrub or small tree, native to China, Chosen, and Japan, with obovate or ovate-lanceolate leaves from 1 to 3 inches long. It is a variable plant, especially in the amount of down on its leaves, young shoots, and flower stalks. The white flowers, each about one-half inch in diameter, are in corymbs over an inch wide. The fruit is the size and shape of the common haw, and the leaves turn a beautiful red in autumn.

102260. *PIERS FORRESTII* Harrow. *Ericaceae*.

An upright evergreen shrub with pendent branches and red branchlets, native to southwestern China. The oblanceolate serrulate leaves are 2 to 5 inches long, and the small whitish urn-shaped flowers are in drooping panicles.

102261 to 102263. *STEWARTIA* spp. *Theaceae*.

102261. *STEWARTIA MONADELPHA* Sieb. and Zucc.

A tree up to 75 feet high, native to Japan. The bright-green ovate leaves are 2 to 4 inches long, and the fra-

102244 to 102264—Continued.

grant white cup-shaped flowers, 1 to 2 inches across, are solitary in the axils of the leaves.

102262. STEWARTIA PSEUDO-CAMELLIA Maxim. Japanese *stewartia*.

A handsome tree, native to Japan, 50 feet high, with erect branches and red bark. The thickish obovate-lanceolate leaves are bright green, and the large white flowers are borne in summer.

102263. STEWARTIA SINENSIS Rehd. and Wils.

A shrub or tree up to 30 feet high, native to central China. The oblong to obovate serrulate leaves are 2 to 4 inches long, and the cup-shaped white flowers are 2 inches across.

102264. TRIPETALEIA PANICULATA Sieb. and Zucc. *Ericaceae*.

A shrub 4 to 6 feet high with red-brown branchlets, native to Japan. The rhomboid-ovate leaves are 1 to 3 inches long, and the pink-tinged white flowers, with three distinct petals, are in terminal panicles 2 to 4 inches long.

102265. ERYTHRINA sp. *Fabaceae*.

From Trinidad. Seeds presented through David Fairchild. Received March 13, 1933.

102266 and 102267. CASTANEA SATIVA Mill. *Fagaceae*. Spanish chestnut.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Plant Industry, Leningrad. Received March 16, 1933.

Wild forest chestnuts, collected in the Caucasus area.

102268 to 102273.

From the West Indies. Material collected by David Fairchild, with the 1933 Allison V. Armour expedition. Received March 20, 1933.

102268. HIPPEASTRUM sp. *Amaryl- lidaceae*.

No. 3023.

102269. MANGIFERA INDICA L. *Anacardiaceae*. **Mango.**

No. 3052. *Bombay*. From Hope Gardens, Kingston, Jamaica; presented by M. S. Goodman, March 12, 1933. This is the most prolific of all the East Indian mangoes that have been tested in Jamaica. It is a small, fiberless, sweet mango with a faint red blush, very much like the "Paii."

102270. PHILODENDRON sp. *Araceae*.

No. 3042. From near Bath, Jamaica, March 7, 1933. A handsome climber with sagittate leaves with incised margins.

102271. RHABDADENIA sp. *Apocynaceae*.

No. 3014. From the Bahama Islands, February 24, 1933. Tubers of a woody vine with opposite, thick, almost-succulent leaves and large flowers in small racemes. Found growing over stumps in a cornfield on Mariгуana Island.

102272. SOLANUM TUBEROSUM L. *Solanaceae*. **Potato.**

102268 to 102273—Continued.

No. 3029. Tubers purchased in the market at Port-au-Prince, Haiti, March 3, 1933. Small elongated potatoes with deep-set eyes.

102273. SYNGONIUM AURITUM (L.) Schott. *Araceae*.

No. 3043. Cuttings collected March 7, 1933, near Bath, Jamaica. A woody vine native to the West Indies and tropical America. The 3- to 5-parted leaves have the middle segment largest, up to 12 inches long, and the yellow-green spathe, spotted with purple, 6 to 10 inches long, is cylindrical with a closely sheathing base.

102274. BRASSICA OLERACEA CAPITATA L. *Brassicaceae*. **Cabbage.**

From Sweden. Seeds presented by Carl G. Dahl, director, Experimentalfältet, Akarp, Alnarp. Received March 20, 1933.

Jaatun.

102275. IPOMOEA BATATAS (L.) Poir. *Convolvulaceae*. **Sweetpotato.**

From the American Virgin Islands. Tubers presented by Claud Horn, horticulturist, Agricultural Experiment Station, Christiansted. Received March 23, 1933.

No. 795. A seedling produced at the station.

102276. CHAETOSPERMUM GLUTINOSUM (Blanco) Swingle. *Rutaceae*. **Tabog.**

From the Canal Zone. Seeds presented by J. E. Higgins, superintendent, Canal Zone Experiment Gardens, Summit. Received March 21, 1933.

A small spiny Philippine tree with trifoliate leaves, small clusters of rather large white flowers, and oblong hard-shelled fruits. This tree is being tested as a stock for the commercial citrus fruits.

102277 to 102287.

From the West Indies. Material collected by David Fairchild, with the 1933 Allison V. Armour expedition. Received March 24, 1933.

102277. AGAVE MORRISII Baker. *Amaryl- lidaceae*.

No. 3059. Plants collected in Jamaica, British West Indies, March 11, 1933. A stemless agave, native to Jamaica, with a rosette of 20 to 30 spatulate leaves 4 to 6 feet long. The end spine is an inch long, and the marginal prickles are dark brown. The inflorescence, 15 to 20 feet high, is made up of many branches which bear bright-yellow flowers 2 to 3 inches long.

102278. BLIGHIA SAPIDA Koen. *Sapinda- ceae*. **Akee.**

No. 3062. From Kingston, Jamaica, March 11, 1933. Seed of a tree, native to the Guinea Coast of Africa, which has become naturalized in the West Indies. The bright red fruits, containing shiny black seeds, are surrounded by a yellow aril. The fruit is said to be poisonous when immature or overripe, but the fleshy portion (aril) is eaten after being boiled or fried.

102277 to 102287—Continued.

102279. CRESCENTIA CUJETE L. Big-noniaceae. Calabash-tree.

No. 3066. Cuttings of a handsome tree, native to tropical America, with wide-spreading branches and the general habit of the Burbank plum. The glossy dark-green leaves, 4 to 6 inches long, are broadly lanceolate, and the solitary pendulous round fruits are 18 to 20 inches in diameter, but can be made to assume various shapes by skillful tying.

102280. DRACAENA sp. Liliaceae.

No. 3038. Seeds presented by E. S. Lawnes of Castleton Gardens, Jamaica, March 7, 1933. A tree 20 feet high and half as wide. The bright-orange fruits are in long pendent clusters.

102281. EUPHORBIA PULCHERRIMA Willd. Euphorbiaceae. Poinsettia.

No. 3063. From Kingston, Jamaica, March 10, 1933. Cuttings presented by M. Goodman, of the Hope Gardens. A "double" variety, with more numerous bracts than the common form.

102282. LIVISTONA HOOGENBORGHII Andre. Phoenicaceae. Palm.

No. 3040. Seeds collected in Castleton Gardens, Jamaica, March 7, 1933. A tall Javanese palm with fan-shaped leaves 4 to 6 feet wide on spiny petioles 3 to 5 feet long, red-brown at the base and becoming olive green near the blade. The blades are made up of 10 to 12 plicate pendulous segments with 5 to 7 acute lobes at the apex.

For previous introduction see 101263.

102283. PELARGONIUM INQUINANS (L.) Ait. Geraniaceae. Fish geranium.

No. 3046. Cuttings collected in the Hope Gardens, Jamaica, March 12, 1933. A thick-stemmed geranium with long-stemmed, roundish or kidney-shaped velvety leaves, and scarlet flowers. It succeeds well in the dry Tropics.

102284 and 102285. PERSEA AMERICANA Mill. Lauraceae. Avocado.

102284. No. 3075. From San Andrea Island, March 16, 1933. A West Indian avocado which ripens in late March or early April. It is an oblong fruit 4 inches long and of a bright-green color. The seed, however, is relatively very large.

102285. No. 3333. Fruit purchased in a market in Hispaniola.

102286. PHILODENDRON sp. Araceae.

No. 3044. Cuttings collected in the Hope Gardens, Jamaica, March 9, 1933. An unusually attractive vine with rather small leaves, 6 inches across, of an intense dark green.

102287. ROYSTONEA sp. Phoenicaceae. Royal palm.

No. 3035. Seeds collected at Kingston, Jamaica, March 7, 1933. The West Indian Royal palm is a more stately tree than the Cuban or Florida Royal palm.

102288. SORGHUM PLUMOSUM (R. Br.) Beauv. Poaceae. Grass.

From Australia. Seeds presented by the Department of Agriculture, Sydney, New South Wales, through G. D. Ross, under-secretary. Received March 15, 1933.

102288—Continued.

An Australian grass over 2 feet high, with slender stems and long narrow leaves. It is not popular with sheep herders, but is considered a very good grass for cattle. The seed shatters freely.

102289 to 102309.

From Manchuria. Seeds purchased from the Manshu Nosan Shokai, Inc., Dairen. Received March 15, 1933.

102289 to 102293. ACER spp. Aceraceae. Maple.

102289. ACER DIABOLICUM Blume. Devil maple.

A tree up to 30 feet high with 5-lobed leaves 4 to 8 inches across, the broadly ovate lobes being coarsely and remotely dentate. The racemes of small yellow flowers are followed by keys with bristly nutlets. It is native to Japan and closely resembles *A. francheti* of central China.

For previous introduction see 97499.

102290. ACER MICRANTHUM Sieb. and Zucc.

A graceful shrubby tree, native to Japan. The cordate, doubly serrate leaves are 5- to 7-lobed; the small green-white flowers are in slender racemes, and the wings of the keys spread almost at right angles.

102291. ACER RUBRIPES Hort.

A name for which a description and a place of publication have not been found.

102292. ACER RUFINERVE Sieb. and Zucc.

A small deciduous Japanese maple with blue-white young shoots and dark-green irregularly serrate 3-lobed or obscurely 5-lobed leaves. The flowers are in erect racemes about 3 inches long, and the keys are up to three-fourths of an inch long. Occasionally the young foliage, the leafstalks, and the midribs are red.

For previous introduction see 97493.

102293. ACER sp.

102294. BERBERIS QUELPAERTENSIS Nakai. Berberidaceae. Barberry.

A much-branched shrub with stout trifid spines, oblanceolate sessile serrulate leaves up to an inch long, and oblong red berries. Native to Quelpaert Island. Chosen.

102295. CARPINUS TSCHONOSKII Maxim. Betulaceae. Hornbeam.

A graceful shrubby tree up to 45 feet high, native to northeastern Asia, with the young branchlets and leaves softly pubescent. The elliptic to oblong leaves are 2 to 4 inches long and have irregularly finely serrate margins.

102296. CASSIOPE LYCOPODIODES (Pall.) D. Don. Ericaceae.

For previous introduction and description see 102191.

102297. CORNUS CONTROVERSA Hemsl. Cornaceae. Giant dogwood.

This Chinese dogwood is one of the most striking of the genus; in its native home it sometimes becomes a tree 60 feet high with a trunk 7 feet in girth.

102289 to 102309—Continued.

The numerous long branches extend at right angles to the trunk, with the lowest sometimes touching the ground. The white or slightly yellow flowers are in flat clusters 6 or 7 inches in diameter, appearing from late May to early June. The black shining fruits which follow are eaten by birds as fast as they ripen.

For previous introduction see 99849.

102298. (Undetermined.)

Received as *Gaultheria pyroloides*, but the seeds and plants do not agree with that species.

102299 to 102301. ILEX spp. Aquifoliaceae.

102299. ILEX PEDUNCULOSA Miquel.
Longstalk holly.

An evergreen shrub or small tree up to 30 feet high, native to Japan. The ovate entire leaves, 1 to 3 inches long, are lustrous green above, and the small flowers, in slender-stemmed cymes, are followed by bright-red fruits one-fourth of an inch in diameter, on slender pedicels 1 inch long.

102300. ILEX ROTUNDA Thunb.

A large evergreen tree, sometimes 40 feet or more high, with glossy green entire elliptic or oblong leaves 2 to 4 inches long, and small globose scarlet berries. Native to Japan and Chosen.

102301. ILEX SUGEROKI Maxim.

A dense evergreen shrub 6 feet high, with pubescent branchlets, elliptic acute leaves 1 to 2 inches long, serrate above the middle, and solitary red fruits about one-third of an inch in diameter on pedicels 1 inch long. It is native to Japan.

For previous introduction see 91255.

102302. PHYLLODOCE CAERULEA (L.) Bab. Ericaceae.

A dwarf evergreen shrub about 6 inches high, native to arctic and alpine regions. The linear serrulate leaves are one-fourth of an inch long, and the small urn-shaped purple flowers are in 2- to 6-flowered umbels on slender nodding pedicels.

102303. PHYLLODOCE NIPPONICA Makino. Ericaceae.

A small evergreen bush up to 1 foot high, with numerous linear, obtuse, spinose-serrulate, rigid, glossy green leaves half an inch long and pink flowers up to 1 inch long, borne near the ends of the branches. Native to Japan.

102304 to 102307. SHORTIA spp. Diapensiaceae.

102304. SHORTIA ALPINA Hort.

A name for which a place of publication and a description have not been found.

102305. SHORTIA GRANDIFLORA Hort.

A name for which a place of publication and a description have not been found.

102306. SHORTIA SOLDANELLOIDES (Sieb. and Zucc.) Makino.

A low alpine plant with long-stemmed orbicular coarsely dentate glossy green leaves about an inch across, and rosy or white flowers, less

102289 to 102309—Continued.

than an inch in diameter, in small clusters on scapes 2 to 3 inches long. Native to the mountains of Japan.

102307. SHORTIA UNIFLORA Maxim.
Nippon-bells.

A perennial herb, native to Japan, closely resembling the native American *Shortia galacifolia*. The cordate leaves are broader than long and deeply sinuate toothed, and the white bell-shaped flowers, an inch across, are borne on slender peduncles 3 to 8 inches tall.

102308. STACHYURUS PRAEcox Sieb. and Zucc. Stachyuraceae.

A shrub 12 to 15 feet high, with slender spreading branches, native to Japan. The elliptic to lanceolate serrate leaves are 3 to 6 inches long, and the small campanulate yellow flowers, borne in racemes 2 to 3 inches long, are followed by globose fruits about one-third of an inch in diameter, greenish yellow with a red cheek.

102309. TRIPETALIA PANICULATA Sieb. and Zucc. Ericaceae.

For previous introduction and description see 102264.

102310 to 102332.

From India. Seeds collected in the neighborhood of Darjeeling and presented by G. Ghose & Co., Town-end, Darjeeling. Received March 24, 1933.

102310. ANEMONE RIVULARIS Buch.-Ham. Ranunculaceae.

A silky pubescent ornamental from 1 to 3 feet high, with three-parted basal leaves up to 6 inches in diameter and white or bluish flowers, over 1 inch long, in compound cymes. It is found in the Himalayan region at 5,000 feet altitude.

For previous introduction see 99717.

102311. BOENINGHAUSENIA ALBIFLORA (Hook.) Reichenb. Rutaceae.

A slender erect perennial herb, 1 to 2 feet high, native to northern India, at altitudes of 4,000 to 8,000 feet. The bipinnate leaves have membranous orbiculate entire leaflets about 1 inch long, and the slightly nodding pure-white flowers, less than an inch across, are borne in compound terminal leafy cymes.

102312. CATHARTIA VILLOSA Hook. f. Papaveraceae.

A hardy annual or biennial found at altitudes of 10,000 to 12,000 feet in the Sikkim Himalayas. The abundance of long shaggy fulvous hairs and the bright-yellow glabrous flowers give it a handsome appearance. The cordate radical leaves are long petioled and palmately five-lobed; the stem leaves are sessile and the uppermost ones pinnatifid. The large nodding flowers have golden anthers and a green fleshy stigma.

For previous introduction see 99655.

102313. DAPHNE SUREIL Smith and Cave. Thymelaeaceae.

An erect evergreen shrub 3 to 10 feet high, with alternate lanceolate or linear-lanceolate leathery leaves about 4 inches long and small whitish flowers half an inch long. Native to the eastern temperate Himalayas.

102310 to 102332—Continued.

102314. ERANTHEMUM INDICUM Hort.
Acanthaceae.

A name for which a place of publication and a description have not been found.

102315. GENTIANA SIKKIMENSIS C. B. Clarke. Gentianaceae. **Gentian.**

A decumbent perennial herb native to the Sikkim Himalayas at altitudes between 10,000 and 14,000 feet. The radical leaves are orbicular, and those of the stem are elliptic to oblong and 1 inch long. The tubular funnel-shaped blue flowers, about 1 inch long, are in head-like clusters.

102316. GENTIANA STYLOPHORA C. B. Clarke. Gentianaceae. **Gentian.**

A stout herbaceous perennial native to the Himalayas in Sikkim between 11,000 to 14,000 feet altitude. The simple stems are 3 to 6 feet high, the lower leaves are elliptic and 12 inches long, and the upper leaves are sessile, about 5 inches long. The widely funnel-shaped solitary flowers are borne on axillary peduncles up to 8 inches long.

For previous introduction see 99868.

102317. LILIUM GIGANTEUM Wall. Liliaceae. **Giant lily.**

A lily, native to the Himalayas, at altitudes of 5,000 to 10,000 feet, with bulbs which grow close to the surface. The hollow stems are 6 to 9 feet high, and the handsome cordate leaves are shining dark green above and paler beneath. The large fragrant white flowers, often 12 in a raceme, are slightly greenish without, and the inner surface of the segments is tinged with deep purple.

For previous introduction see 99893.

102318 to 102320. MECONOPSIS spp. Papaveraceae.

102318. MECONOPSIS DISCIGERA Prain.

An alpine perennial about 1 foot high, with a basal rosette of spatulate, coarsely dentate, or somewhat lobed leaves about 3 inches long, and flowers in racemes. Native to western Sikkim.

102319. MECONOPSIS NAPAULENSIS DC.

A stout perennial herb, 3 to 5 feet high, with the young parts clothed in softly villous golden hairs; native to the temperate slopes of the Sikkim Himalayas. The sinuate-lobed or pinnatifid leaves are 10 to 16 inches long, and the golden yellow flowers, 2 to 4 inches across, are in elongated racemes.

For previous introduction see 99669.

102320. MECONOPSIS SIMPLICIFOLIA (Don) Hook. f. and Thoms.

A stemless annual or biennial herb, native to temperate regions of northern India. The ovate-lanceolate toothed or entire leaves, 2 to 3 inches long, are in a tufted rosette from which rise the deflexed hairy scapes, 12 to 18 inches high, bearing solitary poppylike clear-blue flowers 3 inches across.

102321. PIPTANTHUS NEPALENSIS (Hook.) Sweet. Fabaceae.

A shrub, 6 to 10 feet high, native to Nepal, India, at altitudes of 7,000 to 9,000 feet. The palmately trifoliate

102310 to 102332—Continued.

leaves have lanceolate leaflets 2 to 4 inches long; and the yellow pea-shaped flowers, 1 inch long, are borne in dense racemes resembling bunches of grapes.

102322. POTENTILLA PEDUNCULARIS D. Don. Rosaceae. **Cinquefoil.**

A perennial herb 12 to 18 inches high, native to the alpine slopes of the Himalayas in India at altitudes of 12,000 to 14,000 feet. The pinnate leaves, 6 to 18 inches long, have oblong deeply serrate leaflets 1 to 3 inches long, clothed beneath with soft appressed silky hairs. The yellow flowers, nearly an inch across, are borne in few-flowered corymbs.

102323. POTERIUM DIANDRUM Hook. f. Rosaceae. **Burnet.**

A glabrous erect perennial herb 2 to 3 feet high, native to the temperate slopes of the Himalayas at altitudes of 10,000 to 13,000 feet. The pinnately compound leaves, 6 to 10 inches long, are made up of crenate cordate leaflets 1 inch long, and the small dark-purple flowers, in heads an inch in diameter, are followed by pendulous four-winged fruits one-fourth of an inch long.

102324. PRIMULA KINGII Watt. Primulaceae. **Primrose.**

A glabrous perennial herb native to the Sikkim Himalayas. The elliptic-lanceolate crenulate leaves, 2 to 3 inches long, are in a crowded rosette, and the slender scapes, 6 to 10 inches high, bear 4 to 5 claret-colored funnel-shaped flowers nearly an inch across.

102325. PRIMULA STUARTII Wall. Primulaceae. **Primrose.**

A mealy or quite glabrous perennial herb native throughout the alpine and subalpine Himalayas of India and Tibet at altitudes of 12,000 to 16,000 feet. The coriaceous oblanceolate leaves with entire or crenulate margins are 4 to 10 inches long, and the scapes, 12 to 18 inches high, bear loose umbels of light-yellow drooping flowers.

102326. SAXIFRAGA PURPURASCENS Hook. f. and Thoms. Saxifragaceae. **Saxifrage.**

A beautiful herbaceous rock plant native to the temperate regions of the Sikkim Himalayas between 10,000 and 14,000 feet altitude. The bright glossy green leaves are elegantly margined with red, and the scape and inflorescence are bright vinous-red purple.

For previous introduction see 99752.

102327 to 102329. SENECIO spp. Asteraceae. **Groundsel.**

102327. SENECIO KINGIANUS W. W. Smith.

A stout alpine perennial 2 to 3 feet high, with large orbicular basal leaves 8 inches wide and broadly reniform stem leaves about 6 inches across. The flower heads are in numerous wide-branching corymbs. Native to Sikkim.

102328. SENECIO PACHYCARPUS C. B. Clarke. Asteraceae.

A stout erect perennial herb native to the Sikkim Himalayas between 10,000 and 14,000 feet altitude. The ovate-cordate leaves are toothed and

102310 to 102332—Continued.

the radical leaves have alate-dentate petioles. The nodding yellow flower heads, an inch across, are borne in corymbose racemes.

102329. *SENECIO RETUSUS* (DC.) Wall.

A perennial herb 12 to 18 inches high and 8 inches across, native to the slopes of the Himalayas in Nepal and Sikkim at altitudes of 12,000 to 15,000 feet. The toothed leaves vary from reniform at the base to oblong-lanceolate at the top of the plant. The yellow flower heads, 1 to 2 inches across, are solitary or 2 to 8 in a simple terminal raceme.

102330. *SWERTIA HOOKERI* C. B. Clarke. Gentianaceae.

A perennial herb with a thick hollow stem 2 to 4 feet high, native to the Sikkim Himalayas between 12,000 and 13,000 feet altitude. The elliptic long-petioled radical leaves are 4 inches long, and the stem leaves are lanceolate. The nodding purple flowers, with blue nerves, on pedicels 2 inches long, are borne in dense axillary cymes.

102331. *THALICTRUM CHELIDONI* DC. Ranunculaceae. Meadowrue.

A handsome ornamental plant, 15 inches high, with lovely pale-green foliage, pubescent beneath. The delicate silvery lavender flowers, over an inch across, are borne in graceful sprays. Native to the temperate Himalayas at altitudes of 8,000 to 12,000 feet.

For previous introduction see 95601.

102332. *THALICTRUM FOLIOLOSUM* DC. Ranunculaceae. Meadowrue.

A stiff erect perennial herb, 4 to 8 feet high, native to the temperate slopes of the Himalayas at altitudes of 5,000 to 8,000 feet. The pinnately compound leaves are made up of orbicular leaflets less than an inch across, and the white, pale-green or dull-purple flowers are in much-branched panicles.

102333. *CASTANEA SATIVA* Mill. Fagaceae. Spanish chestnut.

From Germany. Scions presented by the Versuchsstation für Pflanzenschutz, Halle (Saale). Received March 24, 1933.

Introduced for the use of Department specialists.

102334. *ALLIUM CEPA* L. Liliaceae. Onion.

From Manchuria. Seeds purchased from L. Pfitsin, Harbin. Received March 22, 1933.

Sample no. 16, collected in northern Manchuria.

102335 to 102338.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received March 20, 1933.

102335. *AMYRIS ELEMIFERA* L. Rutaceae.

A large shrub or small tree up to 50 feet high, native to the West Indies and Central America. The compound leaves are made up of 3 to 5 lanceolate to rhombic-ovate leathery leaflets 1 to 3 inches long, and the small white flowers,

102335 to 102338—Continued.

borne in panicles, are followed by globose black fruits one-fourth of an inch in diameter.

102336. *SAVIA SESSILIFLORA* (Swartz.) Willd. Euphorbiaceae.

A shrub or small tree up to 25 feet high, native to the West Indies, with slender pubescent branchlets, gray-brown bark, and inconspicuous flowers. The ovate to ovate-lanceolate leaves, 1 to 2 inches long, are pale green and reticulate veined.

102337. *PAULLINIA BARBADENSIS* Jacq. Sapindaceae.

A tropical woody vine which climbs by axillary tendrils. The biternate leaves have cuneate thin leathery leaflets 2 to 5 inches long with winged petioles, and the small flowers, in axillary racemes, are followed by red or yellow three-winged leathery fruits, one-half of an inch long, which open and disclose the black seeds with their creamy aruncles. Native to the West Indies.

102338. *TOURNEFORTIA SCABRA* Lam. Boraginaceae.

A low vinelike shrub up to 6 feet high, native to the West Indies. The rigid, leathery, oblong to lanceolate leaves are 1 to 3 inches long, and the small white or yellow salverform flowers, borne in forked cymes, are followed by ovoid white fruits one-eighth of an inch long.

102339. *ELEOCHARIS TUBEROSA* (ROXB.) Schult. Cyperaceae.

Tubers presented by Albert P. Ding, Portland, Ore. Received March 27, 1933.

A Chinese vegetable which grows very much in the same manner as wet-land rice. The corms or tuberous rhizomes are mostly eaten raw, but are also sliced or shredded in soups and in meat and rice dishes. The plants need a hot summer to mature and are grown on muck or clay soils.

For previous introduction see 101500.

102340 and 102341. *IPOMOEA BATATAS* (L.) Poir. Convolvulaceae.

Sweetpotato.

From the Union of Soviet Socialist Republics. Tubers presented by V. P. Alekseev, chief of foreign-plant introduction, Institute of Plant Industry, of the Lenin Academy of Agricultural Sciences, Leningrad. Received March 4, 1933.

102340. No. 135733. A yellow-skinned, orange-fleshed yam of excellent quality, with a honey sweetness and aroma. A heavy yielder, but the shape of the roots is not standard.

102341. No. 135737. A cream-white, moist, yellow-fleshed variety of excellent quality which produces a heavy yield of large smooth regular-shaped tubers.

102342 to 102354.

From the West Indies. Seeds collected by David Fairchild, with the 1933 Allison V. Armour expedition. Received March 20, 1933.

102342. *AGAVE BREVISPIÑA* Trelease. Amaryllidaceae.

No. 3022. *Galatas* or *Croix des bouquets*. Point Decouverte, above Kenscoff,

102342 to 102354—Continued.

Haiti, March 2, 1933. A stemless but not caespitose agave with dull dark-green broadly lanceolate leaves 3 feet or more long, with small dull-brown spines and narrowly triangular prickles. The golden-yellow flowers are in a dense cluster on a scape 12 feet high. Native to Hispaniola.

102343. ANNESLIA HAEMATOSTOMA (Bertero) Britton. Mimosaceae.

No. 3009. From Watlings Island, January 19, 1933. *Red anneslia*. A handsome shrub of attractive habit. Its spreading branches are covered with small coriaceous pinnate leaves, and its flowers, with long brilliant red stamens, appear in the spring in clusters resembling pincushions.

102344. BEGONIA sp. Begoniaceae.

No. 3024. From near Kenscoff, Haiti, at 6,000 feet altitude. A wild form of scraggly habit, with very small scanty foliage and large, very attractive white flowers tinged with pink.

102345. CAESALPINIA SEPIARIA Roxb. Caesalpinaceae. Mysore thorn.

No. 3027. From near Kenscoff, Haiti, at 6,000 feet altitude, March 3, 1933. A scrambling spiny pubescent shrub, native to India. The compound leaves are made up of 12 to 20 pairs of pinnae, each bearing 16 to 24 oblong leaflets an inch long. The bright-yellow flowers, an inch across, are in simple racemes a foot long.

For previous introduction see 99694.

102346. CAESALPINIA VESICARIA L. Caesalpinaceae.

No. 3020. From Great Inagua, Bahama Islands, February 27, 1933. A small, handsome, loosely branching tree with shining, dark-green compound leaves which have yellow midribs, petioles, and petiolules, giving the foliage a very striking appearance. The attractive red and yellow flowers are in simple racemes.

102347. CARICA PAPAYA L. Papayaceae. Papaya.

No. 3003. From Nassau, April 12, 1933. Small, oblong fruits of excellent flavor, each of which contains a small, embryonic fruit.

102348. CEPHALOCEREUS BAHAMENSIS Britton. Cactaceae.

No. 3011. *Dildo*. From the north side of Crooked Island, Bahama Islands, February 20, 1933. A large handsome columnar cactus with spreading branches, found on solid coral rock. The cream-white flowers, which smell like garlic, are followed by small round reddish fruits with black seeds.

102349. CEPHALOCEREUS MILLSPAUGHII Britton. Cactaceae.

No. 3015. From Mariguana, Bahama Islands, February 24, 1933. A large cactus with branching stems, 6 to 20 feet high, sometimes 8 inches thick at the base of the trunk. It has 8 to 13 ribs, and a score of acicular brown-yellow spines about 2 inches long rise from each gray-brown areole. The rather stiff, greenish flowers, white within and less than an inch long, are succeeded by small reddish globose fruits. Native to the Bahama Islands.

102342 to 102354—Continued.

102350. CLERODENDRUM SPECIOSUM Telism. and Blinn. Verbenaceae.

No. 3034. From Hope Gardens, Kingston, Jamaica, March 7, 1933. An ornamental vine with a profusion of dull-red flowers borne continuously during the summer months. The slender, woody stems are slightly angled, and the dark-green, oblong-cordate or elliptic leaves are 4 to 6 inches long. Said to be a hybrid between *C. thompsonae* and *C. splendens*.

102351 and 102352. LUCUMA DOMINGENSIS Gaertn. f. Sapotaceae.

102351. No. 3021. From the American Legation compound, Port-au-Prince, Haiti, March 1, 1933. The *Juane d'oeuf*, with small round fruits over an inch in diameter, which closely resembles the *Canistel* in texture and flavor of its fruit.

102352. No. 3031. Presented by a student in the School of Agriculture at Damien, Haiti, March 3, 1933. A variety with oblong or pear-shaped fruits with a different skin texture, slightly pointed seed, and rather stickier flesh than no. 3021 [102351]. This may indicate a variability in the seedlings of this species.

102353. PASSIFLORA RUBRA L. Passifloraceae.

No. 3001. A softly pubescent vine with crescent-shaped cordate leaves 2 to 4 inches broad, green-white flowers 2 inches across, and red fruits 2 inches long. It is native to the West Indies.

For previous introduction see 97966.

102354. THRINAX sp. Phoenicaceae. Palm.

No. 3041. From Bath, Jamaica.

102355. CARICA PAPAYA L. Papayaceae. Papaya.

From Guatemala. Seeds presented by Manuel Pacheco H., Director General of Agriculture, Guatemala City. Received March 27, 1933.

A locally grown red variety.

102356 to 102362.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Forest Culture, Moscow, through A. Albensky, chief, Acclimatization Department. Received March 28, 1933.

102356. ASPARAGUS sp. Convallariaceae.

A wild form from Alazan Kachetia, Caucasus.

102357. CARAGANA ARBORESCENS CUNEIFOLIA (Dipp.) C. Schneid. (*C. amurensis* Hort.). Fabaceae.

A dwarf form of the well-known Siberian pea-tree with the leaflets quite uniformly wedge-shaped and the flowers on shorter stalks. This form was originally described from Dahuria and Mongolia.

102358. CRATAEGUS DOLICHOCARPA Hort. Malaceae. Hawthorn.

A name for which a place of publication and a description have not been found.

102356 to 102362—Continued.

102359. CRATAEGUS sp. Malaceae.

From Zakataly, Caucasus. Hawthorn.

102360. PRUNUS CERASIFERA DIVARICATA (Ledeb.) C. Schneid. Amygdalaceae.

From Poti, Caucasus. Plum.

102361. PYRACANTHA sp. Malaceae.

From Zanataby, Caucasus. Firethorn.

102362. TILIA sp. Tiliaceae. Linden.

From Khabarovsk.

102363 to 102365.

From Egypt. Seeds presented by the Director, horticultural section, Ministry of Agriculture, Giza. Received March 30, 1933.

102363. ANTIDESMA BUNIUS (L.) Spreng. Euphorbiaceae. Banauac.

An attractive small evergreen tree, attaining a height of 30 feet, with dark-green thick-pointed leaves and small, dark-red, subacid, well-flavored fruits borne in racemes like the currant. These may be eaten raw or made into jelly. The tree is widely distributed throughout the Tropics at low and medium altitudes under varying climatic conditions. Native to the Malay Peninsula.

102364. CHAMAEROPS HUMILIS L. Phoenicaceae. Hair palm.

A low palm with a stem only 1 to 2 feet high, said to be the only palm native to Europe, found in the Mediterranean region. The nearly orbicular leaves are deeply lacinate into narrow bifid lobes, and the margins of the petioles are armed with stout spines. The small yellow flowers are followed by globose or ovoid yellow-brown fruits.

102365. HYPHAENE THEBAICA (L.) Mart. Phoenicaceae. Doum palm.

A palm about 30 feet high, which is noted as one of the few branching palms. It grows in alkaline, sandy soils and is native from upper Egypt to central Africa. The stems of old trees sometimes fork 3 or 4 times. The beautiful yellow-brown fruits are borne in clusters of 100 to 200 pounds. In upper Egypt the poor people eat the fibrous husk, which tastes like gingerbread but is rather hard. The hard tough wood is used for domestic utensils.

For previous introduction see 98494.

102366. CITRUS LIMETTA RISSO. Rutaceae. Sweet lime.

From Palestine. Seeds presented by M. Lifshitz, manager, Palestine Plantations, Ltd., Tel-Mond, Kfar-Saba, at the request of Robert W. Hodgson, associate professor of subtropical horticulture, Berkeley, Calif. Received March 30, 1933.

The pale-green fruit, about the size of a lemon, has skin less than a quarter of an inch thick, and the juice is cloying and sweet. As a stock this sweet lime requires less water and produces trees yielding earlier fruit than the bitter orange.

102367. PHOENIX DACTYLIFERA L. Phoenicaceae. Date palm.

From India. Seeds presented by the fruit specialist, Government of Punjab, Lyallpur, through W. T. Swingle. Received March 25, 1933.

102368. PHOENIX RECLINATA Jacq. Phoenicaceae. Senegal date palm.

From Africa. Seeds collected at Akure, Ondo Province, in southern Nigeria, and presented by the director of the Department of Agriculture, Ibadan, Nigeria. Received March 25, 1933.

A date palm 20 to 30 feet high, native to the tropical and subtropical parts of Africa. The reclinate pinnate leaves are 6 to 9 feet long and have rigid green leaflets. The yellowish fruits, with edible sweetish pulp, are half an inch long.

102369 to 102372. MALUS SYLVESTRIS Mill. (Pyrus malus L.). Malaceae. Apple.

From Poland. Scions presented by Dr. W. Filewicz, Sinoleka. Received March 31, 1933.

Presented under the following varietal names:

102369. *Glogierbwdk.*102370. *Kosztela.*102371. *Malinowce Oberludzkie.*102372. *Reneta Landakergska.*

102373. CYCAS SIAMENSIS Miquel. Cycadaceae.

From Siam. Seeds presented by A. Kerr, director, Botanic Garden, Bangkok. Received March 28, 1933.

A cycad, native to Siam, with a smooth white stem up to 15 feet high and 6 inches in diameter above the abruptly swollen base. The light-green, pinnately-compound leaves, 3 feet long, have about 70 pairs of narrowly linear, leathery leaflets 3 to 4 inches long, and the ovoid fruits, about 9 inches long, are covered with orange wool.

102374. ALLIUM CEPA L. Liliaceae. Onion.

From Manchuria. Seeds purchased from L. Pittsin, Harbin. Received March 28, 1933.

Sample no. 17, collected in northern Manchuria in January 1933.

102375. GOSSYPIUM PERUVIANUM Cav. Malvaceae. Cotton.

From South America. Seeds presented by the American consul at Guayaquil, Ecuador. Received March 30, 1933.

Red Peruvian.

102376 and 102377. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.

From Yugoslavia. Seeds presented by L. G. Michael, agricultural attaché, American Legation, Belgrade, through L. A. Wheeler, Bureau of Agricultural Economics. Received March 30, 1933.

102376. Variety 1.

102377. Variety 2.

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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 115



Washington, D. C.

Issued July 1935

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, APRIL 1 TO JUNE 30, 1933 (Nos. 102378-103406)

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INTRODUCTORY STATEMENT

In this Inventory, no. 115, is recorded the plant material introduced by the Division of Plant Exploration and Introduction between April 1 and June 30, 1933, totaling 1,129 numbers (102378-103406).

The introduction of plants and scions of more than one hundred named varieties of apples, peaches, apricots, and pears from Italy is in continuation of the plan of the Division to bring into this country, for testing by Government specialists, as many as possible of the commercial deciduous-fruit varieties of Europe. Mention should be made also of a collection of grape scions presented by the Biologische Reichsanstalt at Naumburg, Germany (nos. 102491-102512); these will be tested in the far West and Southwest.

During March 1933, David Fairchild made a tour of several of the islands of the West Indies, stopping also for a brief visit to the Canal Zone. This trip was made possible through the continuing generosity of Allison V. Armour, whose yacht, the *Utowana*, carried the expedition. Dr. Fairchild's collections included cuttings and seeds of various tropical and subtropical fruits, seeds of a number of rare palms, and seeds or cuttings of numerous little-known ornamentals. Also worthy of mention is a special collection of palms (nos. 103155-103173) from Ceylon, presented by the Royal Botanic Garden at Peradeniya.

Joseph Rock, for several years an agricultural explorer for this Division, was traveling during this period through southwestern China for the University of California Botanic Garden. Through the courtesy of that institution, this Division received over 200 lots of seeds collected by Dr. Rock. These included several apparently new species of *Berberis*, *Cassiope*, *Cotoneaster*, *Iris*, *Lilium*, *Nomocharis*, *Prunus*, and *Rosa*.

Through the kindness of the Union of Soviet Socialist Republics, a special collection of tubers of South American species of *Solanum* (nos. 103028-103038) was received that will be of great value to pathologists working with potato diseases. By this same cooperation the Botanic Garden at Leningrad sent in 44 lots of seeds of little-known hardy perennials and bulbous plants adapted for growing in the colder parts of the United States.

The north-central Plains region of the United States should benefit from a shipment of seeds of very hardy vegetables grown between 40° and 45° north latitude in central Asia (nos. 102699-102727). Included in this lot of seed are onions, carrots, tomatoes, eggplants, and redpeppers.

The botanical determinations were made and the nomenclature determined by the late H. C. Skeels,¹ who had general supervision of this inventory.

B. Y. MORRISON,
Principal Horticulturist, in Charge.

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D. C., February 15, 1935.

¹ Died Jan. 3, 1934.

INVENTORY²

102378. PHOENIX RECLINATA Jacq.
Phoenicaceae. Senegal date palm.

From Africa. Seeds collected at Zana, Algeria, and presented by the Royal Botanic Gardens, Kew, England. Received April 6, 1933.

Introduced for the use of Department specialists. Hausa name, *Kajinjira* or *Dabino bivi*. A date palm 20 to 30 feet high, native to tropical and subtropical parts of Africa. The reclinate, pinnate leaves are 6 to 9 feet long and have rigid green leaflets. The yellowish fruits, with edible sweetish pulp, are half an inch long.

For previous introduction see 102368.

102379 and 102380. SOLANUM TUBEROSUM L. Solanaceae. Potato.

From Brazil. Tubers presented by the Instituto Agronomico de Estado de São Paulo, Campinas. Received April 12, 1933.

102379. No. 21. *Ouro* (gold). Seeds from Clone no. 173. A variety introduced from Portugal many years ago.

102380. No. 16. Variety *Richter's Jubel*. Introduced from Germany in 1929; almost immune from common scab.

102381. SOLANUM TUBEROSUM L. Solanaceae. Potato.

From St. John's, Newfoundland. Tubers presented by H. A. Butler, secretary of agriculture, Department of Agriculture and Mines. Received April 14, 1933.

Arran Victory; a wart-resistant variety.

102382. SYAGRUS FLEXUOSA (Mart.) Becc. (*Cocos flexuosa* Mart.). Phoenicaceae. Palm.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received April 10, 1933.

102382—Continued.

A low Brazilian palm, 9 to 12 feet high, with lax terminal pinnate leaves, 3 to 6 feet long, having 70 to 90 pairs of rigid leaflets.

For previous introduction see 91875.

102383 to 102385. DANTHONIA spp. Poaceae. Grass.

From Australia. Seeds presented by A. B. Cashmore, Waite Agricultural Research Institute, University of Adelaide, Glen Osmond, South Australia. Received April 5, 1933.

A collection of selected strains that give the best results under South Australian conditions.

102383. DANTHONIA DUTTONIANA Cashmore.

Ga 65. A perennial grass, native to Australia, with stems about 2 feet high, bearing broad leaves 6 to 9 inches long and open panicles 3 to 6 inches long. Said to be valuable both for hay and as a pasture grass.

102384. DANTHONIA RICHARDSONII Cashmore.

Ga 63. A perennial grass, native to Australia, with stems 2 to 3 feet high, lanceolate leaves about 1 foot long, and dense panicles 4 to 6 inches long. Said to be of value as a pasture grass.

102385. DANTHONIA SEMIANNULARIS (Labil.) R. Br. Wallaby grass.

Ga 60. A perennial fine-leaved tussocky grass, 1 to 2 feet high, which provides feed for the greater part of the year. It is said to be a good winter grass, will stand a great amount of grazing, and its palatability, both for cattle and sheep, is well known.

For previous introduction see 100671.

² 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 Division of Plant Exploration and 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 seed samples or 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 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

102386 to 102389.

From Mikicci, Lithuania. Scions presented by Frank Kokaska. Received April 12, 1933.

Received under the following varietal names.

102386. *MALUS SYLVESTRIS* Mill. (*Pyrus malus* L.). Malaceae. **Apple.**

No. 2. *Red Lomp*. A winter apple.

102387 to 102389. *PYRUS* spp. Malaceae. **Pear.**

102387. *PYRUS* sp.

Late Bartlett.

102388. *PYRUS* sp.

Late Sweet.

102389. *PYRUS* sp.

Red Check.

102390 to 102392. *VITIS VINIFERA* L. Vitaceae. **European grape.**

From the Netherlands. Scions presented by J. M. Riemans, Naaldwijk, through Prof. F. T. Bioletti, University of California, Berkeley, Calif. Received April 13, 1933.

Received under the following varietal names.

102390. *Early van der Laan.*

102391. *Emile Royal.*

102392. *Frankenthaler.*

102393 and 102394.

From Angola, Africa. Seeds presented by Dr. Leon Croizat, New York City, N. Y. Received April 12, 1933.

102393. *ELAEOPHORBIA DRUPIFERA* (Thonn.) Stapf. Euphorbiaceae.

A deciduous tree 40 to 50 feet high, with milky juice that may be a source of rubber. The young branches are fleshy and angled, becoming round and woody with age. The thick fleshy obovate leaves are 3 to 8 inches long, with stipular spines; the flowers are similar to those of the euphorbias, and the fleshy fruits vary in size from that of a cherry to a walnut. Native to tropical Africa.

102394. *EUPHORBIA DIDIEROIDES* M. Denis. Euphorbiaceae.

A low spiny succulent shrub, leafless below, with a terminal rosette of lanceolate-ovate leaves about 2 inches long. The spines are borne in threes, with the central one much longer than the rest. The small yellowish flowers are in dense terminal cymes. Native to Madagascar.

102395. *IPOMOEA BATATAS* (L.) Poir. Convolvulaceae. **Sweetpotato.**

From Japan. Tubers presented by the Agricultural Experiment Station, Nishigahara, Tokyo. Received April 17, 1933.

Shijunichi-Imo, or 40-day sweetpotato.

Introduced for the use of Department specialists.

102396 to 102398.

From Cuba. Seeds presented by Robert M. Gray, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received April 13, 1933.

102396 to 102398—Continued.

102396. *CASEARIA ACULEATA* Jacq. Flacourtiaceae.

A spiny shrub or small tree native to the West Indies. The elliptic to obovate leaves, 1 to 3 inches long, are glabrous above and usually pubescent, with rather long stiff hairs beneath, and the inconspicuous flowers, in small umbels, are followed by globose capsules about one-fourth of an inch in diameter.

102397. *ELSOTA DIVERSIFOLIA* (L.) Blake (*Securiduca diversifolia* (L.) Blake). Polygalaceae.

A trailing or climbing shrub with thick shining oblong to ovate leaves 2 to 6 inches long and racemes of rose-colored flowers. It is native to Central America and the West Indies.

For previous introduction see 99633.

102398. *TABEUIA LEPIDOTA* (H. B. K.) Britton. Bignoniaceae.

A tropical tree, native to Cuba, with opposite compound leaves composed of five small oblong-lanceolate leathery leaflets, lepidote beneath, and axillary pink flowers about 2 inches long.

102399. *AGROPYRON CRISTATUM* (L.) Gaertn. Poaceae. **Wheatgrass.**

From Canada. Seeds presented by L. E. Kirk, Dominion agronomist, Division of Forage Plants, Central Experimental Farm, Ottawa, Ontario. Received April 15, 1933.

Fairway. A strain of crested wheatgrass which has proved very satisfactory for lawns under dry-land conditions. It is also a good pasture strain. Practically all of the plants spread more or less by underground stems and some are decidedly creeping.

102400. *PISTACIA VERA* L. Anacardiaceae. **Pistache.**

From Turkey. Scions presented by H. T. Pence, American Mission, Gaziantep. Received April 3, 1933.

102401 to 102453.

From Italy. Plants purchased from Martino Bianchi, Pistoia. Received April 4, 1933.

Received under the following varietal names.

102401 to 102406. *AMYGDALUS* sp. Amygdalaceae.

102401 to 102405. *AMYGDALUS PERSICA* L. **Peach.**

102401. *D'Italia grossissima.*

102402. *Gialla di Breganze.*

102403. *Grossa Montagna.*

102404. *MoscateLLa gialla spicca.*

102405. *Tondona Presidente.*

102406. *AMYGDALUS PERSICA* NECTARINA Ait. **Nectarine.**

Cardinale.

102407 to 102429. *MALUS SYLVESTRIS* Mill. (*Pyrus malus* L.). Malaceae. **Apple.**

102407. *Annurca.*

102408. *Borda.*

102409. *CalvillA bianca d'inverno.*

102401 to 102453—Continued.

102410. *Calvilla di S. Salvatore*.
 102411. *Calvilla rossa d'estate*.
 102412. *Calvilla rossa d'inverno*.
 102413. *Carla*.
 102414. *Campiano*.
 102415. *Decio*.
 102416. *Durello*.
 102417. *Francesca*.
 102418. *Gelata*.
 102419. *Hohenzollern*.
 102420. *Isabella Luizet*.
 102421. *Jeanne Hardy*.
 102422. *Korobowka*.
 102423. *La Pair*.
 102424. *Lazzeruola*.
 102425. *Mantovano*.
 102426. *Renetta grigia Tirolese*.
 102427. *Rosa Gentile*.
 102428. *Rosmarina Bianca*.
 102429. *S. Giovanni*.
 102430 to 102438. PRUNUS ARMENIACA L.
 Amygdalaceae. **Apricot**.
 102430. *Aome ou Sense*.
 102431. *Bella di S. giuliano*.
 102432. *Fertile di Chatanay*.
 102433. *Golden Dust*.
 102434. *Luizet*.
 102435. *Precoce di Montplaisir*.
 102436. *Precoce di Toscana*.
 102437. *Precoce di Tunisi*.
 102438. *Souvenir d'Amic*.
 102439 to 102453. PYRUS spp. Malaceae.
Pear.
 102439. *Andre Desporters*.
 102440. *Arthur Chevreau*.
 102441. *Buoneristiana d'inverno*.
 102442. *Butirra d'Angleterre*.
 102443. *Butirra senza seni*.
 102444. *Centodoppia (Del Duca)*.
 102445. *Decan d'Alencon*.
 102446. *Duca di Pistoia*.
 102447. *La Madermassa*.
 102448. *Precoce di Cassano*.
 102449. *Re Carlo di Wurtemberg*.
 102450. *Rene Vaucel*.
 102451. *Santa Clause*.
 102452. *S. Germano d'inverno*.
 102453. *Spina*.

102454. ABELIA FLORIBUNDA (Mart. and Gal.) Decaisne. Caprifoliaceae.
Mexican abelia.

From England. Plants presented by Stevenson R. Clarke, Borde Hill, Haywards Heath, Sussex. Received April 5, 1933.

102455. GARCINIA MESTONI F. M. Bailey. Clusiaceae.

From Australia. Seeds presented by J. M. Newman, at the request of C. T. White, Government botanist, Queensland. Received April 4, 1933.

An erect slender graceful tree 20 feet or more in height, with drooping branches and glossy dark-green leaves. The roundish fruits, 2 to 3 inches in diameter, are of a bright olive green, with very juicy pulp of a pleasant acid flavor. The tree grows wild in the Bellenden Ker Hills at about 2,000 feet altitude.

102456 and 102457. MANGIFERA INDICA L. Anacardiaceae. **Mango**.

From the West Indies. Budwood and plants collected by David Fairchild, with the 1933 Allison V. Armour expedition. Received April 8, 1933.

102456. *Bombay mango*. No. 3052. From Kingston, Jamaica, March 11, 1933. This is the most prolific of all the East Indian mangoes that have been tested in Jamaica. It is a small fiberless sweet mango with a faint red flush, very much like the *Pairi*.

For previous introduction see 102269.

102457. *Sugar mango*. No. 3064. From Old Providence Island, March 14, 1933. This is an interesting form with very small sweet fruits of which the great majority are seedless or at least with very thin rudiments of seeds. The fruits are borne in clusters of 10 to 12, like grapes. Curiously enough, once in a while this variety produces a viable seed and this reproduces the variety.

102458 and 102459. AMYGDALUS COMMUNIS L. Amygdalaceae. **Almond**.

From Italy. Seeds presented by Dr. F. Silvestri, director of the R. Laboratorio di Entomologia, Agrario R. Istituto Superiore Agrario, Portici. Received April 8, 1933.

Received under the following varietal names.

102458. *Nocellara*.

102459. *Tricala*.

102460 to 102469.

From the West Indies and the Canal Zone. Material collected by David Fairchild, with the 1933 Allison V. Armour expedition. Received April 4, 1933.

102460. CITRUS GRANDIS (L.) Osbeck. (*C. decumana* Murr.). Rutaceae. **Grapefruit**.

No. 3037. From the market at Port-au-Prince, Haiti, March 3, 1933. A pear-shaped fruit of good quality, with juicy, rather dark-colored aromatic flesh.

Nos. 102461 to 102468 were collected in the Canal Zone.

102461. KAEMPFERIA ROTUNDA L. Ziniberaceae.

No. 3088. *Resurrection lily*. Root-stalks presented by Mr. Hunter, Ancon, February 3, 1933. A stemless tuberous plant allied to the ginger (*Zinziber officinale*). In the Canal Zone the showy violet-purple flowers, in general appearance resembling the crocus, appear in March. Later the very decorative green

102460 to 102469—Continued.

and purple leaves appear. These are about a foot long and 3 to 4 inches wide.

102462. *PASSIFLORA VITIFOLIA* H. B. K. Passifloraceae.

No. 3087. Cuttings collected near Fort Sherman, March 25, 1933. A strong-growing woody climber with deeply three-lobed heart-shaped leaves and large scarlet flowers about 5 inches across. The vine is reported to be immune from insects and nematodes.

102463 to 102467. *PHILODENDRON* spp. Araceae.102463. *PHILODENDRON* sp.

No. 3079. From Ancon, March 23, 1933. Cuttings of a handsome species, with dark-green elliptical leaves and a graceful habit of growth.

102464. *PHILODENDRON* sp.

No. 3080. From Barro Colorado Island, March 23, 1933. Cuttings of a rank climbing species of loose growth, with small very dark-green leaves that have broad petioles.

102465. *PHILODENDRON* sp.

No. 3081. From the Armour trail on Barro Colorado Island, March 23, 1933. A species with handsome immense dark-green leaves on long petioles.

102466. *PHILODENDRON* sp.

No. 3102. Cuttings collected in the Experiment Garden, Summit, March 23, 1933. A very pretty species with beautiful light-green, finely parted leaves.

102467. *PHILODENDRON* sp.

No. 3105. From the Experiment Garden, Summit, March 23, 1933. Cuttings of an epiphytic species with large dark-green cordate leaves. It is native to the Canal Zone.

102468. (Undetermined.)

No. 4. Cuttings of an aroid collected on Barro Colorado Island, March 23, 1933.

102469. *IPOMOEA HEPTAPHYLLA* (Rottl. and Willd.) Voight. Convolvulaceae.

No. 3013. From Crooked Island, Bahamas, February 2, 1933. Roots of a very handsome, free flowering, twining perennial, with fleshy, deep-pink flowers.

102470 to 102490.

From France. Seeds presented by Vilmorin-Andrieux & Cie., Verrieres-le-Buisson (Seine et Oise). Received April 5, 1933.

102470. *BETULA MEDWEDIEWII* Regel. Betulaceae. Birch.

A tall tree native to southeastern Europe. The ovate to obovate, doubly serrate leaves, 3 to 6 inches long and nearly as broad, are dark green above and light green beneath, with the 8 to 11 pairs of veins impressed on the upper surface.

102471. *BETULA TRISTIS* Wormsk. Betulaceae. Birch.

A shrub 3 to 12 feet high, with broadly ovate or elliptic acuminate leaves about 2 inches long. Native to northeastern Asia.

102470 to 102490—Continued.

102472. *CALLICARPA* sp. Verbenaceae. No. 2301.102473. *CALLICARPA* sp. Verbenaceae. No. 5511.102474 to 102490. *COTONEASTER* spp. Malaceae.102474. *COTONEASTER RUGOSA LATIFOLIA* Hort.

A name for which a place of publication and a description have not been found.

102475. *COTONEASTER MELANOCARPALAXIFLORA* (Jacq.) C. Schneid.

A form with leaves larger than the type and pendulous clusters of pink flowers and black fruits.

102476. *COTONEASTER MICROPHYLLA THYMIFOLIA* (Loud.) Koehne. Thyme rockspray.

A variety that differs from the type in being generally smaller throughout, with narrowly oblong-obovate leaves and berries one-fifth of an inch in diameter. Native to the Himalayas.

For previous introduction see 102203.

102477. *COTONEASTER MULTIFLORA* Bunge. Malaceae.

A deciduous shrub about 6 feet high, with slender arching purple branches, native to western China. The broadly ovate leaves are 1 to 2 inches long, and the many-flowered clusters of small white flowers are followed by subglobose to ovoid red fruits one-third of an inch in diameter.

102478. *COTONEASTER MYRTIFOLIA* Hort.

A name for which a place of publication and a description have not been found.

102479. *COTONEASTER UNIFLORA* Bunge.

A dwarf deciduous shrub, closely related to *C. integerrima*, 2 to 3 feet high and native to Siberia. The thin, broadly oval to obovate leaves, less than 1 inch long, are smooth above and downy beneath when young. The single, usually solitary, white flowers are followed by globose red fruits.

102480. *COTONEASTER WHEELERI* Hort.

A name for which a place of publication and a description have not been found.

102481. *COTONEASTER* sp.

Farrer no. 404.

102482. *COTONEASTER* sp.

C. Schneider no. 719.

102483. *COTONEASTER* sp.

No. 2005.

102484. *COTONEASTER* sp.

No. 2007.

102485. *COTONEASTER* sp.

No. 2061.

102486. *COTONEASTER* sp.

No. 2119.

102470 to 102490—Continued.

102487. COTONEASTER sp.
No. 3737.
102488. COTONEASTER sp.
M. V. no. 4414.
102489. COTONEASTER sp.
M. V. no. 4694.
102490. COTONEASTER sp.
No. 7087.

102491 to 102512. VITIS spp. Vitaceae.
Grape.

From Germany. Cuttings presented by Dr. C. Börner, Biologische Reichsanstalt, Zweigstelle, Naumburg, Saale. Received April 7, 1933.

A collection of grape cuttings introduced for the use of Department specialists.

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|-------------------|-------------------|
| 102491. VITIS sp. | 102502. VITIS sp. |
| 102492. VITIS sp. | 102503. VITIS sp. |
| 102493. VITIS sp. | 102504. VITIS sp. |
| 102494. VITIS sp. | 102505. VITIS sp. |
| 102495. VITIS sp. | 102506. VITIS sp. |
| 102496. VITIS sp. | 102507. VITIS sp. |
| 102497. VITIS sp. | 102508. VITIS sp. |
| 102498. VITIS sp. | 102509. VITIS sp. |
| 102499. VITIS sp. | 102510. VITIS sp. |
| 102500. VITIS sp. | 102511. VITIS sp. |
| 102501. VITIS sp. | 102512. VITIS sp. |

102513 to 102585.

From Italy. Plants and scions purchased from G. Giannini, Stabilimento d'Orticultura, Pistoia. Received April 8, 1933.

Received under the following varietal names.

- 102513 to 102535. AMYGDALUS PERSICA L. Amygdalaceae. Peach.
102513. *Bella di Pistoia*.
102514. *Bella di Roma*.
102515. *Bella di Vitry*.
102516. *Bonouvrier*.
102517. *Bonvicini*.
102518. *Buco incavato*.
102519. *Burrone di Rosano*.
102520. *Della China*.
102521. *Giallona di Papigno*.
102522. *Globe*.
102523. *Grosse Mignonne*.
102524. *Isonzo*.
102525. *Lavarone*.
102526. *Morellona di Firenze*.
102527. *Poppa di Venere*.
102528. *Principe di Piemonte*.
102529. *Ricordo Tug Giannani*.
102530. *Sant' Anna*.
102531. *Spagnola*.
102532. *Tardiva di Brunel*.

102513 to 102585—Continued.

102533. *Tardiva di Massalombarda*.
102534. *Topazio*.
102535. *Vittorio Emanuele III*.
102536 to 102561. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae. Apple.
102536. *Api rose*.
102537. *Bella di Pontoise*.
102538. *Calvilla Granduca Federico di Baden*.
102539. *Calvilla Saint Sauveur*.
102540. *Carla*.
102541. *Carla di Finale*.
102542. *Carpandola grigia*.
102543. *Chelmsford Wonder*.
102544. *Drappo dorato*.
102545. *Ferro*.
102546. *Finocchina*.
102547. *Flabewy*.
102548. *Grugno di cane*.
102549. *Lord Suffield*.
102550. *Mora*.
102551. *Principe Alberto*.
102552. *Renetta d'Inghilterra*.
102553. *Renetta grigia*.
102554. *Renetta reale*.
102555. *Rosa Romana*.
102556. *Rosa tirolese*.
102557. *Rosmarina bianca*.
102558. *Rossa nobile*.
102559. *Rotella*.
102560. *Sugar Loaf Pippin*.
102561. *Transparente de Croncels*.
102562. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.
Commune.
102563 to 102585. PYRUS spp. Malaceae. Pear.
102563. *Abate Fetel*.
102564. *Blanquet*.
102565. *Buena Luigia d'Avranches*.
102566. *Butirra d'Amanlis*.
102567. *Coscia*.
102568. *Curato*.
102569. *Decana d'Alençon*.
102570. *Decana di Luglio*.
102571. *Decana d'Inverno*.
102572. *Dottor Giulio Guyot*.
102573. *La Francia*.
102574. *Gentile bianca*.
102575. *Giardina*.
102576. *Imperatore Alessandro*.
102577. *Lardona*.
102578. *Margherita Marillat*.

102513 to 102585—Continued.

102579. *Martin Soc.*
 102580. *Monsallard.*
 102581. *Moscattello Piccolo.*
 102582. *Nobile.*
 102583. *Spadona d'Estate.*
 102584. *Succaramana.*
 102585. *Trionfo di Vienna.*

102586 to 102619.

From the West Indies and Central America. Seeds collected by David Fairchild, with the 1933 Allison V. Armour expedition. Received April 4, 1933.

102586. *AGAVE BREVISPIA* Trelease.
Amaryllidaceae.

No. 3022. *Galatas* or *Croix des bouquets*. Point Decouverte, above Kenscoff, Haiti, March 2, 1933. A stemless but not caespitose agave, with dull dark-green, broadly lanceolate leaves 3 feet or more long having small dull-brown spines and narrowly triangular prickles. The golden-yellow flowers are in a dense cluster on a scape 12 feet high. Native to Hispaniola.

For previous introduction see 102342.

102587. *AGAVE INDAGATORUM* Trelease.
Amaryllidaceae.

No. 3004. From near the sea, east of Cockburn, on Watlings, or San Salvador Island. A stemless agave with grayish lanceolate acute leaves about 7 feet long, terminated by a chestnut-brown spine half an inch long and flowers borne in a panicle on a scape about 25 feet high. Native to Watlings Island, Bahamas.

102588. *A N A N A S SATIVUS* Schult. f.
Bromeliaceae. Pineapple.

No. 3083. Purchased in the market at Colon, Panama, March 27, 1933. A large, almost spherical fruit, with delicious aromatic flesh.

102589. *A N A N A S SATIVUS* Schult. f.
Bromeliaceae. Pineapple.

No. 3089, March 28, 1933. *Ripley*. From Kingston, Jamaica. A pineapple with a delicious flavor.

102590 and 102591. *ARECA ALICAE* F. Muell.
Phoenicaceae. Palm.

Seeds presented by J. E. Higgins, director, Canal Zone Experiment Gardens, Summit, March 23, 1933.

For previous introduction see 92192.

102590. No. 3085. An Australian cluster palm with graceful spineless trunks 9 feet or more in height and pinnate shining-green leaves 3 to 6 feet long. The handsome, scarlet oblong fruits, three-fourths of an inch long, make this one of the most attractive of all dooryard palms.

102591. No. 3090. A single-stemmed variety.

102592 and 102593. *ARRABIDAFA PACHYCALYX* Sprague.
Bignoniaceae.

A large woody vine, native to Panama, with 2 or 3 entire leaflets covered beneath with dense minute white tomentum. The pink or purple flowers, in large terminal or axillary panicles, are followed by long linear pods.

102586 to 102619—Continued.

102592. No. 3095. Collected on the Armour trail, Barro Colorado Island, Panama, March 23, 1933.

102593. No. 3103. Presented by J. E. Higgins, director, Canal Zone Experiment Gardens, Summit, March 23, 1933.

102594 to 102596. *CAJANUS INDICUS* Spreng.
Fabaceae. Pigeonpea.

102594. No. 3055. *No eye* pigeonpea.

102595. Collected March 14, 1933, on O'd Providence Island. Probably a Jamaican variety.

102596. No. 3056. Purchased in the market at Kingston, Jamaica, March 11, 1933. A variety with extra large pods.

102597. *CHRYSOPHYLLUM PANAMENSE* Pittier.
Sapotaceae.

No. 3091. From Barro Colorado Island, Panama, March 23, 1933. A medium-sized tropical tree with a rounded crown, smooth gray bark, and brown pubescent branchlets. The elliptic-acuminate leaves, 6 to 8 inches long, are smooth and dark green above and gray and slightly pubescent beneath. The small yellow-green flowers, in axillary clusters, are followed by 1-seeded fruits about an inch long. Native to Panama.

102598. *COCCOLOBA MANZINELLENSIS* Beurl.
Polygonaceae.

No. 3078. From Ancon, Panama, March 18, 1933. A handsome shade tree with dark-green leaves resembling oak leaves. The tree is inclined to form suckers and become a large bush.

102599 to 102601. *COCCOTHRINAX* spp.
Phoenicaceae. Palm.102599. *COCCOTHRINAX* sp.

No. 3065. From Old Providence Island, March 14, 1933. A short graceful palm, 10 to 15 feet high, with large handsome leaves, silvery beneath, and having the characters of *Coccolithrinax argentea*. Found in a rocky situation about 20 feet above the sea where it was exposed to the salt spray.

102600. *COCCOTHRINAX* sp.

No. 3108. From Georgetown, Grand Cayman Island.

102601. *COCCOTHRINAX* sp.

No. 3068. From Old Providence Island, March 14, 1933. Although this tree resembles no. 3065 [102599], it may be distinct, as the seeds are much smaller.

102602 and 102603. *CROTALARIA RETUSA* L.
Fabaceae.

From New Providence Island, March 13 and 14, 1933.

For previous introduction see 98842.

102602. No. 3069.

102603. No. 3072.

102604. *DRACAENA* sp. Liliaceae.

No. 3038. Seeds presented by E. S. Downes, of Castleton Gardens, Jamaica, March 7, 1933. A tree 20 feet high and half as wide. The bright-orange fruits are in long pendent clusters.

For previous introduction see 102280.

102586 to 102619—Continued.

102605. *ERAGROSTIS PROLIFERA* (Swartz)
Steud. Poaceae.

No. 3076. From New Providence Island, March 15, 1933. A robust grass with stems 3 to 5 feet high in large clumps, native to tropical America on sandy beaches and in brackish marshes.

102606. *ERYTHRINA POEPPIGIANA* (Walp.)
O. F. Cook (*E. micropteryx* Poepp.).
Fabaceae. Bucare.

No. 3071. *Mountain immortelle*. Presented March 10, 1933, by Mr. Goodman, of the Hope Gardens, Kingston, Jamaica. A handsome tender leguminous tree with red flowers. Native to Peru.

For previous introduction see 101011.

102607. *GOSSYPIUM JAMAICENSE* Macf.
Malvaceae. Cotton.

From Great Inagua, Bahamas, February 27, 1933. A tropical shrub 4 to 5 feet high with hairy branches, heart-shaped, three-lobed hairy leaves, pale-yellow flowers, and a four-valved capsule containing white cotton. It is native to Jamaica.

102608. *INODES* sp. Phoenicaceae. Palm.

No. 3073. From the Castleton Gardens, Jamaica, March 9, 1933.

102609. *LECYTHIS TUYRANA* Pittier.
Lecythidaceae.

No. 3107. From Ancon, Canal Zone, March 23, 1933. A tall straight tree 75 to 100 feet high, native to Panama. The elliptic-lanceolate coriaceous leaves, 8 to 12 inches long, are glossy above and paler and dull beneath, and the sulphur-yellow flowers are borne in dense terminal racemes 1 to 2 feet long.

102610. *MISANTECA TRIANDRA* (Swartz)
Mez. Lauraceae.

No. 3067. From Old Providence Island, March 14, 1933. A West Indian tree up to 70 feet high, with alternate oblong shining dark-green leaves 4 inches long and panicles of white flowers which turn purple with age. The purple fruits with their red cups have the appearance of acorns and are very attractive.

102611. *ODONTADENIA SPECIOSA* Benth.
Apocynaceae.

No. 3092. From Barro Colorado Island, Canal Zone, March 23, 1933. A large woody tropical American vine with opposite elliptic leaves 5 to 10 inches long and large cymes of yellow flowers.

102612. *PASSIFLORA LIGULARIS* JUSS. Passifloraceae. Sweet granadilla.

No. 3061. From the market at Kingston, Jamaica, March 11, 1933. The light-yellow or green-yellow fruit is egg-shaped and has a rather thin rind. The seed is surrounded by an edible translucent arillus which is very refreshing.

102613. *PASSIFLORA VITIFOLIA* H. B. K. Passifloraceae.

No. 3086. From the Armour trail, Barro Colorado Island, Canal Zone, March 23, 1933.

For previous introduction and description see 102462.

102614. *PAULLINIA* sp. Sapindaceae.

No. 3098. From the Armour trail, Barro Colorado Island, Canal Zone,

102586 to 102619—Continued.

March 23, 1933. A strong growing vine with three-sided capsules containing shining black seeds, each with a brilliant white arillus.

102615. *PINUS OCCIDENTALIS* Swartz.
Pinaceae. Pine.

No. 3026. *Bois Chaudelle*, or *candlewood* tree. Collected at 6,000 feet altitude in Haiti, March 2, 1933. A native pine which resembles *Pinus caribaea*, but generally has five leaves in the fascicle instead of two. Formerly this pine covered the island above 2,500 feet altitude but is now found only in small patches. The tree is a rapid grower and is now being planted on the mountain sides to prevent soil erosion.

102616. *SOLANUM* sp. Solanaceae.

No. 3077. *Vankee*. From Great Inagua, Bahama Islands, February 26, 1933. A shrub with attractive foliage and small reddish fruits. Found in deep sandy land in a coconut plantation. The seeds have a bitter flavor and may contain an alkaloid.

102617. *SPATHODEA NILOTICA* Seem.
Bignoniaceae.

No. 3093. From the Experiment Gardens, Summit, Canal Zone, March 25, 1933. A shrubby tree up to 20 feet high, native to the northern part of tropical Africa. The leaves, which are opposite and composed of 9 to 15 leathery leaflets, are covered beneath with dense short hairs, and the scarlet flowers are in short terminal clusters. Both the leaves and flowers resemble those of *Spathodea campanulata*.

102618. *TILMIA CARYOTAEPOLIA* (H. B. K.)
O. F. Cook (*Martinezia caryotaepolia*
H. B. K.). Phoenicaceae. Palm.

No. 3101. A beautiful slender straight-stemmed spiny-trunked palm up to 30 feet high with graceful pinnate leaves and bright orange-scarlet fruits borne in drooping racemes.

For previous introduction see 91784.

102619. *TRIPHLARIS SURINAMENSIS* Cham.
Polygonaceae.

No. 3070. Presented March 10, 1933, by Mr. Goodman, curator, Hope Gardens, Kingston, Jamaica. A small tropical tree with ovate acuminate alternate leaves and small cream-white flowers in pilose spikes. The young stems are hollow and are usually occupied by ants. Native to Surinam.

102620. *ELEOCHARIS TUBEROSA* (Roxb.)
Schult. Cyperaceae. Waternut.

Tubers presented by Albert P. Ding, of Portland, Oreg. Received April 17, 1933.

A Chinese vegetable which grows very much in the same manner as wet-land rice. The corms or tuberous rhizomes are mostly eaten raw but are also sliced or shredded in soups and in meat and rice dishes. The plants, which are grown on muck or clay soil, need a hot summer to mature.

For previous introduction see 102339.

102621 to 102636.

From the West Indies and the Canal Zone. Material collected by David Fairchild, with the 1933 Allison V. Armour expedition. Received April 15, 1933.

102621 to 102636—Continued.

102621. AGAVE INDAGATORUM Trelease.
Amaryllidaceae.

No. 3004. Cuttings collected near the seacoast, at Cockburn, on Watlings, or San Salvador, Island.

For previous introduction of seeds and description see 102587.

Nos. 102622 to 102628 were presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba, April 2, 1933.

102622. ANNONA BULLATA A. Rich. Annonaceae.

No. 3114. Budwood of a native Cuban tree which is related to the sugar-apple and appears to be unusually well adapted to dry soils. The aromatic leaves are used to season stews, and the small scaly ovoid-cordiform, scarcely edible fruits which mature in July are eaten by pigs.

102623. ANNONA RETICULATA L. Annonaceae.
Custard-apple.

No. 3126. Budwood of an unusually large and attractive smooth custard-apple, with a reddish tinge and almost no bloom. It came originally from Santo Domingo.

102624. JOANNESIA PRINCEPS Vell. Euphorbiaceae.

No. 3116. Cuttings of a large tropical American tree with handsome 3- to 7-foliolate leaves about 4 inches long and coconutlike fruits about 5 inches in diameter, with four large oily seeds. It is related to the tung-oil tree (*Aleurites fordii*).

102625. ARISTOLOCHIA ARGYRONEURA Hort. Aristolochiaceae.

No. 3117. A plant of an interesting species with small wine-red flowers of an unusual shape, but with the fetid odor of the genus.

102626. CACTUS HARLOWII Britton and Rose. Cactaceae.

No. 3124. A cylindrical cactus which becomes about a foot high, with 12 narrow ribs, reddish spines less than half an inch long, and deep rose-red flowers embedded in the rather small cephalium. The deep-red fruits are one-half inch long. Native to Cuba.

102627. CASIMIROA EDULIS Llave. Rutaceae.
White-sapote.

No. 3120. Cuttings from a seedling tree which bears unusually long, almost pointed fruits of good quality, with no suggestion of bitter flavor.

102628. GARCINIA TINCTORIA (DC.) W. F. Wight (*G. xanthochymus* Hook. f.). Clusiaceae.

No. 3121. Seeds of a tree of fairly rapid growth, with large opposite elliptic or oblong coriaceous leaves 6 to 10 inches long. The orange-yellow fruits, borne singly or in clusters of 3 to 5 in the axils of the leaves on mature wood, are round or tapering to an acute apex and are often over 2 inches in diameter. They are made up of 3 to 5 segments, each usually containing a large oblong seed. The ripe fruit has a distinctive, subacid flavor.

102621 to 102636—Continued.

102629. LIVISTONA HOOGENDORPHI Andre. Palm.
Phoenicaceae.

No. 3040. Seeds presented by Mr. Downes, Castleton Gardens, Jamaica, March 7, 1933. A handsome fan palm 60 feet high, with large coarse leaves which, when they fall, leave prominent leaf scars. The fruit is spherical and a deep blue.

102630. LUCUMA SERPENTARIA H. B. K. Sapotaceae.

No. 3141. Presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba, April 2, 1933. A medium-sized tree, 30 to 40 feet high, which is a Cuban relative to the canistel (*Lucuma nervosa*). The yellow oblate fruit, about 3 inches in diameter, is very similar both in taste and texture to that of the canistel.

102631 to 102633. MANIHOT ESCULENTA Crantz (*M. utilisissima* Pohl.). Euphorbiaceae.
Cassava.

Cuttings collected on the island of Grand Cayman, British West Indies, March 29, 1933.

102631. No. 3143. *Silver Leaf*. This variety is preferred for cooking because of its unusually tender flesh.

102632. No. 3144. *White sweet*. One of the standard varieties of cassava on Grand Cayman where the soil and climatic conditions are much like they are in Florida.

102633. No. 3145. *Tampa*. A variety, originally from Florida, which on the island of Grand Cayman is said to be a tremendous yielder, but not of such tender quality as the others.

102634. PHILODENDRON WARSZEWICZII Koch and Bouche. Araceae.

No. 3104. From Summit, Canal Zone, March 24, 1933. An aroid with large, much-divided leaves which somewhat resemble those of *Monstera* except that these leaves have no holes in them. It was found growing wild in the rain forests of Panama.

Nos. 102635 and 102636 were presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba, April 2, 1933.

102635. SALIX CHILENSIS Molina (*S. humboldtiana* Willd.). Salicaceae.
Willow.

No. 3119. A graceful evergreen species of attractive appearance, the common willow of the Andean cordillera.

102636. SYNGONIUM AURITUM (L.) Schott. Araceae.

No. 3125. Cuttings of a handsome climbing aroid of loose growth, resembling *Syngonium polyphyllum*, but with smaller, darker green foliage.

102637 and 102638. PHOENIX RECLINATA Jacq. Phoenicaceae.
Senegal date palm.

From Nigeria. Seeds collected by J. R. V. Smyth, Superintendent of Agriculture, and presented by O. T. Faulkner, Director, Department of Agriculture, Idadan, Nigeria. Received April 17, 1933.

102637 and 102638—Continued.

Native name, *Okunkun* or *Okun*. Introduced for the use of Department specialists.

For previous introduction and description see 102378.

102637. Collected in a clump of palms 6½ miles from the Oyo rest house on the Oyo-Iseyin Road.

102638. Collected on a farm near the Oyo rest house.

102639 to 102642.

From the Union of Soviet Socialist Republics. Scions and trees presented by V. P. Alekseev, chief, foreign plant introduction, Institute of Plant Industry of the Lenin Academy of Agricultural Sciences, Leningrad. Received April 20, 1933.

102639. *MALUS SYLVESTRIS* Mill. (*Pyrus malus* L.). Malaceae. **Apple.**

Received as the *Circassian* apple. A semiwild variety of exceptional vigor and productivity, which should be of interest for fruit breeding work in the southern part of the United States.

102640 to 102642. *AMYGDALUS COMMUNIS* L. (*Prunus amygdalus* Stokes). Amygdalaceae. **Almond.**

102640. No. 62. 102642. No. 162.

102641. No. 96.

102643. *ZINNIA MULTIFLORA* L. Asteraceae.

From Argentina. Seeds collected by Walter Fischer, United States Tariff Commission, at Oncativo, Province of Cordoba. Received April 24, 1933.

A wild zinnia, found along fence rows and roadsides in the Province of Cordoba. The small flower heads are a light brick red.

102644 to 102687.

From the West Indies and the Canal Zone. Plants and seeds collected by David Fairchild, with the 1933 Allison V. Armour expedition. Received April 15, 1933.

102644. *ADENIUM OBESUM* (Forsk.) Roem. and Schult. Apocynaceae.

No. 3033. Presented by Mr. Goodman, curator, Hope Gardens, Kingston, Jamaica. A slow-growing shrub, not over 3 feet high, native to the dry regions of Africa and named after the desert port of Aden. The gorgeous deep-pink or white flowers are 3 inches across and remind one of enormous oleander blossoms.

Nos. 102645 and 102646 were collected on Grand Cayman, British West Indies, March 29, 1933.

102645. *AECHMEA* sp. Bromeliaceae.

No. 3127. A species with very large leaves over 2 feet long and 4 to 5 inches wide. The light-green fruits are in large clusters.

102646. *AERANTHES* sp. Orchidaceae. **Orchid.**

No. 3149. An epiphytic orchid that forms strandlike roots and covers the bark of trees with its interesting growth. Its delicate white flowers, 1 to 2 inches across, are fragrant in the evening.

102647 to 102649. *AGAVE* spp. Amaryllidaceae.

102644 to 102687—Continued.

102647. *AGAVE ACKLINICOLA* Trelease.

No. 3012. From near Moss Harbor, Crooked Island, Bahamas, February 20, 1933. A stemless but not caespitose agave with dull-grayish, narrowly lanceolate leaves 6 to 7 feet long, terminated by a smooth glossy red-brown spine an inch long, graying with age. The inflorescence is unknown, but this agave is closely related to *Agave bahamana*. Native to the Bahamas.

102648. *AGAVE BREVISPIINA* Trelease.

No. 3022. *Galatas*, or *Croix des bouquets*. From Point Decouverte, above Kenscoff, Haiti, March 2, 1933.

For previous introduction and description see 102586.

102649. *AGAVE MORRISII* Baker.

No. 3059. From Jamaica, British West Indies, March 11, 1933. A stemless agave, native to Jamaica, with a rosette of 20 to 30 spatulate leaves, 4 to 6 feet long. The end spine is an inch long, and the marginal prickles are dark brown. The much-branched inflorescence, 15 to 20 feet high, bears bright-yellow flowers 2 to 3 inches long.

For previous introduction see 102277.

102650. *ANANAS SATIVUS* Schult. f. Bromeliaceae. **Pineapple.**

No. 3074. Plants presented by Mr. Goodman, of the Hope Gardens, Kingston, Jamaica, March 10, 1933. In Jamaica this pineapple is known as the *Ripley*. It is a small to medium-sized, sugar-loaf pineapple with deep-yellow, very sweet flesh of fine texture. The eyes are rather deep, necessitating a good deal of waste in preparing the fruit for the table.

102651. *ASTROCARYUM STANDLEYANUM* Bailey. Phoenicaceae.

No. 3115. From Barro Colorado Island, Canal Zone, March 23, 1933. A tall slender handsome spiny palm with pinnate leaves, found in the dense rain forest. The orange-yellow fruits, 1¾ inches by 1½ inches, are rugose and mucronate and are covered with a thin fleshy fibrous juicy sweetish pulp. They are borne in long pendent clusters.

102652 to 102654. *BRASSAVOLA* spp. Orchidaceae. **Orchid.**

From San Andres Island, Colombia.

102652. *BRASSAVOLA NODOSA* (L.) Lindl.

An epiphytic orchid 8 to 12 inches high, native to tropical America. The thick fleshy half-cylindrical linear leaf is 6 to 8 inches long, and the large pale-green flowers with a white lip are 2 to 3 inches across and are borne in a raceme 1 foot long.

102653. *BRASSAVOLA* sp.

A form with large white fragrant flowers.

102654. *BRASSAVOLA* sp.

[Received without notes.]

Nos. 102655 and 102656 were collected near Salt Pond, Great Inagua, Bahama Islands, March 26, 1933.

102644 to 102687—Continued.

102655. *NEOMAMILLARIA* sp. Cactaceae.
No. 3017.

102656. *CEPHALOCEREUS MILLSPAUGHII*
Britton. Cactaceae.

No. 3018. A large cactus with branching stems, 6 to 20 feet high, sometimes 8 inches thick at the base of the trunk. It has 8 to 13 ribs, and a score of acicular brown-yellow spines, about 2 inches long, rise from each gray-brown areole. The rather stiff greenish flowers, white within and less than an inch long, are succeeded by small reddish globose fruits. Native to the Bahama Islands.

For previous introduction see 102349.

Nos. 102657 and 102658 were presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba.

102657. *CITRUS GRANDIS* (L.) Osbeck (*C. decumana* Murr.). Rutaceae.
Grapefruit.

No. 3113. *Harvard No. 1*. An extremely juicy, very sweet, medium-sized grapefruit with deep-yellow flesh, little rag, and tender follicles. A cross between the orange and the grapefruit.

102658. *CLERODENDRUM ANAENSE* Britton and P. Wils. Verbenaceae.

No. 3137. A Cuban tree 30 feet high, with obovate coriaceous leaves 2 to 4 inches long and clusters of white flowers an inch long followed by brilliant blue fruits.

102659. *CRINUM* sp. Amaryllidaceae.

No. 3150. From Grand Cayman, Bahama Islands, March 29, 1933. Bulbs found in deep sandy soil; this may be a local variety.

102660. *CYTOSPERMA SENEGALENSE* (Schott) Engler. Araceae.

No. 3122. Presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba, April 2, 1933. The giant aroid of the Cameroons, grown from seed sent by the Allison V. Armour expedition to West Africa in 1927. It sends up its square, 16-inch-long spathe on a spiny stem 10 feet high. The plant requires wet sandy soil and warm moist atmosphere.

For previous introduction see 99319.

102661. *DENDROBIUM PIERARDI* Roxb. Orchidaceae. Orchid.

No. 3047. Presented by Mr. Goodman, curator, Hope Gardens, Kingston, Jamaica. An epiphytic herb with slender pendulous pseudobulbs 2 to 3 feet long, native to India. The rose-mauve flowers, 2 inches across and borne usually in pairs, have a pale primrose-yellow lip streaked with purple at the base.

102662. *DIOSCOREA BULBIFERA* L. Dioscoreaceae. **Airpotato.**

No. 3032. From Port-au-Prince, Haiti. A tall climbing vine with cordate-ovate leaves, native to tropical Asia. The axillary tubers are often bitter, but in this variety they are bland in flavor and are used for food.

102644 to 102687—Continued.

102663. *DIOSCOREA TRIFIDA* L. f. Dioscoreaceae. **Yampie.**

No. 3045. From the market at Kingston, Jamaica. The yampie, a high-quality species of yam, exists in several varieties, of which this one from Jamaica is one of the best known. The species is grown only with difficulty outside the Tropics.

Nos. 102664 and 102665 were presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba, April 2, 1933.

102664. *DRYMARIA CORDATA* (L.) Willd. Silenaceae.

No. 3123. A small creeping annual which may prove a valuable cover crop for shady areas. It has flat round leaves an inch or less wide and small white flowers in cymes. Native to the West Indies.

102665. *ESPADAEA AMOENA* A. Rich. Solanaceae.

No. 3129. A tree, native to Cuba, very common along the seacoast. The black and yellow wood is very hard and durable, and the small fruits are bright yellow.

For previous introduction see 101025.

102666. *FLACOURTIA INERMIS* Roxb. Flacourtiaceae.

No. 3084. Fruits collected in the Experiment Garden, Summit, Canal Zone, from a tree which grew from seed collected by David Fairchild in Ceylon in 1926. The lovi-lovi tree of Ceylon has brilliant-red fruits, the size of small cherries, produced in immense quantities. They are very sour and are said to make excellent jelly or preserves.

102667. *HIPPEASTRUM* sp. Amaryllidaceae.

No. 3023. Wild plants collected in Haiti.

102668. *IPOMOEA HEPTAPHYLLA* (Rottl. and Willd.) Voigt. Convolvulaceae.

No. 3019. Tubers collected along a roadside in Great Inagua, Bahama Islands, February 26, 1933.

For previous introduction and description see 102469.

102669. *KOPSIA FRUTICOSA* (Ker) A. DC. Apocynaceae.

No. 3138. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba, April 2, 1933. A large evergreen shrub, native to Burma, with elliptic leaves 4 to 8 inches long. The flowers, over an inch long and 2 inches across and borne in cymes, have pink corolla tubes with red mouths. The pyriform fruits, 1 inch long, are greenish purple.

For previous introduction see 101134.

102670. *MABA CRASSINERVIS* Urb. Diospyraceae.

No. 3005. From Watlings Island (San Salvador), January 1, 1933. A tropical American shrub 4 to 11 feet high, occasionally a small tree, with leathery obovate or broadly ovate leaves about 2 inches long and inconspicuous flowers in small racemes.

102644 to 102687—Continued.

102671. *PASSIFLORA PEDATA* L. Passifloraceae.

No. 3128. Presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba, April 2, 1933. A species with particularly attractive foliage and fruits that are dark green when ripe.

102672. *PHASEOLUS CALCARATUS* Roxb. Fabaceae. Rice bean.

No. 3028. A deep-brown bean purchased in the market at Port-au-Prince, Haiti, March 3, 1933.

102673. *PORTLANDIA GRANDIFLORA* L. Rubiaceae.

No. 3133. Presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba, April 2, 1933. A tropical shrub up to 15 feet high, native to the West Indies, with opposite elliptical leathery leaves and axillary funnel-shaped flowers 4 inches long marked with purple-red calyx stripes, but with a very beautiful cream-colored corolla.

For previous introduction see 97577.

102674. *PTEROCARPUS OFFICINALIS* Jacq. Fabaceae.

No. 3051. Collected in the Bath Botanic Garden, Jamaica, March 9, 1933. A glabrous tree up to 30 feet high, native to tropical America. The compound leaves are made up of 5 to 9 elliptical-lanceolate shining leaflets 4 to 8 inches long, and the small yellow flowers, in lax panicles, are followed by flat, very oblique veiny pods nearly 2 inches across.

102675 to 102677. *SCHOMBURGKIA* spp. Orchidaceae. Orchid.

102675. *SCHOMBURGKIA THOMSONIANA* Reichenb. f.

No. 3057. Originally from Grand Cayman Island and presented by Edward J. Downes, of the Hope Gardens, Jamaica, March 10, 1933. A handsome West Indian orchid closely related to *Schomburgkia tibicinis*. The panicle has 15 flowers, the sepals are very pale yellow with a pale-mauve disk, and the light sulphur-yellow petals are lined and streaked with dark purple.

102676 and 102677. From Old Providence Island, March 14, 1933.

102676. *SCHOMBURGKIA* sp.

102677. *SCHOMBURGKIA* sp.

Nos. 102678 to 102681 were presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba, April 2, 1933.

102678. *SOLANUM PIERREANUM* Pail. and Bois. Solanaceae.

No. 3135. A small sweet pepper with bright scarlet fruits which are ornamental as well as edible.

102679 to 102681. *STIGMAPHYLLON* spp. Malpighiaceae.

102679. *STIGMAPHYLLON LEDIFOLIUM* (H. B. K.) Small.

No. 3140. A woody vine native to Cuba. The linear to suborbicular leathery leaves, 1 to 4 inches long, are lustrous above, and the axillary clus-

102644 to 102687—Continued.

ters of bright-yellow flowers are followed by 1 to 3 maplelike winged fruits nearly an inch long.

102680. *STIGMAPHYLLON SAGRAEANUM* Juss.

No. 3131. A woody vine, native to the West Indies, with rigid leathery linear to ovate leaves, coarsely reticulated beneath. The bright-yellow flowers are in axillary clusters, and the maplelike fruits are oblong with straight edges.

102681. *STIGMAPHYLLON PUBERUM* (Rich.) Juss.

No. 3134. A woody vine, native to the West Indies, with the branchlets covered with appressed brown hairs. The ovate-acuminate leaves, 2 inches long, are nearly glabrous above and appressed pubescent beneath. The petals of the bright-yellow flowers, an inch across, are fringed on the margin, and the maplelike fruits are more than an inch long.

102682. *STROPHANTHUS* sp. Apocynaceae.

No. 3058. From the Hope Gardens, Kingston, Jamaica, March 11, 1933. A strong climber with coarse leaves and large pink and white flowers with short acute petals.

102683. *SYNADENIUM GRANTII* Hook. f. Euphorbiaceae. African milk-bush.

No. 3130. Presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba, April 2, 1933. A stout shrub 8 to 10 feet high with pale-gray bark, native to tropical Africa. The slightly fleshy, oblanceolate to obovate leaves are 3 to 7 inches long, and the small dark-red flowers are borne in axillary cymes.

102684. *TILLANDSIA* sp. Bromeliaceae.

No. 3148. Collected near Georgetown, Grand Cayman, British West Indies, March 29, 1933. A small epiphytic tillandsia with attractive transverse markings. Found in dense brush.

102685. *TRIOPTERIS JAMAICENSIS* L. Malpighiaceae.

No. 3132. Presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba, April 2, 1933. A low-growing twining glabrous woody vine, native to the West Indies, with small violet to purple flowers.

102686. (Undetermined.)

No. 3142. From Old Providence Island, March 13, 1933. A fern found growing on the rocks in a very dry situation where it was exposed to the most intense sunlight. It had formed a perfect network of creeping rhizomes from which rose decorative leaves that were strikingly like the leaves of the *Picus repens* (when old).

102687. (Undetermined.)

No. 3109. *Bull Rush* palm. From Grand Cayman, British West Indies, March 29, 1933. A beautiful fan palm with very dark-green leaves on long petioles and a tendency for the base of the leaflets to cross over at the suture. It is an ornamental palm which can stand long periods of drought.

102688 to 102690. ORYZA SATIVA L. Poaceae. Rice.

From Surinam. Seeds presented by the Department of Agriculture, Paramaribo. Received April 17, 1933.

A collection of locally grown varieties introduced for the use of Department specialists.

102688. *Bruin Missi*.

102689. *Kretek*.

102690. *Witte Wanica*.

102691. ONOBRYCHIS VULGARIS Hill (O. viciaefolia Scop.). Fabaceae. Sanfoin.

From Hungary. Seeds presented by Rudolf Fleisc' mann, director of plant breeding, Kompolf. Received April 18, 1933.

Persica. A newly developed local variety introduced for the use of Department specialists.

102692 to 102694. CARICA PAPAYA L. Papayaceae. Papaya.

From the West Indies and Central America. Seeds collected by David Fairchild, with the 1933 Allison V. Armour expedition. Received April 15, 1933.

102692. No. 3100. From the Experiment Garden, Summit, Canal Zone. A small oblong papaya, about 6 inches long and 3 inches through, with deep golden-yellow flesh with the flavor of the *Solo* variety.

102693. No. 3146. Purchased in the market at Panama, Panama, March 29, 1933. An obovate medium-sized papaya with deep-red, almost salmon-colored flesh of superb quality.

102694. No. 3147. From Old Providence Island, March 21, 1933. A distinct strain, perhaps originated by isolation on the island. Its texture is mealy with a very sweet agreeable flavor, and although dead ripe, the surface of the fruit, when cut, exudes drops of papain which is not usual with ripe papayas.

102695. PISTACIA KHINJUK Stocks. Anacardaceae.

From India. Seeds presented by the forest officer in Quetta, Baluchistan. Received April 21, 1933.

A smooth-barked shrub with unequally pinnate, velvety pubescent leaves consisting of 1 or 2 pairs of oblique broadly ovate or oblong leaflets, and small obovate-compressed nuts. Native to arid regions in southern and eastern Persia.

102696 and 102697. SOJA MAX (L.) Piper. Fabaceae. Soybean.

From the Union of Soviet Socialist Republics. Seeds presented by the Bureau of Introduction, Institute of Plant Industry, Leningrad, at the request of J. W. Pincus, New Brunswick, N. J. Received April 20, 1933.

Wild soybeans, from Tisnikhi, Far Eastern Republic.

102696. Catalog no. 1018; no. 115.

102697. Catalog no. 971; no. 116. Collected along the roadside.

102698. CUPANIA CUBENSIS Maza and Molinet. Sapindaceae.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received April 18, 1933.

Guara común. An attractive shrub or small tree common in calcareous soil throughout Cuba. It has alternate compound leaves with pale-green leaflets and terminal panicles of small whitish flowers.

102699 to 102727.

From the Union of Soviet Socialist Republics. Seeds purchased through Dr. K. J. Pangalo, Bureau of Introduction, Institute of Plant Industry, Leningrad. Received April 25, 1933.

A collection of seeds grown between 40° and 45° latitude in Turkistan and the Caucasian regions. Introduced for testing in the north-central Plains region of the United States.

102699 to 102703. ALLIUM CEPA L. Liliaceae. Onion.

102699. No. 122/2, from Turkmenistan.

102700. No. 123/1, from Samarkand.

102701. No. 124/1, from Tashkent.

102702. No. 124/3, from Samarkand.

102703. No. 124/5, from Ferghana.

102704 to 102706. AMYGDALUS PERSICA L. Amygdalaceae. Peach.

102704. No. 492. A peach with a sweet kernel; from the Ferghana Valley.

102705. No. 501. A peach with a striped kernel; from Khodjent Kostoks.

102706. No. 510. Variety *ferganensis*; a seedling peach from Mamangan, central Asia.

102707 to 102711. CAPSICUM ANNUUM L. Solanaceae. Common redpepper.

102707. No. 503. *Kalamtyr*, from Samarkand.

102708. No. 565. *Purgh*, from Asia Minor and Turkistan.

102709. No. 569. *Mestnyz*, from Asia Minor and Turkistan. A locally grown variety.

102710. No. 571. *Mestnyz*, from Asia Minor and Turkistan. A locally grown variety.

102711. No. 607. *Ghorkey*, a bitter variety from Tashkent.

102712. DAUCUS CAROTA L. Apiaceae. Carrot.

No. 257. A violet carrot from Kanda-guar.

102713 to 102725. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

102713. No. 923. *Tshudorynka*, from Nikolaevsk, a village near Tashkent.

102714. No. 924. From Yanghabad, near Tashkent.

102715. No. 926. From the village of Nikolsk, near Tashkent.

102716. No. 927. From an Uzbek kitchen-garden near Tashkent.

102699 to 102727—Continued.

102717. No. 930. From an Uzbek kitchen-garden near Tashkent.
102718. No. 931. From the market in Ferghana.
102719. No. 932. From Yunus-Abad, near Tashkent.
102720. No. 942. From Andiksan.
102721. No. 975. From the market at Makhatsch-Kala, Daghestan.
102722. No. 976. From Makhatsch-Kala, Daghestan.
102723. No. 977. From Bujnask, Daghestan.
102724. No. 978. From the market at Makhatsch-Kala, Daghestan.
102725. No. 979. From Bujnask, Daghestan.
- 102726 and 102727. SOLANUM MELONGENA L. Solanaceae. Eggplant.
102726. No. 105. From Tashkent.
102727. No. 202. From central Asia.

102728 and 102729. CITRUS SINENSIS (L.) Osbeck. Rutaceae. Orange.

From Cuba. Scions presented by Thomas R. Towns, Holguin. Received April 27, 1933.

102728. Cuban navel orange.

102729. Harvard No. 2. A new navel orange introduced by the Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos.

102730 and 102731.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received April 25, 1933.

102730. ASPARAGUS OFFICINALIS L. Convallariaceae. Garden asparagus.

Introduced for the use of Department specialists.

102731. TRIPLARIS CUMINGIANA Fisch. Polygonaceae.

An ornamental tropical tree about 20 feet high, generally of pyramidal habit, which prefers moist situations along the borders of lakes and streams. From February until the middle of April it is ablaze with red, produced by the bracts surrounding the capsules, and forms an exceedingly striking object in the landscape. The tree is native to Panama.

102732 to 102736. CLEMATIS spp. Ranunculaceae.

From New Zealand. Seeds presented by J. E. Spingarn, Amenia, N. Y. Received April 27, 1933.

102732. CLEMATIS AFOLIATA J. Buch.

A perennial with wiry leafless stems, native to New Zealand. The flowers are greenish white, nearly an inch across, and are borne in axillary fascicles of 2 to 5. On young plants the leaves are occasionally developed and consist of a persistent petiole and three minute long-stalked ovate to triangular leaflets. It

102732 to 102736—Continued.

is curious and distinct rather than beautiful.

For previous introduction see 101275.

102733. CLEMATIS AUSTRALIS × HEXASEPALA.

A natural hybrid between two white-flowered species, both of which have trifoliolate leaves and are native to New Zealand. In *C. australis* the leaflets are pinnate or pinnately lobed, while those of *C. hexasepala* are nearly entire.

102734. CLEMATIS FOETIDA Raoul.

A stout woody vine, often covering small trees, native to New Zealand. The slightly coriaceous trifoliolate leaves have ovate to cordate leaflets 1 to 2 inches long, and the small yellow flowers in large panicles are strongly odorous but are said not to be fetid.

For previous introduction see 101276.

102735. CLEMATIS HEXASEPALA DC.

A smaller and more slender vine than *C. indivisa*, with pale-green coriaceous trifoliolate leaves having ovate-oblong to ovate-cordate toothed leaflets 1 to 3 inches long. The numerous flowers, 1 to 2 inches across, have 6 to 8 white sepals. It is native to New Zealand.

For previous introduction see 101277.

102736. CLEMATIS HILARII Spreng.

A tropical climbing shrub with ternate or nearly ternate leaves 2 to 4 inches wide and blue-white fragrant flowers. It is native to southeastern Brazil.

102737. AMARANTHUS GANGETICUS L. Amaranthaceae. Ganges amaranth.

From California. Seeds presented by Ernest L. Lutz, Summit. Received April 28, 1933.

Hung Hua Tsai, or Red Sala. Seed of plants grown from seed brought from China by Mr. Lutz. An annual vegetable whose stems and leaves are prepared in the same manner as spinach and used for food in China.

102738 to 102741.

From Manchuria. Seeds purchased from Manshu Nosan Shokai, Inc., Dairen. Received April 19, 1933.

102738. ACER ARGUTUM Maxim. Aceraceae. Maple.

A small deciduous tree with erect branches and doubly serrate leaves 2 to 4 inches long. The flowers, produced in April before the leaves, are greenish yellow, and the keys are borne in hanging racemes. This tree is native to the mountain woods of Japan and makes an elegant appearance with its pale-green leaves during the summer and its purple-brown branches in the winter.

For previous introduction see 102160.

102739. ACER CISSIFOLIUM (Sieb. et Zucc.) Koch. Aceraceae. Maple.

A Japanese maple of compact rounded habit becoming 30 feet or more high, with leaves composed of three leaflets up to 4 inches long. The minute flowers are produced in May with the leaves, and the keys, about 1 inch long, occur in long

102738 to 102741—Continued.

racemes. In autumn the foliage turns red and yellow.

For previous introduction see 97497.

102740. BETULA JAPONICA MANDSHURICA (Regel) Winkl. Betulaceae. Birch.

A white-barked birch up to 80 feet high, with the leaves often broadly wedge-shaped at the base. Native to Hopeh Province, China.

For previous introduction see 93112.

102741. RHODODENDRON WEYRICHII Maxim. Ericaceae.

A deciduous shrub up to 15 feet high, native to Japan and China. The broadly ovate to rhombic leaves, 1 to 3 inches long, are in clusters of 2 or 3 at the tips of the branchlets and turn vinous purple in autumn. The rotate funnel-form red flowers, 1 to 3 inches across, appear before or with the leaves.

For previous introduction see 98479.

102742 to 102745.

From Brazil. Seeds presented by P. H. Rolfs, São Paulo. Received April 28, 1933.

102742. ACANTHOSTACHYS ANANASSOIDES Baker. Bromeliaceae.

A plant, native to Brazil, very much like the pineapple, with rigid linear leaves over 3 feet long and less than 1 inch broad above the dilated base. The flower head is borne on a stem 1 to 2 feet high, but the individual flowers are surrounded by separate bracts instead of being united as in the pineapple.

102743 to 102745. ANANAS spp. Bromeliaceae.

102743. ANANAS DUCKEI Hort.

A name for which a place of publication and a description have not been found.

102744. ANANAS MICROCEPHALUS Linden.

Thiava, the Guarany name for fiber. A dwarf pineapple, with small globose unpalatable fruits, which is considered to represent the original wild form. The quality of the fiber is unusually good, being very strong, lustrous, and fine, and the percentage of fiber in the leaves is very high.

102745. ANANAS sp.

102746 to 102748. AMYGDALUS spp. Amygdalaceae.

From Australia. Trees purchased from G. F. Althofer, Dripstone, New South Wales. Received May 3, 1933.

102746. AMYGDALUS PERSICA L. Peach.

Ruby red. Medium to large-sized clingstone; one of Australia's best shipping peaches. Originated in Victoria, Australia, probably coming from the old Shanghai peach, but it is earlier, more highly colored, and a better shipper.

102747. AMYGDALUS PERSICA NECTARINA Ait. Nectarine.

Lee's Seedling.

102748. AMYGDALUS PERSICA NECTARINA Ait. Nectarine.

W. C. Fripp. A new nectarine of Australian origin; very large size;

102746 to 102748—Continued.

highly colored; flavor excellent; quality very good; heavy and regular bearer; season late.

102749 and 102750. HUMULUS LUPULUS L. Moraceae. Common hop.

From Austria. Roots presented by Josef Binder & Co., Neufelden, Austria. Received May 3, 1933.

102749. Auschaer Rote.

102750. Muhltretler grüne.

102751. GOSSYPIUM HIRSUTUM L. Malvaceae. Upland cotton.

From the Union of Soviet Socialist Republics. Seeds presented by Dr. N. A. Malinovsky, Transcaucasian Cotton Research Institute, Ganja Station, Azerbaijan, Transcaucasia. Received May 1, 1933.

Selved seeds from one plant.

102752 to 102787.

From India. Seeds presented by the curator of the Lloyd Botanic Garden, Darjeeling. Received May 3, 1933.

102752. ARDISIA MACROCARPA Wall. Myrsinaceae.

A shrub up to 4 feet high with narrowly ovate leaves, with crisped-crenate margins, bearing conspicuous glands in the crenations. The umbels of inconspicuous flowers are followed by dotted, bright-red berries one-half to one-third of an inch in diameter. Native to Sikkim and Nepal between 3,000 to 7,000 feet altitude.

For previous introduction see 93186.

102753. ARISAEMA GRIFFITHII Schott. Araceae.

A tuberous herb native to the temperate Himalayas in India from 7,000 to 12,000 feet altitude. The two leaves are divided into three rhombic-orbicular crenate lobes 6 to 10 inches long with faint yellow margins. The tube of the spathe, 2 to 3 inches long, is purple, ribbed with white, and the incurved limb, 5 to 8 inches broad, is divided into two dull-purple lobes reticulated green and having purple tails 3 inches long. The stout spadix has a tortuous linear purple tail 1 to 3 feet long.

102754. ARISAEMA TORTUOSUM (Wall.) Schott. Araceae.

A tuberous herb native to the subtropical and temperate Himalayas up to 8,000 feet altitude. The 2 or 3 leaves, on petioles 1 to 3 feet long, have 5 to 20 linear to ovate tailed leaflets 12 to 18 inches long. The flower stalk, 2 to 4 feet high, bears a pale-green or purple spathe 4 to 6 inches long with an incurved boat-shaped limb, and the spadix, which resembles a rattail, is first erect, then recurved, and again erect.

102755. CLEMATIS CONNATA DC. Ranunculaceae.

A large woody climbing vine native to the temperate Himalayas at altitudes between 4,000 and 10,000 feet. The leaves are made up of 3 to 7 broadly cordate leaflets 2 to 4 inches long, with coarsely serrate or three-lobed margins, and the

102752 to 102787—Continued.

small creamy tubular flowers are borne in large panicles.

102756. CLEMATIS ZEYLANICA (L.) Poir.
Ranunculaceae.

A climbing shrub, native to India and Ceylon, with trifoliolate leaves having the terminal leaflet changed into a tendril. The solitary axillary flowers, about 1 inch across, have narrow green-white petals and yellow stamens.

For previous introduction see 93218.

102757. ELSHOLTZIA POLYSTACHYA Benth.
Menthaceae.

A bushy annual 3 to 4 feet high, native to India. The serrate lanceolate leaves are 3 to 6 inches long, and the small white tubular flowers are borne in fasciated spikes 4 to 10 inches long.

102758. ERIOBOTRYA PETIOLATA Hook. f.
Malaceae.

A stout tree with leathery leaves 6 to 9 inches long and white flowers, one-half inch in diameter, appearing in panicles 3 to 6 inches long and broad. It is native to Sikkim, India, between 5,000 and 9,000 feet altitude.

102759. EUPHORBIA SIKKIMENSIS Boiss.
Euphorbiaceae.

A stout perennial 3 to 4 feet high, native to the Sikkim Himalayas at altitudes of 8,000 to 10,000 feet. The linear-lanceolate glabrous leaves are 2 to 4 inches long, and the small inconspicuous flowers are surrounded by broad ovate yellow bracts.

102760. FLEMINGIA CONGESTA Roxb.
Fabaceae.

An erect shrub 4 to 6 feet high, with angular silky branchlets, native to south-eastern Asia. The trifoliolate leaves have broadly lanceolate leaflets 4 to 6 inches long, and the small flowers, covered by the shining pale-brown silky calyx, are in dense oblong racemes 2 inches long.

102761. GAULTHERIA GRIFFITHIANA Wight.
Ericaceae.

A stout shrub native to northern India up to an altitude of 9,000 feet. The leathery oblong long-pointed leaves are about 5 inches in length, and the broadly tubular yellow-green flowers, in racemes 2 to 3 inches long, are followed by brown, hairy fruits covered by the deep-blue enlarged calyx one-fifth of an inch in diameter.

102762. GAULTHERIA NUMMULARIOIDES
Don. Ericaceae.

A procumbent shrub covering banks with much-branched densely leafy stems, native to the Himalayas up to an altitude of 9,000 feet. The leathery ovate leaves are one-half inch long, and the reddish or nearly white tubular flowers, one-fifth of an inch long, are on densely bracted pedicels. The small fleshy blue-black fruits are one-sixth of an inch in diameter.

102763. GERANIUM REFRACTUM Edgew.
and Hook. f. Geraniaceae.

A glandular-hairy perennial herb 2 to 4 feet high, native to the Himalayas between 12,000 and 13,000 feet altitude. The palmately compound pubescent leaves, 3 inches wide, have 5 to 7 obtuse deeply lobed segments, and the white

102752 to 102787—Continued.

flowers, nearly 2 inches across, have reflexed petals and are borne in pairs on axillary or terminal peduncles.

102764. GLOBBIA RACEMOSA J. E. Smith.
Ziniberaceae.

A tropical herbaceous perennial with erect stems 2 feet high from a creeping rhizome. The oblong-lanceolate leaves are 6 to 9 inches long, and the bright-yellow tubular flowers, 1 inch long, are borne in a narrow panicle a foot long. Native to India.

102765. HYDRANGEA VESTITA Wall. Hydrangeaceae.

A tall shrub up to 15 feet high, native to the temperate Himalayas from 8,000 to 10,000 feet. The branchlets are hairy, and the oblong to ovate serrate leaves, 4 to 9 inches long, are densely white tomentose beneath.

102766. HYPERICUM HOOKERIANUM Wight
and Arn. Hypericaceae.

St. Johnswort.

A compact shrub up to 6 feet high, with bright red-brown branches, evergreen leaves 1 to 4 inches long, and many-flowered corymbs of large golden-yellow flowers, each about 2 inches across. Native to the Himalayas.

102767. HYPERICUM OBLONGIFOLIUM
Choisy. Hypericaceae. St. Johnswort.

A shrub 3 to 6 feet high, native to the temperate slopes of the Himalayas at altitudes of 5,000 to 7,000 feet. The sessile ovate-lanceolate leaves are 1 to 3 inches long, and the nodding flowers, 2 inches across, are white on opening, turning light yellow with age.

For previous introduction see 99732.

102768. NAGEIA NERIIFOLIA (Don) Kuntze
(*Podocarpus nerifolia* Don). Taxaceae.

A glabrous evergreen tree, native to southeastern Asia. The straight or falcate leathery leaves are 4 to 8 inches long, and the solitary globose seeds, one-fourth of an inch in diameter, grow on fleshy oblong peduncles.

102769. OSTODES PANICULATA Blume. Euphorbiaceae.

A tree, native to India and Java, with pubescent branchlets and stout white-barked branches. The leathery long-pointed serrate ovate leaves are 8 to 12 inches long, and the inconspicuous flowers, in glabrous panicles a foot long, are followed by rough three-lobed woody capsules an inch long.

102770. PELIOSANTHES MACROPHYLLA
Wall. Liliaceae.

A perennial herb with horizontal rootstocks, native to India at an altitude of 600 feet or less. The elliptic-lanceolate leaves, 12 to 18 inches long, are in a rosette from which rise the erect bracted scapes bearing racemes of purple-green broadly campanulate flowers.

102771. PINUS ROXBURGHII Sargent (*P. longifolia* Roxb.). Pinaceae. Pine.

A tree, native to the lower Himalayas at altitudes of 1,500 to 7,500 feet, often over 100 feet high, with a round symmetrical head, but sometimes stunted and gnarled. The light-green pendulous leaves, in clusters of three, are 9 to 12

102752 to 102787—Continued.

inches long and persist for 3 or 4 years. The ovoid-conical cones, 4 to 7 inches long, have greatly thickened 4- to 6-lobed scales with a beak in the center. As a young plant, this pine is attractive for its long drooping pale-green foliage.

102772. POLYGALA ARILLATA Buch.-Ham.
Polygalaceae.

An erect shrub 4 to 8 feet high, native to south-eastern Asia. The lanceolate to ovate leaves are 4 to 6 inches long, and the irregular flowers, one-half inch long, in drooping panicles, have red-purple sepals and yellow petals. The broadly reniform fleshy capsules are nearly an inch across.

102773. PRUNUS NAPAULENSIS (Seringe)
Steud. Amygdalaceae.

A small tree, native to the temperate Himalayas up to 10,000 feet altitude. The lanceolate to oblong-lanceolate, crenate-serrate leaves, 4 to 6 inches long, are glaucous beneath, and the white flowers, in dense racemes, are followed by globose-ovoid blue fruits nearly 1 inch long.

102774. PUERARIA PEDUNCULARIS (Benth.)
R. Gray. Fabaceae.

A vigorous shrub with slender twining branches clothed with short deflexed deciduous hairs. The membranous green leaflets are gray with a thick down. The reddish pea-shaped flowers, with a deep-purple-tipped keel, are in moderately close racemes 6 to 12 inches long. Native to the temperate regions of the Himalayas.

102775. PUERARIA PHASEOLOIDES (Roxb.)
Benth. Fabaceae.

A twining, semishrubby plant densely covered with brown hairs. The leaflets are green above and densely matted beneath with gray hairs, and the reddish flowers are borne in long-stemmed racemes. Native to tropical regions of the Himalayas.

102776. PYRULARIA EDULIS (Wall.) DC.
Santalaceae.

A medium-sized thorny tree native to the southern slopes of the Himalayas up to an altitude of 5,000 feet. The leaves are 3 to 7 inches long, rather fleshy, oblong with entire margins. The staminate flowers are in racemes, and the pistillate flowers are solitary, producing edible pear-shaped drupes 2 inches long.

For previous introduction see 94079.

102777 to 102780. RHODODENDRON spp.
Ericaceae.

102777. RHODODENDRON CAMELLIAEFLO-
RUM Hook. f.

An often epiphytic evergreen shrub 2 to 6 feet high with densely scaly branchlets, native to the Himalayas between 9,000 and 11,000 feet altitude. The narrowly oblong, obtusely mucronate leaves, 2 to 4 inches long, are glabrous and reticulate above and densely scaly beneath. The pink-tinged white flowers, an inch across, are fleshy, with a short broad tube and a wide-spreading limb.

102778. RHODODENDRON DALHOUSIAE
Hook. f.

A large epiphytic evergreen shrub native to the Sikkim Himalayas at

102752 to 102787—Continued.

altitudes of 6,000 to 8,000 feet. The oblanceolate to obovate, obtuse leaves, 2 to 6 inches long, are scaly and papillose beneath. The funnel-shaped fragrant white flowers, tinged with rose outside, are 3 to 4 inches long with five broad lobes.

102779. RHODODENDRON GRANDE Wight.

A tree up to 30 feet high, native to the Sikkim Himalayas between 8,000 and 10,000 feet altitude. The elliptic to oblanceolate leaves, 6 to 12 inches long, are shining deep green above and silvery white beneath. The mortar-shaped flowers, 2 to 3 inches long, are pale rose in the bud, opening creamy white with basal purple blotches, and are borne in large rounded clusters of 20 to 25.

102780. RHODODENDRON VACCINOIDES
Hook. f.

A low shrub 1 to 3 feet high, with densely warty glandular branchlets, native to the Sikkim Himalayas between 6,000 and 12,000 feet altitude. The scattered spatulate emarginate leaves are less than 1 inch long, and the lilac-pink or pink-tinged white campanulate flowers are one-third of an inch long.

102781. ROSA MACROPHYLLA Lindl. Rosa-
ceae. **Bigleaf rose.**

A large, nearly thornless shrub, native to the temperate Himalayas up to 10,000 feet altitude. The compound leaves have 9 to 11 oblong to ovate leaflets 1 to 2 inches long, pubescent beneath, and the red flowers, 2 inches across, in clusters of 1 to 3, are followed by oblong-ovoid red fruits which are sometimes 2 inches long.

102782. TETRSTIGMA SERRULATUM
(Roxb.) Planch. (*Vitis capreolata*
Don.). Vitaceae.

A glabrous woody vine with slender wiry stems, native to India. The palmately compound leaves have 3 to 5 lanceolate to obovate bristly serrate leaflets 1 to 3 inches long, and the axillary or terminal cymes of small green flowers are followed by globose black fruits about one-fourth of an inch in diameter.

102783 to 102785. VACCINIUM spp. Vac-
ciniaceae.

102783. VACCINIUM DUNALIANUM Wight.

A large erect shrub with angular branchlets, native to India up to an altitude of 8,000 feet. The leathery oblong-lanceolate long-pointed leaves, 4 inches long, have entire recurved margins, and the small ovoid-conic flowers, in axillary racemes 3 inches long, are followed by globose berries one-sixth of an inch in diameter.

102784. VACCINIUM GLAUCO-ALBUM
Hook. f.

A shrub native to the Sikkim Himalayas between 9,000 and 10,000 feet altitude. The leathery oblong-ovate leaves, 2 to 3 inches long, are mucronate-serrate and are white beneath. The small pink-tinged white flowers, in racemes 3 inches long, are subtended by large white bracts which persist until the fruits are ripe.

102752 to 102787—Continued.

102785. *VACCINIUM NUMMULARIA* Hook. f. and Thoms.

A small rigid epiphytic shrub with densely hirsute pendent branches, native to the Himalayas at altitudes between 8,000 and 10,000 feet. The leathery glabrous broadly elliptic leaves, one-half inch long, have recurved margins, and the small tubular rosy flowers are borne in clustered racemes.

102786. *ZANTHOXYLUM ACANTHOPODIUM* DC. Rutaceae. Prickly-ash.

A shrub or small tree with vertically flattened prickles on the trunk and branches and dense foliage with a pungent aromatic odor. The small pale-red fruits are in loose panicles. Native to the warm valleys in the subtropical Himalayas at altitudes between 4,000 and 7,000 feet.

102787. *ZANTHOXYLUM ALATUM* Roxb. Rutaceae. Prickly-ash.

A shrub or small tree native to the subtropical Himalayas ascending to 6,000 feet. The compound leaves are made up of 5 to 11 lanceolate to ovate finely serrulate leaflets 1 to 5 inches long on a winged prickly rachis, and yellow-green flowers in small panicles are followed by warty red fruits which open and show the lustrous black seeds.

102788. *ZEA MAYS* L. Poaceae. Corn.

From Huancayo, Peru. Seeds presented by Paul G. Ledig, Huancayo Magnetic Observatory, Carnegie Institution of Washington, D. C. Received May 1, 1933.

Morada. A form with purple seeds.

102789 to 102814.

From the Union of South Africa. Seeds presented by Dr. R. H. Compton, director, National Botanic Gardens, Kirstenbosch, Newlands, Capetown. Received May 6, 1933.

102789. *ALOE HEREROENSIS* Engler. Liliaceae.

A nearly stemless perennial, native to southern Africa, with fleshy ovate-lanceolate leaves, 10 to 14 inches long, whitish green with purple tips and spiny margins. The tubular red flowers, an inch long, are borne in a dense corymb on pendulous pedicels, at the top of a purple scape about 3 feet high. The variety *orpeniae*, the name under which these seeds were received, is said to be a more slender form.

102790. *GLORIOSA SIMPLEX* L. Melanthiaceae. Glorylily.

A vinelike perennial, native to Africa, which supports itself by the tendril-bearing tips of the oblong-lanceolate leaves, 3 to 6 inches long. The yellow and red flowers, 1 to 3 inches across and borne in a lax terminal corymb, are on recurved pedicels, and the segments are reflexed and slightly undulate.

102791 to 102793. *INDIGOFERA* spp. Fabaceae.

102791. *INDIGOFERA CYLINDRICA* DC.

A bushy perennial with slender angular stems, native to southern Africa. The compound leaves are made up of 4 to 5 pairs of obovate emarginate leaflets one-half inch long, and the small

102789 to 102814—Continued.

pink-purple flowers are borne in dense many-flowered racemes.

102792. *INDIGOFERA FILIFOLIA* Thunb.

A bushy perennial with stems 3 to 6 feet high, native to southern Africa. Only young plants bear ordinary compound leaves, those on mature plants being reduced to filiform petioles 3 to 5 inches long. The purple flowers are borne in racemes longer than the petioles.

102793. *INDIGOFERA LANGEBERGENSIS* Bolus.

A small shrub, closely allied to *Indigofera frutescens*, and perhaps only a stunted form of that species. It is about 10 inches high, with leathery oval-obovate leaflets and lax many-flowered racemes of purple flowers. Native to Cape Province.

102794. *JASMINUM TORTUOSUM* Willd. Oleaceae. Jasmine.

A woody vine with angular twigs, native to southern Africa. The trifoliolate leaves have glabrous lanceolate leaflets, and the salver-shaped white flowers, 1 inch long, are borne in terminal clusters of 3 to 5.

102795 to 102813. *PROTEA* spp. Proteaceae.

Introduced for the use of Department specialists.

102795. *PROTEA MELLIFERA* Thunb.

102796. *PROTEA ACEROSA* R. Br.

102797. *PROTEA AMPLEXICAULIS* (Salisb.) R. Br.

102798. *PROTEA CEDROMONTANA* Schlechter.

102799. *PROTEA COMPACTA* R. Br.

102800. *PROTEA CYNAROIDES* L.

102801. *PROTEA GRANDICEPS* Tratt.

102802. *PROTEA HUMIFLORA* Andrews.

102803. *PROTEA LATIFOLIA* R. Br.

102804. *PROTEA LONGIFLORA* Lam.

102805. *PROTEA LONGIFOLIA* Andrews.

102806. *PROTEA MARGINATA* Thunb.

102807. *PROTEA MUNDI* Klotzsch.

102808. *PROTEA NERIIFOLIA* R. Br.

102809. *PROTEA OBTUSIFOLIA* Buek.

102810. *PROTEA PULCHELLA* Andrews.

102811. *PROTEA ROUPELLIAE* Meisn.

102812. *PROTEA SCOLYMOCEPHALA* (L.) Reichard.

102813. *PROTEA SUSANNAE* Phillips.

102814. *SESAMUM CAPENSE* Burm. f. Pedaliaceae.

An erect simple or branched herbaceous plant up to 6 feet high, native to southern Africa. The leaves are palmately divided into 3 to 5 ovate to linear leaflets 1 to 3 inches long, and the tubular violet flowers are 1 inch long with spreading lobes about 1 inch wide. The plant can thrive in very dry situations where the annual rainfall is only 4 inches.

102815. ROLLINIA ORTHOPETALA A. DC.
Annonaceae.

From Para, Brazil. Seeds collected by G. Schultz, Miami, Fla., and presented through David Fairchild. Received May 3, 1933.

A shrub or small tree native to tropical America. The fleshy fruits resemble those of *Annona*; the seeds are enveloped in a large amount of pulp which is of custard-like consistency and of a very agreeable acidulous taste. The plant thrives in localities which are often flooded for some time during the rainy season.

102816 to 102818.

From India. Seeds from the Lloyd Botanic Garden, Darjeeling, presented through George L. Slate, New York State Agricultural Experiment Station, Geneva, N. Y. Received May 3, 1933.

102816. ABIES SPECTABILIS Lambert (A. webbiana Lindl.). Pinaceae.
Himalayan fir.

A tree sometimes 150 feet high, native to the Himalayas at altitudes between 7,000 and 13,000 feet. The dark-green leaves are arranged in two opposite series so as to leave a V-shaped opening along the top; the individual leaves are 1 to 2 inches long. The cones, about 5 inches long, are violet purple at first, later becoming brown.

For previous introduction see 99707.

102817. MUCUNA IMBRICATA DC. Fabaceae.

A woody climber, native to the eastern Himalayas up to 4,000 feet altitude. The membranous trifoliate leaves have oblong pointed leaflets 6 inches long, and the dull-purple flowers, 2 inches long, are in lax racemes 6 to 12 inches long. The oblong pods, 4 to 6 inches long, are clothed with deciduous irritating bristles.

102818. MUCUNA MACROCARPA Wall. Fabaceae.

A woody climber, native to Nepal and Sikkim at altitudes up to 6,000 feet. It has stiffish trifoliate leaves, purple flowers, and the torulose pods are over a foot long.

For previous introduction see 93215.

102819. SOPHORA GRIFFITHII Stocks. Fabaceae.

From Afghanistan. Seeds presented by J. E. Spingarn, Amenia, N. Y. Received May 3, 1933.

An attractive shrub with silvery compound leaves composed of 20 to 40 oval, silky-hairy leaflets, and terminal and lateral racemes of golden-yellow flowers that appear in the spring. It is native to Baluchistan.

102820 to 102827. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

From Sinkiang, China. Seeds presented by R. C. Schomberg, through E. A. Foley, agricultural attache, American Embassy, London. Received May 5, 1933.

A collection of cantaloup seeds from central Asia. The melons of that region are noted both for their size and their excellent flavor.

102828 to 102848.

From southwestern China and Tibet. Seeds collected by Dr. J. F. Rock, agricultural explorer, for the University of California Botanical Garden expedition. Received May 4, 1933.

102828 to 102838. LILIUM spp. Liliaceae.
Lily.

Nos. 102828 to 102836 were collected in Tsarung Province, southeastern Tibet.

102828. LILIUM GIGANTEUM Wall.
Giant lily.

No. 23566. Collected at 11,000 feet altitude in the forests on Mount Motung, east of Atuntze. A lily, native to the Himalayas between 5,000 and 10,000 feet altitude, with bulbs that grow close to the surface. The hollow stems are 6 to 9 feet high, and the handsome cordate leaves are shining dark green above and paler beneath. The large fragrant white flowers, often 12 in a raceme, are slightly greenish without, and the inner surface of the segments is tinged with deep purple.

For previous introduction see 102317.

102829. LILIUM sp.

No. 21933. Collected on Mount Kenichunpo, Salwin-Irrawaddy Divide, at 12,000 feet altitude. A plant 3 feet high with white flowers.

102830. LILIUM sp.

No. 21937. Collected on Mount Kenichunpo, Salwin-Irrawaddy Divide, in alpine meadows. The flowers are purplish red.

102831. LILIUM sp.

No. 22152. Collected on Mount Kenichunpo, north of Sikitung, on the Upper Salwin River, in alpine meadows at 13,000 feet. The flowers are red.

102832. LILIUM TALIENSE Franch.

No. 22264. Collected in the forests of Solola, in alpine meadows at 12,000 feet altitude. A martagon lily with stout gray-green stems, 3 to 5 feet high, clothed with dense white scabrid pubescence, and linear to lanceolate leaves 2 to 4 inches long. The fragrant nodding flowers, 2 inches long, are in subverticillate clusters of 2 to 12 and vary in color from purple-spotted white to pink.

For previous introduction see 99902.

102833. LILIUM GIGANTEUM Wall.
Giant lily.

No. 22542. From the northern slopes of Mount Kenichunpo, at 12,500 feet altitude.

For previous introduction and description see 102828.

Nos. 102834 to 102836 were collected on Mount Kaakerbo.

102834. LILIUM WILLMOTTIAE Wilson.

No. 23475. Collected in pine forest at 10,000 feet altitude. Flowers orange-red, spotted with black.

For previous introduction see 69927.

102835. LILIUM TALIENSE Franch.

No. 23537. Collected on dry slopes in pine forest at 9,500 feet altitude.

For previous introduction and description see 102832.

102828 to 102848—Continued.

102836. *LILIUM TALIANSE* Franch.

No. 23613. From the western slopes, in alpine meadows at 12,000 feet altitude.

For previous introduction and description see 102832.

Nos. 102837 and 102838 were collected on Mount Kintzu, Labako, northwestern Yunnan, China.

102837. *LILIUM HYACINTHINUM* Wilson.

No. 25457. Collected at 10,000 feet altitude in fir forests. An alpine lily, native to western China between 10,000 and 12,000 feet altitude. The stout erect shining-green stems are 3 to 4 feet tall, the scattered oblong-lanceolate leaves are 6 to 8 inches long, and the slightly fragrant, funnel-shaped flowers, 1 to 2 inches long, are borne in racemes of 12 to 24 and vary in color from lavender-pink to rose-lilac.

For previous introduction see 99896.

102838. *NOMOCHARIS LOPHOPHORA* (Bur. and Franch.) Balf. f.

No. 25460. Found in alpine meadows at 13,000 feet altitude. A lily 6 to 12 inches high, with alternate ovate or lanceolate leaves 2 to 3 inches long and solitary yellow flowers about 2 inches long.

102839. *MAGNOLIA* sp. Magnoliaceae.

No. 22607. From the northern slopes of Mount Kenichunpo, north of Sikitung, on the Upper Salwin River, Tsarung Province, southeastern Tibet. A magnolia with immense leaves.

102840 to 102847. *NOMOCHARIS* spp. Liliaceae.

Nos. 102840 to 102843 were collected in Tsarung Province, southeastern Tibet.

102840. *NOMOCHARIS* sp.

No. 22176. From the northern slopes of Mount Kenichunpo, in alpine meadows at 12,500 feet altitude at the headwaters of the Eastern Irrawaddy. The white flowers are spotted with purple.

Nos. 102841 to 102843 were collected on Mount Tjonatong, Upper Salwin Divide.

102841. *NOMOCHARIS* sp.

No. 22309.

102842. *NOMOCHARIS* sp.

No. 22310.

102843. *NOMOCHARIS* sp.

No. 22311.

102844. *NOMOCHARIS* sp.

No. 23256. From Mount Fuchuan, west of the Mekong-Salwin Divide, northwestern Yunnan, China, at 13,000 feet altitude, in alpine meadows. The white flowers are spotted with purple.

Nos. 102845 and 102846 were collected in Tsarung, southeastern Tibet.

102845. *NOMOCHARIS* sp.

No. 23576. Collected on Mount Kaakerbo in alpine meadows at 12,500 feet altitude. Flowers, lavender pink.

102828 to 102848—Continued.

102846. *NOMOCHARIS* sp.

No. 23670. From west of Mount Kaakerbo in alpine meadows. The white flowers are speckled.

102847. *NOMOCHARIS* sp.

No. 25456. Collected on Mount Kintzu, Labako, northwestern Yunnan, China, near fir forests at 12,500 feet altitude. The flowers are pink.

102848. (Undetermined.)

No. 23584. Collected on Mount Kaakerbo, Tsarung, southeastern Tibet, at 12,500 feet altitude. The flowers are dark reddish purple.

102849 to 102858. *HUMULUS LUPULUS* L. Moraceae. Common hop.

From France. Roots presented by Prof. Etienne Foex, directeur de la Station Centrale de Pathologie Végétale, Versailles. Received May 8, 1933.

A collection of wilt-resistant French varieties, introduced for the use of specialists working on hop breeding.

102849. *Alsace* (Urbann).102850. *Burgunder* (Simon).102851. *Landopfen* (Simon).102852. *Sämling* (Salmon).102853. *Sämling* (Urbann).102854. *Spalt* (Urbann).102855. *Spalter* (Rohmer).102856. *Spalter* (Simon).102857. *Tige Blanche* (Jagger).102858. *Tige Verte* (Jagger).102859 to 102877. *GOSSYPIMUM* spp. Malvaceae. Cotton.

From Haiti. Seeds obtained by O. F. Cook. Received April 8, 1933.

Introduced for the use of Department specialists.

102859. Cotton-breeding no. 1035. A lintless variation from Port-au-Prince.

Nos. 102860 to 102877 are Cotton-breeding no. 1036.

102860. No. 16. 102869. No. 37.

102861. No. 18. 102870. No. 41.

102862. No. 19. 102871. No. 44.

102863. No. 21. 102872. No. 45.

102864. No. 22. 102873. No. 46.

102865. No. 27. 102874. No. 47.

102866. No. 28. 102875. No. 52.

102867. No. 30. 102876. No. 55.

102868. No. 35. 102877. No. 96.

102878. *CARICA CAULIFLORA* Jacq. Papayaceae.

From the Canal Zone. Seeds presented by J. E. Higgins, director, Experiment Garden, Summit. Received May 9, 1933.

Introduced for the use of Department specialists.

102879 to 102891.

From China. Seeds purchased through Peter Liu, Peiping. Received May 8, 1933.

From Hopch Province, north of Peiping; introduced for the use of Department specialists.

102879. ALLIUM CEPA L. Liliaceae. Onion.

No. 9. *Ta Tsung.*

102880. BRASSICA sp. Brassicaceae.

No. 13.

102881 to 102883. CAPSICUM ANNUUM L. Solanaceae. Common redpepper.

102881. No. 4. Large persimmon pepper.

102882. No. 5. Chinese.

102883. No. 6. A Chinese pepper.

102884 to 102886. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

102884. No. 10.

102885. No. 11.

102886. No. 12.

102887 and 102888. PISUM SATIVUM L. Fabaceae. Pea.

102887. No. 7.

102888. No. 8.

102889 to 102891. SOLANUM MELONGENA L. Solanaceae. Eggplant.

102889. No. 1.

102890. No. 2.

102891. No. 3.

102892. PISTACIA MUTICA Fisch. and Mey. Anacardiaceae. Terebinth.

From Palestine. Seeds collected in Aiir Balat, Safed District, Metulla region, and presented by A. Khazanoff, Haifa. Received May 8, 1933.

A deciduous tree up to 35 feet high with pinnate foliage. It is sometimes used as a stock for *Pistacia vera*. Native to the Mediterranean region.

For previous introduction see 99351.

102893 and 102894. GOSSYPIUM ARBOREUM L. Malvaceae. Cotton.

From India. Seeds presented by V. N. Ranganatha Rao, senior assistant botanist, Krishnalaya, Ulsoor Gate, Bangalore City, southern India, through T. H. Kearney, Bureau of Plant Industry. Received May 5, 1933.

102893. A form which resembles *Gossypium herbaceum*.

102894. A form which resembles the *Nahda* variety.

102895. CITRUS MEDICA L. Rutaceae. Citron.

From Italy. Plants purchased from Onofrio Bottaro & Figli, by Dr. Forzano, of the Diamond Citron Co., Los Angeles, Calif., and sent through Coert de Bois, American consul general, Naples. Received April 13, 1933.

Diamante citron, from Diamante, Province of Cosenza. A fine variety introduced for the use of Department specialists.

102896. CITRUS sp. Rutaceae.

From French Indo-China. Plants collected at the Station Agricole de Blao de Haut Donoi, Annam, and presented by M. Poillane, Institut des Recherches Agronomiques de l'Indochine, Division de Botanique. Received May 13, 1933.

A cultivated lemon with aromatic fruits, collected at 2,300 feet altitude.

102897. HUMULUS LUPULUS L. Moraceae. Common hop.

From Czechoslovakia. Roots presented by Dr. Ing. Ctibor Blatny, Institute of Phytopathology, Statni vyzkumne ustavy zemedelske Prague-Devce, Sadova. Received May 16, 1933.

Early green hop from Duba.

102898 to 102901.

From Mexico. Seeds presented by Peter H. Heinz, Brownsville, Tex. Received May 13, 1933.

A collection of seeds purchased in a Mexican market.

102898 to 102900. CAPSICUM ANNUUM L. Solanaceae. Common redpepper.

102898. Ancho. A large aromatic mild pepper of good color; used to color chili.

102899. Mulato. A medium-sized pepper, mild but with a bitter flavor; used to flavor chili.

102900. Pasilla. A pepper 4 inches long with a mild flavor; used in chili.

102901. SESAMUM ORIENTALE L. Pedalaceae. Sesame.

Ajonjoli. Used in the manufacture of chili powder.

102902 to 102911.

From India. Seeds presented by the curator, Lloyd Botanic Garden, Darjeeling, through Ralph A. Fenton, Portland, Oreg. Received May 11, 1933.

102902. ARDISIA sp. Myrsinaceae.

The *Ardisia* are tropical or subtropical trees or shrubs, with thick evergreen leaves, cymes of white or rose-colored flowers, and, usually, red fruits the size of a pea.

102903. DAPHNE PAPHRACEA Wall. Thymelaeaceae.

A shrub up to 8 feet high, native to the temperate slopes of the Himalayas in India. The thinly coriaceous oblanceolate leaves are 2 to 4 inches long, and the fragrant cream-colored flowers, half an inch long, are in terminal heads.

For previous introduction see 94075.

102904. DAPHNE SUREIL Smith and Cave. Thymelaeaceae.

An erect evergreen shrub 3 to 10 feet high, with alternate lanceolate or linear-lanceolate leathery leaves about 4 inches long and small whitish flowers half an inch long. Native to the eastern temperate Himalayas.

For previous introduction see 102313.

102905. ILEX HOOKERI King. Aquifoliaceae. Holly.

A small deciduous tree, with leathery narrow oblong or lanceolate leaves 3 to 5 inches long and small globular berries

102902 to 102911—Continued.

one-sixth of an inch in diameter. Native to the Sikkim Himalayas.

102906. *ILEX INSIGNIS* Hook. f. Aquifoliaceae. **Holly.**

An attractive holly, native to the Sikkim Himalayas, where it grows at 7,000 feet altitude. It forms a small tree or shrub with thick, grooved branches which are purplish when young. The dark-green leathery leaves are pinnately lobed, with the lobes spine tipped and alternately raised and depressed, so that there appears to be a double row of spiny lobes on each side. This holly has proved hardy in Ireland and may be suited for growing in the Gulf States and southern California.

102907. *KAEMPFERIA SIKKIMENSIS* King. Zinziberaceae.

A low herbaceous plant native to India, with slender leafy stems 2 to 4 inches long. The sessile lanceolate leaves are 2 to 3 inches long, and the solitary tubular flower, 1 inch long, has linear-oblong, dark-lilac segments; the suborbicular lip of the staminode is white and entire.

102908. *OSBECKIA CRINITA* Benth. Melastomaceae.

A much-branched shrub 4 to 8 feet high, with small narrow bristly leaves and large purple or pure-white flowers borne in terminal clusters. The plant is abundant at altitudes between 4,000 and 8,500 feet in the mountains of Sikkim and Bhutan, India.

102909. *OSBECKIA STELLATA* Don. Melastomaceae.

An ornamental shrub 2 to 7 feet high, with reddish bractelets and membranous leaves 2 to 6 inches long. The delicately beautiful lilac-rose flowers have four ovate ciliate petals over an inch across. The conspicuous stamens are incurved, and the calyx tube is pale green with green-stalked stellate hairs, each bearing reddish rays.

102910. *POUPARTIA AXILLARIS* (Roxb.) King and Prain. Anacardiaceae.

A tree native to the low valleys of western China, where it becomes 50 to 80 feet high, with a trunk often 3 feet in diameter near the base. It has gray bark, massive branches, deciduous leaves, and inconspicuous flowers. The oval yellow fruits, about an inch long, are eaten by the Chinese.

102911. *SYMPLOCOS RAMOSISSIMA* Wall. Symplocaceae.

A shrub or tree up to 40 feet high, native to India. The oblong-lanceolate membranous leaves are 4 inches long, and the small white flowers are in axillary 1- to 6-flowered racemes.

102912 and 102913.

From Australia. Seeds presented by H. Wenholz, director of plant breeding, Department of Agriculture, Sydney, New South Wales, through J. B. Cleland. Received May 10, 1933.

102912. *CALANDRINIA BALONENSIS* Lindl. Portulacaceae. **Parakeelya.**

A perennial herb about a foot high, native to Queensland, Australia. The thick fleshy oblong-spatulate leaves are less than an inch long at the base of the plant,

102912 and 102913—Continued.

while the upper ones are 2 inches long and linear-lanceolate. The large purple flowers, 1 to 2 inches across, are borne in loose terminal racemes.

For previous introduction see 102078.

102913. *CALANDRINIA REMOTA* J. M. Black. Portulacaceae. **Parakeelya.**

A low procumbent annual, or possibly perennial, 4 to 12 inches high, native to South Australia. The succulent, linear-spatulate leaves are less than an inch long, and the rather large purple to white flowers are 1 to 2 inches across.

For previous introduction see 101299.

102914. *CROTALARIA BURKEANA* Benth. Fabaceae.

From Africa. Seeds presented by I. B. Pole-Evans, chief, Division of Plant Industry, Department of Agriculture, Pretoria, Union of South Africa, through E. Percy Phillips, principal botanist. Received May 11, 1933.

An erect slightly shrubby perennial 1 to 2 feet high, native to southern Africa, with the branches, petioles, and racemes densely hispid with long rusty hairs. The 3 to 5 linear-lanceolate leaflets are 1 to 2 inches long, and the yellow flowers, less than an inch long, are in terminal racemes.

102915 to 102975.

From China. Seeds collected in Lushan, Kiangsi Province, and presented by A. N. Steward, University of Nanking, Nanking. Received May 10, 1933.

102915. *ACER* sp. Aceraceae. **Maple.**
No. 10. From Chihsiensze.

102916. *ADINA* sp. Rubiaceae.

No. 36. From Kuanyinchiao. This is a rubiaceae genus of trees and shrubs closely resembling the American button-bush (*Cephalanthus occidentalis*). The simple leaves are opposite or whorled, and the inconspicuous flowers are in dense heads.

102917. *ALBIZZIA* sp. Mimosaceae.
No. 1. From Huangyenzse.

102918. *ARALIA* sp. Araliaceae.
No. 6. From Huangyenzse.

102919 to 102921. *BENZOIN* spp. Lauraceae.

The benzoin is aromatic shrubs or trees related to the American spicebush (*Benzoin aestivale*). The yellow flowers appear in sessile clusters before the leaves, and the fruits are highly colored in autumn.

102919. *BENZOIN* sp.

No. 2. From Huangyenzse.

102920. *BENZOIN* sp.

No. 25. From Suifungzse.

102921. *BENZOIN* sp.

No. 39. From Kuanyinchiao.

102922. *CALLICARPA* sp. Verbenaceae.

No. 27. From Kuanyinchiao.

102923. *CASTANEA SEGUINII* Dode. Fagaceae.

102915 to 102975—Continued.

No. 74. From Haihweisze. A wild bush chestnut native to east-central China. It is usually a bush or low tree, but occasionally a shapely tree 40 feet high, with deep-green leaves, paler beneath, and small nuts of sweet agreeable flavor.

For previous introduction see 101607.

102924. CELASTRUS sp. Celastraceae.

No. 7. From Huangyenzse.

102925. CELTIS sp. Ulmaceae. **Hackberry.**

No. 12. From Kuanyinchiao.

102926. CEPHALOTAXUS sp. Taxaceae.

No. 54. From Huangyenzse.

102927. CITRUS sp. Rutaceae.

No. 72. From Haihweisze.

102928. CLERODENDRUM sp. Verbenaceae.

No. 4. From Huangyenzse.

102929. CRATAEGUS sp. Malaceae. **Hawthorn.**

No. 37. From Kuanyinchiao.

102930. DEUTZIA sp. Hydrangeaceae.

No. 45. From Haihweisze.

102931. DIOSPYROS sp. Diospyraceae. **Persimmon.**

No. 24. From Haihweisze.

102932. ELAEOCARPUS DECIPIENS Hemsl. Elaeocarpaceae.

No. 52. From Kuanyinchiao. A subtropical tree with smooth narrowly ovate leaves about 5 inches long, numerous small white flowers in racemes, and small oval-oblong fleshy fruits scarcely three-fourths of an inch long. Native to southeastern China.

102933 to 102935. EUONYMUS spp. Celastraceae.

102933. EUONYMUS sp.

No. 29. From Yunchungszse.

102934. EUONYMUS sp.

No. 55. From Kuanyinchiao.

102935. EUONYMUS sp.

No. 64. From Haihweisze.

102936 and 102937. EURYA spp. Theaceae.

The euryas are shrubs with simple evergreen leaves and small flowers, usually in axillary clusters, followed by berrylike fruits. They are native to southern Asia.

102936. No. 49. From Dayahtsun.

102937. No. 50. From Kuanyinchiao.

102938. EUSCAPHIS JAPONICA (Thunb.) Dipp. Staphyleaceae.

No. 11. From Kuanyinchiao. A shrub up to 10 feet high, native to China and Japan. The compound leaves are made up of 7 to 11 ovate-lanceolate serrate leaflets 3 inches long; and the small white flowers, in upright panicles, are followed by brown-red fruits which open, exposing the steel-blue seeds.

102915 to 102975—Continued.

102939 and 102940. EVODIA spp. Rutaceae.

The evodias are deciduous or evergreen trees or shrubs with opposite simple or pinnate leaves, inconspicuous flowers, and small fruits which open and expose the black seeds. They are related to the American prickly-ash (*Zanthoxylum americanum*).

102939. No. 15. From Kuanyinchiao.

102940. No. 17. From Huangyenzse.

102941. GARDENIA sp. Rubiaceae.

No. 42. From Huangyenzse.

102942. GREWIA sp. Tiliaceae.

No. 34. From Kuanyinchiao.

102943. HYDRANGEA sp. Hydrangeaceae.

No. 22. From Huangyenzse.

102944 to 102946. ILEX spp. Aquifoliaceae. **Holly.**

102944. ILEX sp.

No. 5. From Huangyenzse.

102945. ILEX sp.

No. 53. From Kuanyinchiao.

102946. ILEX sp.

No. 68. From Pailohtung.

102947. JUNIPERUS sp. Pinaceae. **Juniper.**

No. 66. From Kuanyinchiao.

102948. LAGERSTROEMIA sp. Lythraceae. **Crapemyrtle.**

No. 71. From Suifungszse.

102949. LOROPETALUM CHINENSE (R. Br.) Oliver. Hamamelidaceae.

No. 18. From Kuanyinchiao. A handsome but somewhat tender Chinese evergreen bushy shrub, about 5 feet high, with wiry hairy branches, oval unsymmetrical leaves, and curious white witch-hazellike flowers during the early spring.

102950. MAGNOLIA sp. Magnoliaceae.

No. 62. From Chihsiensze.

102951. PAULOWNIA sp. Scrophulariaceae.

No. 38. From Kuanyinchiao.

102952. PISTACIA sp. Anacardiaceae.

No. 69. From Kuanyinchiao.

102953. PITTOSPORUM sp. Pittosporaceae.

No. 59. From Kuanyinchiao.

102954. PLATYCARYA STROBILIFERA Sieb. and Zucc. Juglandaceae.

No. 13. From Kuanyinchiao. A bush or small tree, or rarely a tree over 60 feet high, with thick dark deeply furrowed bark. The moderately thick branches form a rounded or flattened crown. The leaves, 12 inches long, are composed of 9 to 17 sessile, doubly serrate leaflets, and the brown, oval, conelike fruits are over an inch long.

102955. PYRUS sp. Malaceae. **Pear.**

No. 28. From Kuanyinchiao.

102956. RHAMNUS sp. Rhamnaceae. **Buckthorn.**

No. 35. From Kuanyinchiao.

102915 to 102975—Continued.

102957. RHODODENDRON sp. Ericaceae.

No. 41. From Huangyenzse.

102958. RHUS sp. Anacardiaceae. Sumach.

No. 33. From Huangyenzse.

102959 to 102961. ROSA spp. Rosaceae. Rose.

From Kuanyinchiao.

102959. No. 44. 102961. No. 61.

102960. No. 60.

102962. RUBUS sp. Rosaceae.

No. 3. From Huangyenzse.

102963. SPIRAEA sp. Rosaceae. Spirea.

No. 21. From Huangyenzse.

102964. STYRAX sp. Styracaceae. Snowbell.

No. 19. From Huangyenzse.

102965. SYMLOCOS sp. Symplocaceae. Sweetleaf.

No. 65. From Haihweizse.

102966 to 102968. THEA spp. Theaceae.

102966. No. 9. From Huangyenzse.

102967. No. 31. From Huangyenzse.

102968. No. 43. From Pailohtung.

102969. VANIERIA sp. Moraceae.

No. 46. From Pailohtung. The vanierias are woody plants, native to south-eastern Asia, closely related to the curranias. The inconspicuous flowers are followed by fleshy subglobose fruits that resemble mulberries.

102970. VIBURNUM sp. Caprifoliaceae.

No. 26. From Haihweizse.

102971. ZANTHOXYLUM sp. Rutaceae. Prickly-ash.

No. 14. From Kuanyinchiao.

102972. ZANTHOXYLUM sp. Rutaceae. Prickly-ash.

No. 16. From Kuanyinchiao.

102973. (Undetermined.)

No. 8. From Huangyenzse.

102974. (Undetermined.)

No. 20. From Huangyenzse.

102975. (Undetermined.)

No. 63. From Haihweizse.

102976. MANGIFERA INDICA L. Anacardiaceae. Mango.

From Surinam. Seeds presented by the director of the agricultural experiment station at Paramaribo, through David Fairchild. Received May 16, 1933.

Mangga golek.

102977. ALLIUM sp. Liliaceae.

From India. Seeds presented by E. A. Beale, deputy director of agriculture, Irrawaddy Circle, Myaungaya, Lower Burma, through W. E. Gregson, deputy director of agriculture, Tenasserim Circle, Moulmein. Received May 15, 1933.

Introduced for the use of Department specialists.

102978 to 102984.

From the Union of Soviet Socialist Republics. Seeds presented by V. P. Aleksseev, chief, Bureau of Introduction, Institute of Plant Industry, Leningrad. Received May 17, 1933.

102978 to 102982. ALLIUM CEPA L. Liliaceae. Onion.

Originally collected in Asia Minor by the expedition of Professor Zhukovsky.

102978. No. 119/1. From Bitlis.

102979. No. 119/6. From Bitlis.

102980. No. 119/16.

102981. No. 119/21.

102982. No. 119/37. From Trebizond.

102983 and 102984. ALLIUM PORRUM L. Liliaceae. Leek.

Originally from western Persia, collected by the Tcherniakovsky expedition.

102983. No. 31/1.

102984. No. 31/3.

102985. EUGENIA LIGUSTRINA (Swartz) Willd. Myrtaceae.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received May 17, 1933.

A low tropical American shrub with papery lanceolate leaves, shining above and pale beneath, solitary white flowers half an inch across, and globose smooth berries one-fourth of an inch in diameter.

102986. AMARANTHUS GANGETICUS L. Amaranthaceae. Ganges amaranth.

From California. Seeds presented by Ernest L. Lutz, Summit. Received May 19, 1933.

Beh Han Tsai, or *white Han Tsai*. Seed of plants grown from seed brought from China by Mr. Lutz. An annual herb whose stems and leaves are prepared in much the same manner as spinach and used for food in China.

For introduction of a red form see 102737.

102987 to 103000. AGAVE spp. Amaranthaceae.

From Mexico. Plants purchased from Howard E. Gates, Anaheim, Calif. Received May 22, 1933.

Native plants, collected in Baja California by Howard E. Gates.

102987. AGAVE AUREA Brandegee.

A stemless plant with a rosette of about 50 gray-green, narrow-lanceolate leaves about 3 feet long, armed with unequally triangular, often upcurved prickles and ending in a chestnut-colored spine an inch long. The numerous golden-yellow flowers are borne on a scape about 5 feet high.

102988. AGAVE AFFINIS Trelease.

An agave with rough, gray-green, triangular-oblong leaves about 20 inches long, terminating in an ashen or nearly white spine over an inch long. The flowers are borne in a short branched panicle.

102987 to 103000—Continued.

102989. AGAVE ORCUTTIANA Trelease.

An agave, resembling *Agave shawii*, with a reclinate trunk sometimes 10 feet long. The smooth green narrow leaves, 6 inches to a foot long, end in a dull gray spine an inch long. The flowers, 3 inches long, are in a panicle.

102990. AGAVE CONNOCHAETODON Trelease.

A stemless agave with dull pale-green oblanceolate leaves about 10 inches long, ending in a dull-red or ashen spine about 2 inches long. The flowers are borne on a scape sometimes 10 feet high.

102991. AGAVE GOLDMANIANA Trelease.

With the general aspect of *Agave shawii*, this plant has a short trunk and ovate-lanceolate, stiffly erect-spreading leaves about 20 inches long, ending in a dull dark-gray spine over an inch long. The deeply funneliform flowers are on a scape 15 to 20 feet high.

102992. AGAVE SOBRIA T. S. Brandegee.

A stout plant with lanceolate leaves, curved outward, ending in a stout spine about 1 inch long. The campanulate orange-yellow flowers are on an erect scape 6 to 12 feet high, the flower panicle occupying more than half its length.

102993. AGAVE NELSONI Trelease.

A stemless cespitose plant with stiffly erect spreading glaucous oblong-ovate openly concave leaves about 1 foot long, armed with fragile, easily detached marginal prickles and a blackish terminal spine sometimes an inch long. The light yellow flowers are borne in a panicle on a slender scape 12 to 25 feet high.

102994. AGAVE MARGARITAE T. S. Brandegee.

An agave with a rosette of 40 to 50 leaves 4 to 6 inches long, all concave, ending in a terminal spine an inch long. The light-yellow flowers are borne on a scape 8 to 12 feet high.

102995. AGAVE VEXANS Trelease.

An agave with smooth, gray-green, linear-triangular leaves a foot long, very gradually acute, ending in a dull gray-brown spine about an inch long. The greenish flowers are on a slender scape 4 to 6 feet high.

102996. AGAVE SEBASTIANA Greene.

A stemless agave with ascending glaucous ovate-lanceolate leaves a foot long, tapering into a stout spine 2 inches long, and yellow flowers on a stout scape 6 to 10 feet high.

102997. AGAVE BRANDEGEEI Trelease.

An agave with grayish, yellow-green, lanceolate, gradually acute leaves about 2 feet long, ending in a glossy red-brown recurving spine less than an inch long. The yellow flowers are nearly 2 inches long.

102998. AGAVE ROSEANA Trelease.

A somewhat caespitose succulent with stiffly spreading glaucous, gray-green, broadly lanceolate leaves 6 to 20 inches long, terminating in a purple-chestnut tortuous spine 2 to 3 inches long. The slender scape is 6 to 12 feet high.

102999. AGAVE sp.

Gates no. 231.

102997 to 103000—Continued.

103000. AGAVE DATYLIO Web.

A low stemless plant growing in clumps. The rigid straight narrow leaves, 1 to 1½ feet long, terminate in a black spine about half an inch long, and the whitish flowers are on a scape about 12 feet high.

103001. PASSIFLORA EDULIS Sims.
Passifloraceae. Purple granadilla.

From Hawaii. Seeds presented by W. T. Pope, Agricultural Experiment Station, Honolulu. Received May 17, 1933.

Variety *flavicarpa*. A yellow-fruited passion fruit of large size, with golden yellow juice of exceptionally fine flavor.

103002. PHOENICOPHORUM BORSIGIANUM
(Koch) Stuntz (*Stevensonia grandifolia* Duncan). Phoenicaceae. Palm.

From Cuba. Plants presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received May 22, 1933.

Seedling plants grown in the Hope Gardens, Jamaica. This noble palm, famous for its beauty, is indigenous to the Seychelles Islands. The mature palm is wholly destitute of spines, whereas in the young state the deep orange-red petioles are clothed with black needlelike spines 1 to 3 inches long. The young leaves are orange beneath and mottled with orange spots above. The difference between the young and the mature plants is so great that the uninitiated would consider them different species. The flower spike is from 3 to 6 feet long, divided into numerous slender branches, swollen at the base and densely covered above with yellow flowers each about one-fourth of an inch in diameter.

For previous introduction see 94092.

103003 to 103014.

From New Zealand. Seeds presented by A. Wilkinson, Tauranga. Received May 13, 1933.

103003. ACIPHYLLA COLENSOI Hook. f.
Apiaceae.

A stout perennial herb 2 to 5 feet high, native to New Zealand. The numerous radical leaves form a circle of bayonetlike spikes around the base of the stem, each 1 to 3 feet long, pinnate or bipinnate at the base, with few secondary narrowly linear leaflets 5 to 15 inches long, terminated by a long stout spine. The small white flowers are in a cylindrical panicle made up of numerous umbels.

For previous introduction see 101271.

103004. CELMISIA SPECTABILIS Hook. f.
Asteraceae.

A herbaceous perennial with short stout stems and numerous linear-oblong thick leaves, 6 inches long, covered with silvery hairs above and densely matted pubescent wool beneath. The several stout cottony scapes are longer than the leaves and bear white flower heads 1 to 2 inches broad. Native to New Zealand, where it often grows in extensive stands.

103003 to 103014—Continued.

103005. DAHLIA MERCKII Lehm. Astera-
ceae. Bedding dahlia.

A single-flowered dahlia, 2 to 3 feet high, with bipinnate leaves and flowers typically lilac in color. This dahlia comes true from seed.

103006. ENTELEA ARBORESCENS R. Br. Tiliaceae.

A New Zealand shrub or small tree 20 feet high, with the growing parts covered with soft stellate hairs. The alternate cordate leaves, nearly a foot across, are on petioles 8 inches long, the white flowers, an inch in diameter, are in erect cymes, and the globose pods are covered with long rigid bristles.

103007. GERANIUM TRAVERSII Hook. f. Geraniaceae. Cranesbill.

A perennial herb with decumbent or prostrate stems 1 to 2 feet long, native to New Zealand. All parts of the plant are covered with silvery hairs. The nearly orbicular leaves, 1 to 3 inches across, have 5 to 7 lobes, and the radical leaves have petioles up to 9 inches long. The white or pink flowers, 1 inch wide, are borne on slender peduncles 1 to 4 inches long, with two acuminate bracts at the middle.

103008. HEBE FORMOSA (R. Br.) Cock-
ayne (*Veronica formosa* R. Br.).
Scrophulariaceae.

A glabrous evergreen shrub 2 to 4 feet high, native to Tasmania. The thick lanceolate entire leaves are about 1 inch long, and the pale-lilac flowers are borne in short racemes in the axils of the upper leaves.

103009. HEBE VENUSTULA (Colenso)
Cockayne (*Veronica venustula* Co-
lenso). Scrophulariaceae.

A small compact shrub 6 to 9 inches high, native to New Zealand. The oblong-ovate leathery leaves, less than 1 inch long, are close-set on the branches, and the small white flowers are in terminal much-branched racemes.

103010. LEUCOGENES LEONTOPODIUM
(Hook. f.) Beauvard. Asteraceae.

A much-branched dwarf perennial, woody at the base, 2 to 8 inches high. The linear-lanceolate, densely imbricated leaves are three-fourths of an inch long, and the small densely woolly flower heads are borne in compact clusters of 8 to 15. The plant has the same aspect as the edelweiss of the European Alps.

103011. MYOSOTIDIMUM HORTENSIA (De-
caisne) Baill. (*M. nobile* Hook.).
Boraginaceae.

A stout succulent perennial herb, 1 to 3 feet high, native to the Chatham Islands. The thick fleshy radical leaves, 6 to 12 inches long, are broadly cordate or reniform, and the blue flowers, one-half inch across, are borne in dense corymbose cymes.

For previous introduction see 101284.

103012. OLEARIA sp. Asteraceae. Daisytree.

A mixture of species native to Tasmania. The olearias are evergreen trees or shrubs of the Australian region with flowers like the asters, to which they are closely related.

103003 to 103014—Continued.

103013. PETROPHILA BILOBA R. Br. Pro-
teaceae.

A shrub with slender villous branchlets, native to Western Australia. The leathery leaves are pinnately divided into four rhomboid sharp-pointed lobes about one-half inch long, and the small flowers are borne in ovoid conelike spikes about one-fourth of an inch long, crowded along the branchlets.

103014. (Undetermined.)

103015. EPIDENDRUM VITELLINUM Lindl. Orchidaceae.

From Baja California, Mexico. Plants presented by Waldo S. Schmidt, United States National Museum, Washington, D. C. Received May 24, 1933.

An orchid, native to Mexico, with ovoid pseudobulbs 2 inches long, each bearing 1 to 3 leaves 6 to 9 inches long. The cinnamon-red flowers with orange lips are borne in 10- to 15-flowered racemes on peduncles 1 to 2 feet long.

103016. PASSIFLORA EDULIS Sims. Pas-
sifloraceae. Purple granadilla.

From Brazil. Seeds presented by P. H. Rolfs, Rio de Janeiro. Received May 19, 1933.

Seed from fruits over an inch in diameter, purchased in a confectionery store at Curatyba, Parana, Brazil, April 22, 1933.

103017 and 103018.

From the Galápagos Islands. Seeds presented by Waldo S. Schmitt, United States National Museum, Washington, D. C. Received May 25, 1933.

103017. CASSIA sp. Caesalpiniaceae.

103018. VIGUIERA sp. Asteraceae.

From Duncan Island. The viguieras are tropical shrubs, or subshrubs, related to the sunflowers, with the rather small flower heads in ample corymbs.

103019. (Undetermined.)

From the Union of South Africa. Seeds presented by a Mr. Breslin, of Victoria. Received May 25, 1933.

Introduced for testing by Department specialists as a possible source of rubber.

103020. ARECA sp. Phoenicaceae.

Palm.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received May 26, 1933.

The arecas are graceful spineless palms with attractive pinnate leaves.

103021. CINCHONA sp. Rubiaceae.

From the British West Indies. Seeds presented by F. T. Landale, Jamaica, through Col. Victor E. Ruehl, Caldwell, N. J. Received May 24, 1933.

103022. CINCHONA sp. Rubiaceae.

From Guatemala. Seeds presented by the American consul general, Guatemala City, through Col. Victor E. Ruehl, Caldwell, N. J. Received May 25, 1933.

103022—Continued.

From Finca Chejel, Tucuru, Alta Vera Paz.

103023. *EUPHORBIA ABYSSINICA* Gmel.
Euphorbiaceae. Spurge.

From Africa. Seeds presented by the Government Agricultural Station, Asmara, Eritrea, through L. Croizat, New York, N. Y. Received May 31, 1933.

A plant which attains a height of 30 to 40 feet in poor dry soil and yields a large quantity of latex containing about 5 percent of first-class rubber.

103024 and 103025.

From Wonosobo, Java. Seeds originally from Russia, presented by A. M. Cramer, of Cramer & Zoon. Received May 29, 1933.

103024. *BUTIA CAPITATA* × *ERIOSPATHA*.
Phoenicaceae. Palm.

A natural hybrid combining characters of both parents. The fruits closely resemble in flavor the best Japanese loquats, and the tree will probably thrive wherever the Satsuma orange is grown commercially.

For previous introduction see 100275.

103025. *PRUNUS* sp. Amygdalaceae.

A plum introduced for testing by Department specialists.

103026 and 103027.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received May 26, 1933.

103026. *ALBIZZIA ADINOCEPHALA* (Donn-Smith) Britton and Rose. Mimrosaceae.

A small unarmed tree, with rather small compound leaves composed of 1 or 2 pairs of lanceolate leathery leaflets 1 or 2 inches long and flower heads in terminal panicles about 4 inches long. Native to Costa Rica.

103027. *CAESALPINIA PAUCIFLORA* (Griseb.) C. Wright. Caesalpinaceae.

A slender shrub 5 to 8 feet high, native to the West Indies. The compound leaves have 8 to 12 pinnae, each bearing a few oblong to obovate leaflets one-half inch long; the yellow flowers with crisped petals are borne in racemes.

103028 to 103038. *SOLANUM* spp. Solanaceae.

From the Union of Soviet Socialist Republics. Tubers presented by the Institute of Plant Industry, Leningrad. Received June 3, 1933.

A collection of South American species of *Solanum* of the section *Tuberarium*; introduced for the use of Department specialists.

103028. *SOLANUM AJANHUIRI* Juz. and Buk.

No. 8018. A species from high altitudes in Bolivia; it forms the best tubers of all the frost-resistant species.

103029. *SOLANUM CHAUCHA* Juz. and Buk.

No. 8100. A tropophytic species from Peru and Bolivia which rarely forms berries.

103028 to 103038—Continued.

103030. *SOLANUM CHOCLO* Juz. and Buk.

No. 8143. A mountain species from southern Peru and Bolivia.

103031. *SOLANUM CURTILOBUM* Juz. and Buk.

No. 8008. From the mountains of southern Peru and Bolivia.

103032. *SOLANUM GONIOCALYX* Juz. and Buk.

No. 8027. A polymorphous mountain species of central Peru with small yellow tubers.

103033. *SOLANUM MAMILLIFERUM* Juz. and Buk.

No. 8136. From the mountains of southern Peru and Bolivia.

103034. *SOLANUM PHUREJA* Juz. and Buk.

No. 8070. A species from the mountain valleys of Bolivia which produces medium-sized tubers of very low starch content.

103035. *SOLANUM RYBINII* Juz. and Buk.

No. 8023. From the mountains of Colombia. A species which rarely forms berries and is tender to frost.

103036. *SOLANUM STENOTOMUM* Juz. and Buk.

No. 8042. A hydrophytic species from southern Peru and Bolivia which is not frost hardy.

103037. *SOLANUM ANDIGENUM TARMENSE* Juz. and Buk.

No. 8113. A form with the leaf segments small; found in the vicinity of Tarma, Peru.

103038. *SOLANUM TENUFILAMENTUM* Juz. and Buk.

No. 8105. A tender species from the mountains of southern Peru and Bolivia.

103039. *CITRUS SINENSIS* (L.) Osbeck.
Rutaceae. Orange.

From Southern Rhodesia. Scions presented by W. J. Hall, director, Citrus Experiment Station, Mazoe, through A. A. Morris. Received June 3, 1933.

Premier orange, a new variety which is said to be a very early sort and to give a good yield.

103040 to 103068.

From China. Seeds purchased in Peiping by Peter Liu. Received May 29, 1933.

103040. *APIUM GRAVEOLENS* L. Apiaceae.
Celery.

No. 13. *Chin Tsai*.

103041. *BENINCASA HISPIDA* (Thunb.) Cogn. Cucurbitaceae. Waxgourd.

No. 21. *Chia Tung Kua*, a winter gourd.

103042. *BETA VULGARIS* L. Chenopodiaceae.
Beet.

No. 17. *Ken Ta Tsai*.

103043 to 103047. *BRASSICA* spp. Brassicaceae.103043. *BRASSICA OLERACEA CAULO-RAPA* DC. Kohlrabi.

No. 18. *Pei Lan*.

103040 to 103068—Continued.

103044. BRASSICA SP.
No. 5. *Hsioa Yu Tsai*, small oil cabbage.
103045. BRASSICA SP.
No. 6. *Hsien Hao Pai*, white stork cabbage.
103046. BRASSICA SP.
No. 7. *Hsiao Pai Kou Pai Tsai*, short white cabbage.
103047. BRASSICA SP.
No. 8. *Ch'ing Kou Pai Tsai*, green top cabbage.
103048. CAPSICUM ANNUUM L. Solanaceae.
Common redpepper.
- No. 9. *Ta Shih Tse*, large persimmon pepper.
103049. CUCUMIS SATIVUS L. Cucurbitaceae.
Cucumber.
- No. 12. *Kuai Huang Kua*, early cucumber.
103050. CUCURBITA MAXIMA Duchesne. Cucurbitaceae.
Squash.
- No. 20. *Pai Nan Kua*, white pumpkin.
103051. CUCURBITA MOSCHATA Duchesne Cucurbitaceae.
Cushaw.
- No. 19. *Pa Leng Wo Kua*, eight-cornered pumpkin.
103052. DOLICHOS LABLAB L. Fabaceae.
Hyacinth-bean.
- No. 28. *Chia Pien Tou*, framed flat bean.
103053. LACTUCA SATIVA L. Cichoriaceae.
Garden lettuce.
- No. 15. *Tuan Yieh Sheng Tsai*, round-leaved lettuce.
103054. LACTUCA SATIVA L. Cichoriaceae.
Garden lettuce.
- No. 16. *Shang Yieh Sheng Tsai*, long-leaved lettuce.
103055. LYCOPERSICON ESCULENTUM Mill. Solanaceae.
Tomato.
- No. 4. *Ta Hsi Hung Shih*, large red tomato.
103056. MEDICAGO SATIVA L. Fabaceae.
Alfalfa.
- No. 26. *Mu Hsu*, alfalfa.
103057. PHASEOLUS VULGARIS L. Fabaceae.
Common bean.
- No. 27. *Hung Yun Tou*, red garden bean.
103058. PISUM SATIVUM L. Fabaceae.
Pea.
- No. 10. *Pai Wan Tou*, white pea.
103059. RAPHANUS SATIVUS L. Brassicaceae.
Radish.
- No. 3. *Hsiao Hung Shui Lo Pu*, small red water radish.
103060. RAPHANUS SATIVUS L. Brassicaceae.
Radish.
- No. 14. *Hsiang Ya Pai Lo Pu*, elephant tusk radish.
103061. SOLANUM MELONGENA L. Solanaceae.
Eggplant.
- No. 1. *Ta Hai Chieh Tze*, large eggplant.

103040 to 103068—Continued.

103062. SOLANUM MELONGENA L. Solanaceae.
Eggplant.
- No. 2. *Kuai Chieh Tze*, early eggplant.
103063. SPINACIA OLERACEA L. Chenopodiaceae.
Common spinach.
- No. 11. *Po Tsai*.
103064. VICIA FABA L. Fabaceae.
Broadbean.
- No. 29. *Tsan Tou*, silkworm bean.
- 103065 to 103068. VIGNA SESQUIPEDALIS (L.) Fruwirth. Fabaceae.
Asparagus-bean.
103065. No. 22. *Hsien Chiang Tou*, thread cowpea.
103066. No. 23. *Shih Pa Tou*, 18-seed cowpea.
103067. No. 24. *Huang Hua Ch'ing Chiang Tou*, yellow-flowered cowpea.
103068. No. 25. *Ssu Kua Ch'ing Chiang Tou*, the green-thread gourd cowpea.
- 103069 to 103074. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae.
Common wheat.
- From Australia. Seeds presented by Dr. A. McTaggart, Council for Scientific and Industrial Research, Division of Plant Industry, Department of Agriculture, Canberra. Received June 1, 1933.
- A collection of Australian varieties, supplied by the plant genetics section, Federal Capital Territory, Canberra, from the 1931 crop. Introduced for the use of Department specialists.
103069. *Dindiloa*, 103072. *Pilot*, W. W. 293a. 737a.
103070. *Firwhill*, 103073. *S. H. J.*, W. W. 364a. 875a.
103071. *Genoa*, W. 103074. *Zealand*, 394a. W. 1063a.
- 103075 to 103078.
- From China. Seeds collected by Peter Liu, in the vicinity of Peiping. Received June 1, 1933.
103075. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae.
Cushaw.
Erh Ch'iu Tze Wo Kua, early pumpkin.
103076. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae.
Cushaw.
Kuai Wo Kua, autumn pumpkin.
103077. SOLANUM MELONGENA L. Solanaceae.
Eggplant.
Tieh Pa Hei Chieh Tze, black-stem eggplant.
103078. VIGNA SESQUIPEDALIS (L.) Fruwirth. Fabaceae.
Asparagus-bean.
Ssu Kua Ch'ing Chiang Tou, green-thread gourd cowpea.
- 103079 to 103098. SOJA MAX (L.) Piper. Fabaceae.
Soybean.
- From China. Seeds presented by Dr. Chin Tu, Honan University, Kaifeng, Honan. Received June 7, 1933.

103079 to 103098—Continued.

A collection of soybeans from Honan and the neighboring Provinces, introduced for the use of Department specialists.

103079. No. 48. *Shang Tsai*.
 103080. No. 52. *White* soybean.
 103081. No. 53. *Yellow* soybean.
 103082. No. 61. *Lu Yi*.
 103083. No. 69. *Wen Hsuan*.
 103084. No. 70. *Ling Pao*.
 103085. No. 71. *Shi Hua*.
 103086. No. 73. *Wen Hsiang*.
 103087. No. 74. *Tung Hsu*.
 103088. No. 78. *Ming Chuan*.
 103089. No. 80. *Yunan*.
 103090. No. 81. *Suiping*.
 103091. No. 89. *Wu An*.
 103092. No. 93. *Kaifeng*.
 103093. No. 101. *Wai Chuan*.
 103094. No. 103. *Lukou*.
 103095. No. 106. *Ming Chuan*.
 103096. No. 108. *Kaifeng*.
 103097. No. 109. *Hsin Cheng*.
 103098. No. 111. *Cheng Hsuan*.

103099 to 103106.

From the Union of South Africa. Seeds, native to southern Africa, presented by the McGregor Museum, Kimberley. Received June 8, 1933.

103099 to 103102. *ALOE* spp. Liliaceae.103099. *ALOE BROOMII* Schoenland.

An erect or ascending plant with a short trunk bearing a dense rosette of ovate-lanceolate unspotted glaucous or reddish leaves up to 5 inches long. The yellow flowers are in a dense raceme on a short thick scape.

103100. *ALOE HEREROENSIS* Engler.

Variety *orpeniae*.

For previous introduction and description see 102789.

103101. *ALOE PRETORIENSIS* Pole Evans.

An aloe with dense rosettes of tapering leaves, usually withered at the red tips, with a stoutish stem 4 to 5 inches in diameter. The dark-brown to black stem is extremely rough and is clothed throughout its entire length by the remains of withered leafstalks. The most distinctive feature of the plant is its tall branched inflorescence with dense racemes of bright-scarlet flowers.

103102. *ALOE WICKENSII* Pole Evans. Liliaceae.

A handsome stemless succulent with a dense rosette of narrow sword-shaped pale-green leaves about 2 feet long and yellow flowers in a dense raceme.

103103. *ARTHEROSOLEN POLYCEPHALUS* (E. Mey.) Meyer. Thymelaeaceae.

A much-branched shrub 1 to 2 feet high. The linear-lanceolate leaves are 6 inches long, and the rich-yellow flowers, in small terminal heads, are surrounded by colored bracts.

103099 to 103106—Continued.

103104. *CERATOTHECA TRILOBA* E. Mey. Pedaliaceae.

An erect annual plant up to 6 feet high. The obtusely quadrangular stems are hairy, and the coarsely crenate leaves, 1 to 6 inches long, vary from broadly cordate and three-lobed near the base to lanceolate and sparingly crenate at the top of the plant. The solitary axillary flowers, 2 to 3 inches long, are lilac streaked with purple, and the loosely pubescent capsules, an inch long, have two horns at the tip.

103105. *RHIGOZUM BREVISPINOSUM* Kuntze. Bignoniaceae.

An erect spiny shrub 4 to 10 feet high. The oblong to oblanceolate leaves, 1 to 2 inches long, are tomentose and clustered at the tips of the branchlets, and the campanulate funnel-shaped yellow or white flowers are less than an inch long and are axillary or fascicled in the leaf clusters.

103106. *SESAMUM CAPENSE* Burm. f. Pedaliaceae.

For previous introduction and description see 102814.

103107. *BALSAMOCITRUS PANICULATA* (Schum.) Swingle. Rutaceae.

From Africa. Seeds presented by J. Voelcker, agricultural botanist, Moor plantation, Hadan, Nigeria. Received June 13, 1933.

Sanga fruit. A spiny shrub, native to western tropical Africa, with membranous trifoliate leaves consisting of oblong-ovate leaflets 1 to 3 inches long, small white flowers, and globose woody fruits.

For previous introduction see 100912.

103108 and 103109.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received June 12, 1933.

103108. *PHOEBE ELONGATA* Nees. Lauraceae.

A tree up to 60 feet high, native to tropical America. The elliptic to ovate leaves, 2 to 8 inches long, are glabrous above and slightly pilose beneath, and the small white flowers are borne in axillary clusters.

103109. *TABEBUIA HETEROPHYLLA* (DC.) Britton (*T. triphylla* DC.). Bignoniaceae.

A shrub or small tree up to 30 feet high, native to the West Indies. The densely lepidote compound leaves are made up of 1 to 5 oblong to obovate leathery leaflets 1 to 3 inches long, and the pink-and-white funneiform flowers, 2 to 3 inches long, are borne in clusters of 1 to 20.

103110. *PHOENIX PUSILLA* Gaertn. Phoenicaceae. **Date palm.**

From India. Seeds collected by the systematic botanist of the Madras Presidency through the principal of the Agricultural College of Coimbatore, and presented through the Royal Botanic Gardens, Kew, England. Received June 13, 1933.

103110—Continued.

A dwarf palm about 4 feet high, with pinnate leaves having spiny petioles, dark-green, sword-shaped leaflets, and black fruits. The stem is said to contain a farinaceous pith. It is native to Ceylon and is introduced for the use of Department specialists.

For previous introduction see 94097.

103111 to 103150.

From China. Seeds obtained by native collectors and presented by Henry McLaren, Bodnant Gardens, North Wales. Received June 12, 1933.

The numbers correspond to those of the herbarium specimens at the Royal Botanic Gardens, Edinburgh, Scotland.

103111. ABIES DELAVAYI Franch. Pinaceae. Fir.

C. 195. A tall tree, often 100 feet high, native to western China. The slightly grooved branchlets are lustrous red brown, and the emarginate linear leaves, about 1 inch long, are revolute on the margin, dark green above and with two white bands beneath. The violet-black, cylindrical to ovoid cones are 2 to 4 inches long.

For previous introduction see 100501.

103112. ACER DAVIDI Franch. Aceraceae. Maple.

C. 285. A native Chinese maple, 50 to 60 feet high, with large oval heart-shaped coarsely toothed leaves and long pendent clusters of samaras.

For previous introduction see 100850.

103113. ACER FAXII Franch. Aceraceae. Maple.

C. 300. An evergreen maple from the mountain forests of southwestern China, with stiff leathery obovate or 3-lobed leaves 2 inches long.

103114. ASTILBE RIVULARIS Buch.-Ham. Saxifragaceae.

B. 79. A perennial herb, native to Nepal and western China, with stems 3 to 5 feet high covered with tawny hairs. The biternate leaves have dentate ovate leaflets 1 to 3 inches long, and the cream-white flowers with pure-white stamens are borne in large paniced spikes at the top of the stems.

For previous introduction see 99721.

103115. BUDDLEIA TALIENSIS W. W. Smith. Loganiaceae.

C. 201. A shrub 6 to 9 feet high much like *Buddleia Forrestii*. The lanceolate papery leaves, about 4 inches long, are densely hairy, and the deep maroon-crimson flowers are in a dense thyrsoid cyme. Native to Yunnan.

103116. CAESALPINIA SEPIARIA Roxb. Caesalpiniaceae. Mysore thorn.

C. 99. A scrambling spiny pubescent shrub native to India. The compound leaves are made up of 12 to 20 pairs of pinnae each bearing 16 to 24 oblong leaflets an inch long. The bright-yellow flowers, an inch across, are in simple racemes a foot long.

For previous introduction see 102345.

103111 to 103150—Continued.

103117. CAPPARIS BODINIERI Leveille (*C. subtenera* Craib and Smith). Caparidaceae.

C. 164. A semiscandent spiny shrub 10 to 20 feet high, with ovate-oblong or lanceolate leaves 2 to 4 inches long and translucent purple-gray flowers in small clusters in the upper leaf axils. Native to southwestern China.

103118. CARAGANA FRANCHETIANA Komarov. Fabaceae.

C. 248. A stout shrub with long branches, sometimes spiny, small compound leaves consisting of about two pairs of narrow obovate leaflets one-third of an inch long, and yellow flowers about 1 inch long. Native to southwestern China.

103119. CAUTLEYA LUTEA Royle. Ziniberaceae.

B. 144. A slender herbaceous plant, native to temperate regions of the Himalayas, 12 to 18 inches high, with narrow sessile leaves and loose spikes of yellow flowers in calyces. The globose capsules are bright red.

103120. CHIONANTHUS RETUSA Lindl. Oleaceae. Chinese fringetree.

C. 98. A handsome deciduous hardy ornamental tree bearing, during the spring, a multitude of small white delicately fragrant flowers, with very narrow petals, followed in the fall by masses of blue berries resembling wild grapes. This species is considered by some to be superior to the Virginia fringetree (*Chionanthus virginica*), because of the whiteness and fragrance of its flowers and its more graceful habits.

103121. COLQUHOUNIA COCCINEA Wall. Menthaceae.

B. 249. A climbing shrubby mint, closely related to *Stachys*, native to the temperate Himalayas at altitudes between 7,000 and 9,000 feet in India. The tomentose branches, 8 to 10 feet long, bear ovate to cordate leaves 2 to 5 inches long, and the dull-red tubular flowers, in axillary clusters, have orange or yellow corolla lobes.

103122. CORNUS CAPITATA Wall. Cornaceae. Evergreen dogwood.

C. 221. A small evergreen tree native to the lower slopes of the Himalayas between 4,000 and 7,000 feet altitude in India. The leathery oblong-lanceolate leaves, 2 to 4 inches long, are densely white pubescent beneath. The involucre bracts, 1 to 2 inches long, are creamy white, and the scarlet fruit-head, shaped like a strawberry, is 1 to 2 inches in diameter and is edible.

103123. CORYLUS TIBETICA Batal. Betulaceae. Hazelnut.

C. 269. A shrubby tree up to 30 feet high, native to central and western China. The broadly ovate to cordate sharply serrate leaves are 2 to 6 inches long, and the small globose nuts are borne in glabrous spiny involucre, resembling a chestnut bur, 2 inches in diameter.

103124. COTONEASTER SEROTINA Hutchison. Malaceae.

C. 157. A small Chinese tree with elliptic papery leaves, small white flowers

103111 to 103150—Continued.

borne in many-flowered corymblike clusters, and attractive bright-red berries which persist throughout most of the winter.

103125. DECAISNEA FARGESII Franch.
Lardizabalaceae.

C. 259. A handsome deciduous shrub up to 15 feet high, with large drooping pinnate leaves 3 feet long, greenish flowers in pendulous racemes a foot or more long, and deep-blue fruits 3 to 4 inches long. Native to western China.

For previous introduction see 100871.

103126. INDIGOFERA NIGRESCENS Kurz.
Fabaceae. Indigo.

C. 298. An annual legume with pink flowers and abundant seed. It becomes 1 to 4 feet high, but the odorous herbage is not eaten by cattle. It is of value as a green manure.

103127. JUNIPERUS FORMOSANA Hayata.
Pinaceae. Formosa juniper.

C. 283. A tree 30 to 40 feet high, with several trunks arising from near the base; native to Taiwan. The spreading or ascending branches have pendulous branchlets, the linear sharp-pointed leaves, 1 inch long, have two broad white bands above, and the red or orange-brown globose fruits are one-third of an inch in diameter.

103128. JURINEA EDULIS Franch. Asteraceae.

B. 194. A leafy herb, 4 to 10 inches high, with membranous, deeply lobed, oblong-obovate, long-stemmed leaves and violet-blue flower heads over 2 inches in diameter. Native to southwestern China.

103129. LEYCESTERIA FORMOSA STENOSEPALA Rehd. Caprifoliaceae.

C. 149. A shrub 6 to 8 feet high, native to western Szechwan, China. The broadly ovate leaves are 5 to 7 inches long. The white or pale-purple flowers are in axillary spikes and are followed by bright-red fruits.

103130. PHILADELPHUS HENRYI Koehne.
Hydrangeaceae.

C. 138. A shrub about 4 feet high, with chestnut-brown bark, narrow-ovate slightly hairy papery leaves 1 to 2 inches long, and white flowers about 1 inch across, in racemes of 3 to 13 flowers. Native to Yunnan.

103131. PIPTANTHUS FORRESTII Craib.
Fabaceae.

C. 15. A shrub 9 to 13 feet high, with alternate trifoliate leaves composed of lanceolate light-yellow leaflets over an inch long and half an inch across. Native to alpine meadows in southwestern China.

103132. PISTACIA CHINENSIS Bunge.
Anacardiaceae. Chinese pistache.

C. 241. A large deciduous tree, sometimes reaching a height of 80 feet, native to central and western China. The pinnate leaves, about 9 inches long, consist of 10 to 12 narrow-oval leaflets. Because of its glossy green foliage, which becomes brilliant crimson in the autumn, and its rather rapid growth, this is a valuable shade tree for mild-wintered regions.

103111 to 103150—Continued.

103133. PITTOSPORUM HETEROPHYLLUM Franch. Pittosporaceae.
Rock pittosporum.

C. 295. A spreading shrub, 3 to 6 feet high, native to Szechwan and Yunnan, where it grows on cliffs and in rocky places in the arid valleys. The ovate leaves are medium sized, and the light-yellow flowers are borne near the tips of the new branchlets.

For previous introduction see 99451.

103134. PRIMULA FORRESTII Balf. f.
Primulaceae. Primrose.

B. 1. A handsome perennial primrose, native to northwestern Yunnan between 9,000 and 11,000 feet altitude, in dry sunny situations. The woody rootstock is said to live over 50 years, the large basal leaves are covered with glandular hairs, and the rich orange-yellow flowers are produced in large umbels.

For previous introduction see 100013.

103135. PRIMULA MALVACEA Franch. Primulaceae. Primrose.

B. 158. A primrose from the mountains of Yunnan, densely covered with short hairs; the bright-green leaves are about 3 inches long, and the thick scapes bear 2 or 3 umbels of reddish flowers.

For previous introduction see 100027.

103136. PRUNUS sp. Amygdalaceae.

C. 58. Judging from the seeds, this species is a cherry, closely related to *Prunus majestica*, which is a large handsome white-flowered tree.

103137. to 103139. RHODODENDRON spp.
Ericaceae.

103137. RHODODENDRON BULLATUM Franch.

C. 33. A loosely branched shrub up to 8 feet high, native to Yunnan. The branchlets are densely and softly woolly, the elliptic-ovate leaves, 2 to 4 inches long, are puckered above and loosely woolly pubescent beneath, and the broadly tubular pink-tinged white flowers, 2 to 3 inches long, are borne in terminal clusters.

For previous introduction see 100889.

103138. RHODODENDRON FASTIGIATUM Franch.

C. 190. A low erect shrub with scaly branchlets, native to Yunnan. The elliptic-oblong leaves, one-third inch long, are densely scaly on both surfaces, and the light-purple flowers, one-half inch long, are borne in terminal clusters of 4 or 5.

For previous introduction see 98463.

103139. RHODODENDRON MADDENI Hook. f.

C. 91. A shrub 6 to 8 feet high, with red-stemmed, dark-green leaves. The large delicately fragrant flowers, tinged with rose, are produced in threes at the ends of the branches. Native to the Himalayas.

For previous introduction see 97397.

103140. ROSA SERTATA Roife. Rosaceae.
Garland rose.

C. 207. A low shrub, native to western China, with glaucous stems 5 feet high,

103111 to 103150—Continued.

armed with straight slender prickles, and leaves composed of 7 to 11 narrowly oblong leaflets. The solitary purple flowers, 2 to 3 inches across, are followed by deep-red, obovoid fruits.

103141. SOLANUM VERBASCIFOLIUM L. Solanaceae. **Nightshade.**

C. 130. A shrub or small tree up to 30 feet high, with ovate to lanceolate velvety tomentose leaves 6 to 10 inches long and small white flowers followed by yellowish fruits half an inch in diameter. Native to Mexico and established generally in the Tropics.

103142. SOPHORA sp. Fabaceae.

C. 172.

103143. THALICTRUM DELAVAYI Franch. Ranunculaceae. **Meadowruie.**

B. 127. A slender Chinese plant 2 to 3 feet high, with nodding purple flowers half an inch across.

For previous introduction see 95602.

103144. TROLLIUS PATULUS Salisb. Ranunculaceae.

B. 166. A low perennial herb, less than 1 foot high, native to southern Asia. The palmately dissected radical leaves are incised-dentate, and the large golden-yellow flowers are borne on one-flowered scapes.

103145. TSUGA YUNNANENSIS (Franch.) Masters. Pinaceae. **Yunnan hemlock.**

C. 196. A forest tree up to 150 feet high, with trunks 6 to 7 feet in diameter. The branchlets are covered with a rufous-gray pubescence, and the leaves, up to an inch long, are rounded at the apex and have white lines beneath. The small dull cones, 1 inch long, have fewer scales than those of *Tsuga chinensis*. Native to western China at 11,000 feet altitude.

For previous introduction see 100613.

103146. VACCINIUM DELAVAYI Franch. Vacciniaceae. **Blueberry.**

C. 35. A bushy shrub with grayish bark, leathery shining-green obovate leaves half an inch long, very small white flowers in small racemes, and small globose capsules. Native to Yunnan.

For previous introduction see 100615.

103147. (Undetermined.)

C. 76.

103148. (Undetermined.)

C. 93.

103149. (Undetermined.)

C. 129.

103150. (Undetermined.)

C. 258.

103151 to 103154. GOSSYPIUM HERBACEUM L. Malvaceae. **Cotton.**

From the Union of Soviet Socialist Republics. Seeds presented by A. Popov, head of the Department of New Cultures and Introduction, through Dr. N. I. Vavilov, director, Institute of Plant Industry, Leningrad. Received June 12, 1933.

From the Turkistan Plant Breeding Station; introduced for the use of Department specialists.

103151 to 103154—Continued.

103151. No. 107. **103153. No. 347.**

103152. No. 260. **103154. No. 534.**

103155 to 103173. Phoenicaceae.

Palm.

From Ceylon. Seeds presented by T. H. Parsons, curator, Royal Botanic Garden, Peradeniya. Received June 13, 1933.

103155. ARECA CONCINNA Thwaites.

A pinnate-leaved palm, 8 to 12 feet high, native to Ceylon. The subglabrous leaves, 3 to 4 feet long, are made up of lanceolate leaflets 2 feet long, and the orange-yellow spindle-shaped fruits are 1 to 2 inches long.

103156. ARECA TRIANDRA Roxb.

A graceful spineless palm, ultimately about 25 feet high, usually with several trunks which bear crowns of pinnate leaves 4 to 6 feet in length. The fruits, about the size of an olive, are orange-scarlet. Native to India.

For previous introduction see 98485.

103157. ARENGA ENGLERI Beccari.

A cluster palm with no trunk, which suckers from the ground and forms clumps 10 feet across. The pinnae are 16 inches long and over an inch wide and are fish-tail shaped. The red fruits are less than an inch in diameter.

For previous introduction see 99515.

103158. CALYPTROCALYX SPICATUS (Lam.) Blume.

A graceful palm, 30 to 40 feet high, with pinnate leaves and slender spikes of red fruits.

For previous introduction see 93401.

103159. CARYOTA MITIS Lour. (C. soboljera Mart.).

A palm, native to the Malay Peninsula, 15 to 20 feet high, which sends up suckers from the base. The pinnate leaves, 6 to 9 feet long, are divided into wedge-shaped segments, and the globular purple fruits are about the size of a cherry.

For previous introduction see 93402.

103160. CARYOTA URENS L. Toddy palm.

A palm up to 80 feet high and 18 inches in diameter, with twice palmately divided leaves 20 feet long by 12 feet wide, and the segments are curved and drooping. It is native to the Malay Archipelago.

For previous introduction see 99725.

103161. CHRYSALIDOCARPUS MADAGASCARENENSIS Beccari.

A graceful palm, native to Madagascar, about 15 feet high, with pinnate leaves 10 feet long, having the segments arranged in fascicles and appearing to be in threes, giving a triangular effect.

For previous introduction see 93408.

103162. PTYCHOSPERMA sp.

Palms of this genus have smooth, ringed trunks, crowned at the summit by a dense cluster of pinnate leaves.

103163. LINOMA ALBA (Bory) O. F. Cook (Dictyosperma alba Wendl.).

A small palm up to 30 feet high, native to tropical Africa. The pinnate

103155 to 103173—Continued.

leaves, which become 4 to 8 feet long, have whitish petioles and greenish white veins when the plants are young.

For previous introduction see 96484.

103164. *LINOMA ALBA* (Bory) O. F. Cook (*Dictyosperma alba* Wendl.).

Variety *aurea*. A form which differs from the type in having yellow or orange petioles on the young plants.

103165. *LIVISTONA DECIPIENS* Beccari.

A fan palm of medium height and a trunk diameter of about 16 inches. The leaves are made up of about 50 segments which are very weak at the tips, hanging as though wilted. It is native to South Australia.

103166. *LIVISTONA SUBGLOBOSA* (Hassk.) Mart.

A medium-sized palm, native to Java, with palmately divided leaves having segments 10 to 12 inches long, which are two-parted nearly to the base into linear pendulous lobes. The deep-violet fruits, one-half inch in diameter, are borne in a panicle on a spadix about a foot long.

For previous introduction see 93414.

103167. *LOROMA CUNNINGHAMIANA* (Wendl.) O. F. Cook (*Archontophoenia cunninghamiana* Wendl. and Drude).

A palm 70 to 80 feet high, native to Australia. The pinnately divided leaves, green on both sides, are several feet long, and the segments are acuminate and entire.

103168. *MARTINEZIA TRUNCATA* Brongn.

A palm, native to Bolivia, with a trunk up to 20 feet high, covered with brown-black spines. The pinnately divided spreading leaves, 4 to 5 feet long, are dark green with prominent veins.

103169. *ONCOSPERMA FILAMENTOSUM* Blume.

The *Nibung* is a cluster palm of great beauty which rises to a height of 50 feet and waves its pinnate leaves in the slightest breeze. Like its relative, *Oncosperma fasciculatum*, it is a spiny palm and therefore not suited to small gardens. Great clumps of this palm are wonderfully effective, however, in a proper setting. Native to the Malay Archipelago.

For previous introduction see 94091.

103170. *PINANGA KUHLII* Blume.

A stout rapid-growing palm native to the lower altitudes of western Java, becoming 16 to 25 feet high, with annulate stems 2 inches in diameter, reddish when young, and beautiful terminal fronds with pinnate blades 4 feet long and half as wide. This is one of the hardest species of *Pinanga* known.

For previous introduction see 97287.

103171. *PTYCHOCOCCUS PARADOXUS* (Scheff.) Beccari.

A slender palm, native to New Guinea, with a trunk 9 to 12 feet high, covered with dense white tomentum. The regularly pinnately divided leaves have 6 to 15 broadly lanceolate segments with obliquely truncate tips.

103155 to 103173—Continued.

103172. *TILMIA CARYOTAEOFOLIA* (H. B. K.) O. F. Cook (*Martinezia caryotaefolia* H. B. K.).

A beautiful slender straight-stemmed spiny-trunked palm up to 30 feet high, with graceful pinnate leaves and bright orange-scarlet fruits borne in drooping racemes.

For previous introduction see 102618.

103173. *VEITCHIA JOANNIS* Wendl.

A palm with pinnate leaves, native to the Fiji Islands. The leaf segments have a wide shallow notch at the apex, the sheath, petiole, and rachis are dull red, and the ellipsoid fruits, 2 to 3 inches long, are orange with a red base.

103174 to 103357.

From southwestern China and Tibet. Seeds collected by Dr. J. F. Rock, agricultural explorer, for the University of California Botanical Garden expedition, and presented through Dr. T. H. Goodspeed, Department of Botany, University of California, Berkeley, Calif. Received June 26, 1933.

103174. *ANDROMEDA* sp. Ericaceae.

No. 22335. From the Tjonatong Mountains, Upper Salwin River, Tsarung Province, southeastern Tibet, at 14,500 feet altitude. A shrub a foot high, found among rocks.

103175. *ANEMONE NARCISSIFOLIA* L. Ranunculaceae.

No. 23551. From Mount Moting, east of Atuntze, Yunnan, in alpine meadows at 11,500 feet altitude. A stout herbaceous perennial with stalky, 3- to 5-parted, deeply cut basal leaves, sessile involucre leaves, and an umbel of several white flowers an inch across, with yellow anthers. It is native to Europe and Asia.

For previous introduction see 100151.

103176 and 103177. *AQUILEGIA OXYSEPALA* Trautv. and Mey. Ranunculaceae. Columbine.

A hardy herbaceous perennial having more or less square flowers with four points; the flowers vary from purplish red to blue, yellow, and white.

For previous introduction see 68407.

103176. No. 23610. From Tsarong in the Kaakerbo Mountains, west of Dikerla and Yundshi, southeastern Tibet, in alpine meadows at 11,000 feet altitude.

103177. No. 24428. Collected north of Kulu in the Yetsi Mountains in Muli Territory, Szechwan, in a valley at 10,000 feet altitude. The flowers are purplish red.

103178. *ARTEMISIA* sp. Asteraceae.

No. 23541. From grassy slopes in the Mekong Valley in the Moting Mountains, east of Atuntze, Yunnan, at 9,000 feet altitude. An herb with yellow flowers.

103179. *ASPARAGUS* sp. Convallariaceae.

No. 24571. Collected between Muli and Kulu, Szechwan, at 9,000 feet altitude. A prostrate spreading shrub 2 feet high with pinkish flowers.

103174 to 103357—Continued.

103180 to 103186. *BERBERIS* spp. Berberidaceae. **Barberry.**

Nos. 103180 and 103181 are from alpine meadows in the Moting Mountains, east of Atuntze, Yunnan.

103180. *BERBERIS* sp.

No. 23339. A shrub 3 feet high, found at 12,000 feet altitude.

103181. *BERBERIS* sp.

No. 23340. A shrub 4 to 5 feet high, found at 13,000 feet altitude.

103182. *BERBERIS* sp.

No. 24276. From Miturong, Muli Territory, southwestern Szechwan, east of the Yalung River on the Mutikonka Mountains (a hitherto unknown snow range), at 11,500 feet altitude. A shrub up to 5 feet high, found in spruce forests.

103183. *BERBERIS* sp.

No. 24392. From Mount Siga, west of the Yalung River and north of Karadi, at 11,000 feet altitude. A shrub 1 foot high, found in open scrub.

103184. *BERBERIS* sp.

No. 24416. From the Yetsi Mountains, north of Kulu, in Muli Territory, Szechwan, at 11,000 feet altitude. A shrub 3 to 4 feet high, found in pine forests.

103185. *BERBERIS* sp.

No. 24513. From alpine regions on the western slopes of Mount Mitzuga, Muli Territory, in southwestern Szechwan, at 13,500 feet altitude. A shrub 2 to 3 feet high, found among rocks.

103186. *BERBERIS* sp.

No. 25310. From Mount Haba, north of the Yangtze loop, the third peak of the Likiang Snow Range, Bårdär, at 12,000 feet altitude. A shrub 5 to 6 feet high, found in open rocky regions.

103187. *ADENOPHORA COELESTRIS* Diels. Campanulaceae.

No. 24594. From Mount Gibboth, southwestern Szechwan, near the Yunnan border, in alpine meadows between 11,500 and 12,000 feet altitude.

103188 to 103191. *CASSIOPE* spp. Ericaceae.

103188. *CASSIOPE SELAGINOIDES* Hook. f. and Thoms.

No. 21935. A shrub with white flowers found in alpine regions among scrub at 15,000 feet altitude on Mount Kenichunpo, Tsarung Province, southeastern Tibet.

103189. *CASSIOPE* sp.

No. 22173. From alpine regions at the upper headwaters of the Eastern Irrawaddy River in southeastern Tibet at 14,000 feet altitude. A shrub with white flowers found on mossy banks among rhododendron scrub.

103190. *CASSIOPE* sp.

No. 22687. From the Solola, Tsarung Province, southeastern Tibet, at 14,500 feet altitude. A shrub with white flowers found on rocks and among shrubs.

103191. *CASSIOPE* sp.

No. 23554. From Mount Moting, east of Atuntze, Yunnan, at 14,500 feet

103174 to 103357—Continued.

altitude. A shrub with white flowers found on alpine ridges under rhododendron scrub.

103192. *CEPHALOTAXUS* sp. Taxaceae.

No. 23289. From Mount Fuchuan, west of the Mekong-Salwin Divide, west of Weihsü, Szechwan, between 9,500 and 10,000 feet altitude. A tree 30 to 40 feet high.

103193. *CEPHALOTAXUS* sp. Taxaceae.

No. 25420. From Mount Laochun, southwest of Shiku and the Yangtze. A tree 60 to 80 feet high, found in open forest at 10,500 feet altitude.

103194 to 103196. *CLEMATIS* spp. Ranunculaceae.

103194 and 103195. *CLEMATIS MONTANA* Buch.-Ham. **Anemone clematis.**

An ornamental vigorous climber, 30 feet or more in length, with solitary, pure-white flowers. It is native to the Himalayan region.

103194. No. 22284. From the Solola, Tsarung Province, southeastern Tibet; found along water-courses in forests at 11,500 feet altitude.

103195. No. 23552. From Mount Moting, east of Atuntze, Yunnan, in fir forests at 12,000 feet altitude.

103196. *CLEMATIS* sp.

No. 23623. Collected in the Kaakerbo Mountains, southeastern Tibet, at Tsarung, west of Dikerla and Yundshi. A shrub 1 to 2 feet high with white flowers, found along streams at 9,000 feet altitude.

103197 to 103199. *CODONOPSIS* spp. Campanulaceae.

Nos. 103197 and 103198 were collected on Mount Moting, east of Atuntze, Yunnan, in alpine meadows.

103197. *CODONOPSIS BULLEYANA* Forrest.

No. 23442. A malodorous perennial about a foot high with an ascending stem, hairy heart-shaped leaves 4 to 6 inches long, and pale lavender-blue flowers nearly half an inch long, found at 14,000 feet altitude. Native to southwestern China.

For previous introduction see 100163.

103198. *CODONOPSIS* sp.

No. 23443. A malodorous perennial with pale-blue flowers found at 12,500 feet altitude.

103199. *CODONOPSIS* sp.

No. 24596. From Mount Gibboth, southwestern Szechwan, near the Yunnan border, at 13,000 feet altitude. An herb with purple flowers, found in meadows.

103200 to 103210. *COTONEASTER* spp. Malvaceae.

103200. *COTONEASTER DIVARICATA* Rehd. and Wils.

No. 22336. From the Tjonatong Mountains on the Upper Salwin River, Tsarung Province, southeastern Tibet, at 14,000 feet altitude. A shrub up to

103174 to 103357—Continued.

6 feet high, with gracefully reflexed branches, shining green leaves, paler beneath, and small rose-colored flowers. The red fruits are ovoid. Native to southwestern China.

For previous introduction see 53675.

103201. COTONEASTER SALICIFOLIA
Franch. Willowleaf cotoneaster.

No. 22554. From the northern slopes of Mount Kenichunpo, west of the Salwin River in the Siktung Mountains, Tsarung Province, southeastern Tibet, at 11,000 feet altitude, in open scrub. A half-evergreen, or in mild climates, evergreen shrub up to 15 feet high, with slender spreading branches, ovate-lanceolate or elliptic-oblong acute cuneate leaves up to over an inch long, white tomentose beneath; small white flowers, and bright-red roundish berries one-fifth of an inch in diameter. Native to western China.

For previous introduction see 102209.

103202. COTONEASTER sp.

No. 22631. From the Solola, Tsarung Province, southeastern Tibet. A shrub 4 feet high, found among boulders at 13,500 feet altitude.

103203. COTONEASTER ADPRESSA Bois.

No. 23377. From Mount Moting, east of Atuntze, Yunnan, at 14,000 feet altitude. A spreading shrub, usually less than a foot high, which forms a clump several feet in diameter with the stems rooting easily where they touch the ground. The solitary flowers, with pink-tipped petals, are followed by bright-red fruits.

For previous introduction see 55080.

103204. COTONEASTER DIVARICATA Rehd. and Wils.

No. 24308. From Miturong, Muli Territory, east of the Yalung River on the Mutikonka Mountains (a hitherto unknown snow range) in southwestern Szechwan; in open places at 11,000 feet altitude.

For previous introduction and description see 103200.

103205. COTONEASTER sp.

No. 24367. From south of Dzempe Sheren in the Sagi Valley, Szechwan, in open forests at 12,000 feet altitude. A shrub 4 to 5 feet high with pinkish flowers.

Nos. 103206 and 103207 were collected on Mount Siga, west of the Yalung River and north of Karadi.

103206. COTONEASTER sp.

No. 24386. A shrub 3 to 4 feet high with pinkish flowers found on a forested slope at 11,000 feet altitude.

103207. COTONEASTER sp.

No. 24389. A spreading shrub with pinkish flowers found among rocks and boulders at 12,500 feet altitude.

103208. COTONEASTER HORIZONTALIS
PERPUSILLA C. Schneid.

No. 24554. Found at 14,500 feet altitude on the western slopes of Mount Mitzuga, Muli Territory, Szechwan. An ornamental prostrate shrub well adapted for rockeries. It has a low

103174 to 103357—Continued.

growth and develops an abundance of almost horizontal branches. The leaves are rounded oval, glabrous, and less than one-third of an inch long. The flowers are pinkish, and the abundant bright-red ovoid fruits are one of the most attractive features of the plant.

For previous introduction see 45706.

103209. COTONEASTER RACEMIFLORA
SOONGARICA C. Schneid.

No. 24560. Between Muli and Kulu, Szechwan, on open mountain slopes at 10,000 feet altitude. An erect shrub up to 4 feet high, but sometimes prostrate. The leaves are oval and usually somewhat obtuse, and the small white flowers are followed by red fruits.

For previous introduction see 44083.

103210. COTONEASTER sp.

No. 25353. From the lower slopes of Mount Yulung, Likiang Snow Range, Yunnan, at 9,500 feet altitude. A shrub 5 to 6 feet high with white flowers.

103211. DAPHNE TANGUTICA Maxim. Thymelaeaceae.

No. 24488. From Mount Kanshu, on the trail to the Leirong Mountains, southwestern Szechwan, in fir forests at 12,500 feet altitude. A low densely branched evergreen shrub of compact sturdy habit; the young shoots are hairy, and the leathery oval to obovate leaves, 1 to 2 inches long, are densely arranged toward the end of the twigs. The flowers, white with a violet tinge, are borne in a crowded cluster on a short conspicuously brown-felted stalk. The berries are bright red.

103212. AQUILEGIA OXYSEPALA Trautv. and Mey. Ranunculaceae.

No. 22253. From the Solola, Tsarung Province, southeastern Tibet, in alpine meadows at 14,000 feet altitude. A very early flowering herbaceous perennial 2 to 3 feet high, with large blue, yellow, and white flowers. The spurs are short and are bent inward.

For previous introduction see 92045.

103213 to 103217. DELPHINIUM spp. Ranunculaceae. Larkspur.

103213. DELPHINIUM sp.

No. 22373. From Mount Wulila, a high mountain east of the Salwin River and north of Alulaka, southeastern Tibet, at 13,000 feet altitude. Blue flowers; found in alpine meadows.

Nos. 103214 to 103217 were collected on Mount Moting, east of Atuntze, Yunnan.

103214. DELPHINIUM YUNNANENSIS
Franch.

No. 23421. A perennial alpine with a simple or branched stem and pale-green, finely pubescent leaves that are divided to the middle into five obovate incised segments. The calyx is intensely blue while the petals are bluish violet, the entire flower being four-fifths of an inch long.

103215. DELPHINIUM sp.

No. 23444. Pale-lavender flowers; from 13,500 feet altitude.

103174 to 103357—Continued.

103216. DELPHINIUM LIKIANGENSE Franch.

No. 23457. One of the finest larkspurs; the dark-green, glossy leaves are in cushionlike rosettes; the large rich-blue flowers are an inch across, and there are several spikes on a plant at one time. Found in alpine meadows at 13,000 feet altitude.

For previous introduction see 100184.

103217. DELPHINIUM sp.

No. 23583. Blue flowers collected at 11,000 feet altitude.

103218. DIPELTA YUNNANENSIS Franch. Caprifoliaceae.

No. 24576. Collected between Muli and Kulu, Szechwan, at 9,000 feet altitude. A shrub from 5 to 15 feet high, with opposite entire lanceolate leaves 3 to 6 inches long and leafy racemes of two-lipped tubular-campanulate pinkish to purple flowers having shieldlike floral bracts.

For previous introduction see 97601.

103219. GAULTHERIA sp. Ericaceae.

No. 22057. From Mount Kenichunpo, west of Champutong, at 12,000 feet altitude. A shrub 6 to 8 feet high with pink flowers.

103220. HEMEROCALLIS sp. Liliaceae. Daylily.

No. 24558. Collected between Muli and Kulu, Szechwan, in alpine forest at 11,000 feet altitude. A daylily with orange-yellow flowers.

103221. ILEX PERNYI Franch. Aquifoliaceae. Holly.

No. 24556. Collected between Muli and Kulu, Szechwan, in valleys debouching into the Litang River, at 9,000 feet altitude. A dense-growing evergreen holly of very dwarf and compact habit, with small dark-green spiny leaves, squarish at the base, and red berries. It is probably allied to *Ilex cornuta* and was first discovered by Père Paul Perny in western China.

For previous introduction see 92776.

103222 to 103233. IRIS spp. Iridaceae.

103222. IRIS sp.

No. 22254. From the Solola, Tsarung Province, southeastern Tibet. An iris with deep purple-blue flowers, found in alpine meadows at 12,500 feet altitude.

Nos. 103223 and 103224 were collected on Mount Moting, east of Atuntze, Yunnan, in alpine meadows.

103223. IRIS sp.

No. 23361. An iris with blue flowers, found between 12,500 and 13,000 feet altitude.

103224. IRIS sp.

No. 23374. An iris with bluish-purple flowers, found at 11,500 feet altitude.

Nos. 103225 and 103226 were collected at Miturong, Muli Territory, east of the Yalung River, on the Mutikonka

103174 to 103357—Continued.

Mountains (a hitherto unknown snow range) in southwestern Szechwan, at 14,000 feet altitude, in alpine meadows.

103225. IRIS sp.

No. 24303. An iris with deep-blue flowers.

103226. IRIS sp.

No. 24318. An iris with purple-spotted yellow flowers.

Nos. 103227 to 103229 were collected in Muli Territory, at Dzempe Sheren, west of Wuata Gomba, Szechwan, between 12,000 and 13,500 feet altitude, in alpine meadows.

103227. IRIS sp.

No. 24324. An iris with deep purple-blue flowers; found in wet meadows.

103228. IRIS sp.

No. 24331. An iris with pale-blue flowers.

103229. IRIS sp.

No. 24335. An iris with dark-purple flowers.

Nos. 103230 and 103231 were collected in alpine meadows at 13,000 feet altitude, south of Dzempe Sheren, in the Sagi Valley, Szechwan.

103230. IRIS sp.

No. 24355. An iris with dark purple-blue flowers.

103231. IRIS sp.

No. 24375. An iris with dark-blue flowers.

103232. IRIS sp.

No. 24451. From the Yetsi Mountains, north of Kulu, Muli Territory, Szechwan, in alpine meadows at 14,500 feet altitude; an iris with pale-blue flowers.

103233. IRIS sp.

No. 25279. From meadows at Chungtien, west of the Hsiao Chungtien Mountains between 11,500 and 12,000 feet altitude. An iris with dark-blue flowers.

103234. JUNIPERUS sp. Pinaceae. Juniper.

No. 22300. From the Solola, Tsarung Province, southeastern Tibet. A shrub spreading from the base, 4 to 5 feet tall.

103235. LARIX POTANINI Batal. Pinaceae. Chinese larch.

No. 25270. From the mountains west of Hsiao Chungtien, Yunnan, at 15,000 feet altitude. A deciduous tree 75 to 100 feet high, native to western China. The pendulous branchlets are orange or red brown, the slender compressed gray-green leaves are about 1 inch long, and the ovoid-oblong cones, 2 inches long, are violet purple, changing to brown.

103236. LARIX sp. Pinaceae. Larch.

No. 23404. From Mount Moting, east of Atuntze, Yunnan; a tree 30 to 40 feet high found in alpine regions at 15,000 feet altitude.

103174 to 103357—Continued.

103237. *LIGUSTRUM* sp. Oleaceae. Privet.

No. 24405. From Mount Siga, west of the Yalung River, north of Karadi, Szechwan. A shrub 4 to 5 feet high with white flowers, found on forested slopes at 14,000 feet altitude.

103238 to 103250. *LILIUM* spp. Liliaceae. Lily.

Nos. 103238 and 103239 were collected on grassy slopes at 12,000 feet altitude on Mount Kenichunpo.

103238. *LILIUM* sp.

No. 21933. A lily 3 feet tall with white flowers.

103239. *LILIUM* sp.

No. 21937. A lily with purplish-red flowers.

103240. *LILIUM* sp.

No. 22152. From the northern slopes of Mount Kenichunpo, north of Sikitung on the Upper Salwin River, Tsarung Province, southeastern Tibet. A lily with red flowers, found in alpine meadows at 13,000 feet altitude.

103241. *LILIUM TALIENSE* Franch.

No. 22264. From alpine meadows at 12,000 feet altitude in the Solola, Tsarung Province, southeastern Tibet. A martagon lily with stout gray-green stems, 3 to 5 feet high, that are clothed with dense white scabrid pubescence. The linear to lanceolate leaves are 2 to 4 inches long, and the fragrant nodding purple-spotted white flowers, 2 inches long, are in subverticillate clusters of 2 to 12.

For previous introduction see 99902.

103242. *LILIUM* sp.

No. 22542-I.

103243. *LILIUM* sp.

No. 22542-II.

103244. *LILIUM WILLMOTTIAE* Wilson.

No. 23475. From Mount Moting, east of Atuntze, Yunnan. A lily with orange-red flowers, spotted with black, found in pine forests at 10,000 feet altitude.

103245 and 103246. *LILIUM TALIENSE* Franch.

For previous introduction and description see 103241.

103245. No. 23537. From Mount Moting, east of Atuntze, Yunnan, on dry slopes in pine forests at 9,500 feet altitude. A form with pink flowers.

103246. No. 23613. From the Kaakerbo Mountains in southeastern Tibet, west of Dikerla and Yundishi, in alpine meadows at 12,000 feet altitude. A form with pinkish flowers.

103247. *LILIUM HYACINTHINUM* Wilson.

No. 24316. From Miturong, Muli Territory, east of the Yalung River on the Mutikonka Mountains (a hitherto unknown snow range), in southwestern Szechwan at 12,000 feet altitude, among scrub. A lily with stout erect shining-green stems 3 to 4 feet tall and

103174 to 103357—Continued.

scattered oblong-lanceolate leaves 6 to 8 inches long; the slightly fragrant, purple-lavender, funnel-shaped flowers, 1 to 2 inches long, are borne in racemes of 12 to 24.

For previous introduction see 99896.

103248. *NOMOCHARIS LOPHOPHORA* (Bur. and Franch.) Balf. f.

No. 24377. From alpine meadows at 12,000 feet altitude on Mount Siga, west of the Yalung River and north of Karadi, Szechwan.

For previous introduction and description see 102838.

Nos. 103249 and 103250 were collected on Mount Kintzu, Dahoyunulu, Labako, west of Shiku, at 13,000 feet altitude.

103249. *LILIUM HYACINTHINUM* Wilson.

No. 25457. Collected in fir forests.

For previous introduction and description see 103247.

103250. *NOMOCHARIS LOPHOPHORA* (Bur. and Franch.) Balf. f.

No. 25460. Collected in alpine meadows.

For previous introduction and description see 103248.

103251 to 103258. *NOMOCHARIS* spp. Liliaceae.103251. *NOMOCHARIS* sp.

No. 22176. From the northern slopes of Mount Kenichunpo in alpine regions at the headwaters of the Eastern Irawaddy, southeastern Tibet, at 12,500 feet altitude.

For previous introduction and description see 102840.

Nos. 103252 to 103254 were collected in the Tjonatong Mountains on the Upper Salwin River, Tsarung Province, southeastern Tibet.

103252. *NOMOCHARIS* sp.

No. 22309. For previous introduction see 102841.

103253. *NOMOCHARIS* sp.

No. 22310. For previous introduction see 102842.

103254. *NOMOCHARIS* sp.

No. 22311. For previous introduction see 102843.

103255. *NOMOCHARIS* sp.

No. 23256. For previous introduction and description see 102844.

Nos. 103256 and 103257 were collected on Mount Kaakerbo in alpine meadows at 12,500 feet altitude.

103256. *NOMOCHARIS* sp.

No. 23756. For previous introduction and description see 102845.

103257. *NOMOCHARIS* sp.

No. 23670. For previous introduction and description see 102846.

103258. *NOMOCHARIS* sp.

No. 25456. Collected on Mount Kintzu, Labako, northwestern Yun-

103174 to 103357—Continued.

nan, China, near fir forests at 12,500 feet altitude.

For previous introduction and description see 102847.

103259. *PAEONIA DELAVAYI* Franch. Ranunculaceae. Peony.

No. 25312. From Mount Haba, north of the Yangtze loop, third peak of the Likiang Snow Range, Bårdär, in meadows and outskirts of spruce forests at 11,000 feet altitude. A very attractive vigorous shrub 4 feet high with deep-crimson flowers 3 inches in diameter.

For previous introduction see 100576.

103260. *PICEA* sp. Pinaceae. Spruce.

No. 25333. From the eastern slopes of Maboang Vatzé, Likiang Snow Range, at 12,000 feet altitude. A tree between 60 and 80 feet high.

103261 to 103263. *PIERIS* spp. Ericaceae.103261. *PIERIS* sp.

No. 22036. From scrub forest on the northern slopes of Mount Kenichunpo, north of Sikitung, Upper Salwin River, Tsarung Province, in southeastern Tibet, at 11,500 feet altitude. A shrub with large leaves and white flowers.

103262 and 103263. *PIERIS DOYONENSIS* Hand.-Mezz.

An upright shrub 4 to 5 feet high, with stout branches and rounded elliptic leaves 1 to 4 inches long. The white tubular-campanulate flowers, one-half inch long, are in small terminal racemes. Native to Yunnan, China.

103262. No. 24279. From Miturong, Mull Territory, east of the Yalung River on the Mutikonka Mountains, in southwestern Szechwan, at 11,500 feet altitude.

103263. No. 24400. From Mount Siga, west of the Yalung River, north of Karadi, Szechwan, at 12,500 feet altitude.

103264 to 103275. *POTENTILLA* spp. Rosaceae. Cinquefoil.103264. *POTENTILLA MICROPHYLLA* DEPRESSA Wall.

No. 21971. From the northern slopes of Mount Kenichunpo, north of S'kitung, Upper Salwin River, Tsarung Province, southeastern Tibet, at 14,000 feet altitude, among crags. A densely caespitose variety with shorter stems and yellow flowers.

103265. *POTENTILLA CURVISECTA* Hook. f.

No. 22274. From the Solola, Tsarung Province, southeastern Tibet, among scree at 14,000 feet altitude. An alpine perennial with trifoliate leaves 2 to 3 inches long, the leaflets hairy, leathery, and dentate. The small, inconspicuous flowers are on slender wiry flowering stems 2 to 3 inches long. Native to the Himalayan region from 12,000 to 14,500 feet altitude.

Nos. 103266 and 103267 were collected in the Tjonatong Mountains, on the Upper Salwin River, Tsarung Province, southeastern Tibet, among boulders at 14,000 feet altitude.

103174 to 103357—Continued.

103266. *POTENTILLA KRYLOVIANA* Wolf.

No. 22320. A caespitose alpine perennial 3 to 6 inches high with small compound leaves of 2 or 3 pairs of obovate serrate leaflets, and long-stemmed yellow flowers half an inch across. Native to the Altai Mountains.

103267. *POTENTILLA STENOPHYLLA* (Franch.) Diels.

No. 22321. An alpine perennial 3 to 4 inches high, with a thick rhizome, pinnate leaves 2 to 3 inches long, and orange-yellow flowers on scapes 4 inches high.

For previous introduction see 100218.

Nos. 103268 and 103269 were collected on Mount Wulila, a high mountain east of the Salwin River and north of Alulaka, southeastern Tibet.

103268. *POTENTILLA ERIOCARPOIDES* Krause.

No. 22358. A low bushy perennial, 2 to 3 inches high, with hairy ternate leaves, the divisions being obovate-cuneate and coarsely incised. The yellow flowers are over half an inch across. Found on crags at 15,000 feet altitude. Native to eastern Tibet.

103269. *POTENTILLA CORIANDRIFOLIA* D. Don.

No. 23266. From swampy alpine meadows at 14,500 feet altitude. A tufted herb 4 inches in diameter with white flowers which have dark-red centers. Native to the Himalayan region.

For previous introduction see 100215.

Nos. 103270 to 103272 were collected west of Weihsí, west of the Mekong-Salwin Divide on Mount Fuchuan.

103270 and 103271. *POTENTILLA FRUTICOSA* DAURICA (Nestl.) Seringe.

A dwarf compact shrub from 2 to 3 feet high, with small leaves having lustrous brown stipules tipped with a tuft of conspicuous hairs. The solitary flowers are about an inch across. Found in meadows between 12,500 and 13,000 feet altitude.

For previous introduction see 97997.

103270. No. 23271. Pale cream-colored flowers.

103271. No. 23272. Yellow flowers.

103272. *POTENTILLA STENOPHYLLA* (Franch.) Diels.

No. 23281. For previous introduction and description see 103267.

Nos. 103273 to 103276 were collected on Mount Moting, east of Atuntze, Yunnan.

103273. *POTENTILLA ERIOCARPOIDES* Krause.

No. 23354. Collected at 13,000 feet altitude.

For previous introduction and description see 103268.

103274. *POTENTILLA SIBBALDI* Haller f.

No. 23393. From alpine meadows at 14,000 feet altitude. A low herbaceous perennial which forms a dense spreading tuft, with trifoliate leaves, cuneate to dentate leaflets, and small yellow flowers.

103174 to 103357—Continued.

103275. *POTENTILLA CURVISECTA* Hook.
f.

No. 23429. Found among boulders at 14,500 feet altitude.

For previous introduction and description see 103265.

103276. *SAXIFRAGA HIRCULUS ALPINA* Engl. Saxifragaceae.

No. 23446. A Chinese variety with yellow flowers and broader petals, collected at 14,000 feet altitude. The typical form is an alpine perennial, 6 inches high with yellow flowers, native to the mountains of central and northern Europe.

Nos. 103277 and 103278 are from Mount Kanshu, on the trail to the Leirong Mountains, Muli Territory, Szechwan, in meadows between 13,000 and 13,500 feet altitude.

103277. *COLORIA ELEGANS IMBRICATA* Cardot. Rosaceae.

No. 24482. An alpine perennial with a basal rosette of pinnate leaves 3 to 4 inches long, with the leaflets much crowded and imbricate. The yellow flowers, nearly an inch across, are on stems up to 8 inches high. Native to eastern Tibet.

103278. *POTENTILLA CURVISECTA* Hook, f. Rosaceae. Cinquefoil.

No. 24500. For previous introduction and description see 103265.

103279 to 103287. *PRUNUS* spp. Amygdalaceae.

103279. *PRUNUS* sp.

No. 22124. From the northern slopes of Mount Kenichunpo, north of Sikitung, Upper Salwin River, Tsarung Province, southeastern Tibet, at 12,500 feet altitude. A tree 15 to 20 feet high with white flowers.

103280. *PRUNUS* sp.

No. 22241. From the Solola, Tsarung Province, southeastern Tibet, at 14,500 feet altitude. A shrub 3 to 4 feet high with pink flowers; found among crags.

103281. *PRUNUS* sp.

No. 22396. From Wulila, a high mountain east of the Salwin River and north of Alulaka, southeastern Tibet, at 14,000 feet altitude. A wild cherry 3 to 5 feet high; flowers not seen.

103282. *PRUNUS* sp.

No. 23154.

103283. *PRUNUS* sp.

No. 23352. From Mount Moting, east of Atuntze, Yunnan, at 13,000 feet altitude. A shrub 6 to 10 feet high; flowers not seen.

103284. *PRUNUS* sp.

No. 24419. From the Yetsi Mountains, north of Kulu, Muli Territory, Szechwan, at 13,000 feet altitude. A shrub or small tree 6 to 10 feet high with pink flowers, found in alpine meadows.

103285. *PRUNUS* sp.

No. 24448. From the Kulu Mountains in Muli Territory, Szechwan, in

103174 to 103357—Continued.

fir forests at 13,000 feet altitude. A shrub 8 to 10 feet high with white flowers.

103286. *PRUNUS* sp.

No. 25266. From the mountains west of Hsiao Chungtien, northwestern Yunnan, in a spruce forest at 11,500 feet altitude. A shrub or tree 25 feet high with pinkish flowers.

103287. *PRUNUS SALICINA* Lindl. Japanese plum.

No. 25363. From Mount Yulung, in the Likiang Snow Range, between 10,500 and 11,000 feet altitude, growing among pines and rhododendrons. A tree 10 to 15 feet high with white flowers.

103288 to 103290. *MALUS BACCATA HIMALAICA* (Maxim.) C. Schneid. Malaceae. Pear.

A variety with broadly elliptic, coarsely serrate leaves, pubescent beneath.

103288. No. 24427. From the Yetsi Valley, north of Kulu, in Muli Territory, Szechwan, at 10,000 feet altitude. A tree 15 to 20 feet high with white flowers.

103289. No. 25284. From the Chungtien Plain, west of Hsiao Chungtien, northwestern Yunnan, along streams at 11,500 feet altitude. A tree 30 feet high with white flowers.

103290. No. 25366. From the meadows of Gobo, on Mount Yulung, Likiang Snow Range, east of Likiang, at 9,500 feet altitude. A tree 25 to 30 feet high.

103291 to 103300. *RIBES* spp. Grossulariaceae.

Nos. 103291 and 103292 were collected in fir forests on Mount Kenichunpo between 12,000 and 12,500 feet altitude.

103291. *RIBES* sp.

No. 21998. A shrub 6 to 8 feet high with red flowers.

103292. *RIBES* sp.

No. 22008. A shrub 5 to 10 feet high with red flowers.

103293. *RIBES* sp.

No. 24450. From the Yetsi Mountains, north of Kulu, Muli Territory, Szechwan, at 13,000 feet altitude. A shrub 5 to 6 feet high with reddish flowers.

103294. *RIBES* sp.

No. 24520. From the western slopes of Mount Mitzuga, Muli Territory, southwestern Szechwan, at 12,500 feet altitude. A shrub 2 to 4 feet high with reddish flowers.

103295. *RIBES* sp.

No. 24585. From Mount Gibboth, southwestern Szechwan, near the Yunnan border, in spruce forests at 11,000 feet altitude. A shrub 4 to 5 feet high with purple flowers.

103296. *RIBES* sp.

No. 25286. From Mount Haba, north of the Yangtze loop, the third peak of the Likiang Snow Range, Bär-

103174 to 103357—Continued.

där, in fir forests at 13,000 altitude. A shrub 10 to 15 feet high with red flowers.

Nos. 103297 to 103299 were collected on Mount Yulung, on the eastern slopes of the Likiang Snow Range, northwestern Yunnan, in fir forests between 12,000 and 12,500 feet altitude.

103297. *RIBES* sp.

No. 25336. A shrub 6 to 7 feet high with reddish flowers.

103298. *RIBES* sp.

No. 25347. A shrub 6 feet high with yellow flowers, collected at Sabaloko.

103299. *RIBES* sp.

No. 25358. A shrub 6 to 8 feet high with red flowers.

103300. *RIBES* sp.

No. 25385. From the outskirts of spruce forests on Mount Yulung, Likiang Snow Range, northwestern Yunnan, between 10,500 and 11,000 feet altitude. A shrub 5 to 6 feet high with black fruits.

103301 to 103317. *ROSA* spp. Rosaceae.
Rose.

103301. *ROSA ROXBURGHII* Tratt.
Roxburgh rose.

No. 22240. From the Solola, in Tsarung Province, southeastern Tibet, in a spruce forest at 12,000 feet altitude. A shrub 6 to 12 feet high with pale-pink flowers, followed by edible yellow-brown fruits.

For previous introduction see 99214.

103302. *ROSA* sp.

No. 22439. From the forests of Tjonatong, at 10,000 feet altitude, on Mount Wulila, east of the Salwin River and north of Alulaka, southeastern Tibet. A shrub 5 to 6 feet high; flowers not seen.

Nos. 103303 and 103304 were collected on Mount Moting, east of Atuntze, Yunnan.

103303. *ROSA* sp.

No. 23355. A shrub 6 to 10 feet high; flowers not seen; collected at 13,000 feet altitude.

103304. (Undetermined.)

No. 23519. From lateral water-courses on the banks of the Mekong River at 7,800 feet altitude.

Nos. 103305 and 103306 were collected in the Kaakerbo Mountains, west of Dikerla and Yundshi, Tsarung Province, southeastern Tibet, in open regions at 13,000 feet altitude.

103305. *ROSA* sp.

No. 23616. A shrub with white flowers.

103306. *ROSA MOYESII* Hemsl. and Wils.

No. 23659. A strikingly handsome shrub from 4 to 5 feet high with scattered, short straight prickles on the branches. The flowers vary from dark blood red to pink and are followed by orange-red, narrowly ovoid fruits 2

103174 to 103357—Continued.

inches or more in length. It is native to western China.

For previous introduction see 63369.

103307. *ROSA WILLMOTTIAE* Hemsl.
Willmot rose.

No. 24292. From Miturong, Muli Territory, east of the Yalung River on the Mutikonka Mountains, in southwestern Szechwan, in a spruce forest at 11,000 feet altitude. A shrub 3 to 4 feet high with small pink flowers.

For previous introduction see 93082.

Nos. 103308 and 103309 were collected in forests south of Dzempe Sheren, in the Sagi Valley.

103308. *ROSA GRACILIFLORA* Rehd. and Wils.

No. 24376. A slender-branched shrub 6 to 12 feet high, with membranous leaves composed of 9 to 11 oval or elliptic light-green leaflets up to 1 inch long and red to pink flowers over an inch across, solitary at the ends of the branchlets. Collected at 13,000 feet altitude. Native to western Szechwan, China.

103309. *ROSA* sp.

No. 24391. A shrub 6 to 8 feet high with white flowers, found at 11,000 feet altitude.

103310. *ROSA* sp.

No. 24449. A shrub 5 feet high with white flowers, found at 13,000 feet altitude in a fir forest in the Yetal Mountains, north of Kulu, Muli Territory, Szechwan.

103311. *ROSA GRACILIFLORA* Rehd. and Wils.

No. 24508. From Mount Kanshu, on the trail to the Leirong Mountains, Muli Territory, Szechwan, in a fir forest at 12,000 feet altitude.

For previous introduction and description see 103308.

Nos. 103312 and 103313 were collected between Muli and Kulu, Szechwan.

103312. *ROSA* sp.

No. 24557. A shrub 6 to 8 feet high with white flowers, found along streams at 9,800 feet altitude.

103313. *ROSA* sp.

No. 24561. A spreading shrub with white flowers, found at 9,000 feet altitude.

103314. *ROSA* sp.

No. 24600. From Mount Gibboth, southwestern Szechwan, near the Yunnan border, in a pine forest at 10,000 feet altitude. A shrub 2 to 3 feet high with white flowers.

Nos. 103315 and 103316 were collected on Mount Haba, north of the Yangtze loop, third peak of the Likiang Snow Range, Bårdär, in a fir forest at 12,000 feet altitude.

103315. *ROSA* sp.

No. 25285. A shrub 6 to 8 feet high with white flowers.

103174 to 103357—Continued.

103316. *ROSA GRACILIFLORA* Rehd. and Wils.

No. 25318. For previous introduction and description see 103311.

103317. *ROSA* sp.

No. 25397. From Mount Yunlu, southeast of Likang, Yangtze-Mekong watershed, in fir forests at 12,500 feet altitude. A shrub 6 feet high with white flowers.

103318 to 103322. *RUBUS* spp. Rosaceae.

103318. *RUBUS* sp.

No. 22630. From the Solola, in Tsarung Province, southeastern Tibet, in a larch and fir forest at 12,500 feet altitude. A shrub with yellow fruits.

103319. *RUBUS STEPHANANDRA* Lev.

No. 23275. Variety *chinensis*. From Mount Fuchuan, west of the Mekong-Salwin Divide, west of Weihsü, Szechwan, on the outskirts of forests at 11,500 feet altitude. A shrub 4 to 5 feet high, armed with slender reflexed thorns. The trifoliolate pubescent leaves have small ovate doubly dentate leaflets, and the small white flowers are solitary. Native to Szechwan.

103320. *RUBUS* sp.

No. 24429. From alpine meadows at 13,000 feet altitude in the Yetsi Mountains, north of Kulu, Muli Territory, Szechwan. A shrub 2 feet high with white flowers.

103321. *RUBUS* sp.

No. 25322. From a valley at 10,000 feet altitude on Mount Yulung, Likang Snow Range. A woody climber with fragrant yellow flowers.

103322. *RUBUS* sp.

No. 25413. From Mount Laochun, southwest of Shiku, and the Yangtze, in canebrake at 12,000 feet altitude. A shrub 2½ feet high with pink flowers.

103323 to 103326. *SALVIA* spp. Menthaceae. Sage.

103323. *SALVIA HIANS* Royle.

No. 22378. From alpine meadows at 14,500 feet altitude on Mount Wulila, east of the Salwin River and north of Alulaka, southeastern Tibet. A viscid-hairy perennial herb 2 to 3 feet high, with cordate toothed leaves, 4 to 7 inches long, on petioles often 10 inches long. The blue flowers, 1 to 2 inches long, with very inflated throats, are borne in large spreading panicles.

For previous introduction see 101794.

103324. *SALVIA* sp.

No. 23273. From alpine meadows at 13,000 feet altitude on Mount Fuchuan, west of the Mekong-Salwin Divide, west of Weihsü, Szechwan. A perennial herb with purplish-pink flowers.

103325. *SALVIA* sp.

No. 23609. From alpine meadows between 13,500 and 14,000 feet in the Kaakerbo Mountains in southeastern Tibet, west of Dikerla and Yundshi. A perennial herb with purple flowers.

103174 to 103357—Continued.

103326. *SALVIA HIANS* Royle.

No. 25316. From Mount Haba, north of the Yangtze loop, third peak of the Likang Snow Range, Bårdär, at 13,500 feet altitude, in a fir forest.

For previous introduction and description see 103323.

103327 to 103331. *SILENE* spp. Silenaceae. Catchfly.

Nos. 103327 and 103328 were collected on Mount Moting, east of Atunze, Yunnan.

103327. *SILENE* sp.

No. 23423. An herb with purple flowers found in meadows at 14,000 feet altitude.

103328. *SILENE AFRICA* Turcz.

No. 23486. An herb found in pine forests of Tsechung, on the Mekong River, at 7,000 feet altitude.

Nos. 103329 and 103330 were collected in alpine meadows on Mount Kanshu, on the trail to the Leirong Mountains, southwestern Muli, Szechwan.

103329. *SILENE* sp.

No. 24468. An herb with purple flowers, collected at 11,000 feet altitude.

103330. *SILENE* sp.

No. 24478. An herb with purple flowers collected at 12,500 feet altitude.

103331. *SILENE* sp.

No. 24593. From Mount Gibboch, southwestern Szechwan, near the Yunnan border. An herb with lavender flowers, found in meadows at 11,000 feet altitude.

103332 to 103346. *SORBUS* spp. Malaceae. Mountain-ash.

103332. *SORBUS VILMORINI* C. Schneid.

No. 22048. From Mount Kenichunpo in the mountains of Champung at 11,000 feet altitude. A shrub or tree 10 to 15 feet high, with feathery compound leaves and white to red flowers succeeded by bright translucent rose-red fruits.

For previous introduction see 61992.

103333. *SORBUS SETSCHWANENSIS* (C. Schneid.) Koehne.

No. 22286. From forests on the Solola, Tsarung Province, southeastern Tibet. A shrub or small tree 10 to 12 feet high. The compound leaves, 2 to 4 inches long, are composed of 12 to 17 pairs of narrow-oblong leaflets, and the white to red flowers are in clusters 1 to 2 inches across. This has the smallest leaves of any of the mountain-ashes, and is native to Szechwan.

103334. *SORBUS* sp.

No. 22346.

103335. *SORBUS VILMORINI* C. Schneid.

No. 23299. From Mount Fuchuan, west of the Mekong-Salwin Divide, west of Weihsü, Szechwan.

For previous introduction and description see 103332.

103174 to 103357—Continued.

Nos. 103336 to 103341 were collected on Mount Moting, east of Atuntze, Yunnan.

103336. *SORBUS* sp.

No. 23362. A tree 12 to 15 feet high, with white flowers, found in a spruce forest at 12,500 feet altitude.

103337. *SORBUS* sp.

No. 23390. A shrub or tree 10 to 20 feet high, found in mixed forests at 11,500 feet altitude.

103338. *SORBUS* sp.

No. 23468. A tree 20 feet high, found in forests at 12,000 feet altitude.

103339. *SORBUS* sp.

No. 23500. A tree from 10 to 15 feet high, with pinkish flowers, found in forests between 11,000 and 12,000 feet altitude.

103340. *SORBUS* sp.

No. 23543. A shrub or small tree 6 to 15 feet high, with pink flowers, collected in a fir forest at 12,000 feet altitude.

103341. *SORBUS* sp.

No. 23547. A small tree 10 to 15 feet high, with white flowers, collected in a fir forest at 12,000 feet altitude.

Nos. 103342 and 103343 were collected at Tsarong, west of Dikerla and Yundshi, in the Kaakerbo Mountains, in southeastern Tibet, in a fir forest at 12,000 feet altitude.

103342. *SORBUS* sp.

No. 23644. A tree 10 feet high with red flowers.

103343. *SORBUS* sp.

No. 23657. A shrub 6 to 8 feet tall with white flowers.

103344. *SORBUS VILMORINI* C. Schneid.

No. 24275. From Miturong, Muli Territory, east of the Yalung River on the Mutikonka Mountains (a hitherto unknown snow range), southwestern Szechwan, in a spruce forest at 12,000 feet altitude.

For previous introduction and description see 103332.

103345. *SORBUS* sp.

No. 24553. From forests at 11,000 feet altitude, on the western slopes of Mount Mitzuga, Muli Territory, Szechwan. A shrub 10 to 15 feet high with pink flowers.

103346. *SORBUS* sp.

No. 25250. From a fir forest at 12,500 feet altitude, in the mountains west of Hsiao Chungtien, northwestern Yunnan. A shrub 10 to 15 feet high with white flowers.

103347. *SPIRAEA ARCUATA* Hook. f. *Rosaceae*. *Spirea*.

No. 24426. Among trees at 11,000 feet altitude, in the Yetsi Mountains, north of Kulu, Muli Territory, Szechwan. A bushy shrub 6 to 8 feet high with shining dark-brown branches and small obovate, coarsely toothed or lobed leaves;

103174 to 103357—Continued.

leaves one-half inch long. The small flowers, which vary from red to white, are in dense corymbs. Native to the Himalayan region between 11,000 and 14,000 feet altitude.

103343. *STYRAX SCHWELIENSIS* W. W. Smith. *Styracaceae*. *Snowbell*.

No. 24572. Between Muli and Kulu, Szechwan, in valleys at 8,000 feet altitude. A deciduous shrub from 3 to 9 feet high with broadly elliptic, shortly acuminate papery leaves 2 inches long and small dull creamy-white flowers in terminal and axillary racemes. Native to southwestern China.

103349. *SYMPLOCOS* sp. *Symplocaceae*. *Sweetleaf*.

No. 22061. From Mount Kenichunpo at 10,000 feet altitude; a tree 15 to 20 feet high with cream-colored flowers.

103350. *SYRINGA YUNNANENSIS* Franch. *Oleaceae*. *Lilac*.

No. 24349. From Dzempe Sherpo, west of Wuato Gomba, in Muli Territory, Szechwan, in spruce forests at 12,000 feet altitude. A shrub from 3 to 8 feet high with fragrant pink flowers.

For previous introduction see 100905.

103351 and 103352. *TUMION FARGESII* (Franch.) Skeels (*Torreya fargesii* Franch.). *Taxaceae*.

An evergreen tree sometimes over 100 feet tall, with a trunk over 4 feet in diameter, and huge descending branches, which is found occasionally in the deciduous and semideciduous forests of the Mekong-Yangtze Divide, and also more commonly on the Mekong-Salwin Divide at an altitude of 10,000 feet. The fruits are the size of small walnuts. The tree prefers rich black soil and considerable rainfall.

For previous introduction see 58600.

103351. No. 22656. From the Solola, Tsarung Province, southeastern Tibet. A shrub or small tree 10 to 15 feet high, found in open scrub forest land at 10,000 feet altitude.

103352. No. 23291. From Mount Fuchuan, west of the Mekong-Salwin Divide, west of Weihsi, Szechwan, at 10,000 feet altitude. A tree 50 to 60 feet high.

103353 to 103356. *VACCINIUM* spp. *Vacciniaceae*. *Blueberry*.103353. *VACCINIUM* sp.

No. 22340. From the Tjonatong Mountains, Upper Salwin River, Tsarung Province, southeastern Tibet, at 14,500 feet altitude. A shrub 1 foot high with pink flowers, found among rocks.

103354. *VACCINIUM* sp.

No. 22407. From Mount Wulila, east of the Salwin River and north of Alulaka, southeastern Tibet, at 13,500 feet altitude. A shrub up to 6 inches high, found among rocks and boulders.

103355. *VACCINIUM FRAGILE* Franch.

No. 22653. From the Solola, Tsarung Province, southeastern Tibet, at 12,000 feet altitude. A shrub 1 foot high with red fruits, found among rocks.

103174 to 103357—Continued.

103356. *VACCINIUM DELAVAYI* Franch.

No. 23522. From Mount Moting, east of Atuntze, Yunnan, at 12,000 feet altitude. A shrub with pink flowers, found among rocks.

103357. *VITIS PENTAGONA* Diels and Gilg. Vitaceae. Grape.

No. 24574. Between Muli and Kulu, Szechwan, at 9,000 feet altitude. A woody vine, native to China, with the stems and leaves reddish-gray tomentose. The long-petioled, papery ovate leaves are usually five-angled, and the flowers are greenish.

For previous introduction see 93969.

103358. *PHOENIX ABYSSINICA* Drude. Phoenicaceae. Date palm.

From Africa. Seeds presented by the director of the Ufficio Agrario, Asmara, Eritrea, through the Royal Botanic Gardens, Kew, England. Received June 23, 1933.

A palm, native to Ethiopia, closely resembling the common date palm. The lower leaflets are reduced to spines, while the upper ones, lanceolate and 10 inches long, are in separated groups. The dry cylindrical fruits are about 1 inch long, with no flesh. Introduced for the use of Department specialists.

103359 to 103402.

From the Union of Soviet Socialist Republics. Seeds presented by A. P. Iljinski, chief botanist in charge of the Botanic Garden, Leningrad. Received June 21, 1933.

103359. *ACER CAUDATUM UKURUNDUENSE* (Trautv. and Meyer) Rehd. Aceraceae. Maple.

A small Manchurian tree with coarsely toothed 5- or 7-lobed leaves.

For previous introduction see 91244.

103360 to 103375. *AQUILEGIA* spp. Ranunculaceae. Columbine.103360 and 103361. *AQUILEGIA ALPINA* L. Alpine columbine.

103360. An alpine columbine about 12 inches high, native to Switzerland. The biternate leaves have deeply lobed divisions 1 to 2 inches long, and the expanded flowers are 2 inches across with blue sepals and white petals, the incurved spurs being as long as the petals.

103361. Variety *superba*.103362. *AQUILEGIA ATRATA* Koch.

A perennial columbine closely resembling *Aquilegia vulgaris*, but differing in its more deeply lobed leaves and smaller flowers, which are blackish violet with long protruding stamens. Native to central Europe.

103363. *AQUILEGIA BERTOLONII* Schott.

An alpine plant over a foot high, with long-stemmed biternate, incised-lobed basal leaves and pale-blue flowers. It is native to the Alps.

For previous introduction see 101769.

103359 to 103402—Continued.

103364. *AQUILEGIA BREVI-STYLA* Hook.

A pubescent or glandular perennial native to northwestern America. The basal leaves are biternate with three-lobed and coarsely serrate leaflets, the stem leaves are ternate or simple and three-lobed. The blue and white flowers are less than an inch long, and the spurs are about one-third of an inch long.

103365. *AQUILEGIA BUERGERIANA* Sieb. and Zucc.

A perennial herb, native to Japan, with biternate leaves and yellow flowers tinted with purple. The erect nearly straight spurs are as long as the petals.

103366. *AQUILEGIA CARMASINA* Hort.

A name for which a place of publication and a description have not been found.

103367. *AQUILEGIA CAUCASICA* (Ledeb.) Rupr.

An upright herbaceous perennial, native to the Caucasus, with biternate, finely pubescent leaves and rather large attractive flowers, the sepals being pink or sky blue and the petals yellow.

103368. *AQUILEGIA EINSELEANA* Schultz.

A columbine from the Alps of western Germany, with stiff, ternate, incised or crenate leaves and blue flowers, smaller than those of *Aquilegia alpina*.

For previous introduction see 101768.

103369. *AQUILEGIA FRAGRANS* Benth.

A perennial herb, possibly a form of *Aquilegia vulgaris*, native to the Himalayas at altitudes between 10,000 and 14,000 feet in India and Tibet. The stems and leaves are softly pubescent or glandular and often glaucous, and the white fragrant flowers have long slender straight or hooked spurs.

103370. *AQUILEGIA HELENÆ* Hort. Helen columbine.

Considered to be a hybrid between *Aquilegia caerulea* and *A. chrysantha*. The plants are robust with numerous blue and white flowers.

103371. *AQUILEGIA MONSTROSA* Hort.

A name for which a place of publication and a description have not been found.

103372. *AQUILEGIA SIBIRICA* Lam. Siberian columbine.

A nearly glabrous perennial herb, 1 to 2 feet high, native to Siberia. The biternate leaves are made up of shallow-lobed leaflets 1 to 2 inches broad, and the many lilac-blue and white flowers have stout incurved or even coiled spurs one-half inch long.

103373 to 103375. *AQUILEGIA VULGARIS* L. European columbine.

103373. Variety *nivea grandiflora*; large white flowers produced in great profusion.

103359 to 103402—Continued.

103374. Variety *olympica*; large light-lilac or bright-purple and white flowers.

103375. Variety *stellata*.

103376. *COTONEASTER MELANOCARPA* Lodd. Malaceae.

A spreading shrub 6 to 8 feet high, native to Europe and Asia. The broadly ovate leaves, 1 to 2 inches long, are dull dark green above and whitish tomentose beneath, and the nodding pinkish flowers, in clusters of 3 to 8, are followed by subglobose black fruits.

103377. *IRIS BUNGEI* Maxim. Iridaceae.

A Mongolian iris of the Apogon section, with linear basal leaves and pale-blue flowers, violet within.

103378. *IRIS* sp. Iridaceae.

103379 to 103383. *LILIUM* spp. Liliaceae.
Lily.

103379. *LILIUM BULBIFERUM* L.

A bulbous perennial, native to Europe, with a furrowed stem 2 to 4 feet high, the upper part covered with white down and bearing bulblets in the leaf-axils. The lanceolate leaves are 3 to 4 inches long, and the 1 to 4 bright orange-red flowers, 3 to 4 inches across, are spotted with purple and tinged in the center with yellow.

103380 and 103381. *LILIUM MARTAGON* L. Martagon Lily.

The martagon lily grows wild from central and southern Europe to southwestern Siberia. The stem is 3 to 6 feet high, often purple spotted, with horizontal deep-green leaves 3 to 6 inches long. The dull claret-purple flowers, spotted purplish black, with red anthers, appear in late June and July and from 3 to 20 flowers blossom at one time.

For previous introduction see 101995.

103380. The typical form.

103381. A fasciated form.

103382. *LILIUM MONADELPHUM* Bieb. Great Caucasian Lily.

A lily with canary-yellow flowers thickly dotted with purple.

For previous introduction see 101919.

103383. *LILIUM TIGRINUM* Ker. Tiger Lily.

A lily native to southwestern China where it is found along watercourses at 9,000 feet altitude. The large orange and purple black-spotted flowers are very attractive.

103384 to 103386. *NEPETA* spp. Mentha-
ceae.

103384. *NEPETA BARBATA* Regel and Winkl.

An erect or ascending herb over a foot high, with ovate acute short-stemmed leaves about 1 foot long and small flowers in lax cymelike racemes. Native to eastern Turkistan.

103385. *NEPETA CYANEA* Stev.

A perennial mint, native to the eastern Caucasus, with hairy ovate cuneate leaves and showy blue flowers in small cymes.

103359 to 103402—Continued.

103386. *NEPETA GRANDIFLORA* Bieb.

A green nearly glabrous perennial 1 to 2 feet high, native to the Caucasus region. The heart-shaped leaves are crenate, and the two-lipped flowers are violet and blue.

103387 to 103391. *PAEONIA* spp. Ranun-
culaceae. Peony.

103387. *PAEONIA ALBIFLORA* Pall. Chinese peony.

A perennial herb 2 to 3 feet high, native to eastern Asia. The biternate leaves are made up of oblong-lanceolate leaflets, 3 to 4 inches long, often red veined. The 2 to 5 flowers have eight or more white or pink petals, the stamens are golden yellow, and the 3 to 5 ovoid follicles are recurved-spreading.

103388. *PAEONIA ANOMALA* L.

A perennial herb, native to Europe and Asia, with one-flowered stems 2 to 3 feet high. The biternate leaves are cut into numerous lanceolate long-pointed segments, and the large bright-crimson flowers are borne in June and July.

103389. *PAEONIA BERESOWSKII* Kom.

A herbaceous perennial about 3 feet high, native to western China. The light-green leaves are 3- to 8-foliolate, and the white or pale-rose flowers are 2 to 3 inches across.

103390. *PAEONIA PEREGRINA* Mill.

A perennial herb, native to Europe, with stems 1 to 2 feet high, bearing 1 to 5 biternately divided deep-green leaves and dark-crimson flowers.

103391. *PAEONIA VEITCHII* Lynch.

A herbaceous peony, native to western China, about 2 feet high, with shining light-green leaves and purple-crimson flowers about 4 inches across.

103392. *RHODODENDRON CAUCASICUM* Pall. Ericaceae. Caucasian rhododendron.

A shrub seldom more than 3 feet high, native to the Caucasus region between 6,000 and 7,000 feet altitude. The ovate, obovate or oblong leaves, 2 to 5 inches long, with more or less recurved margins, are dark green, glabrous at maturity, and slightly rugulose on the upper surface, the under surface being covered with a thin fawn to tawny or pale rusty tomentum. The broadly campanulate flowers are yellowish or rose tinted and are borne on long erect stalks in candelabroid trusses.

For previous introduction see 101957.

103393 to 103398. *SALVIA* spp. Menta-
ceae. Sage.

103393. *SALVIA AUSTRIACA* Jacq.

A perennial herb 2 to 3 feet high, native to southern Europe, with broadly ovate leaves, and the two-lipped yellow flowers have the upper lip spotted with red.

103394. *SALVIA AXILLARIS* Moc. and Sesse.

A low bushy herb with small linear-oblong acute entire leaves and small axillary bluish flowers. Native to Mexico.

103359 to 103402—Continued.

103395. *SALVIA BERTOLONII* Vis.

A perennial herb, hairy throughout, with an erect or ascending stem, cordate-ovate crenate leaves, and branched racemes of flowers which are reddish violet or, rarely, white. Native to Dalmatia.

103396 to 103398. *SALVIA VERTICILLATA* L. Lilac sage.

A pilose herbaceous perennial 2 to 3 feet high, native to the Caucasus region. The lyre-shaped basal leaves are cordate sinuate-crenate and hispid on both surfaces, while the floral leaves are deflexed and bractlike. The small tubular lilac-blue flowers are in remote whorls of 20 to 40 arranged in branched racemes often over a foot long.

103399. *THYMUS MARSCHALLIANUS* Willd. Thyme.

A creeping subshrub, native to the Caucasus region, closely related to *Thymus serpyllum*. The stems are hirsute or villous, and the linear-oblong leaves are ciliate on both surfaces.

103400 to 103402. *TULIPA* spp. Liliaceae. Tulip.103400. *TULIPA ALTAICA* Pall.

A tulip from the Altai Mountains, with oblong-lanceolate undulate leaves slightly exceeding the flowers. The scarlet and yellow flower segments are alternately lanceolate and spatulate-oblong.

For previous introduction see 100643.

103401. *TULIPA BIEBERSTEINIANA* Schult. f.

A rather low plant with 2 or 3 lanceolate or linear grooved acute leaves and a smooth stem bearing a single flower, yellow within and greenish yellow on the outside. Native to southeastern Russia and closely related to *Tulipa celsiana*.

For previous introduction see 101619.

103402. *TULIPA* sp.103403. *GOSSYPIUM PERUVIANUM* Cav. Malvaceae. Cotton.

103403—Continued.

From Peru. Seeds presented by Alejandro Correa Elias, San Vicente, Canete, through T. H. Kearney, Bureau of Plant Industry. Received June 6, 1933.

Tanguis cotton. Introduced for the use of Department specialists.

103404. *ALLIUM SATIVUM* L. Liliaceae. Garlic.

From India. Bulbs purchased from V. H. Kulkarni, superintendent, Modibag Agricultural College, Poona, through M. K. Patel, assistant professor of mycology. Received June 30, 1933.

Introduced for the use of Department specialists.

103405. *CALONCOBA BREVIPES* (Stapf) Gilg. Flacourtiaceae.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received June 27, 1933.

From a tree grown from seed received from Doctor Fairchild, June 5, 1927, collected on the West African trip with Allison V. Armour. An attractive tropical tree 20 feet high, which bears fragrant pure-white flowers 3 inches in diameter. These appear during the winter when the tree is leafless. The dry yellow fruits, about the size of a lime, contain numerous seeds from which the natives express the oil to treat skin diseases.

103406. *EHRETIA ELLIPTICA* DC. Boraginaceae.

From Texas. Seeds presented by Peter H. Heinz, Brownsville. Received June 28, 1933.

Mexican names, *Anaqua* and *manzanillo*. A shrub or tree up to 50 feet high, native to western Texas and northern Mexico. The thick oblong scabrous leaves are 1 to 4 inches long. The small, white fragrant flowers are borne profusely and are followed by sweet edible yellow fruits about one-fourth inch in diameter. The wood is used for tool handles and wheel spokes. In southern Texas young trees are used as ornamentals for planting on lawns.

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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 116



Washington, D. C.

Issued October 1935

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, JULY 1 TO SEPTEMBER 30, 1933 (Nos. 103407-103776)

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INTRODUCTORY STATEMENT

This Inventory, no. 116, is a record of plant material received by the Division of Plant Exploration and Introduction from July 1 to September 30, 1933 (103407-103776).

The introductions listed may be grouped roughly according to the nature of the material and the purpose for which it has been received.

Citrus growers in the West and Southwest will, it is hoped, benefit through the introduction of scions of lemons, mandarins, and oranges from Morocco (103554-103579). These varieties have been developed at the experiment station at Marrakech. Plants of two unusual forms of grapefruit (*Citrus grandis*, 103603, 103604) are recorded from the Society Islands. Included in a shipment of plant material from northern India are seven lots of seeds of citrus fruits (103493-103499); these were collected in little-known villages and may be useful in breeding work.

In the field of deciduous fruits, mention should be made of an introduction of trees of apples, almonds, and peaches from Natal, South Africa (103750-103765). These will be tested in the mild-wintered sections of the United States.

Plant pathologists working with wheat rust will be interested in a collection of wheat varieties (*Triticum* spp., 103527-103553) that have shown a certain degree of resistance to rust under Australian conditions. These were presented by the Department of Agriculture, Sydney, New South Wales. From this same general locality were received also 23 named varieties of oats (*Avena* spp., 103665-103687), through the courtesy of the Wagga Experiment Farm, Bomen, New South Wales.

The mountainous region of southwestern China has proved for many years a rich source of new or rare plants, chiefly valued as ornamentals. Through the kindness of the University of California,

under whose auspices Dr. J. F. Rock was once more exploring in that part of China, this Division received seeds of a large number of trees, shrubs, and herbaceous plants. Of similar nature is a lot of seeds of trees and shrubs (103421-103439) collected in western China and presented by the Bodnant Gardens of North Wales.

The botanical determinations of these introductions were made and the nomenclature determined by the late H. C. Skeels,¹ who had general supervision of this inventory.

B. Y. MORRISON,
Principal Horticulturist, in Charge.

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D. C., May 6, 1935.

¹ Died Jan 3, 1934.

INVENTORY²

103407 and 103408. *ERIOBOTRYA JAPONICA* (Thunb.) Lindl. Malaceae.

Loquat.

From Algiers, Algeria. Bud sticks presented by Dr. René Maire, University of Algiers. Received July 8, 1933.

Introduced for the use of Department specialists.

Japanese medlar varieties, originally from Dr. Tanaka, collected in the botanic station at Maison Carrée.

103407. No. 846. *Dr. L. Trabut.*

103408. No. 107. *Madame Perronne.*

103409 and 103410.

From New Zealand. Seeds presented by Brian M. Jeffery, Roxburgh, Otago. Received July 6, 1933

103409. *ASTELIA NERVOSA* Banks and Soland. Liliaceae.

A stout, densely tufted New Zealand perennial often forming extensive masses on swampy grounds in forests. The spreading lanceolate leaves are 2 to 8 feet long, with the midribs and other prominent nerves colored red. The fragrant flowers, borne in large panicles on scapes 1 to 2 feet high, are greenish black and are followed by bright orange-yellow berries.

For previous introduction see 101274.

103410. *CORYNOCARPUS LAEVIGATA* Forst. **Corynocarpaceae.** **Karaka.**

An ornamental New Zealand tree with a round crown and oblong evergreen leaves up to 7 inches long. The small white flowers, in erect panicles about 4 inches high, are followed by oblong orange fruits an inch long. The flesh of the fruit is extremely poisonous, but the kernel has long been one of the staple articles of diet of the Maoris, the original inhabitants of New Zealand.

For previous introduction see 77997.

103411. *CALOCARPUM MAMMOSUM* (L.)

Pierre (*Lucuma mammosa* Gaertn. f.). Sapotaceae. **Sapote.**

From Puerto Rico. Seeds presented by T. B. McClelland, director, Agricultural Experiment Station, Mayaguez. Received July 5, 1933.

A large erect tree over 30 feet high, native to Mexico and Central America. The obovate to oblanceolate leaves, 4 to 10 inches long and up to 4 inches wide, are light green above and paler or brownish beneath. The subsessile white flowers are followed by russet-brown elliptic fruits the size of a small muskmelon. The rough outer covering contains soft, melting, salmon-colored sweet flesh of rich flavor and a single large, elliptic, glossy brown seed. The fruit is eaten fresh, made into jam, or frozen to form a sherbet.

103412 and 103413. *PETREA VOLUBILIS* L. Verbenaceae.

From Trinidad. Seeds presented by R. O. Williams, director, Department of Agriculture, Port-of-Spain, through A. Joseph, manager of the St. Augustine Nursery. Received July 1, 1933.

A woody climber native to tropical South America and the West Indies. The flowers are borne in loose pendent sprays which hang gracefully from the slender arching branches. These combined with the rigid green leaves produce a striking effect.

103412. The typical blue-flowered form.

103413. A variety with white flowers.

103414 to 103420. *SOJA MAX* (L.) Piper. Fabaceae. **Soybean.**

From Manchuria. Seeds purchased from L. Puitsin, Harbin. Received July 6, 1933.

A collection of soybeans introduced for the use of Department specialists.

Nos. 103414 and 103415 were collected at Sansing station, on the Sungari River.

103414. No. 1. A medium-small subglobose straw-yellow bean with brown hilum.

103415. No. 2. A medium-sized nearly round straw-yellow bean with brown hilum.

Nos. 103416 to 103420 were collected at Imienpo station, on the eastern line of the Chinese Eastern Railway.

103416. No. 1-a. A medium-sized nearly round straw-yellow bean with a large black hilum.

103417. No. 2-a. A medium-sized subglobose straw-yellow bean with pale hilum.

103418. No. 3-a. A medium-sized nearly round straw-yellow bean with light-brown hilum.

103419. No. 4-a. A medium-sized elliptical straw-yellow bean with light-brown hilum.

103420. No. 5-a. A large subglobose black bean with yellow germ and pale hilum.

103421 to 103439.

From China. Seeds obtained by native collectors and presented by Henry McLaren, Bodnant Gardens, North Wales. Received July 3, 1933.

The numbers correspond to those of the herbarium specimens at the Royal Botanic Gardens, Edinburgh, Scotland.

² It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division 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 seed samples or 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 identification, 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

103421 to 103439—Continued.

103421. *ACER CAESIUM* Wall. Aceraceae. Maple.

No. D-99. A tree up to 75 feet high, native to the slopes of the Himalayas between 7,000 and 10,000 feet altitude. The palmately five-lobed leaves, pale beneath, are cordate with serrate margins and are 6 to 8 inches long and broad. The flowers appear after the leaves in large pyramidal panicles and are followed by smooth fruits with the wings spreading at nearly right angles.

For previous introduction see 98306.

103422. *CLETHRA DELAVAYI* Franch. Clethraceae.

No. D-130. A Chinese shrub or small tree with red branchlets and oblanceolate leaves which are pubescent beneath. The fragrant white flowers differ from those of the American sweet pepperbush (*Clethra alnifolia*) in having red calyxes and in being in solitary axillary racemes, while the sweet pepperbush usually has the racemes grouped together to form a panicle.

For previous introduction see 100862.

103423. *DIPelta YUNNANENSIS* Franch. Caprifoliaceae.

No. D-38. A shrub 10 to 15 feet high, native to western China, with opposite entire lanceolate leaves 3 to 6 inches long and leafy racemes of 2-lipped tubular-campanulate pinkish to purple flowers having shieldlike floral bracts.

For previous introduction see 97601.

103424. *ENKIANTHUS DEFLEXUS* (Griffith) C. Schneid. Ericaceae.

No. D-33. The whorled branches of this Himalayan shrub are characteristic of the entire genus and give the plant a peculiar appearance. The branchlets are red, and the margins and petioles of the obovate leaves, 1 to 3 inches long, are red when the leaves are young. The flowers, produced in dense drooping racemes, have yellow corollas, striped dark red, with darker lobes.

For previous introduction see 100541.

103425. *EUPTHELA PLEIOSPERMA* Hook. f. and Thoms. Trochodendraceae.

No. D-285. A tree 30 to 40 feet high, native to Tibet, with ovate-crenate leaves which are glaucous beneath and have very long acuminate tips. The slender-stalked red flowers, in axillary fascicles, appear before the leaves.

For previous introduction see 100875.

103426. *HYDRANGEA HETEROMALLA* D. Don. Hydrangeaceae.

No. D-95. A Himalayan hydrangea, about 10 feet high, with red stems, oval sharp-pointed leaves white hairy beneath, and white flowers borne in clusters about 6 inches wide.

For previous introduction see 59660.

103427. *ILEX CORALLINA* Franch. Aquifoliaceae. Coral holly.

No. D-335. A bushy smooth graceful shrub up to 10 feet high, which has not the rigid appearance of other hollies. The ovate-lanceolate leaves are thin, tough, fully-fringed, and from 4 to 6 inches long, brilliant green on top and pale green underneath. The numerous fruits are small and coral red.

For previous introduction see 93898.

103428. *LIGUSTRUM COMPACTUM* Hook. f. and Thoms. Oleaceae. Privet.

No. A-105. A shrub or small tree sometimes 30 feet high, native to the Himalayan region of southwestern China. The half-evergreen leaves are 3 to 6 inches long, and the small white flowers in large panicles are followed by blue-black fruits.

For previous introduction see 76256.

103421 to 103439—Continued.

103429. *PIPTANTHUS FORRESTII* Craib. Fabaceae.

No. D-290. A shrub 9 to 13 feet high, with alternate trifoliate leaves composed of lanceolate light-yellow leaflets over 1½ inches wide. Native to alpine meadows in southwestern China.

For previous introduction see 103131.

103430 to 103435. *RHODODENDRON* spp. Ericaceae.103430. *RHODODENDRON BEESIANUM* Diels.

No. D-105. A shrub 15 to 20 feet high, with leathery, purple-green, narrowly lanceolate leaves about 6 inches long and deep rich-rose flowers up to 2 inches across. Allied to *R. delavayi*, and native to Yunnan.

For previous introduction see 100329.

103431. *RHODODENDRON BREVISTYLUM* Franch.

No. D-148. A shrub up to 10 feet high with scaly purple branchlets, native to Yunnan, China, between 12,000 and 13,000 feet altitude. The elliptic-lanceolate leaves, 4 inches long, are laxly scaly above and below, and the widely funnel-shaped flowers, 1 to 2 inches long, are pale to deep rose with crimson markings and are borne in 1- to 5-flowered terminal clusters.

103432. *RHODODENDRON CHAETOMALLUM* Balf. and Forr.

No. A-1. A shrub 4 to 5 feet high, with thin twiggy branches densely clothed with branched bristly hairs. The oblong-obovate leathery leaves are about 4 inches long, dark olive green above, and covered beneath with tawny wool. The deep-crimson, tubular-campanulate flowers, 2 inches long, are borne in 4- to 6-flowered terminal umbels. It is native to Tibet and Yunnan between 11,000 and 13,000 feet altitude.

For previous introduction see 100336.

103433. *RHODODENDRON CLEMENTINAE* Forrest.

No. D-201. A shrub 4 to 10 feet high, native to southwestern China at an altitude of 11,000 feet. The oblong-oval leaves, 2 to 6 inches long, are dark green above and covered beneath with a white or pale-fawn felted indumentum. The campanulate flowers, 2 inches long, are creamy white flushed rose with crimson markings and are borne in racemose umbels of 10 to 15 flowers.

103434. *RHODODENDRON CORIACEUM* Franch.

No. D-302. A shrub or small tree 10 to 25 feet high, with gray-white branchlets, native to southwestern China and Tibet between 10,000 and 13,000 feet altitude. The narrowly lanceolate leaves, 4 to 8 inches long, are smooth and light green above and clothed beneath with a light-gray pitted indumentum. The funnel-campanulate flowers, 1 to 2 inches long, are white or light rose with crimson blotches and are borne in lax corymbose racemes of 15 to 20 flowers.

103435. *RHODODENDRON* sp.

No. D-231. Related to *R. wardii* in the *Thompsonii* series.

103436. *ROSA LONGICUSPIS* Bertol. Rosaceae. Rose.

No. A-107. A rambling bush about 20 feet high, native to western China, with sparse short prickles, large dark-green leaves, and white flowers 2 inches wide in very large lax corymbs.

For previous introduction see 100594.

103437. *SOPHORA* sp. Fabaceae.

No. A-172. Closely related to *S. glauca*.

103421 to 103439—Continued.

103439. TETRACENTRON SINENSE Oliver. Magnoliaceae.

No. D-322. A tree up to 100 feet high, native to western and central China. The elliptic-ovate leaves, 3 to 5 inches long, are subcordate with closely serrulate margins, and the minute yellowish flowers are in racemes 4 to 8 inches long.

For previous introduction see 100097.

103439. THERMOPSIS ALPINA YUNNANENSIS Franch. Fabaceae.

No. D-280. A herbaceous perennial 6 to 12 inches high, with three broadly oblong hairy leaflets and bright-yellow flowers in terminal racemes. Native to Yunnan, southwestern China.

103440. CARYOPHYLLUS MALACCENSIS (L.) Stokes (*Eugenia malaccensis* L.). Myrtaceae. Ohia.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received July 7, 1933.

A tree with large glossy handsome leaves and masses of flowers an inch or more across, filled with hundreds of beautiful deep-rose or pink stamens. The crimson pear-shaped fruits of characteristic flavor are much esteemed in the West Indies for preserves.

For previous introduction see 99534.

103441. CINCHONA LEDGERIANA MOENS. Rubiaceae.

From India. Seeds purchased from R. B. & D. S. Pradham, The Chandra Nursery, Sikkim, Bengal. Received July 8, 1933.

A tree, native to the Andes, yielding a bark remarkably rich in quinine which crystallizes readily as quinine sulphate. The percentage of the other alkaloids present is relatively small. The bark of this species matures in the fifth or sixth year and does not increase its quinine content after that age.

For previous introduction see 100986.

103442 to 103444. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae. Apple.

From the Union of Soviet Socialist Republics. Scions presented by the Institute for Northern Fruit and Berry Growing, Koslov, through V. P. Alekseev, chief in charge of Foreign Plant Introduction, Leningrad. Received June 2, 1933. Numbered in July 1933.

Received under the following varietal names:

103442. No. 137714. *Antonovka*.

103443. No. 137717. *Bel Monastirskaja*.

103444. No. 137709. *Reinette Kolhasney*.

103445 to 103475.

From southwestern China and Tibet. Seeds collected by Dr. Joseph F. Rock, agricultural explorer for the University of California Botanical Garden Expedition, and presented through Dr. T. H. Goodspeed, Department of Botany, University of California, Berkeley, Calif. Received July 6, 1933.

103445. AJUGA sp. Menthaceae. Bugle.

No. 24362. Collected south of Dzampe Sheren in the Sagi Valley at 14,500 feet altitude. Flowers pale lavender to white, found growing in scree.

103446. AJUGA sp. Menthaceae. Bugle.

No. 24499. From the trail to Leirong, southwestern Muli Territory, Szechwan, on Mount Kanshu. White flowers found in alpine meadows at 14,000 feet altitude.

103445 to 103475—Continued.

103447. ILEX sp. Aquifoliaceae.

No. 24323. From Mutirong, Muli Territory, on the Mutikonka snow range, Szechwan, at 11,000 feet altitude. A plant between 3 and 4 feet high.

103448. ASTRAGALUS sp. Fabaceae. Milkvetch.

No. 24354. From the Sagi Valley, south of Dzampe Sheren, at 13,000 feet altitude. Purplish-blue flowers found in alpine meadows.

103449. CASSIOPE sp. Ericaceae.

No. 20934. A plant with white flowers found in alpine regions at 15,000 feet altitude.

103450 to 103452. CLINTONIA spp. Convolvulariaceae.

103450. CLINTONIA sp.

No. 21960. Blue flowers, collected in a canebrake between 11,000 and 12,000 feet altitude on Mount Kenichunpo.

103451. CLINTONIA sp.

No. 21962. Large single, deep-purple flowers found in alpine regions at 15,000 feet altitude on Mount Kenichunpo.

103452. CLINTONIA sp.

No. 24484. From the trail to Leirong, southwestern Muli, Szechwan, on Mount Kanshu; found in moss in a fir forest.

103453 to 103455. DIPLARCHE spp. Ericaceae.

103453. DIPLARCHE sp.

No. 21930. A shrub several inches high with pink flowers; found on grassy slopes at 14,000 feet altitude.

103454 and 103455. DIPLARCHE MULTIFLORA Hook. and Thoms.

A low alpine shrub, native to the Himalayan region between 11,000 and 14,000 feet altitude. The crowded leathery linear-oblong leaves are less than one-fourth inch long, and the small tubular white or pink flowers are borne in dense clusters of 8 to 20 at the ends of the branches.

For previous introduction see 99861.

103454. No. 22243. From Solola, Tsarung Province, Tibet; a shrub 1 inch high with white flowers; found in alpine regions at 14,000 feet altitude.

103455. No. 23274. From Mount Fuchuan, west of the Mekong-Salwin Divide. A shrub 2 to 6 inches high with white flowers, found on cliffs and crags.

103456. DISPORUM sp. Convallariaceae. Fairybells.

No. 21947. From Mount Kenichunpo. A shrub up to 3 feet high with white flowers; found in spruce forest at 12,000 feet altitude.

103457. HEDYSARUM sp. Fabaceae.

No. 22249. From Solola, Tsarung Province, Tibet; an herb with yellow flowers, found at 10,000 feet altitude.

103458. HEDYSARUM sp. Fabaceae.

No. 23450. From Mount Moting, west of Atuntze, Yunnan; an herb with pale-yellow flowers, found in alpine scree at 13,000 feet altitude.

103459. ILEX sp. Aquifoliaceae. Holly.

No. 22299. From Solola, Tsarung Province, Tibet; a shrub 5 feet high with red flowers; found in fir forest at 12,500 feet altitude.

103445 to 103475—Continued.

103480. *ILEX* sp. Aquifoliaceae. Holly.

No. 23654. From the mountains of Kaakerbo in southeastern Tibet, Tsarung, west of Dikerla and Yundshi; shrubs 4 to 6 feet high found in valleys at 10,000 feet altitude.

103461. *ERIOPHYTON WALLICHIANUM* Benth. Menthaceae.

No. 24532. From the western slopes of Mount Mitzuga, Muli Territory, southwestern Szechwan, at 15,000 feet altitude; a dwarf herbaceous perennial only 6 inches high, with the stems, leaves, and inflorescence densely covered with soft white wool a quarter of an inch long. The round toothed leaves, 1 to 2 inches across, are very closely set on the stem, and the large two-lipped yellow or pale-pink flowers, 1 to 2 inches long, are borne in axillary whorls. It is native to the Himalayan region.

For previous introduction see 93890.

103482. *NOTOCHAETE* sp. Menthaceae.

No. 24485. From Mount Kanshu on the Leirong trail in Muli Territory, southwestern Szechwan, at 13,000 feet altitude, in alpine meadows an herb whose leaves form large rosettes and whose flowers are lavender blue.

103468. *PHLOMIS ROTATA* Benth. Menthaceae. Jerusalem-sage.

No. 23363. From Mount Moting, west of Atuntze, Yunnan, in alpine meadows at 12,500 feet altitude; a stemless plant with a rosette of thick coriaceous, orbicular, crenate leaves 3 to 6 inches across, densely tomentose beneath, suddenly contracted into tomentose petioles half an inch broad. The small bluish-purple flowers, covered with white hairs, are in whorls on short peduncles, forming dense heads 1 to 2 inches in diameter in the center of the rosette of leaves. It is native to the alpine regions of the Himalayas.

For previous introduction see 93920.

103464. *PIPTANTHUS NEPALENSIS* (Hook.) Sweet. Fabaceae.

No. 24575. Collected between Muli and Kulu at 11,500 feet altitude; a shrub 2 to 11 feet high with palmately trifoliolate leaves made up of lanceolate leaflets 2 to 4 inches long; the yellow pea-shaped flowers, 1 inch long, are borne in dense racemes resembling bunches of grapes.

103465. *SALVIA* sp. Menthaceae. Sage.

No. 24479. From Mount Kanshu, on the trail to Leirong, southwestern Muli, Szechwan, at 10,000 feet altitude; an herb with purple flowers.

103466 to 103483. *SATUREJA* spp. Menthaceae. Savory.103466. *SATUREJA* sp.

No. 23433. Collected in alpine meadows at 12,000 feet altitude on Mount Moting, east of Atuntze, Yunnan; an herb with yellow flowers.

103467. *SATUREJA* sp.

No. 24480. Collected on the trail to Leirong, southwestern Muli Territory, Szechwan, on Mount Kanshu at 11,000 feet altitude; flowers not seen.

103463. *SATUREJA* sp.

No. 24514. Collected among rocks in meadows at 11,000 feet altitude on the western slopes of Mount Mitzuga, Muli Territory, southwestern Szechwan; an herb with purplish-pink flowers.

103445 to 103475—Continued.

103469. *SOPHORA DAVIDII* (Franch.) Komarov. Fabaceae.

No. 24549. Collected in scrub forest at 11,000 feet altitude on the western slopes of Mount Mitzuga, Muli Territory, southwestern Szechwan; a spiny shrub up to 6 feet high with slender spreading pubescent branchlets, native to central and western China. The pinnately compound leaves, 1 to 2 inches long, have 11 to 15 small elliptic leaflets, and the violet to white pea-shaped flowers, one-half inch long, are in racemes of 6 to 12 on short terminal branchlets.

For previous introduction see 99462.

103470. *THERMOPSIS INFLATA* Cambess. Fabaceae.

No. 23336. Found in scree on Mount Moting, east of Atuntze, Yunnan, at 15,000 feet altitude; a bushy perennial about 6 inches high with a widely creeping woody rootstock and small finely pubescent trifoliolate fleshy leaves. The yellow flowers, less than an inch long, are in small dense racemes. Native to the Himalayas between 15,000 and 17,000 feet altitude.

103471. *THERMOPSIS* sp. Fabaceae.

No. 24397. From Mount Siga, west of and overlooking the Yalung River, north of Karadi, at 13,500 feet altitude, in alpine meadows; an herb with red flowers.

103472 to 103474. *VACCINIUM* spp. Vacciniaceae. Blueberry.103472. *VACCINIUM* sp.

No. 22175. From alpine regions near the upper headwaters of the Eastern Irrawaddy, at 14,000 feet altitude; an herb 3 inches high with red flowers.

103473. *VACCINIUM* sp.

No. 22397. Collected at 13,500 feet altitude on Mount Wulila, east of Salwin and north of Alulaka, in southeastern Tibet; a shrub up to 6 feet high; flowers not seen.

103474. *VACCINIUM* sp.

No. 23479. From Mount Moting, west of Atuntze, Yunnan, at 14,500 feet altitude; a shrub over a foot high with red flowers.

103475. (Undetermined.)

No. 22020. From Mount Kenichunpo at Champutong near the Salwin River at 7,000 feet altitude; a handsome tree between 70 and 80 feet high with white flowers.

103476. *COLVILLEA RACEMOSA* Boj. Caesalpiniaceae.

From Tulear, Madagascar. Seeds presented by H. Henri Perrier de la Bathie, Academie Malgache, Tananarive. Received July 8, 1933.

A tree 30 to 40 feet high with pinnate leaves 3 feet long and brilliant orange-scarlet, curiously shaped flowers with 10 protruding stamens, borne in drooping racemes more than a foot long. The tree was discovered in Madagascar in 1824 and named for the Governor of Mauritius, Sir Charles Colville. In all probability it will stand no more frost than the *Poinciana*.

Like other leguminous trees, it is readily propagated from seeds.

For previous introduction see 98549.

103477. CAPSICUM ANNUUM L. Solanaceae. Common redpepper.

From China. Seeds presented by Rev. David C. Graham, through the Smithsonian Institution, Washington, D. C. Received July 11, 1933.

From Ningyuen Fu, Szechwan, at 6,000 feet altitude. A very large mild-flavored redpepper.

103478. PAROCHETUS COMMUNIS Buch-Ham. Fabaceae. Shamrock-pea.

From Ceylon. Seeds presented by the acting curator, Botanic Gardens, Hakgala, through the director of the Botanic Gardens, Paradeniya. Received July 11, 1933.

A half-hardy perennial trailing vine with shamrocklike leaves, each leaflet marked at the base with a brown crescent. The pea-shaped flowers, nearly an inch across, have cobalt-blue standards and pink wings. It is native to tropical Asia.

For previous introduction see 91295.

103479. COLPOTHRINAX WRIGHTII Griseb. and Wendl. Phoenicaceae. Palm.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received July 12, 1933.

A Cuban fan palm 40 feet high with a trunk swollen at the base.

For previous introduction see 90873.

103480 to 103485.

From Chile. Seeds and bulbs collected by Paul G. Ledig, Department of Research in Terrestrial Magnetism, Carnegie Institution of Washington, D. C. Received July 13, 1933.

103480. BERBERIS BUXIFOLIA Lam. Berberidaceae. Magellan barberry.

Calafati. From Magallanes. An erect bushy partially evergreen barberry 6 to 8 feet high, with hard leathery oblong-obovate leaves up to an inch long, small solitary amber-yellow flowers, and globular dark-purple fruits. Native to southern Chile, where it is cultivated for its edible fruits.

For previous introduction see 98032.

103481. DIGITALIS PURPUREA L. Scrophulariaceae. Common foxglove.

From Puerto Montt. A wild plant with flowers which vary from dark purple, lavender, pink to white.

103482. (Undetermined.)

Bulbs, collected at Puerto Montt, of a wild plant which resembles a gladiolus. The flowers are orange colored.

103483. LOTUS sp. Fabaceae.

From Puerto Montt. A yellow-flowered variety.

103484. LUPINUS sp. Fabaceae. Lupine.

From Ensenada, on Lake Llanquihue. A bushy perennial about 3 feet high, found on poor soil. The flowers are yellow.

103485. SISYRINCHIUM sp. Iridaceae. Blued-eyed-grass.

Collected at the Magallanes racetrack.

103486. ALLIUM SATIVUM L. Liliaceae. Garlic.

From India. Bulbs presented by P. G. Dani, superintendent, Ganeshkhind Botanical Gardens, Kirkee, Bombay Presidency. Received July 15, 1933.

103486—Continued.

A variety commonly cultivated in India. introduced for the use of Department specialists.

103487 to 103515.

From India. Seeds collected and presented by Walter Koelz, University of Michigan, Ann Arbor, Mich. Received July 8, 1933.

Nos. 103487 to 103489 were collected in Bhadwar, Kangra, Punjab, between 2,000 and 3,000 feet altitude.

103487. PHLOGACANTHUS THYRSIFLORUS (Roxb.) Nees. Acanthaceae.

No. 36. *Paskaka marpo.* A scraggly shrub, 8 feet high, with attractive leaves and spikes of lovely rose-madder flowers; found in deep glens along streams, but not in heavy shade. The Tibetans use this plant medicinally.

103488. BARLERIA sp. Acanthaceae.

No. 37. A shrub 5 feet high found in well-watered shady situations. The numerous flowers are royal blue.

103489. BAUHINIA VAHLII Wight and Arn. Caesalpiniaceae. Malu-creeper.

No. 31. A shrubby vine 40 feet high, with large velvety leaves a foot long and white flowers.

For previous introduction see 98803.

103490. BAUHINIA sp. Caesalpiniaceae.

No. 16. From Bajnath, Kangra, Punjab, at 3,000 feet altitude. A shrubby vine 30 feet high, flowers not seen.

Nos. 103491 and 103492 were collected in Bhadwar, Kangra, Punjab, between 2,000 and 3,000 feet altitude.

103491. CARISSA SPINAEUM L. Apocynaceae.

No. 30. A spiny suberect evergreen shrub 6 feet high, native to the lower slopes of the Himalayas in India. The elliptic-ovate leathery leaves are 1 to 2 inches long, and the white tubular fragrant flowers, one-half inch long, are abundantly borne in terminal cymes. The subglobose black fruits are one-fourth inch in diameter and are said to be edible. It is used for forage; it is also trimmed and used for hedges or specimen plants as ornamentals.

103492. CITRULLUS sp. Cucurbitaceae.

No. 7. *Seri perbu.* A Tibetan medicinal plant.

103493 to 103499. CITRUS spp. Rutaceae.

Nos. 103493 and 103494 were collected in Mandi State at 4,000 feet altitude.

103493. CITRUS AURANTIUM L. Seville orange.

No. 4. A sour orange, 3 inches in diameter, too sour for eating out of hand.

103494. CITRUS GRANDIS (L.) Osbeck. Grapefruit.

No. 5. A grapefruit, 6 inches in diameter, of good flavor, but with many seeds.

103495 and 103496. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Mandarin orange.

Collected in Bhadwar, Kangra, Punjab, at 2,000 feet altitude.

103495. No. 8. Sun apple. A yellow tangerine, not so acid as a lemon, and 3 inches in diameter.

103496. No. 9. Gomiri. A yellow tangerine, 2 inches in diameter, of acid flavor but still edible.

103497. CITRUS sp.

No. 6. From Mandi State at 4,000 feet altitude. Character of fruit unknown.

Nos. 103498 to 103501 were collected in Bhadwar, Kangra, Punjab, at 2,000 feet altitude.

103487 to 103515—Continued.

103498. CITRUS sp.

No. 10. *Kimbu*. A yellow to orange thin-skinned fruit, 3 inches in diameter.

103499. CITRUS sp.

No. 12. *Taranj*. A very acid, warty, thick-skinned citrus up to 4 inches in diameter.

103500. *EVOLVULUS ALSINOIDES* L. Convolvulaceae.

No. 32. A hairy perennial herb with wiry, often prostrate branches, native to southeastern Asia. The small entire leaves, 1 to 2 inches long, are very variable in shape, and the royal blue or white funnel-shaped flowers, up to one-half inch long, are borne abundantly for 6 to 8 weeks.

103501. *INDIGOFERA LINIFOLIA* (L. f.) Retz. Fabaceae. Indigo.

No. 38. A legume with fine stems 6 to 8 inches high, numerous small leaves, and beautiful salmon-pink flowers. It is considered one of the best pasture plants in the Ganges Valley.

For previous introduction see 97818.

103502. *KALANCHOE SPATHULATA* DC. Crassulaceae.

No. 1. From dry open slopes in Mandi State at 5,000 feet altitude. A succulent perennial up to 4 feet high, with the lower leaves spatulate crenate, 3 to 10 inches long, and the upper leaves, 3 to 4 inches long, very narrow and sometimes trifoliate. The clear yellow flowers are in flattish corymbs. It is native to tropical Asia and is said to be poisonous to cattle.

For previous introduction see 93093.

Nos. 103503 to 103505 were collected at Bhadwar, Kangra, Punjab, at 2,000 feet altitude.

103503. *MALLOTUS* sp. Euphorbiaceae.

No. 35. A shrub or small tree 20 feet high, found on semiarid slopes, with attractive foliage and edible red fruits that remain on the shrub for a long time.

103504. *FICUS* sp. Moraceae.

No. 17. A large attractive tree with late-ripening yellow fruits up to 3 inches long, rather insipid, with few seeds and the odor of peaches.

103505. *MORUS* sp. Moraceae. Mulberry.

No. 24. A large well-formed tree with red fruits, larger and later than the common mulberry.

103506. *PRUNUS* sp. Amygdalaceae.

No. 26. From Bajnath, Kangra, Punjab, at 3,000 feet altitude. A cherry tree up to 20 feet high found in open or semishaded situations; the large pink blossoms are followed by inedible fruits.

103507. *TRICHOSANTHES BRACTEATA* (Lam.) Voigt. Cucurbitaceae.

No. 2. From Banjar, Kulu, Punjab, at 5,000 feet altitude. An annual ornamental vine climbing to 30 feet, with broadly oval leaves, scabrous above, and deeply lobed; the globose fruits are red streaked with orange. Native to India.

For previous introduction see 66977.

Nos. 103508 to 103511 were collected at Bhadwar, Kangra, Punjab, at 2,000 feet altitude.

103508. *VALLARIS HEYNEI* Spreng. Apocynaceae. Burma vallaris.

No. 21. A climbing shrub with fragrant white flowers three-fourths of an inch wide, often cultivated as an ornamental in India where it is native. The milky juice is used medicinally for skin diseases and is also a possible source of rubber.

For previous introduction see 74225.

103487 to 103515—Continued.

103509. *WOODFORDIA FRUTICOSA* (L.) Kurz. Lythraceae.

No. 34. An attractive shrub up to 8 feet high, with long spreading branches, found on open abrupt slopes in sunny situations. During the wet season for 6 to 8 weeks it is covered with brilliant-red flowers about one-half inch long. The opposite leaves are lanceolate and 2 to 4 inches long, usually gray-hairy beneath.

103510. (Undetermined.)

No. 33. An orchid 18 inches high, found along streams.

103511. *OUGEINIA DALBERGOIDES* Benth. Fabaceae.

No. 29. An erect tree 20 to 40 feet high, with rather leathery, trifoliate leaves and small but copious pale-pink flowers in short racemes. Native to northern India.

103512. *LANTANA CAMARA* L. Verbenaceae.

No. 28. From Bajnath, Kangra, Punjab, at 3,000 feet altitude. A herbaceous plant 6 feet tall.

Nos. 103513 to 103515 were collected at Bhadwar, Kangra, Punjab, at 2,000 feet altitude.

103513. (Undetermined.)

No. 13. An exceedingly attractive shrub 7 feet high, found in half shade in forests or in open watered situations. The leaves are dark shining green, and the white to cream-colored flowers have a strangely pleasant fragrance.

103514. (Undetermined.)

No. 18. A shrubby vine up to 30 feet high, found in the open or in semishade. The leaves are attractive, and the showy white flowers have an exquisite fragrance.

103515. *DODONAEA VISCOSA* (L.) Jacq.

No. 19. A shrub 6 feet high, found on dry slopes.

103516. *ARTOCARPUS INTEGR* (Thunb.) L. Moraceae. Jackfruit.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received July 17, 1933.

Introduced for the use of Department specialists.

103517. *TRIFOLIUM PANORMITANUM* Presl. Fabaceae. Clover.

From Algeria. Seeds presented by Dr. R. Maire, Government General de l'Algerie Service Botanique, Algiers. Received July 17, 1933.

A clover, native to Algeria, which is said to be valuable for forage. Introduced for the use of Department specialists.

103518. *CALOTROPIS GIGANTEA* (L.) R. Br. Asclepiadaceae. Giant milkweed.

From India. Seeds presented by W. O'Brien, Hyderabad, Deccan. Received July 20, 1933.

An erect shrubby milkweed, 8 to 15 feet high, native to the Himalayas in India where it ascends to 3,000 feet. The obovate to wedge-shaped leaves are woolly beneath, and the rose-purple flowers are borne in umbels. Some parts of the plant are said to be of value as an insecticide.

103519 and 103520.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received July 24, 1933.

103519 and 103520—Continued.

103519. *ANNONA BULLATA* A. Rich. Annonaceae.

A tree, native to Cuba, which is related to the sugar-apple and appears to be unusually well adapted to dry soils. The aromatic leaves are used to season stews, and the small, scaly, ovoid-cordiform, scarcely edible fruits, which mature in July, are eaten by pigs.

For previous introduction see 102622.

103520. *MIMUSOPS ROXBURGEIANA* Wight. Sapotaceae.

A large tree, native to India, with broadly elliptic leathery leaves 3 to 4 inches long. The small white axillary flowers are followed by subglobose shining yellow fruits less than an inch in diameter.

103521. PONCIRUS TRIFOLIATA (L.) Raf. Rutaceae. Hardy orange.

From China. Seeds collected in Lushan, Kiangsi Province, and presented by A. N. Steward, University of Nanking. Received May 10, 1933.

Introduced for the use of Department specialists.

103522. HYPARRHENIA HIRTA PUBESCENS (Vis.) Simps. Poaceae.

From Algeria. Seeds presented by Dr. R. Maire, Government General de l'Algerie Service Botanique, Algiers. Received July 24, 1933.

Hemar. A coarse perennial caespitose grass, native to tropical and northern Africa, with fibrous roots and branching culms about 3 feet high. Introduced for the use of Department specialists.

103523 to 103526. NOTHOFAGUS spp. Fagaceae.

From New Zealand. Seeds presented by the director of forestry, State Forest Service, Wellington. Received July 25, 1933.

Seeds of trees native to New Zealand, collected at Whangamoia, Nelson, between 600 and 1,200 feet altitude.

103523. *NOTHOFAGUS FUSCA* (Hook. f.) Oerst.

An evergreen tree over 100 feet high, with zig-zag branchlets, broadly ovate, coarsely dentate leaves 1 to 2 inches long, and clusters of small nutlets resembling bechnuts.

For previous introduction see 77460.

103524. *NOTHOFAGUS MENZIESII* (Hook. f.) Oerst.

An evergreen tree which becomes 80 feet high and 5 feet in diameter, with white, silvery bark, roundish, doubly crenate, leathery leaves less than an inch long, and small fruits resembling bechnuts.

For previous introduction see 77461.

103525. *NOTHOFAGUS SOLANDRI* (Hook. f.) Oerst. Solander's beech.

A forest tree up to 100 feet high, with small leaves less than an inch long and fruits resembling small bechnuts. This is the most abundant of the New Zealand beeches, forming immense forests on the drier mountain slopes.

103526. *NOTHOFAGUS TRUNCATA* Hort.

Clinker beech. Said to be closely related to *Nothofagus fusca*.

103527 to 103553. TRITICUM spp. Poaceae. Wheat.

From Australia. Seeds presented by H. Wenzholz, director of plant breeding, Department of Agriculture, Sydney, New South Wales. Received July 25, 1933.

103527 to 103553—Continued.

A collection of wheats which have proved to have some resistance to leaf rust under Australian conditions. Introduced for the use of Department specialists.

103527 to 103551. *TRITICUM AESTIVUM* L. (*T. vulgare* Vill.). Common wheat.

103527. *Artigas.* C. 6193.

103528. *Bladette de Besplas.* C. 6148.

103529. *Bordeaux.* C. 6140.

103530. *Cedric.* C. 3909.

103531. *Currimp.* C. 4429.

103532. *Dindiloa.* C. 4990.

103533. *Dookie Gamma.* C. 6409.

103534. *Halif Inversible.* C. 4206.

103535. *Heine's Kolben.* C. 5137.

103536. *Hornblende.* C. 24.

103537. *Janetzki's.* C. 5138.

103538. *John Brown.* C. 12.

103539. *Kenya crossbred.* C. 6040.

103540. *Kenya crossbred.* C. 6042.

103541. *Kenya Governor.* C. 4989.

103542. *Pair.* C. 6147.

103543. *Potenziani.* C. 6136.

103544. *Preparateur Etienne.* C. 6141.

103545. *Reraf.* C. 35.

103546. *Roussillon.* C. 6143.

103547. *Russian (062).* C. 5247.

103548. *Saisette.* C. 6149.

103549. *S. H. J.* C. 3157.

103550. *Varonne.* C. 6146.

103551. *Warchief.* C. 3910.

103552 and 103553. *TRITICUM DURUM* Desf. Durum wheat.

103552. *Durity.* C. 6406.

103553. *Durity.* C. 6408.

103554 to 103579. CITRUS spp. Rutaceae.

From Morocco. Scions presented by H. Brayard, Directeur de la Station Experimentale, Marrakech. Received July 29, 1933.

Introduced for the use of Department specialists.

103554 to 103558. *CITRUS LIMONIA* Osbeck. Lemon.

103554. No. 15. *Bernia.*

103555. No. 16. *Corregia.*

103556. No. 17. *De Ba Ahmed.*

103557. No. 13. *Des 4 saisons.*

103558. No. 14. *Panache.*

103559 to 103563. *CITRUS NOBILIS DELICIOSA* (Ten.) Swingle. Mandarin orange.

103559. No. 2. *Commune.*

103560. No. 1. *De Ba Ahmed.*

103561. No. 3. *De Valence.*

103562. No. 5. *Naranjo mandarine.*

103563. No. 4. *Sanguine.*

103554 to 103579—Continued.

- 103564 to 103579. CITRUS SINENSIS (L.) Osbeck. Orange.
103564. No. 7. *Bernia*.
103565. No. 8. *Bresilienne*.
103566. No. 21. *Cadena punchosa*.
103567. No. 6. *Del Rio*.
103568. No. 24. *De Tetouan*.
103569. No. 23. *Fuya Monuda*.
103570. No. 11. *Indigene Gale-Gzel*.
103571. No. 9. *Indigene Petrighanai*.
103572. No. 22. *Magnum*.
103573. No. 12. *Ovale de Sangre*.
103574. No. 19. *Pajarito*.
103575. No. 20. *Precocede valence*.
103576. No. 26. *Royal*.
103577. No. 10. *Sanguine grosse ronde*.
103578. No. 25. *Torregrassa*.
103579. No. 18. *Viciedo*.

103580 to 103586.

From Arabia. Seeds presented by Mary C. Van Pelt, American mission, Kuwait. Received July 31, 1933.

Desert plants collected near Kuwait.

103580. ALIUM sp. Liliaceae.
103581. ASTRAGALUS sp. Fabaceae. Milkvetch.
103582. ASTRAGALUS sp. Fabaceae. Milkvetch.
103583. RESEDA sp. Resedaceae.
103584. SCABIOSA sp. Dipsacaceae.
103585. (Undetermined.)
103586. (Undetermined.)

103587 and 103588. PHASEOLUS LUNATUS L. Fabaceae. Lima bean.

From Java. Seeds presented by the chief of the Agricultural Institute, Buitenzorg, through K. A. Patton, American consul general, Batavia. Received July 28, 1933.

Kratok beans. Locally grown varieties introduced for the use of Department specialists.

103587. A form with red or pinkish seeds.
103588. A form with white seeds.

103589 and 103590.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received August 1, 1933.

103589. BANISTERIA LAURIFOLIA L. Malpighiaceae.
- A shrubby vine 15 to 20 feet long, native to tropical America. The oblong to obovate reticulate leaves are 2 to 6 inches long, and the small yellow flowers, borne in panicles, are followed by red-brown maplelike fruits.
103590. SOLANUM TUCUMANENSE Griseb. Solanaceae.

A subtropical shrub about 3 feet high, with stout hairy branches, oval-lanceolate leaves, and small white flowers in few-flowered cymes. Native to Tucumán, Argentina.

For previous introduction see 88259.

103591. MUSA PARADISIACA SAPIENTUM (L.) Kuntze. Musaceae. Banana.

From Palestine. Suckers presented by Aaron Khazanoff, Palestine Jewish Colonization Society Haifa. Received August 3, 1933.

Cavendish banana. A commercial variety, considered one of the best in Palestine. Introduced for the use of Department specialists.

103592 to 103597.

From Guatemala. Seeds presented by M. Pacheco, Director General of Agriculture. Received August 1, 1933.

A collection of locally grown seed.

103592. BARYXYLUM BRASILIENSE (L.) Pierre. Caesalpiniaceae.

A tree up to 80 feet high, with bipinnate leaves of small leaflets and axillary or terminal racemes of small yellow flowers. The orange-colored wood is elastic, tough, and durable and takes on a fine polish. The tree is native to Central America.

For previous introduction see 93579.

103593. ERYTHRINA sp. Fabaceae. Coraltree.
103594. RANDIA sp. Rubiaceae.

103595. SIDEROXYLON TEMPISQUE Pittier. Sapotaceae.

A large tree, glabrous throughout, native to El Salvador and Guatemala. The coriaceous elliptical leaves are 2 to 4 inches long on long petioles, and the small green-yellow flowers are in dense clusters on the old wood and are followed by ovoid 1-seeded fruits 1 to 2 inches long.

For previous introduction see 80702.

103596. TABEBUIA sp. Bignoniaceae.

103597. XIMENIA AMERICANA L. Olacaceae. False sandalwood.

A widely distributed tropical tree with clustered oblong-obtuse leaves, small yellow flowers, and yellow plumlike acid fruits enclosing a white nut.

For previous introduction see 80499.

103598. PRUNUS LAUROCERASUS L. Amygdalaceae. English cherry-laurel.

Collected in the Capitol Grounds, Washington, D. C., by Paul Russell, of the Bureau of Plant Industry. Received August 5, 1933.

Variety *schipkaensis*. A shrubby form with nearly entire leaves 2 to 5 inches long.

103599 to 103602.

From southern Madagascar. Seeds presented by Henri Perrier de la Bathie, Academie Malgache, Tananarive. Received August 2, 1933.

Nos. 103599 to 103601 were collected at Tulear.

103599. ALOE ANTANDROI (Decary) Perrier. Liliaceae.

An aloe from Madagascar, with 4 or 5 simple or sometimes branched stems up to 3 feet long, each bearing a rosette of 15 to 25 ascending recurved leaves 3 to 5 inches long. The reddish flowers, about 1 inch long, are in small spikes on scapes 2 to 4 feet high.

For previous introduction see 88869.

103600. CAPPARIS GRANDIDIERI Baill. Cappariaceae.

A tree 20 to 30 feet high, with linear-oblong leathery acuminate leaves 2 inches long and rather large rosy flowers. Native to Madagascar.

103599 to 103602—Continued.

103601. *KALANCHOE GRANDIDIERI* Baill. Crassulaceae.

An arborescent succulent plant, native to Madagascar, with a smooth stem 3 to 6 feet high and entire flat leaves 4 to 6 inches long. At the top of the stem a flower stalk, about 20 inches high, bears a panicle-like cluster of pendulous violet flowers.

For previous introduction see 77908.

103602. *POINCIANA ADANSONIODES* Hort. Caesalpiniaceae.

Collected in dry limestone soil at Manompetsa.

A name for which a place of publication and a description have not been found.

103603 to 103605.

From the Society Islands. Budsticks and plants presented by Harrison H. Smith, Papeari, Tahiti. Received August 8, 1933.

103603. *CITRUS GRANDIS* (L.) Osbeck. Rutaceae. **Grapefruit.**

A variety with green flesh.

103604. *CITRUS GRANDIS* (L.) Osbeck. Rutaceae. **Grapefruit.**

A variety with pink flesh of excellent quality, originally from Sarawak.

103605. *GARDENIA TAITENSIS* DC. Rubiaceae.

Tiare Tahiti. A spineless tropical shrub with opposite obovate leaves and fragrant white flowers, borne singly in the uppermost leaf axils. It is native to the Society Islands, where it grows to perfection on the low atoll islands.

103606 to 103623.

From Tonkin, Indo-China. Seeds grown at the Agricultural Station de Phu-Ho, and presented through the director of the Institut National d'Agronomie Coloniale, Nogent-sur-Marne, France. Received August 3, 1933.

103606 to 103609. *CASSIA* spp. Caesalpiniaceae.

103606. *CASSIA ABSUS* L.

An erect annual tropical legume, about 2 feet high, with small red-yellow flowers. It is native to India and Egypt.

For previous introduction see 93765.

103607. *CASSIA HIRSUTA* L.

An erect annual herb covered with long hairs. The compound leaves are made up of 3 to 5 pairs of ovate leaflets 2 to 3 inches long, and the yellow flowers are borne in axillary racemes. It is native to Brazil.

For previous introduction see 90535.

103608. *CASSIA MIMOSOIDES* L.

A sensitive plant, with pea-shaped flowers, which does well in poor dry soil.

For previous introduction see 90546.

103609. *CASSIA PATELLARIA* DC.

A subshrubby perennial with densely pubescent stems 2 to 3 feet high, native to tropical America. The small oblong-linear leaflets are borne in 10 to 25 pairs, and the inconspicuous flowers are in peduncled axillary clusters.

103610. *CROTALARIA CHINENSIS* L. Fabaceae.

A perennial herb 1 to 2 feet high, native to southeastern Asia. The ascending branches are clothed with long brown silky hairs; the simple linear to oblanceolate leaves are 1 to 2 inches long; and the inconspicuous flowers are in densely capitate terminal clusters of 3 to 6.

103606 to 103623—Continued.

103611. *CROTALARIA UNCINELLA* Lam. Fabaceae.

A much-branched shrub over a foot high, with slender branches and terminate leaves composed of oval-obtuse leaflets. The small flowers, in terminal and axillary racemes, are succeeded by small round pea-shaped pods. Native to the island of Bourbon.

103612. *FLEMINGIA CONGESTA* Roxb. Fabaceae.

An erect shrub 4 to 6 feet high, with angular silky trifoliate, native to southeastern Asia. The trifoliate leaves have broadly lanceolate leaflets 4 to 6 inches long, and the small flowers, covered by the shining pale-brown silky calyx, are in dense oblong racemes 2 inches long.

For previous introduction see 102760.

103613 to 103622. *MEIBOMIA* spp. Fabaceae.

103613. *MEIBOMIA CAPITATA* (Burm.) Kuntze (*Desmodium capitatum* DC.).

A subshrubby shrub native to southeastern Asia. The somewhat leathery trifoliate leaves have obovate-cuneate leaflets 1 to 2 inches long, green above and covered beneath with silky white hairs. The inconspicuous flowers are borne in dense headlike racemes 1 to 2 inches long.

103614. *MEIBOMIA CEPHALOTES* (Roxb.) Kuntze (*Desmodium cephalotes* Wall.).

A tall shrub with densely silky, acutely angled, zigzag branches and compact umbels of deep-red flowers. It is native to the tropical zone of the eastern Himalayas. Cattle and goats are said to be fond of the leaves.

For previous introduction see 86682.

103615. *MEIBOMIA ELEGANS* (Lour.) Kuntze.

A low shrub or herbaceous perennial with villose stems and compound leaves consisting of three ovate-obtuse leaflets, silky hairy beneath, and 2 to 4 inches long. The small flowers, in dense heads or umbels, are followed by flat three-jointed pods with rounded joints. It is native to Hong Kong.

103616. *MEIBOMIA GANGETICA* (L.) Kuntze (*Desmodium gangeticum* DC.).

A woody herbaceous plant, more or less erect, and 3 to 4 feet high, with oblong leaflets 3 to 6 inches long and copious lateral and terminal flower clusters. Native to the Himalayas up to 5,000 feet, and distributed throughout the East Indies and tropical Africa.

For previous introduction see 65587.

103617. *MEIBOMIA HETEROCARPA* (L.) Kuntze (*Desmodium polycarpum* DC.).

An erect or suberect undershrub found throughout the Himalayas and Burma at altitudes up to 5,000 feet. All of the shrubby species of this genus are said to contain good fibers, used in some cases for papermaking.

For previous introduction see 99742.

103618. *MEIBOMIA LASTOCARPA* (Beauv.) Kuntze (*Desmodium latifolium* DC.).

An erect undershrub 3 to 6 feet high, native to southeastern Asia. The branches are densely clothed with short brown pubescence; the single leathery leaflet, 3 to 6 inches long, is ovate with obscurely undulate margins; and the dense spike-like racemes of small flowers are 2 to 6 inches long.

103619. *MEIBOMIA MAURITIANA* (Willd.) Kuntze (*Desmodium mauritianum* DC.).

A much-branched perennial herb 1 to 3 feet high, native to the island of Mauritius. The trifoliate leaves have firm obovate leaflets 1 inch long, and the small red flowers are in racemes 2 to 3 inches long.

103606 to 103623—Continued.

103620. *MEIBOMIA PULCHELLA* (L.) Kuntze
(*Desmodium pulchellum* Benth.).

An erect hairy shrub with trifoliolate leaves and spikelike clusters of red flowers. It is native to southeastern Asia.

103621. *MEIBOMIA RETICULATA* (Champ.) Kuntze (*Desmodium reticulatum* Champ.).

A tall shrub with compound leaves composed of oval, bright-green leaflets an inch long and small reddish flowers in terminal racemes 6 inches long. Native to Hong Kong and allied to *Meibomia concinna*.

103622. *MEIBOMIA TRIQUETRA* (L.) Kuntze (*Desmodium triquetrum* DC.).

A handsome shrub with triangular branches, stiff leathery leaflets, and long axillary and terminal racemes of red flowers. It is found in most places in eastern and southern India, and also in China and the Philippines.

103623. *URARIA CRINITA* (L.) Desv. Fabaceae.

An erect somewhat shrubby perennial 3 to 6 feet high, native to southeastern Asia. The compound leaves are made up of 3 to 7 leathery oblong leaflets 4 to 6 inches long, and the small purple flowers are borne in dense cylindrical racemes 12 to 15 inches long and nearly 2 inches in diameter.

103624. *CARPOTROCHE BRASILIENSIS* (Raddi) Endl. Flacourtiaceae.
Sapucainha.

From Pernambuco, Brazil. Seeds collected by Rev. Bento Pickel, and presented by Father Hugh O'Neill, of the Catholic University, Washington, D. C. Received August 8, 1933.

A tropical tree 30 to 50 feet high, with oblong leaves about 4 inches long and few-flowered racemes of small white flowers. The fruits are about 4 inches in diameter. A sirup said to cure leprosy and an ointment used for skin affections are prepared from the seeds.

For previous introduction see 95500.

103625. *GOSSYPIUM BARBADENSE* L.
Malvaceae. **Sea-island cotton.**

From the South Sea Islands. Seeds presented by Earl F. Wallace. Received August 5, 1933.

Introduced for the use of Department specialists.

103626. *LICUALA* sp. Phoenicaceae.
Palm.

From Annam, Indo-China. Seeds presented by M. Poilane, Institut des Recherches Agronomiques de l'Indochine, Division de Botanique Forestiere, Saigon. Received August 12, 1933.

The licalas are rather low palms, sometimes almost stemless, with terminal fan-shaped leaves.

103627. *ALLIUM SATIVUM* L. Liliaceae.
Garlic.

From China. Bulblets presented by T. Y. Wang, head of the horticultural department of the Sun Yat Sen Tomb and Memorial Park Commission. Received August 15, 1933.

Introduced for the use of Department specialists.

103628 and 103629.

From Arabia. Seeds presented by K. S. Twitchell, New York City, through William A. Taylor, Chief, Bureau of Plant Industry. Received August 15, 1933.

103628 and 103629—Continued.

103628. *CASSIA ATRICULATA* L. Caesalpiniaceae.

A tall shrub native to southeastern Asia. The compound leaves, 3 to 4 inches long, are made up of 16 to 24 rigid leathery ovate-oblong leaflets about 1 inch long, covered beneath with fine gray down. The bright-yellow flowers, 1 inch long, are borne in large racemes.

103629. *CRACCA VILLOSA PURPUREA* (L.) Kuntze.

A purple-flowered, herbaceous perennial of low spreading habit which is native to tropical Africa. The plant is useful as a cover crop and also as a green manure.

For previous introduction see 97871.

103630. *URGINEA INDICA* (Roxb.) Kunth. Liliaceae.

From India. Seeds presented by the forest botanist, Forest Research Institute, Dehra Dun. Received August 16, 1933.

A bulbous perennial 12 to 18 inches high, native to India and tropical America. The flower scape, appearing before the linear leaves, bears a raceme 6 to 12 inches long of drooping campanulate flowers an inch long, greenish white with green nerves.

103631 to 103645. *ALLIUM* spp. Liliaceae.

From Manchuria. Seeds purchased from L. Ptitin, Harbin. Received August 16, 1933.

A collection of locally grown alliums, introduced for the use of Department specialists.

103631 to 103642. *ALLIUM CEPA* L. **Onion.**

103643 and 103644. *ALLIUM PORRUM* L. **Leek.**

103645. *ALLIUM SCHOENOPRASUM* L. **Chives.**

103646 to 103650. *IPOMOEA BATATAS* (L.) Poir. Convolvulaceae.

Sweetpotato.

From Australia. Tubers presented by Dr. H. Wenzel, Department of Agriculture, Sydney, New South Wales. Received August 19, 1933.

A collection of varieties introduced for the use of Department specialists.

103646. *Ashburn.*

103647. *Director.*

103648. *Farmer's Special.*

103649. *Rosella.*

103650. *Wannop.*

103651. *VIGNA SINENSIS* (Torner) Savi.
Fabaceae. **Cowpea.**

From Australia. Seeds presented by Dr. Alexander McTaggart, senior plant introduction officer, Division of Plant Industry, Canberra. Received August 18, 1933.

Giant. A commercial variety from the Cairns district, Queensland.

103652 and 103653. *JUGLANS REGIA* L.
Juglandaceae. **Persian walnut.**

From Australia. Trees presented by L. J. Hicks, Highbury East, South Australia. Received August 21, 1933.

Australian varieties, introduced for the use of Department specialists.

103652. *Freshford Gem.*

103653. *Kelvin.*

103654. EUCALYPTUS GOMPHOCEPHALA DC. Myrtaceae. Tooart.

From Australia. Seeds purchased from Stinton & Son, Geelong, Victoria. Received August 19, 1933.

A tree, native to Australia, of fairly rapid growth, which reaches a height of 100 feet. The very heavy, tough and strong wood is used for shipbuilding, bridges, and docks. This species will endure but little frost and prefers limestone soils.

For previous introduction see 48989.

103655. CANAVALIA RUSIOSPERMA Urban. Fabaceae.

From Haiti. Seeds presented by H. D. Barker, Service National de la Production Agricole et de l'Enseignement Rural, Port-au-Prince. Received August 15, 1933.

Quary A high-climbing herbaceous perennial, sometimes 4 inches in diameter at the base, native to the West Indies. The trifoliolate leaves have ovate leaflets 4 inches long; the red flowers, an inch across, are borne in racemes 10 inches long; and the beanlike pods, 10 inches long, enclose bright crimson suborbicular seeds nearly an inch in diameter.

103656. AVENA BYZANTINA Koch. Poaceae. Oats.

From Argentina. Seeds presented by the División de Estaciones Experimentales Dirección de Agricultura, Ministerio de Agricultura, Buenos Aires. Received August 24, 1933.

A local variety introduced for the use of Department specialists.

103657 to 103664. AVENA SATIVA L. Poaceae. Oats.

From France. Seeds presented by Florimond Despres, Capelle par Templeuve (Nord). Received August 24, 1933.

A collection of oat varieties introduced for the use of Department specialists.

103657. *Grugonnaise*.

103658. *Grise de Beauce*.

103659. *Ligowo*.

103660. *Logowo Bril*.

103661. *Pluie d'Or*.

103662. *Pluie d'Or II*.

103663. *S. F.*

103664. *Von Lockow*.

103665 to 103687. AVENA spp. Poaceae.

From Australia. Seeds presented by the manager of the Wagga Experiment Farm, Bomen, New South Wales. Received August 24, 1933.

A collection of named varieties, introduced for the use of Department specialists.

103665 to 103670. *AVENA BYZANTINA Koch.*

103665. *Amarilla I.* W 812.

103666. *Amarilla II.* W 813.

103667. *Argolis.* W 1038.

103668. *Baldwin.* W 917.

103669. *Cyprus White.* W 985.

103670. *Romano 6.* W 974.

103671 to 103683. *AVENA SATIVA L.*

103671. *Adonis.* W 1146.

103672. *Advocate.* W 1046.

103665 to 103687—Continued.

103673. *Barwon.* W 1224.

103674. *Binda.* W 1035.

103675. *Bradley.* W 884.

103676. *Burruga.*

103677. *Floresti.* W 803.

103678. *Hiver III.* W 918.

103679. *Hjarn.* W 1635.

103680. *Stark's Hooiemaker.* W 896.

103681. *Westdale.* W 1138.

103682. *Weston.* W 1012.

103683. *Weston.* W 1531.

103684 to 103687. *AVENA spp.*

103684. *Bharia.* W 802.

103685. *Imbros Island.* W 1655.

103686. *Saisine.* W 1651.

103687. *Winton.* W 900.

103688 to 103694. TRIFOLIUM RESUPINATUM L. Fabaceae.

Persian clover.

From the Union of Soviet Socialist Republics. Seeds presented by Dr. A. I. Belov, Central Plant Breeding Station, Tashkent, Turkistan. Received August 21, 1933.

A collection of widely varying strains, introduced for the use of Department specialists.

Native name *Shabdar*.

103688. No. 2320. From Gijduran, near Bokhara, Turkistan.

103689. No. 3172. From the District of Saman, northern Persia.

103690. No. 3173. From the District of Damghan, northern Persia.

103691. No. 3175. From the District of Tsafahan, central Persia.

103692. No. 3176. From Qum, central Persia.

103693. No. 3187. From Shahrud, District of Damghan, northern Persia.

103694. No. 2743. From northern Afghanistan.

103695 and 103696. ALLIUM SATIVUM L. Liliaceae. Garlic.

From Burma, India. Bulbs presented by A. McLean, deputy director of agriculture, East Central Circle, Pynmana. Received August 24, 1933.

103695. "Indian type", a garlic with smooth bulbs, presented by D. Rind, economic botanist, Agricultural College, Mandalay, at the request of Mr. McLean.

103696. *Shan garlic*.

103697. GLADIOLUS sp. Iridaceae.

From Portugal. Seeds presented by John Gossweiler, Loanda, Angola, Africa. Received August 25, 1933.

103698. ILEX PARAGUARIENSIS St. Hil. Aquifoliaceae. Yerba maté.

From Paraguay. Seeds presented by Dr. C. Fiebrig, director, Botanical Garden, Asuncion. Received August 23, 1933.

A tender evergreen Paraguayan holly, the leaves of which are dried and used to make a beverage called maté, or Paraguay tea.

For previous introduction see 101516.

103699. UVARIA RUFA (Dunal) Blume.
Annonaceae.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received August 23, 1933.

A much-branched shrub, native to Java, with a stem 4 to 6 inches in diameter and alternate, elliptic-oblong, acute or obtuse leaves 2 to 5 inches long. The solitary flowers are purplish red and about 1 inch wide. The oblong kidney-shaped fruits, about 2 inches long, are in bunches of 18 to 20 with scant whitish flesh which is juicy, aromatic, and subacid without a trace of sugar; they contain many seeds.

For previous introduction see 90938.

103700 to 103714.

From India. Seeds presented by D. N. Mahta, economic botanist, Nagpur, Central Provinces. Received August 24, 1933.

A collection of locally grown vegetables introduced for the use of Department specialists.

103700. ALLIUM CEPA L. Liliaceae. **Onion.**

103701. ALLIUM SATIVUM L. Liliaceae. **Garlic.**

103702. CUCUMIS SATIVUS L. Cucurbitaceae.
Cucumber.

A long green variety.

103703. CUCUMIS SATIVUS L. Cucurbitaceae.
Cucumber.

A long white variety.

103704. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae.
Cushaw.

103705. LAGENARIA LEUCANTHA (Duchesne) Rusby (*L. vulgaris* Seringe). Cucurbitaceae.
Calabash gourd.

103706. LUFFA ACUTANGULA (L.) Roxb. Cucurbitaceae.
Singkwa towelgourd.

Bottle gourd.

103707. LUFFA CYLINDRICA (L.) Roemer. Cucurbitaceae.
Suakwa towelgourd.

Sponge gourd.

103708. MOMORDICA CHARANTIA L. Cucurbitaceae.
Balsam-pear.

Bitter gourd.

103709 and 103710. PISUM SATIVUM L. Fabaceae.
Pea.

103711. SOLANUM MELONGENA L. Solanaceae.
Eggplant.

A purple-fruited variety.

103712. SOLANUM MELONGENA L. Solanaceae.
Eggplant.

A white-fruited variety.

103713. SPINACIA OLERACEA L. Chenopodiaceae.
Common spinach.

103714. TRICHOSANTHES ANGUINA L. Cucurbitaceae.
Snakegourd.

103715 to 103721. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From the Philippine Islands. Cuttings presented by the Philippine Sugar Association, Manila. Received September 2, 1933.

Introduced for the use of Department specialists.

103715. PSA 15. **103719. PSA 35.**

103716. PSA 18. **103720. PSA 36.**

103717. PSA 19. **103721. PSA 37.**

103718. PSA 24.

103722. PHYSALIS PERUVIANA L. Solanaceae. **Peruvian groundcherry.**

From Mexico. Seeds presented by A. C. Baker, principal entomologist, United States Department of Agriculture, Bureau of Entomology, Mexico City. Received August 31, 1933.

Cape gooseberry or *husk tomato*. A shrub native to tropical and temperate America, but widely naturalized in many countries of the warmer zones. It reaches a height of about 4 feet, the fruits are oval or nearly round, up to an inch in length, and deep yellow when fully ripe. They are used for preserving, but are too acid to be eaten out of hand.

For previous introduction see 91043.

103723. PRUNUS sp. Amygdalaceae.

From the Union of Soviet Socialist Republics. Seeds presented by Vale Lichagov, horticulturist, Sochi, Caucasus. Received September 2, 1933.

A strong and rapid-growing wild cherry, collected in the middle mountain zone of Sochi District. It is well adapted for growing in heavy soil in a humid climate.

103724 to 103732. Phoenicaceae. Palm.

From Ceylon. Seeds presented by T. H. Parsons, curator, Royal Botanic Garden, Peradeniya. Received August 31, 1933.

103724. ARCHONTOPHOENIX ALEXANDRAE (F. Muell.) Wendl. and Drude.

A pinnate-leaved palm 70 to 80 feet high, with leaves several feet long and lanceolate, usually entire, leaflets 1 to 2 feet long and whitish beneath. The yellow-green flowers are borne in a cluster about 1 foot long and are followed by small round dry fruits. It is native to Queensland, Australia.

For previous introduction see 98484.

103725. BACTRIS PALLIDISPINA Mart.

A slender palm, 10 to 20 feet high, with the stems in clusters, native to Brazil. The pinnately divided leaves, made up of linear-lanceolate segments 8 to 12 inches long, are 5 to 9 feet long, and the petioles are thickly covered with black-tipped yellow spines 1 to 3 inches long. The yellow-green flowers are followed by green ovoid fruits 1 to 2 inches in diameter.

103726. CALYPTROGYNE OCCIDENTALIS (Swartz) G. Maza. (*C. swartzii* Becc.).

A beautiful and rare palm with a straight smooth stem, sometimes reaching a height of 50 feet. The pinnate leaves are from 8 to 12 feet long.

For previous introduction see 101257.

103727. CARYOTA MITIS Lour.

A palm, native to the Malay Peninsula, 15 to 20 feet high, which sends up suckers from the base. The pinnate leaves, 6 to 9 feet long, are divided into wedge-shaped segments, and the globular purple fruits are about the size of a cherry.

For previous introduction see 103159.

103728. DIDYMSPERMA PORPHYROCARPON (Mart.) Wendl. and Drude.

A reedlike palm 3 to 6 feet high, native to Java. The pinnately divided leaves, 5 to 8 feet long, are glaucous beneath and are made up of narrowly oblong segments 6 inches long, often 2- or 3-lobed at the tip. The oblong purple fruits are about 1 inch long.

103729. LOXOCOCCUS RUPICOLA (Thwaites) Wendl. and Drude.

A pinnate-leaved palm 20 to 40 feet high, native to Ceylon, where it grows between 1,000 to 5,000 feet altitude. The leaves are 5 to 6 feet long, and the blood-red flowers are followed by globular fruits about 1 inch in diameter.

For previous introduction see 30743.

103724 to 103732—Continued.

103730. *ONGOSPERMA FASCICULATUM* Thwaites.

The *Katu-kitul* palm of Indo-Malaya is one of the graceful cluster palms which make magnificent groups 40 to 60 feet high in the Peradeniya Gardens. The stems are spiny, making it unsuitable for small gardens, but it is useful for large parks.

For previous introduction see 94090.

103731. *PHOENICOPHORUM BORSIGIANUM* (Koch) Stuntz.

This noble palm, famous for its beauty, is native to the Seychelles Islands. The mature palm is wholly destitute of spines, whereas in the young state the deep orange-red petioles are clothed with black needlelike spines 1 to 3 inches long. The young leaves are orange beneath and mottled with orange spots above. The difference between the young and the mature plants is so great that the uninitiated would consider them different species. The flower spike is from 3 to 6 feet long, divided into numerous slender branches, swollen at the base and densely covered above with yellow flowers, each about one-fourth of an inch in diameter.

For previous introduction see 103002.

103732. *PHOENIX ZEYLANICA* (Trimen.) Ceylon date palm.

A pinnate-leaved palm, native to Ceylon, with a stem 8 to 20 feet high and a crown of rather short leaves made up of numerous linear-lanceolate, light-green leaflets 7 to 10 inches long. The obovoid-oblong, violet-blue, edible fruits are one-half inch long.

For previous introduction see 93325.

103733. *EUPHORBIA* sp. *Euphorbia-ceae.* Spurge.

From India. Seeds collected on the northern slopes of the Wyndhian Mountains, Jhansi Division, United Provinces, and presented by Dr. Leon Croizat, New York, N. Y. Received September 5, 1933.

Tuhahr. Of possible value as a rubber plant.

103734. *CARYOTA CUMINGII* Lodd. *Palm.* *Phoenicaceae.*

From Cuba. Seedlings presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received September 5, 1933.

A palm, native to the Philippine Islands, with a tall, stout, spineless ringed trunk about 20 feet high and a few spreading bipinnate leaves and small globose fruits.

For previous introduction see 72950.

103735 to 103738. *MACADAMIA TERNI-FOLIA* F. Muell. *Proteaceae.* *Queensland-nut.*

From Australia. Seeds presented by S. M. Greer, Murwillumbah, Tweed Rio, New South Wales. Received September 5, 1933.

An evergreen tree up to 50 feet high, native to shady jungles in the eastern part of Australia where the soil is rich and the annual rainfall is over 60 inches. It is cultivated for its edible nuts, which have sweet white flesh with the flavor of chestnuts, incased in a shell that is typically very hard.

103735. A variety with a thin shell.

103736. An everbearing variety.

103737. *Mammoth.*

103738. A variety with a medium hard shell and large nuts.

103739. *GUILIELMA UTILIS* Oerst. *Phoenicaceae.* *Pejibaye.*

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received September 5, 1933.

A pinnate-leaved palm, native to tropical regions of the Western Hemisphere. Its straight slender stem, about 6 inches in diameter, becomes 60 feet high and is armed from the ground upward with stiff, very sharp, black spines about 2 inches long. The racemes, 18 to 24 inches long, of small sessile yellow-white flowers are produced from the trunk of the palm immediately below or among the lower leaves and are protected by erect spathes. When the fruit is mature the raceme weighs over 25 pounds, and often 5 or 6 such racemes are produced in a single crop. The individual fruits are conical or ovoid, vary from 1 to 2 inches in length, and have dry mealy flesh of a pale-orange or yellow color. It is one of the important food plants of the Tropics.

For previous introduction see 65054.

103740 and 103741.

From Arizona. Seeds presented by the Boyce Thompson Southwestern Arboretum, Superior, through F. J. Crider. Received April 9, 1932. Numbered in September 1934.

103740. *FEROCACTUS WISLIZENI* (Englm.) Britt. and Rose. *Cactaceae.*

A large cactus, at first globular, but becoming cylindrical and finally reaching a height of over 5 feet when old. The numerous ribs, often 25 or more, are 1¼ inches high, beset with brown-felted areoles from which arise subulate, strongly hooked red or white spines about 2 inches long. The yellow or sometimes red flowers are over 2 inches long, and the oblong yellow fruits are nearly as long as the flowers. Native to northern Mexico and the southwestern United States.

103741. *NEOMAMMILLARIA MACDOUGALII* (Rose) Britt. and Rose. *Cactaceae.*

A flattened globular cactus 3 to 4 inches in diameter, with a carrot-shaped root. The axils of the flattened, somewhat-angled tubercles often bear long white wool, and from the tops of the tubercles appear 10 to 12 radial spines, white or yellowish, and about one-half inch long. The cream-colored flowers are an inch or more long and are followed by club-shaped red fruits. Native to southeastern Arizona.

103742. *BLIGHIA SAPIDA* Koen. *Sapin-daceae.* *Akee.*

From Trinidad. Seeds presented by H. Bruins-Lich, Department of Agriculture. Received September 11, 1933.

A tree, native to the Guinea Coast of Africa, which has become naturalized in the West Indies. The triangular bright-red capsule contains shiny black seeds, each partly surrounded by a yellow fleshy aril. The fruit is said to be poisonous when immature or overripe, but the fleshy portion (aril) is eaten after being boiled or fried.

For previous introduction see 102278.

103743. *COLUTEA ORIENTALIS* Mill. *Fabaceae.* *Oriental bladder-senna.*

From the Union of Soviet Socialist Republics. Seeds presented by the director of the Tiflis Botanic Garden, Tiflis, Georgia. Received January 7, 1932. Numbered in September 1933.

A shrub 6 to 8 feet high, with pubescent branchlets, native to the Caucasus region. The compound leaves are made up of 7 to 11 broadly ovate leaflets 4 to 6 inches long. The pea-shaped, red-brown flowers, in racemes of 2 to 5, are followed by bladdery pods 1 to 2 inches long, usually suffused with violet purple.

103744 to 103746. PRUNUS spp. Amygdalaceae.

From Palestine. Seeds presented by Asaph Grasovsky, Department of Agriculture and Forests, American colony, Jerusalem. Received September 13, 1933.

Locally developed varieties, introduced for the use of Department specialists.

103744. PRUNUS ARMENIACA L. Apricot.

Clabisee. From the horticultural station at Jerusalem.

103745. PRUNUS sp.

Karasia. A plum grown in the village of Wallageh.

103746. PRUNUS sp.

Sweedah. A plum from the village of Artess.

103747 and 103748.

From Straits Settlements. Seeds presented by the assistant curator, Botanic Gardens, Singapore. Received September 13, 1933.

103747. LIVISTONA SUBGLOBOSA (Hassk.) Mart. Palm.

A medium-sized palm, native to Java, with palmately divided leaves having segments 10 to 12 inches long which are two-parted nearly to the base into linear pendulous lobes. The small, very dark violet fruits, one-half inch in diameter, are borne in a panicle on a spadix about a foot long.

For previous introduction see 103166.

103748. PALAQUIUM GUTTA (Hook.) Burck. Sapotaceae. Gutta-percha tree.

A tree up to 100 feet high, native to the Malay Peninsula, and a source of gutta-percha. The oblanceolate coriaceous leaves, 3 to 5 inches long, are dark green above and golden-coppery beneath. The small white flowers, in clusters of 3 to 5 in the axils or on the bare parts of the branches, are an inch long.

103749 GARCINIA CORNEA L. Clusiaceae.

From the Canal Zone. Seeds presented by J. E. Higgins, director, Canal Zone Experiment Gardens, Summit. Received September 18, 1933.

A small erect tree native to the Malay Archipelago. The oblong or oblong-lanceolate leathery shining leaves are 4 to 6 inches long, and the roundish, dull rusty yellow fruits are the size of a small orange.

103750 to 103765.

From the Union of South Africa. Trees purchased from H. F. Kothe, Edendale, Natal. Received September 19, 1933.

Introduced under the following varietal names for the use of Department specialists.

103750 to 103753. AMYGDALUS COMMUNIS L. Amygdalaceae. Almond.

103750. Britz.

103751. Harriott Seedling.

103752. Mission Princess.

103753. Rosens Lewelling.

103754 to 103759. AMYGDALUS PERSICA L. Amygdalaceae. Peach.

103754. Alexander Jewell.

103755. Bells November.

103756. Hertzog.

103750 to 103765—Continued.

103757. Killiekrankie.

103758. Schoongezicht.

103759. Van Rensburg Late.

103760 to 103764. MALUS SYLVESTRIS Mill. Malaceae. Apple.

103760. Beyers.

103761. Eccleville Pippin.

103762. Rokewood.

103763. Statesman.

103764. Tulus.

103765. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.

Alpha.

103766. THALICTRUM sp. Ranunculaceae. Meadowrue.

From Sitkalidag Island, Alaska. Seeds purchased from Walter J. Eyerdam, Seattle, Wash. Received December 5, 1931. Numbered in 1933.

103767. BUMELIA sp. Sapotaceae.

From British Guiana. Seeds presented by J. G. Myers, Rupununi Savannas, through David Fairchild. Received September 15, 1933.

Wichabai tree. A small tropical tree with edible black berries nearly as large as a cherry and green delicious pulp resembling that of a plum. The latex is sticky.

103768. EUONYMUS ALATUS (Thunb.) Rupr. Celastraceae.

Winged euonymus.

From Zenkoku, Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 9, 1929. Numbered in September 1933.

A spreading shrub up to 5 feet high, with corky branches, sharply toothed elliptic leaves about 2 inches long, and clusters of yellow flowers followed by small two-seeded bright-red fruits.

103769. GORDONIA LASIANTHUS Ellis. Theaceae. Loblolly-bay.

From England. Plants purchased from V. E. Gauntlett & Co., Chiddingfold, Surrey. Received September 23, 1933.

An evergreen tree up to 60 feet high, but usually shrubby in cultivation. The obovate-lanceolate leaves, 4 to 6 inches long, have crenate margins, and the large white flowers, appearing in July and August, are 2 to 3 inches across. Native to the southeastern United States.

103770. (Undetermined.)

From Annam, Indo-China. Seeds presented by M. Poilane, Institut des Recherches Agronomiques de l'Indochine, Division de Botanique Forestiere, Saigon. Received August 12, 1933.

A shrub that may have value as a stock plant for *Coffea arabica*.

103771. STRYCHNOS SPINOSA Lam. Loganiaceae. Kaffir-orange.

From Madagascar. Seeds presented by Henri Perrier de la Bathie, Academie Malgache, Tananarive. Received September 25, 1933.

Piriformis. A variety of the Kaffir orange with pear-shaped fruits. This is a low spiny tree, native to tropical Madagascar. The slightly leathery ovate to suborbicular leaves are 2 to 3 inches long, and the small greenish flowers, borne in dense terminal cymes, are followed by orange-red fruits, usually globular, with edible flesh.

103772 to 103776.

From China and Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received in 1929 and 1930. Numbered in September 1933.

103772. *CELASTRUS ARTICULATUS* Thunb. Celastraceae. Oriental bittersweet.

No. 7228. Collected in the Yung Lo Ming Tomb, Nankow, China, September 19, 1930. A vine which climbs to about 20 feet. The yellow husks of the fruit persist but open, showing the red fruit.

For previous introduction see 90658.

103773. *EUONYMUS HAMILTONIANUS* Wall. Celastraceae.

No. 7248. From Chinglungchiao, China, September 21, 1930. A large Himalayan shrub which under favorable circumstances becomes a moderate-sized tree, 30 to 35 feet high, with a short straight trunk 4 to 5 feet in circumference. The clusters of greenish-white flowers are followed by yellow capsules, the seeds of which are entirely surrounded by a scarlet aril. The fruit begins to ripen in August, and the leaves are brilliantly colored in the autumn.

For previous introduction see 90660.

103772 to 103776—Continued.

103774. *QUERCUS SERRATA* Thunb. Fagaceae. Oak.

No. 1480. Collected near Kawazoe, Japan, October 12, 1929. A white oak up to 70 feet high, native to Japan, Chosen, and China. The oblong ovate leaves are lustrous bright green and hold their color until late in the autumn. It is usually shrubby under cultivation.

For previous introduction see 90795.

103775. *EUONYMUS MAACKII* Rupr. Celastraceae.

No. 1563. From Keijo, Chosen, October 27, 1929. A large shrub or small tree with narrowly ovate leaves about 3 inches long and small clusters of pink, four-lobed fruits which have orange-red arils. Native to northeastern Asia.

For previous introduction see 92050.

103776. *EUONYMUS JAPONICUS* L. f. Celastraceae. Evergreen burningbush.

No. 3156. From Tokyo, Japan, December 13, 1929. An upright shrub 6 to 8 feet high, native to Japan. The thick evergreen obovate leaves are 1 to 3 inches long, and the small greenish-white flowers are followed by depressed-globose pink capsules.

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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 117



Washington, D. C.

Issued January 1936

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, OCTOBER 1 TO DECEMBER 31, 1933 (Nos. 103777-103988)

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INTRODUCTORY STATEMENT

Inventory no. 117 is a record of the plant material received by the Division of Plant Exploration and Introduction from October 1 to December 31, 1933 (nos. 103777-103988).

Although the total number of plants introduced during this period is unusually low, there are, nevertheless, certain introductions that deserve to be pointed out.

From the Department of Agriculture, Manila, P. I., there was received a collection of rice varieties (nos. 103854-103859) reported to be resistant to stem rot, and a special collection of rye selections (nos. 103953-103969) was presented by the Institute of Plant Industry at Leningrad. Twenty-two varieties of wheat, representing selections that have proved very resistant to leaf rust (nos. 103805-103826) were received from the experiment farm at Glen Innes, New South Wales, Australia.

In the field of deciduous fruits there should be mentioned a collection of locally grown varieties of peaches, apricots, and plums (nos. 103797-103803) presented by the agricultural officer of the Northwest Frontier Province, India. In this temperate mountainous region, the most northerly Province of British India, deciduous fruits have been grown for centuries.

Interest in rock gardening in the United States continues very strong, and for that reason a collection of 40 species of native Japa-

nese alpine plants (nos. 103861-103900) is noteworthy. This lot includes little-known species of *Anemone*, *Potentilla*, *Primula*, *Viola*, etc.

The botanical determinations were made and the nomenclature determined by the late H. C. Skeels,¹ who had general supervision of this inventory.

B. Y. MORRISON,
Principal Horticulturist, in Charge.

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D. C., July 10, 1935.

¹ Died Jan. 3, 1934.

INVENTORY²

103777. BRASSICA sp. Brassicaceae.

From southwestern China. Seeds collected by Dr. J. F. Rock, agricultural explorer for the University of California Botanical Garden expedition. Received October 2, 1933.

Ko Mgyu A. (Tibetan name). *Matsing* (Chinese name). Rape turnip. The leaves are edible when young, and the root is boiled and eaten. The root is also cut up and used as fodder for cows, horses, and pigs, and is said to be very fattening.

103778. PHLEUM PHLEOIDES (L.) Karst. Poaceae. Timothy.

From Sweden. Seeds presented by Prof. Hearnfrid Witte, director, Swedish State Seed Testing Institute, Stockholm. Received October 5, 1933.

A variety, native to Sweden, introduced for the use of Department specialists.

103779. ANEMOPAEGMA CHAMBERLAYNII (Sims) Bur. and K. Schum. Bigoniaceae.

From Venezuela. Seeds presented by C. A. Davila, commercial attaché to the Legation of Venezuela, Washington, D. C. Received October 10, 1933.

From the mountains near Carácas. A perennial vine which climbs by means of clawlike tendrils. The trumpet-shaped flowers are clear bright yellow.

For previous introduction see 9662.

103780. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae.

Common wheat.

From Denmark. Seeds presented through Prof. H. C. Rafter, Michigan State College of Agriculture and Applied Science, East Lansing, Mich. Received October 18, 1933.

Danish-grown wheat, introduced for the use of Department specialists.

103781 to 103785. Phoenicaceae.

Palm.

From the Philippine Islands. Seeds presented by the director of forestry, Manila. Received October 2, 1933.

103781 to 103785—Continued.

103781. CORYPHEA ELATA Roxb.

A tall palm up to 60 feet high, with spiny stems and fan-shaped leaves. It is native to the Philippine Islands.

For previous introduction see 74425.

103782. HETEROSPATHE ELATA Scheff.

A tall unarmed palm with a straight slender stem and long pinnate leaves, growing in protected situations where the rainfall is evenly distributed. It is one of the most attractive and graceful palms and will make a good plant for the conservatory and, possibly, a good house plant.

For previous introduction see 101212.

103783. LIVISTONA ROTUNDIFOLIA LUZONENSIS Becc.

A Philippine palm up to 35 feet high, with a straight terete trunk 6 to 10 inches thick. The fan-shaped leaves, 3 to 5 feet in diameter, are used for thatching. Native to the island of Luzon, Philippine Islands.

103784. ORANIA PALINDAN (Blanco) Merr.

Banga. A tall unarmed ornamental palm, native to the interior of Bukidnon, Mindanao, found between 900 and 1,500 feet altitude. The trunk is straight and remarkably uniform in diameter, rarely exceeding 6 inches. The leaves are pinnate and silvery beneath. The natives use the straight-grained durable wood for floors, fences, etc.

For previous introduction see 94197.

103785. PINANGA INSIGNIS Beccari.

A rather small palm with a slender smooth trunk about 6 inches in diameter, very graceful feathery leaves, and oval fruits 2 inches in length. The seeds are used by the natives as a substitute for the betel nut in preparing "buayo", a mixture of leaves of *Piper betle*, lime, and betel nuts which, when chewed, colors the saliva a characteristic red and is held to be a tonic and general stimulant.

For previous introduction see 54986.

² It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Plant Exploration and 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 seed samples or 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

103786. COCCOLOBA LATIFOLIA L a m.
Polygonaceae.

From Paramaribo, Surinam. Seeds presented by the director of the Agricultural Experiment Station, through David Fairchild. Received October 3, 1933.

A tree with dark-green leaves from 1 to 2 feet in diameter, found on poor lands of the coastal plain in Surinam. While not a striking tree in some respects, the large size of the leaves makes it attractive for dooryard and park purposes.

For previous introduction see 99539.

103787. PAPAVER SCHINZEANUM Fedde.
Papaveraceae.

From Scotland. Seeds presented by the Royal Botanic Garden, Edinburgh. Received February 8, 1933. Numbered in October 1933.

A perennial herb, about a foot high, more or less caespitose in habit and gray hairy throughout. The leaves are narrowly obovate or oblong lanceolate, irregularly pinnately lobed, and 4 to 6 inches long. The flowers, borne singly on erect scapes, vary from orange to apricot in color. This poppy was first discovered in the Botanical Garden, Zurich, Switzerland.

103788 and 103789.

From Cuba. Seeds presented through Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received October 9, 1933.

103788. OPUNTIA ROBUSTA W e n d l.
Cactaceae.

Presented by A. Bircher, Middle Egypt Botanic Station, El Saft, Egypt. A stout erect cactus, sometimes as much as 15 feet high, with many branches. The round or oblong joints, 8 to 10 inches long, are very thick and bluish green, with 8 to 12 stout brownish spines 1 or 2 inches long. The yellow flowers, 2 inches across, are succeeded by deep-red fruits about 3 inches long. Native to central Mexico.

103789. ANGELONIA CUBENSIS Robins.
Scrophulariaceae.

A tropical perennial herb about a foot high, with erect simple stems and narrowly oblong leaves about 2 inches in length. The small purplish blue flowers three-fourths of an inch long are in simple racemes. Native to Cuba.

103790 to 103793.

From Argentina. Seeds presented by G. H. Childs, Hollywood, Calif., who collected them near Lago San Martin, Territory of Santa Cruz. Received October 6, 1933.

103790 to 103792. BERBERIS spp. Ber-
beridaceae. **Barberry.**

Calefate.

103790. BERBERIS sp.

A large mountain variety with very seedy fruits.

103791. BERBERIS sp.

Collected in rather sandy soil near a lake.

103792. BERBERIS sp.

A large variety.

103790 to 103793—Continued.

103793. EMBOTHRUM COCCINEUM Forst.

A handsome evergreen tree, with dark, glossy-green, somewhat leathery, ovate-lanceolate leaves 2 to 4 inches long and brilliant scarlet flowers about 1 inch long in dense axillary and terminal short racemes. It is native to Chile and becomes 40 feet high under favorable conditions.

103794 to 103796. AVENA spp. Poaceae.
Oats.

From Australia. Seeds presented by the manager of the New England Experiment Farm, Glen Innes, New South Wales. Received October 12, 1933.

Introduced for the use of Department specialists.

103794. AVENA BYZANTINA Koch.

Creme.

103795. AVENA sp.

Estramadura Grey.

103796. AVENA BYZANTINA Koch.

Vrome.

103797 to 103803.

From India. Seeds presented by the agricultural officer, Northwest Frontier Province, Taru Jabba, Peshawar. Received October 16, 1933.

A collection of locally grown varieties introduced for the use of Department specialists.

103797. AMYGDALUS PERSICA L. **Amyg-
dalaceae. Peach.**

A variety with white fruit.

103798. AMYGDALUS PERSICA L. **Amyg-
dalaceae. Peach.**

A variety with yellow fruit.

103799 to 103803. PRUNUS spp. **Amyg-
dalaceae.**

103799 to 103801. PRUNUS ARMENIACA
L. **Apricot.**

103799. Buvi. 103801. Sufaida.

103800. Jab.

103802. PRUNUS CERASIFERA DIVARICATA
(Ledeb.) C. Schneid. **Cherry plum.**

Dinga.

103803. PRUNUS CERASIFERA DIVARICATA
(Ledeb.) C. Schneid. **Cherry plum.**

Dug.

103804. ACHRAS ZAPOTA L. Sapotaceae.
Sapodilla.

From the Philippine Islands. Scions presented by the Economic Garden, Bureau of Plant Industry, Los Banos, Laguna, through Manuel Rozas, director of plant industry, Manila. Received October 23, 1933.

Ponderosa, a variety characterized by being 4 or 5 times larger than the wild type, with a superior quality and flavor. Some fruits are said to weigh 12 ounces, while the native fruit weighs about 3 ounces. The flesh of this variety is vinous, very sweet, and very juicy.

103805 to 103826. TRITICUM spp. Poaceae. Wheat.

From Australia. Seeds presented by S. L. Macindoe, plant breeder at the New England Experiment Farm, Glen Innes, New South Wales. Received October 17, 1933.

A collection of triticums which have proved very resistant to leaf rust under the conditions at the experiment farm in New South Wales. Introduced for the use of Department specialists. Received under the following varietal names:

103805 to 103825. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.103805. No. C 5347. *Baladi 26*.103806. No. C 5351. *Baladi 31*.103807. *Clarendon*.103808. No. C 5988. *H 44* × *Marquis 609*.103809. No. C 5985. *H 44* × *Marquis 592*.103810. No. C 5990. *H 44* × *Marquis 615*.103811. No. C 5983. *H 44* × *Marquis 586*.103812. No. C 6041. *Kenya* (crossbred).103813. No. C 5986. *Marquis 594* × *H 44*.103814. No. C 4610. *Marquis* × *Emmer*.103815. No. C 5090. *Marquis* × *Emmer 20*.103816. No. C 6284. *Marquis* × *Emmer*.103817. No. C 5085. *Marquis* × *Vernal Emmer 14*.103818. No. C 5976. *Pentad* × *Marquis 724*.103819. No. C 5978. *Pentad* × *Marquis 726*.103820. No. C 5979. *Pentad* × *Marquis 727*.103821. No. C 5981. *Pentad* × *Marquis 729*.103822. *Persian Black*.103823. No. C 8793. *Reward* × *H 44*.103824. *Thevo*.103825. No. C 5084. *Vernal Emmer* × *Marquis 138*.

103826. TRITICUM DURUM Desf. Durum wheat.

Hodei form.

103827. AMYGDALUS PERSICA L. Amygdalaceae. Peach.

From the island of Malta. Seeds presented by J. Borg, superintendent, Office of Agriculture, Valletta. Received October 23, 1933.

A locally grown variety which has yellow flesh; introduced for the use of Department specialists.

103828 to 103830. PHOENIX spp. Phoenicaceae. Palm.

From Africa. Seeds presented by C. B. Taylor, botanist, Department of Agriculture, Zaria, Nigeria. Received October 27, 1933.

103828 to 103830—Continued.

103828. PHOENIX DACTYLIFERA L.

Date palm.

Dabino. A cultivated palm over 30 feet high, with leaves 15 feet long. The inflorescence has a broad flattened spathe, and the edible fruits are 2 inches long.

103829. PHOENIX sp.

Kajinjiri fadama or *dabodin biri*. A wild palm found in the swamps around Zaria. The smooth stem, without any adhering old leaf bases, is 18 feet high, and the leaves are 7 feet long. The small edible fruits are less than an inch long, but the tree begins to fruit when only 6 years old and is said to live to be 100 unless damaged by wind or disease. The leaves are extensively used in mat weaving, and the stems are split and used for building purposes.

103830. PHOENIX sp.

Kajinjiri tudu or *kajinjiri daji*. A small wild palm found on the hills around Zaria, with a stem 6 feet high, covered with persistent old leaf bases. The leaves are about 4 feet long, and the small edible fruits are less than an inch in length. The tree begins fruiting when only 5 years old and is said to live over 100 years unless damaged by wind or disease. The leaves are extensively used for mat weaving, and the stem of the tree is split and used for building purposes.

103831 to 103833. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae.

Common wheat.

From Brazil. Seeds presented through Reginald S. Castleman, American consul, Porto Alegre. Received October 30, 1933.

A collection of wheats, said to be immune from rust, developed at the Wheat Experiment Station at Bagé, which is maintained by the State Government of Rio Grande do Sul.

103831. M 12-32.

103832. *Trigo fronteira*.103833. *Trigo surpresa*.

103834 and 103835.

From India. Seeds grown in the Victoria Botanic Garden, Bombay, and presented through Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba, by F. G. Walsingham. Received October 30, 1933.

103834. BAUHINIA BRACHYCARPA Wall. Caesalpinaceae.

An erect tropical shrub with slender branches and heart-shaped roundish nine-ribbed leaves, cleft a third down into two obtuse lobes. The flowers are in short dense racemes, and the pod is over an inch long. Native to India.

103835. CASSIA RENIGERA Wall. Caesalpinaceae.

A tropical tree from the mountains of Burma, with compound leaves a foot long. The 30 to 40 obtuse oblong leaflets, 1½ inches long, are leathery and finely hairy below. The cylindrical pod is a foot in length.

103336. *STYLOSANTHES MUCRONATA*
Willd. Fabaceae.

From Australia. Seeds presented by J. Michelmore & Co. Pty. Ltd., Mackay, Queensland. Received November 2, 1933.

A much-branched undershrub, 1 to 2 feet high, native to southern Asia and tropical Africa. The rigidly coriaceous trifoliolate leaves have oblong leaflets about one-half inch long, and the inconspicuous flowers are in small dense heads. Of possible value as a forage crop.

For previous introduction see 101186.

103337 to 103349. *TRITICUM AESTIVUM*
L. (*T. vulgare* Vill.). Poaceae.
Common wheat.

From Australia. Seeds presented by H. Wenzholz, director of plant breeding, Department of Agriculture, Sydney, New South Wales. Received November 2, 1933.

A collection of Australian-grown wheats introduced for the use of Department specialists.

103337. *Baringa*.

103338. *Bolin*.

103339. *Bomen*.

103340. *Dindiloa*.

103341. *Firchill*.

103342. *Florence*.

103343. *Genoa*.

103344. *Nabawa*.

103345. *Pilot*.

103346. *Queen Fan*.

103347. *S. H. J.*

103348. *Thew*.

103349. *Wardfir*.

103350. *PAROCHETUS COMMUNIS* Buch-
Ham. Fabaceae. Shamrock-pea.

From India. Seeds presented by F. H. Butcher, curator, Government Botanic Garden, Ootacamud. Received November 6, 1933.

A half-hardy perennial trailing vine with shamrocklike leaves, each leaflet marked at the base with a brown crescent. The pea-shaped flowers, nearly an inch across, have cobalt-blue standards and pink wings. It is native to tropical Asia.

For previous introduction see 103478.

103351. *CASTANOPSIS PHILIPENSIS*
(Blanco) Vidal. Fagaceae.

From the Philippine Islands. Seeds presented by Arthur F. Fischer, director of forestry, Department of Agriculture and Commerce, Manila. Received November 11, 1933.

A tall tropical evergreen tree up to 75 feet high, with lanceolate entire acuminate leaves 3 to 4 inches long. The edible nuts are about an inch long and resemble the European chestnut in flavor.

103352 and 103353.

From Africa. Seeds presented by Dr. Leon Croizat, New York, N. Y. Received November 9, 1933.

103352. *CANAVALIA ENSIFORMIS* (L.) DC.
Fabaceae. Jackbean.

From French Sudan.

103353. *EUPHORBIA* sp. Euphorbiaceae.

From Dodoma, Tanganyika Territory.

103354 to 103359. *ORYZA SATIVA* L.
Poaceae. Rice.

From the Philippine Islands. Seeds presented by Manuel L. Roxas, director of plant industry, Department of Agriculture, Manila. Received November 8, 1933.

A collection of rice varieties said to be resistant to stem rot under Philippine conditions. Introduced for the use of Department specialists.

103354. *Elonelon*.

103355. *Guinangang Str. 1*.

103356. *Macan Binan*.

103357. *Manticanon*.

103358. *Mancasar Str. 3*.

103359. *Ramay*.

103360. *ONOSERIS* sp. Asteraceae.

From Ecuador. Seeds collected by Elsie Brown, Pan American Union. Received November 16, 1933.

Collected on a mountain slope north of Quito. A daisylike plant with slender grayish-green leaves that form a thick low mat. The solitary, fragrant, pink flowers are borne on a leafless stem 10 to 12 inches long.

103361 to 103390.

From Japan. Seeds purchased from Tanaka Boekibu, Osaka. Received November 14, 1933.

A collection of native Japanese alpine plants.

103361. *ADENOPHORA NIKOENSIS* Franch.
Campanulaceae.

A low perennial, less than a foot high, closely allied to the campanulas, with sessile, lanceolate, finely toothed leaves about 1 inch long and small nodding spikes of sky-blue flowers three-fourths of an inch across.

103362. *ALSINE ARCTICA* (Stev.) Fenzl.
Silenaceae.

A herbaceous perennial that forms clumps a few inches high, with linear leaves half an inch long. The small white flowers are borne singly on short peduncles. Native to the arctic regions of northeastern Asia and North America.

103363 to 103365. *ANEMONE* spp. Ranunculaceae.

103363. *ANEMONE FLACCIDA* Fr. Schmidt.

An erect herbaceous perennial with stems 4 to 8 inches high and three-parted, incised-dentate basal leaves. The 1 or 2 long-stalked flowers are white appearing in midsummer in southeastern Siberia where the plant is also a native.

103364. *ANEMONE NIKOENSIS* Maxim.

An anemone with long-stemmed, triternate, incised basal leaves and solitary white flowers. Native to the highest mountains of central Japan.

103861 to 103900—Continued.

103865. ANEMONE PATENS INTERMEDIA Mak.

A herbaceous perennial with silky hairy stems and leaves about 5 inches high. The lower leaves are petioled, the upper ones sessile, all much divided into narrow linear acute lobes. The yellowish-white flower is about 1 inch across.

103866. ARNICA UNALASCHENSIS Less. Asteraceae.

A low perennial, about 6 inches high, with a simple stem and hairy, decussate, membranous, somewhat spatulate leaves less than an inch long. The small solitary flower heads are sulphur yellow. Native also to northern Alaska.

103867. CAMPANULA DASYANTHA Bieb. Campanulaceae.

A hardy perennial campanula, with the lower leaves spatulate, the upper linear-lanceolate, and all crenate and pubescent. The flowers are sky blue, with the calyx and petal margins very hairy.

103868. CASSIOPE LYCOPODIODES (Pall.) D. Don, Ericaceae.

A low creeping plant with slender stems, scalelike crowded leaves, and nodding, white, bell-shaped flowers borne singly on erect peduncles. Native to northeastern Asia.

For previous introduction see 102296.

103869. CHRYSANTHEMUM WEYRICHII (Max.) Miyabe.

A hardy perennial about 8 inches high, with fleshy pinnately parted leaves about 2 inches long and flower heads $1\frac{1}{2}$ inches across, with lilac ray flowers and yellow disks. Native to Sakhalin Island.

103870. CORYDALIS REMOTA Fisch. Papaveraceae.

A perennial herb with a tuberous rootstock and variously incised biternate leaves, often red margined. The exterior petals of the violet flowers are two-lobed and minutely toothed. Native to southeastern Asia.

103871. CRAWFURDIA TRINERVIS (Blume) Hassk. Gentianaceae.

Creeping gentian. A low-growing vine with pale gentianlike flowers followed by large oblong deep-red fruits, white inside, with many seeds.

For previous introduction see 67762.

103872. DIANTHUS SUPERBUS MONTICOLA Makino and Nemoto. Silenaceae.

A dwarf variety of the lilac pink with larger flowers that vary in color from rose pink to purplish pink.

103873. DIAPENSIA OBOVATA Nakai. Diapensiaceae.

A small compact evergreen, more or less woody perennial that forms a cushionlike tuft 1 to 2 inches high, with small white flowers on stems 1 to 2 inches high. The small entire leaves are flat and obovate-cuneate. Native to northeastern Asia.

103861 to 103900—Continued.

103874. DICENTRA PUSILLA Sieb. and Zucc. Papaveraceae.

A charming hardy perennial with the leaves finely divided into linear segments and with large clear-pink flowers.

103875. EPIGAEA ASIATICA Maxim. Ericaceae.

An Asiatic trailing arbutus, very similar to the American species but differing chiefly by being stouter throughout. The racemes usually consist of 6 to 12 flowers.

103876. ERANTHIS PINNATIFIDA Maxim. Ranunculaceae.

A dainty herbaceous perennial, allied to the anemone, with long-stemmed, pinnatifid leaves about 2 inches across and white flowers about an inch wide.

103877. GEUM PENTAPETALUM (L.) Mak. Rosaceae.

A low creeping shrubby perennial with pinnate, roselike foliage and solitary rather large white flowers about 1 inch across, with 8 to 10 petals borne in April on a slender stem. Native also to Kamchatka.

103878. JEFFERSONIA DUBIA (Max.) Benth. and Hook. Berberidaceae.

A stemless alpine perennial native to northeastern Asia, with a slender rhizome and numerous long-stemmed, cordate-reniform leaves about 3 inches long and wide. The large blue flowers are on a scape 6 inches high.

103879. LEONTOPODIUM FAURIEI Hand.-Mazz. Asteraceae.

An alpine perennial, white, hairy throughout, with a slender stem up to 8 inches high and a rosette of erect, spreading narrowly spatulate, acute leaves up to $2\frac{1}{2}$ inches long. The small whitish flower heads are in a small dense cluster.

103880. LEONTOPODIUM JAPONICUM Miq. Asteraceae.

An alpine plant related to the edelweiss, with an erect stem less than a foot high and lanceolate dark-green leaves over an inch long having densely woolly lower surfaces. The grayish flower heads, in terminal corymbs, are also densely woolly.

103881 to 103883. POTENTILLA spp. Rosaceae.

103881. POTENTILLA DICKINSII Franch. and Sav.

A perennial herb with a stoloniferous rhizome and slender, erect little-branched stems. The basal leaves are pinnate with 2 or 3 rhomboid leaflets, while the stem leaves are ternate with the lower stem leaves long-stemmed. The light-yellow flowers are in lax corymbs.

103882. POTENTILLA MEGALANTHA Takeda.

A stout perennial with a fleshy rootstock from which arise numerous heavy stems often more than a foot high. The thick radical leaves, often long-stemmed, are cordate, ternate, and up to 3 inches across, while the stem leaves are simple, sessile, and much smaller. The large yellow flowers are over 1 inch across.

103861 to 103900—Continued.

103883. POTENTILLA NIVEA L.

An alpine perennial with a stout rootstock, densely white-tomentose throughout. The leathery leaves are 1 to 2 inches long, with 3 to 5 obovate serrate leaflets. The yellow flowers, half an inch across, are on short stout peduncles. Native to northeastern Asia.

103884 to 103886. PRIMULA spp. Primulaceae. Primrose.

103884. PRIMULA FAURIAE Franch.

An alpine primrose with a long fibrous rhizome and rhombic or broadly ovate, lightly crenate, long-stemmed leaves, yellow mealy beneath and about one-half inch across. The small pink flowers are in umbels of 6 to 8.

103885 and 103886. PRIMULA REINHII Franch. and Sav.

A primula of the Fallaces section with roundish, deeply cordate, incised-crenate leaves densely covered with long hairs, and 4 to 6 inches in diameter. The scape, scarcely longer than the leaves, bears 2 to 6 pale-violet flowers.

103885. Collected on Mount Hakone.

103886. Collected on Mount Yatsugatake.

103867. RANZANIA JAPONICA T. Ito. Berberidaceae.

A hardy perennial closely allied to the mayapple of North America. The three lobes of the heart-shaped leaves are orbicular, and the solitary white flower is scarcely an inch across. Native to Mount Togakushe, Japan.

103888. RHODODENDRON BRACHYCARPUM D. Don. Ericaceae. Fujiyama rhododendron.

A shrub 10 to 15 feet high with elliptic to oblanceolate leaves 3 to 9 inches long, cuneate to auriculate at the base, dark green above, and gray tomentose beneath. The broadly funnel-form flowers, about 2 inches across, are white or yellow, striped and flushed pink, and spotted greenish brown.

For previous introduction see 95629.

103889. SAXIFRAGA BRONCHIALIS L. Saxifragaceae.

A low compact perennial 4 to 8 inches high, with ascending stems densely leafy at the base. The leaves are stiff, gray green, shiny, and linear-lanceolate, and the small yellowish-white flowers are dotted with orange-red. Native to northeastern Asia and Alaska.

103890. SAXIFRAGA CORTUSAEFOLIA ALPINA Matsum. and Nakai. Saxifragaceae.

A rather low perennial saxifrage, not stoloniferous. The dark-green basal leaves are rather fleshy and seven lobed, with the lower part reddish. The white flowers are in a lax panicle with long, very slender pedicels. Native to Mount Shirouma, Shinano Province, Japan.

103861 to 103900—Continued.

103891. SHORTIA UNIFLORA Maxim. Diapensiaceae.

Variety *grandiflora*. A large-flowered form of a perennial herb native to Japan, closely resembling the native American *Shortia galacifolia*. The cordate leaves are broader than long and deeply sinuate toothed, and the white bell-shaped flowers, an inch across, are borne on slender peduncles 3 to 8 inches tall.

103892. TRAUTVETERIA PALMATA Fisch. and Mey. Ranunculaceae.

A perennial herb 2 to 3 feet high, with alternate, large leaves divided into 5 to 11 incised lobes. The white flowers are in terminal cymes. Native to northeastern Asia and northern North America.

103893. TRICYRTIS AFFINIS Makino. Melanthiaceae.

An erect perennial 1 to 4 feet high, with oblong-lanceolate or ovate-oblong, nearly sessile, thinly hairy, pale-green leaves 2 to 4 inches long. The purple-spotted white flowers, an inch across, are borne in terminal clusters.

103894. TRICYRTIS HIRTA Hook. Melanthiaceae. Hairy toadlily.

A perennial herb, 1 to 3 feet high, covered with soft whitish spreading hairs. The cordate-lanceolate leaves clasp the stem, and the white lilylike flowers are covered with purple spots.

For previous introduction see 101796.

103895. TULIPA LATIFOLIA Makino. Liliaceae.

A Japanese tulip, very similar to *T. edulis*, but with shorter and broader leaves, and small white flowers on a stem 6 to 8 inches high.

103896. VERATRUM JAPONICUM (Baker) Loes. Melanthiaceae.

A hardy perennial 2 to 4 feet high, with slender stems. The oblong, plicate leaves are a foot long, and the very dark purple flowers are in lax racemes. It is closely related to *Veratrum nigrum*, of which it may be considered a geographic variety, with slightly larger flowers and a more slender habit.

103897 to 103900. VIOLA spp. Violaceae. Violet.

103897. VIOLA CHAEROPHYLLOIDES (Regel) Makino.

A hardy violet about 6 inches high, with broad, finely divided leaves and rather large white flowers produced in April. Native to Chosen and said to be adapted for growing in partial shade.

103898. VIOLA PATRINII Ging.

A low stemless perennial, native to northeastern Asia, with a stout rootstock, ovate-oblong leaves, and lilac flowers about one-half inch in diameter.

103899. VIOLA VERECUNDA A. Gray.

A Japanese violet closely related to *V. canadensis*. The 3 or 4 kidney-shaped leaves are slender and erect, and the flowers are white with purple veins.

103861 to 103900—Continued.

103900. VIOLA VIOLACEA Wiesb.

A stemless violet with long stolons and triangular cordate obtuse leaves. The fragrant flowers are violet, with the spur paler violet. It is also native to Austria.

103901 and 103902.

From Australia. Seeds presented by W. E. Schevill, of Harvard University, with the Ellis expedition for the Museum of Comparative Zoology, Cambridge. Received November 17, 1933.

Collected 40 miles west of Barrow Creek, Northern Territory, in September 1932.

103901. ELAEOCARPUS sp. Elaeocarpaceae.

A plumlike fruit.

103902. SOLANUM sp. Solanaceae.

Quinine-plum. A very bitter plumlike fruit.

103903 to 103906. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae.

Common wheat.

From Australia. Seeds presented by H. Wenzholz, director of plant breeding, Department of Agriculture, Sydney, New South Wales. Received November 17, 1933.

A collection of locally grown Australian wheat, introduced for the use of Department specialists.

103903. *Cleveland*. 103905. *Queen Fan*.103904. *Ford*. 103906. *Rymer*.

103907. TAMUS COMMUNIS L. Dioscoreaceae.

From Italy. Seeds received through David Lumsden, Bureau of Entomology and Plant Quarantine, United States Department of Agriculture, November 20, 1933.

A twining herbaceous vine with a tuberous root, ovate-cordate, obscurely lobed leaves about 3 inches long, and loose clusters of small yellowish-green flowers followed by bright-red berries. Native to the Mediterranean countries.

For previous introduction see 76768.

103908 to 103927.

From Africa. Seeds and bulbs presented by Rev. Kenneth H. Prior, Missão de Dondi, Bela Vista, Angola. Received November 17, 1933.

103908. ALBIZZIA sp. Mimosaceae.

Okapilangau. A useful timber tree. The hard wood has a pungent odor when planed; it resists decay.

103909. ALBIZZIA sp. Mimosaceae.

Omako. A close-grained, hard wood timber tree with greenish-brown bark. The wood resists decay.

103910 and 103911. BRACHYSTEGIA spp. Caesalpinaceae.

The brachystegias are unarmed trees, native to tropical Africa, with pinnate leaves and small inconspicuous flowers in dense racemes.

103908 to 103927—Continued.

103910. *Omanda*. A useful timber tree whose wood is used for agricultural implements; the bark of saplings is made into rope by the natives of Angola.

103911. *Usamba*. A good shade tree with an umbrella top. The timber is not used.

103912. CHRYSOPHYLLUM sp. Sapotaceae.

Onjali. An erect tropical tree with milky juice, leathery short-stemmed leaves, and dense clusters of small whitish flowers, followed by pods resembling those of the honeylocust. The pods are eaten by antelopes. The timber of the tree is not used.

103913. FICUS sp. Moraceae.

Ukuyu. A wild fig with very soft, light, coarse-grained wood. The tree grows rapidly from seed or cuttings and fruits abundantly.

103914 and 103915. GLADIOLUS spp. Iridaceae.

Red-flowered species.

103914. Seeds. 103915. Bulbs.

103916. LUFFA CYLINDRICA (L.) Roemer. Cucurbitaceae. Suakwa towelgourd.

Introduced for the use of Department specialists.

103917 and 103918. MORAEA spp. Iridaceae.

A blue-flowered species.

103917. Bulbs. 103918. Seeds.

103919. PARINARI MOBOLA Oliver. Rosaceae.

Usia. A handsome forest tree with dense evergreen foliage. The leaves are deep green above and white beneath, and the fruit, much like an olive in appearance, has an edible kernel in a very hard shell. The hard wood is used for furniture and building purposes.

For previous introduction see 87474.

103920. SECURIDACA LONGIPEDUNCULATA Fres. Polygalaceae.

Rhodesia violet-tree.

Utata. A much-branched divaricate shrub, sometimes 10 feet high, native to Upper Guinea, Ethiopia, and Mozambique. The coriaceous leaves are revolute-margined when dry, and the flowers, in terminal spreading racemes, are rose, shades of purple or violet, or variegated with white.

For previous introduction see 81982.

103921. TOUNATEA MADAGASCARIENSIS (Desv.) Kuntze. Caesalpinaceae.

Onganha. A tropical leguminous tree, without spines, that grows 20 to 30 feet high in central and south-central Africa. The compound leaves are about 6 inches long, with 9 to 11 leathery green oblong leaflets. The roundish yellow flowers, almost an inch across, are solitary or in small racemes. Native to south-central Africa and Madagascar.

103922. (Undetermined.)

Olohengo. A native wild plum; used for jelly and preserves.

103908 to 103927—Continued.

103923. (Undetermined.)

Onjilasonde. A timber tree whose pretty dark-brown wood is used for cabinetwork.

103924. (Undetermined.)

Bulbs.

103925. (Undetermined.)

Large bulbs.

103926. (Undetermined.)

Bulbs.

103927. (Undetermined.)

Osui. A small tree with hard close-grained wood which resists decay.

103928 to 103937.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received November 20, 1933.

103928. *ARISTOLOCHIA BRASILIENSIS* Mart. and Zucc. Aristolochiaceae.

A tropical vine, sometimes growing to a length of 15 feet, with long-stemmed, reniform, heart-shaped leaves 6 to 8 inches wide. The large, dingy-yellow flower, with purplish marks, is strongly two-lipped, with the upper lip 4 inches long and purple within, and the lower lip the same length but 5 to 7 inches wide. Native to Brazil.

103929. *CORDIA NITIDA* Vahl. Boraginaceae. Glossy cordia.

Red manjack or *West Indian cherry*. A shrubby tree with harsh glossy foliage, white flowers, and red viscid berries which are eaten by the wild doves.

For previous introduction see 98832.

Nos. 103930 to 103932 were collected in Mexico by Prof. Juan Balme, botanical explorer.

103930. *CRESCENTIA ALATA* H. B. K. Bignoniaceae. Calabash-tree.

A small ornamental tree closely allied to *C. cujete*; it is 10 to 20 feet high, with fasciated trifoliate leaves. The brownish, rank-scented flowers, borne singly on the trunk, are followed by hard globose fruits about 2 inches in diameter. The tree is occasionally cultivated in the Philippines where it was introduced from Mexico at an early date.

103931. *FEROCACTUS LATISPINUS* (Haworth) Britt. and Rose. Cactaceae.

A stout globular cactus about a foot high, with 10 to 15 white to pink spines arising from each areole. Of these spines the 4 or 5 central ones are much stouter, with one much flattened and hooked. The campanulate flowers, about 1 inch long, are rose to purple. Native to Mexico.

103932. *IPOMOEA ARBORESCENS* Don. Convolvulaceae.

An erect woody treelike plant that may reach a height of 15 feet or more. The twigs and oval cordate leaves are fine velvety pubescent, and the white flowers are over 2 inches in diameter. It is native to Mexico and thrives best in cool dry air.

103933. *THUNBERGIA ERECTA* (Benth.) T. Anders. Acanthaceae.

103928 to 103937—Continued.

An evergreen climbing shrub, 6 to 8 feet high, with ovate leaves about 2 inches long and solitary blue flowers with orange throats, over an inch long, with stalks about the same length. Native to western tropical Africa.

Nos. 103934 and 103935 were collected in Mexico by Prof. Juan Balme, botanical explorer.

103934. *OPUNTIA STREPTACANTHA* Lem. Cactaceae. Pricklypear.

A much-branched cactus, sometimes 15 feet high, with a trunk 18 inches in diameter. The dark-green, obovate to orbicular joints, about a foot long, are covered with numerous white spines. The orange-yellow flowers, 3 inches across, are followed by dull-red, globular fruits about 2 inches in diameter. Native to central Mexico.

103935. *PACHIRA INSIGNIS* (Swartz) Sav. Bombacaceae.

Variety *Rosea*. A beautiful tropical tree, native to the West Indies and northern South America, which becomes about 30 feet tall, with a trunk up to a foot in diameter. The beautiful fragrant flowers, rose-colored in this form and about 7 inches long, are followed by large woody capsules containing numerous edible seeds which look and taste very much like chestnuts.

For previous introduction see 58582.

103936. *PINUS INSULARIS* Endl. Pinaceae. Pine.

A tall three-needle tropical pine which grows on the highlands in the Philippine Islands between 3,000 and 8,000 feet altitude. The flaccid slender leaves are 7 to 9 inches long, and the ovoid cones are about 3 inches in length. This lot of seed came originally from the Bureau of Forestry, Manila.

For previous introduction see 101448.

103937. *TABEBUIA GUAYACAN* (Seem.) Hemsl. Bignoniaceae.

Collected in Mexico by Prof. Juan Balme, botanical explorer. A tall tropical tree becoming nearly 100 feet high, with smooth pale-gray bark and opposite long-stemmed digitately compound leaves with five very large leaflets. The handsome yellow flowers are 3 inches long. The olive-brown wood is very dense and hard and is used for tool handles, boats, etc. Native from Panama to Guatemala.

103938. *PHYLLOSTACHYS* sp. Poaceae. Bamboo.

From Glenn Dale, Md. Plants presented by P. H. Dorsett; propagated from material collected in China by the late Frank N. Meyer. Received December 11, 1933.

A hardy bamboo of rapid-spreading habit, 12 feet high, with a conspicuous glaucous band beneath each node and the upper half of the internode at first often glaucous. The lower culm sheaths have irregular, ill-defined, brownish-black blotches. The lanceolate leaves, of which there are 3 or 4 on a branchlet, have usually 5 pairs of secondary veins; the leaves do not curl so quickly when the branches are cut as do those of most bamboos.

103939 and 103940.

From Africa. Seeds presented by J. E. Spingarn, Amenia, N. Y. Received November 21, 1933.

103939 and 103940—Continued.

103939. *CLEMATIS SIMENSIS* Fresn. Ranunculaceae.

From Kisantu, Bas-Congo, Belgian Congo. A tropical climber with pinnately cut leaves; the membranous leaflets, usually 3 or 5, are ovate-lanceolate and crenate. The flowers, three-fourths of an inch across, are in axillary clusters. Native to Ethiopia.

103940. *CLEMATIS STANLEYI* Hook. Ranunculaceae.

From the Transvaal, Union of South Africa. An erect shrubby clematis with very variable foliage and flowers. In the native state the flower stems are 2 to 3 inches long, while in cultivation they reach a length of 8 to 10 inches. The flowers vary in size from 1 to 3 inches in diameter and in color from white to pinkish purple.

For previous introduction see 48307.

103941. *CASIMIROA TETRAMERIA* Millsp. Rutaceae. Matasano.

From Honduras. Seeds presented by R. Austin Acly, American consul, Tegucigalpa. Received November 22, 1933.

A Central American tree about 30 feet in height, with pale warty branches, digitate leaves about 8 inches long, and axillary panicles of greenish flowers. The edible fruit, approximately the size of an orange, has a green skin and spiny protuberances sparsely scattered over the surface; the white or yellow flesh is sweet or slightly sour and encloses 2 or 3 large black seeds.

For previous introduction see 55445.

103942 to 103948. *ANANAS SATIVUS* Schult. f. Bromeliaceae. Pineapple.

From Hawaii. Plants presented by J. L. Collins, geneticist, Experiment Station of the Association of Hawaiian Pineapple Cannery, Honolulu. Received November 27, 1933.

103942. *Bermuda*. A variety of unknown origin.

103943. *Hilo Cayenne*. A variety very similar to the *Cayenne* in general appearance; however, the plants do not produce slips, or only a very few, as contrasted with the 3 or 4 slips produced annually by the *Cayenne*.

103944. *Pernambuco*. A variety from South America.

103945. *Ruby*. A variety obtained from Singapore a number of years ago; we have more recently obtained what appears to be the same thing under the name *Mauritius*.

103946. *Sarawak*. A variety much like the *Cayenne*, secured from Singapore a number of years ago.

103947. *Wild Brazil*. A self-seeding type obtained in Brazil.

103948. *Wild Kailua*. A variety growing wild in the Kailua region of the island of Hawaii; origin not known.

103949 to 103951. *AVENA BYZANTINA* Koch. Poaceae. Oats.

From India. Seeds presented by Beni Pashad, fodder specialist, Agricultural College, Lyallpur. Received December 1, 1933.

Introduced for the use of Department specialists.

103949 to 103951—Continued.

103949. *Algerian Red* oat no. 35.

103950. *Algerian Red* oat no. 61.

103951. Local Fo. S. 1/29.

103952. *LIVISTONA ROTUNDIFOLIA* (Lam.) Mart. Phoenicaceae.

Java fan palm.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received December 4, 1933.

A fan-leaved palm closely related to the Chinese fan palm (*Livistona chinensis*). The erect, brownish-black trunk is 40 to 50 feet high, and the roundish leaves are 3 to 5 feet across with spiny petioles up to 6 feet in length. Native to Java.

103953 to 103969. *SECALE CEREALE* L. Poaceae. Rye.

From the Union of Soviet Socialist Republics. Seeds presented by Dr. N. I. Vavilov, director, Institute of Plant Industry, Leningrad. Received December 7, 1933.

A collection of ryes grown in the Soviet Socialist Republics, introduced for the use of Department specialists.

103953. No. 1. 103962. No. 10.

103954. No. 2. 103963. No. 11.

103955. No. 3. 103964. No. 12.

103956. No. 4. 103965. No. 13.

103957. No. 5. 103966. No. 14.

103958. No. 6. 103967. No. 15.

103959. No. 7. 103968. No. 16.

103960. No. 8. 103969. No. 17.

103961. No. 9.

103970 to 103972.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received December 6, 1933.

103970. *ADENANTHERA MICROSPERMA* Teijsm. and Binn. Mimosaceae.

Seeds from the Botanic Garden, Buitenzorg, Java. A handsome tropical tree closely related to the mimosas, with attractive, clean-cut foliage and twisted pods bearing bright-red beans. It is native to the East Indies and is considered a valuable timber tree because of its strong dark-brown wood, which is very hard in spite of the rapid growth of the tree.

For previous introduction see 63758.

103971. *HETEROSPATHE ELATA* Scheff. Phoenicaceae. Palm.

For previous introduction and description see 103782.

103972. *ZAMIA KICKXII* Miq. Cycadaceae.

A tropical palmlike plant with a very short thick stem and gracefully arching, pale-green pinnate leaves about a foot in length, composed of about 12 pairs of lanceolate pinnae 1 or 2 inches long. It is native to Cuba.

103973 and 103974. PHOENIX DACTYLIFERA L. Phoenicaceae. Date palm.

From Africa. Seeds presented by the Department of Agriculture, Nigeria. Received December 9, 1933.

Date palms, said to be growing wild in Nigeria; introduced for the use of Department specialists.

103975. CASTANEA SATIVA Mill. Fagaceae. Spanish chestnut.

From the Union of Soviet Socialist Republics. Seeds presented by Prof. A. Popov, Department of New Cultures and Introduction, Leningrad. Received December 9, 1933.

Chestnuts collected in the northern Caucasus region; introduced for the use of Department specialists.

103976. ADONIDIA MERRILLII Beccari. Phoenicaceae. Palm.

From the Philippine Islands. Seeds presented by Mount Mahiling Agricultural College, Laguna, through the director of forestry, Manila. Received December 19, 1933.

Bonga de China or *bonga de Jolo*. A medium-sized palm with graceful, somewhat curved pinnate leaves, resembling the common betel-nut palm, but not so tall. The crimson fruits, less than an inch long, are borne just below the leaves. In Manila this palm is grown as an ornamental.

For previous introduction see 94177.

103977. VICIA PANNONICA Crantz. Fabaceae. Vetch.

From lower Austria. Seeds purchased from Gustav & Wilhelm Löw, Angern. Received December 19, 1933.

Hungarian vetch. An annual vetch, native to Europe and Asia. It makes a less viny growth than common vetch (*Vicia sativa*) or hairy vetch (*V. villosa*), but is a vigorous grower attaining a full stem length of from 2½ to 3 feet. It is more winter-hardy than common vetch and will seldom winter-kill as far north as Washington, D. C. This species is especially adapted to poorly drained areas and is the best of the vetches in this regard.

For previous introduction see 52274.

103978 to 103980. AVENA spp. Poaceae. Oats.

From India. Seeds presented by the Imperial Institute of Agricultural Research, Pusa, at the request of the Indian Trade Commissioner, London, England. Received December 20, 1933.

A collection of hybrid oats, developed in India. Introduced for the use of Department specialists.

103978. B. S. 2. 103980. Hybrid J.

103979. Hybrid C.

103981. FICUS CARICA L. Moraceae. Common fig.

From Spain. Cuttings presented by Ramon Sala Roqueta, Balaguer. Received February 6, 1926. Numbered in December 1934.

Variety *Fraga*; fruits thick, white with thin skin and rosy flesh; very suitable for drying.

103982. PYRACANTHA CRENULATA (Don) Roemer. Malaceae.

Nepal freethorn.

From California. Seeds presented by the California Nursery Co., Niles. Received December 22, 1933.

This appears to be the typical form of the Nepal freethorn, with stiff, narrow-elliptic, crenulate, shining dark-green leaves with a short bristle at the tip. The showy red berries, one-fourth to five-eighths of an inch in diameter, are in loose corymbs.

103983. AMYGDALUS PERSICA L. Amygdalaceae. Peach.

From the Union of Soviet Socialist Republics. Scions presented by A. Popov, Department of New Cultures and Introduction, Leningrad. Received December 26, 1933.

Variety *ferganensis*.

For previous introduction see 102706.

103984 to 103987.

From Cuba. Seeds presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received December 26, 1933.

103984. ABROMA AUGUSTA L. f. Sterculiaceae.

A quick-growing shrub, native to the East Indies, with large angular leaves and dull, deep, dark-red flowers. The fiber is used for ropes and cordage in the Orient.

For previous introduction see 98795.

103985. ARISTOLOCHIA TAGALA Cham. Aristolochiaceae.

From the Botanic Garden, Straits Settlements. A tropical climber with ovate-acuminate and deeply cordate-auriculate leaves about 4 inches long. The greenish-purple flowers, with the limb extended into a tongue-shaped lip, are in small racemes. Native to Luzon, Philippine Islands, and allied to *Aristolochia indica* L.

103986. JATROPHA PODAGRICA Hook. Euphorbiaceae.

A handsome Central American shrub 1 to 2 feet high, with petlate, 3- to 5-lobed leaves 4 to 8 inches wide and orange flowers with scarlet petals.

For previous introduction see 73246.

103987. PYNOSTACHYS URTICIFOLIA Hook. Menthaeae.

A much-branched herbaceous perennial 5 to 7 feet high, native to tropical and southern Africa. The densely pubescent ovate leaves, 3 to 4 inches long, are deeply cut into rounded lobes, and the small bright-blue flowers are in dense spikes 2 to 3 inches long.

For previous introduction see 99458.

103988. ZEA MAYS L. Poaceae. Corn.

From Australia. Seeds presented by the Grafton Experiment Farm, through H. Wenholz, director of plant breeding, Department of Agriculture, Sydney, New South Wales. Received December 20, 1933.

Fitzroy. Introduced for the use of Department specialists.

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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 118



Washington, D. C.

Issued June 1936

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, JANUARY 1 TO MARCH 31, 1934 (Nos. 103989-105035)

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INTRODUCTORY STATEMENT

Inventory 118 lists the introductions (nos. 103989-105035) received by the Division of Plant Exploration and Introduction during the period from January 1 to March 31, 1934. Nearly all types of economic plants are represented, but certain introductions are worthy of special mention as continuations of projects now in progress within the Bureau.

Two lots of chestnut scions (nos. 104000-104009, 104057-104064) from northern China, representing three native Chinese species of *Castanea*, and a shipment of Japanese chestnut seeds (*Castanea crenata*, nos. 104014-104021) will be used by Department specialists in breeding experiments incidental to the chestnut-blight investigations.

Noteworthy also are several rather large introductions of scions and young plants of deciduous-fruit varieties. These include two lots of apples, pears, apricots, and peaches from Italy (nos. 104022-104056, 104483-104555), one of grapes, plums, and cherries (nos. 104281-104314) from Morocco, and one of apples, pears, and cherries (nos. 104776-104836) from Sweden. These are destined to be grown by Department specialists for comparison with varieties now growing in the United States.

Seeds of three lots of hardy shrubs and perennials (nos. 104345-104378, 104837-104851, and 104852-104864), mostly from eastern Asia, were presented respectively by the botanic gardens at Edinburgh, Kew, and Cambridge. These will be tested in the colder parts of the country. Among them are included some species that may be of particular interest in the planting problems of our more arid sections.

The interests of specialists working with lespedezas in a botanical review of the genus are recorded by the following numbers from Chosen, Japan, and Austria (nos. 104065-104067, 104068 and 104069, also 104669-104672). A collection of legumes from the Belgian Congo (nos. 104070-104102) was presented by the Director of the experiment station at Kisozi, Ruanda-Urundi Territory, as of possible use in the extreme South.

The interests of plant breeders are shown by the numerous importations of delphiniums (nos. 104351-104369, 104570-104573, 104847-104851, 104890-104895, 104939-104943, and 104950-104953), of antirrhinums (nos. 104557, 104924, 104925, 104948, and 104949), and of althaeas (nos. 104636, 104837-104839, and 104921-104923) for breeding experiments with rust-resistant strains, of digitalis (nos. 104574-104576, 104896-104898, and 104954-104960) for botanical review, and of salvias (nos. 104581-104592 and 104651-104658) for horticultural examination and testing.

Many palm species (nos. 104213-104216, 104331-104336, 104338-104343, 104679-104704) have been presented by the botanic gardens of Peradeniya, Trinidad, Georgetown, etc., to assist in the building up of the palm collection at the Coconut Grove Garden, where a valuable collection is already established.

The botanical determinations have been made and the nomenclature determined by Paul Russell, who has had general supervision of this inventory.

B. Y. MORRISON,
Principal Horticulturist, in Charge.

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D. C., November 30, 1935.

INVENTORY¹

103989. TSUGA FORMOSANA Hayata.
Pinaceae.

From Japan. Seeds presented by F. Seki, Director, Department of Forestry, Government Research Institute, Taihoku, Taiwan. Received January 17, 1934.

A handsome hemlock, native of Taiwan, closely allied to *Tsuga diversifolia*, from which it differs chiefly in the shape of the seed wings and in having glabrous branchlets. It develops into a large tree with slender spreading branches and glossy dark-green foliage.

103990. DAVIDIA INVOLUCRATA Baill.
Cornaceae. Dovetree.

From France. Seeds presented by A. Gerard, La Fosse, par Montroire sur Loir, Loir-et-Cher. Received January 9, 1934.

A handsome tree native to central and western China, where it reaches a height of 60 to 70 feet. In habit and foliage it resembles a linden. The bright-green oval leaves, 3 to 6 inches long, are sharply toothed and slender stalked, and the globular heads of small flowers, borne on slender nodding stalks about 2 inches long, are made unusually striking because of two or three large white bracts of unequal length.

For previous introduction see 101963.

103991. GENTIANA sp. Gentianaceae.

From Japan. Seeds presented by T. Tanaka, Osaka. Received January 6, 1934.

Kirishima Rinde. An alpine gentian of the Scabra section. The stem is prostrate, and the large deep-blue flowers are freely borne on the branchlets in autumn. Native to Mount Kirishima, Japan.

103992 to 103999. VITIS VINIFERA L.
Vitaceae. European grape.

From Hungary. Cuttings purchased from M. Kir Mathiasz, through the Royal Hungarian Plant Breeding Institute, Katona-telep. Received January 5, 1934.

A collection of grape varieties introduced for the use of Department specialists.

103992 to 103999—Continued.

103992. *Gustav Szauter* (muscat).

103993. *Mathiasz y-ne* no. 40.

103994. *Mathiasz j diandala* no. 14.

103995. *Nicolas Horthy* no. 39.

103996. *Scolokertek hiralymoje* no. 26 (muscat).

103997. *Tallian* (muscat).

103998. *Thaloczy* (muscat).

103999. *Vorosmarthy* (muscat).

104000 to 104009. CASTANEA spp. Fa-
gaceae. Chestnut.

From China. Scions collected by Peter Liu and sent through Owen L. Dawson, agricultural commissioner, Shanghai. Received January 3, 1934.

104000. CASTANEA SEGUINII Dode.

Ya Lee Tzu, or wild chestnut. Collected on the mountain of Lao Hu Shan, near Hooghchow, and native to east-central China. It is usually a bush or low tree, but occasionally a shapely tree 40 feet high, with deep-green leaves, paler beneath, and small nuts of sweet agreeable flavor.

For previous introduction see 102923.

104001 to 104009. CASTANEA MOLLISSIMA
Blume. Hairy chestnut.

104001. No. 2. *Hsiao Chia Lee*, or small home chestnut. Collected in the foothills near the village of Tamiao, east of Nanking. A locally grown, rather small variety, said to be somewhat reddish, and used for roasting or with meat dishes.

104002. No. 3. *Ta Chia Lee*, or large home chestnut. Collected in the foothills of Sun Chia Tzu Lang, east of Nanking. A locally grown variety bearing nuts a little larger than those of *Hsiao Chia Lee* (no. 2, 104001). The marketing season is about 6 weeks long.

¹It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Plant Exploration and 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 seed samples or 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

104000 to 104009—Continued.

104003. No. 4. *La Yu Lee*, or large oil chestnut. Collected in the foothills south of Sun Chia Tzu Lang, east of Nanking. A very large, dark-brown chestnut, rarely grown in this region.

104004. No. 5. *Pai Mao Lee*, or white-hairy chestnut. Collected in the foothills near the village of Tiehling-kiang, northeast of Yuhong. A locally grown chestnut, rather small but with a very sweet kernel. The dark-brown hull is covered with white hairs on the lower end, and because of this it is called white-hairy chestnut.

104005. No. 6. *Mao Hsiang Lee*, or hairy fragrant chestnut. Collected near the foot of Pao Shih Shan, near Hongchow. A little-grown variety.

104006. No. 7. *Kuei Hua Lee Tzu*, or cassia-flower chestnut. This chestnut is so named because it has a cassia-like fragrance when young.

104007. No. 8. *Kuei Lee*, or large chestnut. Collected at the foot of Pao Shih Shan, near Hongchow. A very common chestnut of this region, used in cooking. The flavor is not as good as that of the North China chestnuts.

104008. No. 9. *Kuei Lee*, or large chestnut. Collected in the foothills of Ssu Yen Ching, at the south mountain of Hongchow.

104009. No. 10. *Kuei Lee*, or large chestnut. Collected in the foothills of Ssu Yen Ching, at the south mountain of Hongchow. Nuts from a different tree than no. 9 (104008).

104010 to 104012.

From China. Seeds presented by G. Weidman Groff, Lingnan University, Canton. Received January 4, 1934.

104010. CITRUS GRANDIS (L.) Osbeck.
Rutaceae. Grapefruit.

Kao Phuang, or white tassel. Grown near Bangkok, Siam, and considered one of the best pomelos of the Far East.

104011. DIOSPYROS KAKI L. f. Diospyraceae.
Kaki persimmon.

Tsai Tsz. A large oblong persimmon from Canton and a good edible variety.

104012. DIOSPYROS KAKI L. f. Diospyraceae.
Kaki persimmon.

Kaai Sam Tsz. Chicken-heart persimmon. An interesting and vigorous small Canton persimmon which is especially good for stock.

104013. AMYGDALUS COMMUNIS L.
Amygdalaceae. Almond.

From Italy. Plants purchased from Dr. Mario Calvino, Stazione Sperimentale di Floricoltura, San Remo. Received January 8, 1934.

Pollardii. An ornamental bushy almond that originated as a seedling in the garden of Mr. Pollard at Ballarat, Victoria, Australia, in 1904.

104014 to 104021. CASTANEA CRENATA Sieb. and Zucc. Fagaceae.
Japanese chestnut.

104014 to 104021—Continued.

From Japan. Seeds purchased from the Yokohama Nursery Co., New York, N. Y. Received January 3, 1934.

104014. From the Temple Forest, Koyasan, Wakayama-ken.

104015. From Nobeoka Eirinsho, Yokogomura, Higashi, Usuki-gun, Miyasaki-ken.

104016. From Numakunai Eirinsho, Ippomura, Iwate-gun, Iwate-ken.

104017. From Masuda-gun, Shimoharamura, Gifu-ken (Hidadaki).

104018. From Sendai Eirinsho, Kawasakimura, Shibata-gun, Miyagi-ken.

104019. From Kakudate Eirinsho, Komaniuchi National Forest, Senhokugun, Akita-ken.

104020. From Mizusawa Eirinsho, Ezashigun, Yanagawa-mura, Iwate-ken.

104021. From Oshima Province, Kametangun, Yunokawa-mura, Hokkaido.

104022 to 104056.

From Italy. Plants purchased from Martino Bianchi, Pistoia. Received January 8, 1934.

Received under the following varietal names, for the use of Department specialists.

104022 to 104026. AMYGDALUS spp. Amygdalaceae.

104022 to 104024. AMYGDALUS PERSICA L.
Peach.

104022. *Grossa gialla di Verona*.

104023. *Maddalena precoce*.

104024. *Poppa di Venere Settembrina*.

104025 and 104026. AMYGDALUS PERSICA NECTARINA Ait. Nectarine.

104025. *Noce pesca gialla*.

104026. *Violet Musquè*.

104027 to 104036. MALUS SYLVESTRIS Mill. Malaceae. Apple.

104027. *Carpindola Reale*.

104028. *Cellini*.

104029. *Dal Ferro*.

104030. *Golden Noble*.

104031. *Jakob Lebel*.

104032. *Morgenduft*.

104033. *Renetta di Mans*.

104034. *Renetta dorata*.

104035. *Renetta grigia di Brownlen*.

104036. *Rosa di Berna*.

104037 to 104056. PYRUS COMMUNIS L. Malaceae. Common pear.

104037. *Abbe Fetel*.

104038. *Ananassa*.

104039. *Belle di Pistoia*.

104040. *Blickling*.

104041. *Bonne de Beugny*.

104042. *Bonne d'Esze*.

104043. *Butirra Bedford*.

104022 to 104056—Continued.

- 104044. *Butirra Bachelier*.
- 104045. *Butirra d'Amanlis*.
- 104046. *Butirra d'Aprile*.
- 104047. *Charles Cognec*.
- 104048. *Directeur Varenne*.
- 104049. *Docteur Jules Guyot*.
- 104050. *Duchessa Berard*.
- 104051. *La Coscia Precoce*.
- 104052. *La Coscia Tardiva*.
- 104053. *Lardona*.
- 104054. *Moscattello Piccolo*.
- 104055. *Fico*.
- 104056. *Souvenir d'Emile Coue*.

104057 to 104064. *CASTANEA* spp. **Fagaceae. Chestnut.**

From China. Seeds collected by Peter Liu and sent through Owen L. Dawson, agricultural commissioner, Shanghai. Received January 3, 1934.

104057. *CASTANEA HENRYI* (Skan.) Rehder and Wilson.

From Hsiaofeng.

104058. *CASTANEA HENRYI* (Skan.) Rehder and Wilson.

From Hsiaohsing, Anhwei Province.

104059 to 104063. *CASTANEA MOLLISSIMA* Blume. **Hairy chestnut.**

104059. From Fengchiao, Chekiang Province. A large chestnut.

104060. *Chia Lee*, or home chestnut, from Nanking.

104061. *Lai An*. A locally grown chestnut from Chekiang Province.

104062. *Tsai Lee*, or vegetable chestnut, from Shucheng, Anhwei Province.

104063. *Kuei Lee*, or large chestnut, from Hsinteng, Chekiang Province.

104064. *CASTANEA SEGUINII* Dode.

A wild chestnut from Hongchow.

104065 to 104067. *LESPEDEZA* spp. **Fabaceae. Bushclover.**

From Chosen. Seeds presented by Dr. T. Kaburaki, Director, Forest Experiment Station, Keijo. Received January 8, 1934.

104065. *LESPEDEZA BICOLOR* Turcz. **Shrub bushclover.**

A bushy perennial which bears a profusion of rose-purple flowers during the early autumn, practically covering the drooping branches which sometimes become 6 feet in length. Native to eastern Asia.

For previous introduction see 101483.

104066. *LESPEDEZA CYRTOBOTRYA* Miquel.

A shrub about 6 feet high, resembling *L. bicolor* in habit, with oval-oblong leaflets and dense clusters of purple flowers. It is native to Japan.

For previous introduction see 101484.

104065 to 104067—Continued.

104067. *LESPEDEZA JAPONICA INTERMEDIA* Nakai.

A bushy shrub 6 to 12 feet high, with large elliptic or oblong, obtuse or emarginate hairy green leaflets, paler beneath; and rose-purple flowers half an inch long, in axillary and terminal racemes. The oblong reticulate pod is covered with long hairs and is one-fourth to one-third of an inch long. Native to Chosen.

104068 and 104069.

From Japan. Seeds presented by T. Nakai, Botanic Gardens, Science College, Imperial University, Tokyo. Received January 12, 1934.

104068. *LESPEDEZA HOMOLOBA* Nakai. **Fabaceae. Bushclover.**

A small shrub with trifoliolate leaves, the leaflets being elliptic or ovate oblong and up to 2 inches long. The pale-purple flowers, half an inch long are in small axillary racemes. Closely allied to *Lespedeza bicolor*, but differing in its more shining leaflets and longer sepals. Native to Japan.

104069. *LESPEDEZA SENDAICA* Nakai. **Fabaceae. Bushclover.**

A bushclover with elongated branches and ternate leaves, the leaf divisions being ovate oblong and about 1 inch long. The flowers, in small axillary racemes, are purplish with pink standards. Native to northern Japan.

104070 to 104102.

From Africa. Seeds presented by J. B. H. Lejeune, Director, Government Experimental Station, Kisozi, Ruanda-Urundi Territory, Belgian Congo. Received January 10, 1934.

104070. *ACACIA PODALYRIAEOFOLIA* A. Cunn. **Mimosaceae.**

A gray pubescent shrub 4 to 6 feet high, with ovate phyllodes and numerous yellow flowers in long racemes at the ends of the branches. The wood is pinkish in color and nicely marked. Native to Queensland.

For previous introduction see 48057.

104071 to 104073. *CAJANUS INDICUS* Spreng. **Fabaceae. Pigeonpea.**

104071. A variety with brownish-pink seeds.

104072. A variety with light-tan seeds marbled with brownish pink.

104073. A variety with straw-colored seeds.

104074 to 104076. *CROTALARIA* spp. **Fabaceae.**

104074. *CROTALARIA FULVA* Roxb.

Collected in Urundi Territory at 6,000 feet altitude. A stiffly erect leguminous shrub 3 to 6 feet high, with numerous paniculate branches. The silky narrow leaves are about 4 inches long, and the flowers, in panicles, are about an inch long.

For previous introduction see 65699.

104075. *CROTALARIA* sp.

Collected in Buhnama, Kasanga.

104076. *CROTALARIA INCANA* L.

104070 to 104102—Continued.

Collected in Urundi Territory. A tropical American plant about 3 feet high, erect, branched, somewhat shrubby, and softly pubescent. The yellow flowers are crowded in 12- to 20-flowered elongated racemes, 2 to 8 inches long. The plant occurs in waste places throughout the Tropics and is in flower all the year.

For previous introduction see 64059.

104077. *CYTISUS PROLIFERUS* L. f. Fabaceae. Tagasaste.

A stout leguminous shrub up to 12 feet high, of rather lax habit, with long slender branches and green trifoliolate leaves with silky pubescent lower surfaces. The white flowers are in axillary clusters among the branches. It is native to the Canary Islands where it is considered an excellent drought-resistant forage plant.

For previous introduction see 90725.

104078. *ELEUSINE CORACANA* (L.) Gaertn. Poaceae. African millet.

Collected in Urundi.

104079. *ERIOSEMA MONTANUM* Baker. Fabaceae.

An erect perennial leguminous plant with trifoliolate leaves; the ovate-oblong, acute leaflets are about 2 inches long. The small yellow flowers are in axillary racemes. Native to eastern and north-eastern Africa.

104080. *INDIGOFERA* sp. Fabaceae. Indigo.

104081. *LUPINUS* sp. Fabaceae.

Collected at Kevin.

104082. *LUPINUS* sp. Fabaceae.

Collected at Kidega.

104083 to 104092. *PHASEOLUS* spp. Fabaceae.

104083 to 104085. *PHASEOLUS LUNATUS*. Lima bean.

104083. A small brown bean with blackish areas.

104084. A small gray bean with deep-brown blotches.

104085. A small white bean.

104086 to 104092. *PHASEOLUS VULGARIS* L. Common bean.

104086. A large, deep reddish-brown bean.

104087. A rose-brown bean with deeper brown marbling.

104088. A brownish-yellow bean with brown marbling.

104089. A black bean.

104090. A reddish-brown bean.

104091. A light-gray bean with black marbling.

104092. A greenish-yellow bean.

104093. *PISUM SATIVUM* L. Fabaceae. Pea.

104094. *SESBANIA* sp. Fabaceae.

104095. *SESBANIA* sp. Fabaceae.

104096. *SMITHIA AESCHYNOMENOIDES* Welw. Fabaceae.

104070 to 104102—Continued.

Collected at 6,000 feet altitude. An erect shrub about 2 feet high, with numerous slender bristly branches, pinnate leaves about 1 inch long with sensitive leaflets, and racemes of small yellow, purple-veined flowers. Native to Angola, Africa.

104097. *SORGHUM VULGARE* Pers. Poaceae. Sorghum.

A red variety.

104098. *SORGHUM VULGARE* Pers. Poaceae. Sorghum.

104099 to 104101. *ZEA MAYS* L. Poaceae. Corn.

104102. *SESAMUM ANGOLENSE* Welw. Pedaliaceae.

An erect herb, often 6 feet high, native to tropical Africa. The square stems are clothed with numerous oblong to ovate, wavy-margined leaves 2 to 4 inches long. The solitary axillary flowers have brilliant violet-purple, obliquely campanulate corollas 2 to 3 inches long.

For previous introduction see 61681.

104103 to 104124.

From Argentina. Seeds presented by the Director, Botanic Gardens, Buenos Aires. Received January 12, 1934.

104103. *ACACIA BONARIENSIS* Gillies. Mimosaceae.

An almost glabrous tree, with angular branches sparsely covered with short recurved spines. The long bipinnate leaves and branches are glabrous; the youngest leaflets and the peduncles are silky hairy, as are also the short panicle flower spikes.

For previous introduction see 88198.

104104. *ACACIA MONILIFORMIS* Griseb. Mimosaceae.

A shrub with fragrant yellow flowers, common in the subtropical forests of Tucumán, Argentina, bearing dusty four-angled branches and petioles and glabrous bipinnate leaves. The flat linear leathery pods when young are used as cattle feed.

For previous introduction see 48954.

104105. *ACNISTUS PARVIFLORUS* Griseb. Solanaceae.

A small shrub with elliptic, acute, long-cuneate papery leaves about 3 inches long and small, fragrant, funnel-shaped white flowers one-third inch long, in small clusters. It is native to Argentina.

104106. *ANNESLIA TWEEDII* (Benth.) Linden (*Calliandra tweedii* Benth.). Mimosaceae.

A low tropical tree, with bipinnate leaves made up of 3 to 4 pairs of very small hairy linear-oblong leaflets and globose flower heads with rather showy purplish stamens. Native to British Guiana.

For previous introduction see 94769.

104107. *CHOMELIA BRASILIANA* A. Rich. Rubiaceae.

A small spiny shrub, pubescent throughout, with opposite elliptic leaves and silky white flowers in small graceful axillary clusters. Native to Brazil.

104103 to 104124—Continued.

104108. *CHORISIA SPECIOSA* St. Hil.
Bombacaceae. Floss-silk-tree.

A handsome tree 20 feet high, abundant in Argentina and the river provinces of Paraguay. The boll is nearly 5 inches long. The yellow fiber, called Samahu or Samuy, and similar to the best Javan kapok, is used to a limited extent for stuffing pillows and can be used commercially for life preservers, jackets, water wings, mattresses, etc. The tree has resisted 3° C. without injury to its flowers, although the bolls require hot sun.

For previous introduction see 88221.

104109. *CISSUS* sp. Vitaceae.

Received as *Cissus rutilans*, a name for which a place of publication has not been found. Said to be popular in Buenos Aires as a cover for trellises and for growing over walls in patios.

104110. *CNICOTHAMNUS LORENTZII* Griseb.
Asteraceae.

A handsome shrub about 20 feet high, with thick branches, oval leaves about 5 inches long, and purple flowers in large solitary heads. Native to Tucumán, Argentina.

For previous introduction see 101512.

104111. *COMBRETUM FRUTICOSUM* (Loefl.)
Stuntz. Combretaceae.

An ornamental climbing shrub with opposite, elliptic leaves and spikes of orange and green flowers. It is native in temperate regions from Argentina to Brazil.

For previous introduction see 42326.

104112. *CROTON URUCURANA* Baill. Euphorbiaceae.

A Brazilian shrub with heart-shaped acuminate leaves about 3 inches long, resembling those of the poplars. The small inconspicuous flowers are in terminal cymes.

104113. *DAUBENTONIA TRIPETII* Poit.
Fabaceae.

An ornamental leguminous shrub or small tree, native to Argentina, with pinnately compound leaves which are dull green above and paler beneath. The rather large, orange-red flowers are borne in drooping racemes.

For previous introduction see 101513.

104114. *ERYTHRINA FALCATA* Benth.
Fabaceae.

A tropical tree allied to *Erythrina crista-galli*. The oval-oblong leaflets are 4 to 6 inches long, becoming leathery with age. The scarlet flowers, a little smaller than those of *E. crista-galli*, are in small racemes in the upper leaf axils. Native to Brazil.

104115. *GLEDITSIA AMORPHOIDES* (Griseb.)
Taub. Caesalpinziaceae. Honeylocust.

A spiny tree, native to Bolivia, which sometimes attains a height of 50 feet with a trunk diameter of over 2 feet. The bark is used in place of soap for removing spots from woolen and cotton goods; hence the name "quillay." The leaves, young twigs, and roots have astringent properties. The wood is used in turning, for furniture, and for wooden soles and pegs.

104103 to 104124—Continued.

For previous introduction see 48673.

104116. *PSYCHOTRIA* sp. Rubiaceae.

The psychotrias are small tropical trees with opposite leaves and small flowers in axillary or terminal cymes.

104117. *IODINA RHOMBIFOLIA* Hook. and Arn. Santalaceae.

Quebrachillo. A low bushy slender-branched tree with three-pointed spiny leaves. The wood is white and smooth and the bark is thick. It is native to Brazil.

For previous introduction see 101517.

104118 to 104120. *MIMOSA* spp. Mimosaceae.

104118. *MIMOSA ACULEATICARPA* Ortega.

A shrub over 6 feet high, covered all over with stout spines, forming an impenetrable hedge which thrives on the very driest poor soils. The small flower heads are pink or white. Native to central and southern Mexico.

For previous introduction see 62095.

104119. *MIMOSA CARINATA* Griseb.

A subtropical spiny tree, with bipinnate leaves consisting of 1 or 2 pairs of pinnae and 12 to 24 pairs of minute pinnules. The purple and green plaid flowers are in small heads. Native to Argentina.

For previous introduction see 94778.

104120. *MIMOSA SEPIARIA* Benth.

A shrub or small tree, with bipinnate leaves made up of 4 to 8 pinnae each bearing 20 to 40 linear pinnules one-fourth of an inch long. The small white flowers are borne in large lax panicles. It is native to Brazil.

For previous introduction see 91786.

104121. *PIPTADENIA MACROCARPA* Benth.
Mimosaceae.

An important timber tree, native to Brazil, with compound leaves 6 inches long composed of pinnae each with 10 to 25 pairs of pinnules. The small white flowers occur in globose heads in the axils of the leaves, sometimes at the ends of the branchlets. The pods are 4 to 10 inches long and 1 inch wide, with thickened margins.

For previous introduction see 88244.

104122. *PIPTADENIA RIGIDA* Benth. Mimosaceae.

An unarmed tree or shrub from subtropical South America, with axillary heads of small white flowers and small stiff linear, shining-green leaflets. The long slender stiff-winged pods are rich in tannin; the wood is used in shipbuilding.

For previous introduction see 48075.

104123. *PORLIERIA LORENTZII* Engl. and Prantl. Zygophyllaceae.

An evergreen shrub or small tree, with stout crooked branches and pinnate leaves with small narrow leaflets. The small fragrant bluish flowers are in small clusters or solitary. Native to Argentina.

104103 to 104124—Continued.

104124. *QUILLAJA BRASILIENSIS* (St. Hil. and Tul.) Mart. Rosaceae.

A Brazilian tree up to 25 feet high, with alternate oblong-lanceolate leaves and corymbs of white flowers. The symmetrical habit and very leafy crown of the tree make it a striking ornamental when in flower. The bark and the wood contain saponin.

For previous introduction see 48686.

104125 to 104127. *ERYTHRINA* SPP. Fabaceae.

From Cuba. Seeds presented by Percy Wilson, associate curator, New York Botanical Garden, Bronx Park, New York, N. Y. Received January 19, 1934.

104125. *ERYTHRINA GRISEBACHII* Urb.

No. 3 (753425). *Piñon botijo* or *piñon real*. From Punta Podre, Oriente, Cuba. A large tree with trifoliolate leaves; these are roundish, about 4 inches long, and membranous. The scarlet flowers, about 2 inches long, are produced in small racemes. Native to Cuba.

104126. *ERYTHRINA VARIEGATA* Stickm. (*E. indica* Lam.).

No. 2 (753424). From Soledad, Cienfuegos. A deciduous tree, native throughout India, with clusters of large bright-red flowers that appear before the leaves. The pods, 4 to 8 inches long, contain several dark-carmine seeds.

For previous introduction see 98846.

104127. *ERYTHRINA* sp.

No. 1 (753423). From Estación Experimental Agronómica, Santiago de las Vegas, Cuba.

104128 and 104129.

From Jamaica Plain, Mass. Cuttings presented by the Arnold Arboretum. Received January 20, 1934.

104128. *VIBURNUM SETIGERUM* Hance (*V. theiferum* Rehd.). Caprifoliaceae.

An upright deciduous shrub about 12 feet high, with dark-green, oval-oblong leaves about 4 inches long and ovoid bright-red fruits. Native to central China.

For previous introduction see 77851.

104129. *VIBURNUM SETIGERUM* Hance (*V. theiferum* Rehd.). Caprifoliaceae.

Variety *aurantiacum*. A yellow-fruited form.

104130 to 104140. *TRITICUM AESTIVUM* L. (*T. vulgare* Vill.). Poaceae.

Common wheat.

From Argentina. Seeds presented by Raul Famella, Fitotecnia, Ministerio de Agricultura, Buenos Aires. Received January 20, 1934.

104130. *Alto de sierra*. From Guatrache. Developed at the Federal Department of Agriculture, Buenos Aires.

104131. *Excelsior*. Developed at La Prevision, private seed farm.

104132. *General Urquiza*. SF. no. 12771. Developed at Solo Experiment Station, private seed farm.

104130 to 104140—Continued.

104133. *Guatrache*. SF. no. 12723. Developed at the Federal Department of Agriculture, Buenos Aires.

104134. *La Prevision 25*. SF. no. 12728. Developed at La Prevision, private seed farm.

Nos. 104135 and 104136 were developed at the Federal Department of Agriculture, Buenos Aires.

104135. *Lin Catal*. SF. no. 13568.

104136. *Rafaeta 6, M. A.* SF. no. 12751.

Nos. 104137 to 104139 were developed by E. Klein, private seed farm.

104137. *San Martin*. SF. no. 12706.

104138. *Triunfo*. SF. no. 12709.

104139. *Vencedor*. SF. no. 12708.

104140. *38 M. A.* SF. no. 12713. Developed at the Federal Department of Agriculture, Buenos Aires.

104141 to 104144.

From Chosen. Seeds presented by Dr. T. Kaburaki, Director, Forest Experiment Station, Keijo. Received January 19, 1934.

104141. *ABIES NEPHROLEPIS* (Trautv.) Maxim. Pinaceae. Fir.

A Siberian conifer up to 100 feet high, resembling the Siberian fir, *Abies sibirica*, but with rough bark, pubescent branchlets, shorter leaves, and smaller cones.

For previous introduction see 90784.

104142. *BETULA DAURICA* Pall. Betulaceae.

A tree up to 60 feet high, with wide-spreading branches and purplish-brown flaky bark. The broadly wedge-shaped leaves, 2 to 4 inches long, are dark green above and have serrate margins.

For previous introduction see 82474.

104143. *FORSYTHIA VIRIDISSIMA KOREANA* Rehd. Oleaceae.

This variety differs from the typical and well-known *F. viridissima* in being more spreading in habit and in having broader leaves and larger and brighter flowers. It is cultivated in Keijo, Chosen.

For previous introduction see 82477.

104144. *THUJA KORAIENSIS* Nakai. Pinaceae.

A small evergreen tree native to the mountains of Chosen at 6,000 feet altitude. While commonly prostrate, it sometimes becomes 12 feet high; the lower branches are usually elongated, and the foliage is intensely green.

104145. *VITIS VINIFERA* L. Vitaceae. European grape.

From Tripoli, Africa. Cuttings presented by Ernestine Fenzl. Received January 26, 1934.

The common grape of Tarhuna, Tripoli.

104146 to 104149. *PISTACIA VERA* L. Anacardiaceae. Pistache.

From the Union of Soviet Socialist Republics. Seeds presented by the Department of New Cultures and Introduction, Leningrad. Received January 26, 1934.

104146 to 104149—Continued.

A collection of seeds originally from Turkmenistan, Russian Turkistan.

104146. No. 141591. 104148. No. 141805.

104147. No. 141715. 104149. No. 142059.

104150 to 104157. PRUNUS spp. Amygdalaceae.

From Manitoba, Canada. Scions presented by G. F. Chipman, Winnipeg. Received January 30, 1934.

104150 and 104151. PRUNUS ARMENIACA L.
Apricot.

Seedlings of a native apricot from the Harbin district, Manchuria. The trees have been growing near Winnipeg for 4 years and have shown no winterkilling on the wood, but the fruit buds have not been entirely hardy.

104150. No. 335.

104151. No. 336.

104152. PRUNUS sp.

Champa cherry. A hybrid between the North Dakota sand cherry (*Prunus besseyi*) and some unknown plum; originated by Dr. N. E. Hansen, Brookings, S. Dak.

104153. PRUNUS sp.

Sand cherry, selection no. 842. A seedling of the Sioux sand cherry, originated by Dr. N. E. Hansen. The fruit is over three-quarters of an inch in diameter, and, although the flesh is soft, the flavor is very good. The tree is winter-hardy at Winnipeg.

104154. PRUNUS sp.

Tom Thumb cherry. A hybrid between the North Dakota native sand cherry (*Prunus besseyi*) and some unknown plum; originated by Dr. N. E. Hansen, Brookings, S. Dak.

104155 to 104157. PRUNUS spp.

Hybrids originated by Dr. N. E. Hansen, at Brookings, S. Dak., between the Assiniboine, a pure Manitoba native plum, and three of Burbank's best California plums. At a temperature as low as 45° to 50° F. below zero they show only slight winter injury.

104155. PRUNUS sp.

Cree plum.

104156. PRUNUS sp.

Ojibwa plum.

104157. PRUNUS sp.

Pembina plum.

104158 to 104160. PRUNUS DOMESTICA L. Amygdalaceae. Common plum.

From Germany. Scions presented by Adolf Schrey, Ratzburg. Received January 30, 1934.

A collection of plum scions, received under the following varietal names, for the use of Department specialists.

104158. *Buhler*.

104159. *Erfinger Frühzwetsche*.

104160. *Lützeltsachsen*.

104161 to 104163.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received February 5, 1934.

104161. GLEDITSIA AMORPHOIDES (Griseb.) Taub. Caesalpiniaceae. Honeylocust.

For previous introduction and description see 104115.

104162. PINUS EDULIS Engelm. Pinaceae.

A small tree, generally 10 to 20 feet high, sometimes as much as 40 feet high, with horizontal branches, developing a rounded head in old age. The rigid dark-green leaves are about 1 inch long, and the small greenish-yellow cones are over an inch long. Native to the southwestern United States.

104163. TOLUIFERA PEREIRAE (Klotzsch) Baill. Fabaceae. Balsam-of-Peru.

A handsome leguminous tree with glossy green, pinnate leaves and racemes of white flowers. The balsam-of-Peru of commerce is obtained from the lower part of the trunk.

For previous introduction see 97900.

104164 to 104172.

From Australia. Seeds presented by F. H. Baker, Richmond, Victoria. Received January 26, 1934.

104164. ACACIA sp. Mimosaceae.

Locally known as jam wood; the blossom has the fragrance of raspberry jam. Received as *Acacia acuminata*, but the seeds do not agree with that species.

104165 to 104172. EUCALYPTUS spp. Myrtaceae.

104165. EUCALYPTUS CALOPHYLLA Lindl.

Variety *rosea*. A medium-sized Australian tree with dense foliage and dark, corky, deeply furrowed bark. The thick firm leaves are ovate-lanceolate, and the large pink flowers appear in big clusters. It is an ornamental tree of slow growth, not enduring much frost or drought, and is used as a shade tree in California.

For previous introduction see 44959.

104166. EUCALYPTUS GOMPHOCEPHALA DC. **Toacart**.

A tree, native to Australia, of fairly rapid growth, which reaches a height of 100 feet. The very heavy, tough, and strong wood is used for general construction. This species will endure but little frost and prefers limestone soils.

For previous introduction see 103654.

104167. EUCALYPTUS LEHMANNI (Schauer) Preiss. **Lehmann gum**.

A large shrub or small tree with rough reddish bark, peeling off in irregular sheets. The greenish-yellow flowers open from July to September. Native to Western Australia.

For previous introduction see 95318.

104164 to 104172—Continued.

104168. EUCALYPTUS TORQUATA Luehm.

A tree with lanceolate, oblique, leathery, dull gray-green leaves 4 inches long and reddish-orange flowers in umbels of seven on stalks 1 inch long. Native to Western Australia.

104169. EUCALYPTUS MACROCARPA Hook.

A stout Australian shrub or small tree up to 15 feet high, with thick, rigid, cordate, glaucous leaves 6 inches long and large, solitary, brilliant orange or crimson flowers.

For previous introduction see 93838.

104170. EUCALYPTUS PATENS Benth.

An Australian tree up to 100 feet high, with falcate lanceolate leaves 6 inches long, short panicles of small flowers, and flat-topped globular fruits. The tough durable wood is used by wheelwrights.

For previous introduction see 77611.

104171. EUCALYPTUS PREISSIANA Schau.

A shrubby eucalyptus about 8 feet high, with rigid branchlets, shining-green, oblong-elliptic leaves nearly 4 inches long, and small yellowish flowers in axillary clusters. Native to southern Australia.

104172. EUCALYPTUS sp.

Received under the name "steedman-nii." It is said to have golden-yellow flowers and shining, reddish bark. Native to Western Australia.

104173 to 104190. VITIS VINIFERA L. Vitaceae. European grape.

From India. Plants purchased from the Government Botanical Gardens, Mohala, Sangyan, Saharanpur. Received February 1, 1934.

A collection of grape varieties introduced for the use of Department specialists.

104173. *Bedana*.104174. *Bedana Red Kishmish*.104175. *Bedana White*.104176. *Black Round*.104177. *Country*.104178. *Crystal*.104179. *General de la Marmora*.104180. *Haitha*.104181. *Hussaini*.104182. *James*.104183. *Japan*.104184. *Kadhari*.104185. *Large White*.104186. *Mothea*.104187. *Red Prince*.104188. *Sharbati*.104189. *Trebbina*.104190. *Vineyard*.

104191. GOSSYPIMUM sp. Malvaceae. Cotton.

From Hawaii. Seeds presented by J. M. Westgate, Director, Hawaii Agricultural Experiment Station, Honolulu. Received February 1, 1934.

Caravonica cotton. Introduced for the use of Department specialists interested in cotton breeding.

104192. ERYTHROXYLON COCA Lam. Erythroxylaceae. Cocaine-tree.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received February 1, 1934.

A tropical shrub, native to Peru, 5 to 6 feet high with yellowish flowers borne in clusters of 3 to 5. It is grown commercially on a large scale throughout the warmer parts of South America, also in Java and Ceylon, for the sake of cocaine, which is extracted from the dried leaves.

For previous introduction see 78509.

104193 to 104195. ALLIUM CEPA L. Liliaceae. Onion.

From Italy. Seeds purchased through W. Roderick Dorsey, American consul general, Genoa. Received February 3, 1934.

104193. *Rossa della rocca*. Introduced as a red onion, but proved to be a fine large yellow-skinned, white-fleshed onion of exceptionally sweet taste.

104194. *Rossa Piatta di Bassano*.

104195. *Rossa Sanguigna di Genova*.

104196. SALIX TAXIFOLIA H. B. K. Salicaceae.

From Tucson, Ariz. Cuttings collected by S. B. Detwiler, Bureau of Plant Industry. Received February 6, 1934.

A shrub, or occasionally a tree 50 feet high, with silvery silky lanceolate or linear leaves about 1 inch long. Native to northern Mexico and the southwestern United States.

104197 to 104210.

From France. Plants purchased from the Grandes Roseraies du Val de la Loir, Orléans. Received February 6, 1934.

104197. CARRIEREA CALYCINA Franch. Flacourtiaceae.

A beautiful tree up to 50 feet high, very similar in foliage to *Idesia polycarpa*. The alternate leaves, 5 to 7 inches long, are ovate to ovate-oblong, smooth, dark green shaded to purple. The tubular white flowers, less than an inch long, are in few flowered terminal clusters. Native to the northeastern part of Szechwan, China, at 4,500 feet altitude.

For previous introduction see 29094.

104198. CERCIS RACEMOSA Oliver. Caesalpiniaceae. Redbud.

An ornamental Chinese tree about 15 feet high, with dark-green, heart-shaped leaves and small rosy flowers in pendulous racemes about 4 inches long. The tree commences to flower when 1 year old.

For previous introduction see 78118.

104197 to 104210—Continued.

104199. *CLETHRA BARBINERVIS* Sieb. and Zucc. Clethraceae. Tree clethra.

A shrub or tree from eastern Asia, up to 30 feet high, with oval-oblong, pointed, sharply serrate, hairy-veined leaves from 3 to 6 inches long and paniced racemes of white fragrant flowers which appear from July to September.

For previous introduction see 43834.

104200 to 104202. *CORYLOPSIS* spp. Hamamelidaceae.

104200. *CORYLOPSIS PAUCIFLORA* Sieb. and Zucc. Winterhazel.

A spreading shrub, usually about 4 feet high, with slender branches, bright-green, broadly oval acuminate leaves, heart-shaped at the base and up to 3 inches long. The primrose-yellow flowers, less than an inch across, are in pairs or threes on short spikes. Native to Japan and said to be less hardy than *Corylopsis spicata*, but more attractive because of its larger flowers.

104201. *CORYLOPSIS PLATYPETALA LEVIS* Rehd. and Wils.

A deciduous shrub 3 to 7 feet high, with slender branches, ovate cordate, dark-green leaves 2 to 4 inches long, and fragrant pale-yellow flowers in rather dense racemes. Native to western Szechwan, China.

104202. *CORYLOPSIS WILLMOTTIAE* Rehd. and Wils.

A deciduous shrub, up to 12 feet high, native to central China. The leaves, 1 to 3 inches long, are oval or somewhat heart-shaped with sinuate margins, and the yellow, fragrant flowers, which appear in early spring, are in racemes about 3 inches long.

For previous introduction see 73428.

104203. *DAPHNIPHYLLUM GLAUCESCENS* Blume. Euphorbiaceae.

An East Indian evergreen tree with entire oblong-lanceolate leaves, inconspicuous flowers, and black fleshy drupes. The tree is valued for the ornamental character of its laurellike foliage.

For previous introduction see 96521.

104204. *DIPELTA VENTRICOSA* Hems l. Caprifoliaceae.

A deciduous shrub, 6 to 15 feet high, with downy young shoots and oval to ovate-lanceolate leaves 2 to 6 inches long. The bell-shaped flowers, about 1 inch long, are borne on drooping pedicels at the end and in the leaf axils of short side shoots. The corolla is deep rose outside and paler within, except in the throat, which is orange colored. Native to western China.

For previous introduction see 81848.

104205. *DIPELTA YUNNANENSIS* Franch. Caprifoliaceae.

A shrub 10 to 15 feet high, native to western China, with opposite, entire, lanceolate leaves 3 to 6 inches long and leafy racemes of two-lipped, tubular-campanulate, pinkish to purple flowers having shieldlike floral bracts.

For previous introduction see 103423.

104197 to 104210—Continued.

104206. *LIRIODENDRON CHINENSE* (Hems l.) Sargent. Magnoliaceae. Chinese tuliptree.

An ornamental deciduous tree up to 50 feet high, native to central China. The leaves, 5 to 6 inches long, have four acute or acuminate lobes, rounded or slightly cordate at the base; the lilylike flower is almost 2 inches long. This variety is somewhat more tender than our native species, *Liriodendron tulipifera*.

For previous introduction see 99188.

104207. *LOROPETALUM CHINENSE* (R. Br.) Oliver. Hamamelidaceae.

A handsome but somewhat tender, bushy evergreen Chinese shrub, about 5 feet high, with wiry hairy branches, oval, unsymmetrical leaves, and curious white witch-hazellike flowers during the early spring.

For previous introduction see 102949.

104208. *STYRAX DASYANTHA* Perkins. Styracaceae. Snowbell.

An ornamental Chinese shrub or small tree up to 25 feet high, with oblong-elliptic leaves about 3 inches long and showy white flowers in slender racemes.

For previous introduction see 72966.

104209. *STYRAX PLANTINIFOLIA* Engelm. Styracaceae.

A large deciduous shrub about 15 feet high, with roundish, sinuate-serrate leaves 2 to 3 inches across, and showy pure-white flowers in racemes. Native to southern and central Texas.

104210. *HOLBOELLIA CORIACEA* Diels. Lardizabalaceae.

An evergreen climbing shrub with dark-green leathery compound digitate leaves of three to seven leaflets and small flowers in axillary racemes; the staminate flowers are white and the pistillate flowers violet. Native to China.

104211 and 104212.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received in February 1934.

104211. *ANTIGONON GUATIMALENSE* Meisn. Polygonaceae.

Throughout the American Tropics one of the most popular and conspicuous ornamental herbaceous climbers is the *rosa de montana* (*Antigonon leptopus*), with its showy racemes of rose-pink flowers. The species *A. guatimalense*, while much less common in cultivation, has more numerous flowers that are deeper pink and nearly twice as large.

For previous introduction see 101703.

104212. *CASSIA TIMORIENSIS* DC. Caesalpiniaceae.

Originally from the Botanic Garden, Buitenzorg, Java. A rather low tree with slender downy branches, pale-green leaves up to 9 inches long, bright-yellow flowers, and thin, glossy, flexible pods sometimes 6 inches long. The tree is distributed throughout the Malay Archipelago and the Philippine Islands.

For previous introduction see 100682.

104213 to 104216.

From Ceylon. Seeds presented by T. H. Parsons, Curator, Royal Botanic Gardens, Peradeniya. Received February 1, 1934.

104213. *ACTINORHYZIS CALAPPARIA* Wendl. and Drude. Phoenicaceae. Palm.

A robust palm 40 feet high, with a smooth stem conspicuously ringed, pinnate leaves 9 feet long and 6 feet wide, and a large pendulous cluster of small flowers followed by ovoid, red fruits 3 inches long. Native to the East Indies.

For previous introduction see 94093.

104214. *ARECA* sp. Phoenicaceae. Palm.

104215. *EUTERPE EDULIS* Mart. Phoenicaceae. Para palm.

A palm, native to Brazil, which becomes 40 feet high, with a slender inclined trunk, pinnate leaves, and fruits the size of marbles. A nutritious beverage is made by the natives from the fibrous flesh surrounding the seeds.

For previous introduction see 97913.

104216. *MARTINEZIA EROSA* Linden. Phoenicaceae. Palm.

A small ornamental feather-leaved palm from tropical America, which is covered throughout with long needlelike spines. A related species (*Martinezia caryotaefolia*) is grown to some extent in lower Florida.

For previous introduction see 72600.

104217 to 104219.

From Africa. Seeds presented by H. G. Poynter, Department of Agriculture, Ibadan, Nigeria. Received February 3, 1934.

104217. *PHOENIX RECLINATA* Jacq. Phoenicaceae. Senegal date palm.

Okunkun or *Okun*. Collected about 5 miles from the town of Oyo, Nigeria. A date palm 20 to 30 feet high, native to tropical and subtropical parts of Africa. The reclinate pinnate leaves are 6 to 9 feet long and have rigid green leaflets. The yellowish fruits with sweet edible pulp are half an inch long.

For previous introduction see 102637.

104218. *STRYCHNOS* sp. Loganiaceae.

Sample A. Collected about 4 miles from the town of Oyo.

104219. *STRYCHNOS* sp. Loganiaceae.

Sample B. Collected about 5 miles from the town of Oyo.

104220 to 104225.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received February 6, 1934.

104220 to 104224. *CINCHONA* spp. Rubiaceae.

Seeds received from the Government Cinchona Plantation, Musong Kalimpong, Bengal, India.

104220. *CINCHONA LEDGERIANA* Moens.

A tree, native to the Andes, yielding a bark remarkably rich in quinine

104220 to 104225—Continued.

which crystallizes readily as quinate sulphate. The percentage of the other alkaloids present is relatively small. The bark of this species matures in the fifth or sixth year and does not increase its quinine content after that age.

For previous introduction see 103441.

104221. *CINCHONA LEDGERIANA* × *OFFICINALIS*.

For previous introduction see 100115.

104222. *CINCHONA LEDGERIANA* × *SUCCIRUBRA*.

For previous introduction see 100116.

104223. *CINCHONA OFFICINALIS* L.

A small tree only 20 feet high, native to Peru and Ecuador in the high valleys of the Andes. It is now the most important species grown in the Nilgiri Hills in India.

For previous introduction see 100987.

104224. *CINCHONA SUCCIRUBRA* Pavon.

104225. *FLACOURTIA INERMIS* Roxb. Flacourtiaceae.

Collected at the Plant Introduction Garden, Summit, Canal Zone. The *Lovilovi* tree of Ceylon. The brilliant red fruits, the size of cherries, are produced in immense quantities. They are very sour and are said to make excellent jelly and preserves.

For previous introduction see 102666.

104226. *TSUGA FORMOSANA* Hayata. Pinaceae.

From Japan. Seeds presented by Motoo Ohsako, Forest Experiment Station, Maguro, Tokyo. Received February 8, 1934.

For previous introduction and description see 103989.

104227 and 104228.

From French Indo-China. Seeds presented by M. Po'ane, Institut des Recherches Agronomiques de l'Indochine, Division de Botanique. Received February 12, 1934.

104227. *CITRUS* sp. Rutaceae.

104228. *CITRUS* sp. Rutaceae.

104229. *ZEA MAYS* L. Poaceae. Corn.

From Brazil. Seeds presented by Dr. J. F. Assis. Received February 10, 1934.

Introduced for the use of Department specialists.

104230. *QUERCUS DENTATA* Thunb. Fagaceae. Daimyo oak.

From Japan. Seeds purchased from the Yokohama Nursery Co., Yokohama. Received February 15, 1934.

A large tree, native to Chosen, northern and western China, 75 to 80 feet high. The obovate, sinuate-lobed leaves, dark green above and grayish tomentose beneath, are 10 to 12 inches long and 9 inches wide, and the ovoid acorns, 1 inch wide, are about half covered by the cup which has lanceolate spreading scales. The leaves turn a gorgeous red in the autumn.

For previous introduction see 89697.

104231 to 104238. GOSYPIUM spp.
Malvaceae. Cotton.

From Africa. Seeds presented by the Director, Cotton Breeding Station, Barberton, Transvaal, Union of South Africa. Received February 8, 1934.

Introduced for the use of Department specialists interested in cotton breeding.

104231. GOSYPIUM sp.

U. 4. Original type.

104232. GOSYPIUM sp.

920. A rather late strain.

104233. GOSYPIUM sp.

921. A medium strain.

104234. GOSYPIUM sp.

955. A very early strain.

104235. GOSYPIUM sp.

0240. A medium strain.

104236. GOSYPIUM sp.

9264. A rather late strain.

104237. GOSYPIUM sp.

9363. A selection from Cambodia which is practically immune from Jassid in the Transvaal.

104238. GOSYPIUM sp.

4/4. An early strain.

104239 and 104240.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received February 12, 1934.

104239. BUTIA ERIOSPATHA (Mart.) Becc.
Phoenicaceae. Apricot palm.

A handsome pinnate-leaved palm with violet-colored stems, creamy flowers, and edible yellow fruits the size of a small plum. It is native to Brazil.

For previous introduction see 91776.

104240. LIVISTONA COCHINCHINENSIS (Blume) Mart. Phoenicaceae. Palm.

A slender palm about 50 feet high, with a crown of large fan-shaped leaves. It is native to Malacca.

For previous introduction see 87434.

104241. OPERCULINA TUBEROSA (L.) Meisn. Convolvulaceae.

From Texas. Seeds presented by L. G. McLean, San Antonio Field Station. Received February 12, 1934.

A perennial, stout-stemmed, herbaceous vine with large compound leaves composed of seven oblong leaflets. The three to six yellow flowers are borne on a long peduncle. The fruit is a membranous globular capsule about 1 inch long, containing two to four large seeds which are covered with short black hairs. It is native to Brazil.

For previous introduction see 87516.

104242 to 104247. VITIS VINIFERA L.
Vitaceae. European grape.

From Morocco. Cuttings presented by H. Brayard, Directeur de la Station Experimentale, Marrakech, Morocco Department of Agriculture. Received February 16, 1934.

104242 to 104247—Continued.

A collection of grape cuttings introduced, under the following varietal names, for the use of Department specialists.

104242. Aïn Naja.

104243. Bernike.

104244. Besoul el Aouada.

104245. Feriala.

104246. Kalb el Tir.

104247. Sébaâ-Taiba

104248 to 104250.

From Arizona. Plants collected by S. B. Detwiler and F. J. Crider, Bureau of Plant Industry. Received February 12, 1934.

104248. COWANIA STANSBURIANA Torr.
Rosaceae.

A bushy shrub 6 to 12 feet high, with deeply lobed, oval leaves half an inch long, white-tomentose beneath, and sulphur-yellow solitary flowers three-fourths of an inch across. Native to the mountains of the southwestern United States.

104249. PARESELA GREGGII (A. Gray) A. A. Heller. Fabaceae.

A low shrub with silky hairy branches and densely hairy compound leaves with 5 to 11 obovate leaflets less than half an inch long. The pink flowers are in dense spikes about 1 inch long. Native to Mexico and Arizona.

104250. SENECEO sp. Asteraceae.

A bush about 3 feet high, with pinnately divided leaves at first whitish tomentose, and yellow flower heads about 1 inch across. Native to western Arizona.

104251. GOSYPIUM AFRICANUM Watt.
Malvaceae.

From Africa. Seeds collected by Aug. Chevalier in Damergou, French Nigeria. Received February 14, 1934.

A spreading bush about 4 feet high, with ovate-rounded, cordate, tomentose leaves 1½ inches across and large yellow flowers with purple blotches. Native to tropical Africa.

104252 to 104263.

From India. Seeds presented by Dr. Eileen W. Erlanson, Science College, Trivandrum, Travancore. Received February 14, 1934.

104252. ANTIGONON GUATIMALENSE Meisn.
Polygonaceae.

Collected January 6, 1934, at Trivandrum.

For previous introduction and description see 104211.

104253. CEDRELA ODORATA L. Meliaceae.
Cigarbox-cedar.

Collected January 1934 in the mountains of Travancore. This is the *West Indian* or *Spanish* cedar, the soft fragrant wood of which is easily worked and is in great demand for cigar boxes. It is also used as a shade tree in coffee plantations.

For previous introduction see 100377.

104254 to 104257. CLITORIA TERNATEA L.
Fabaceae.

An ornamental leguminous vine with pea-shaped flowers about 1 inch long. The green seed pods are used as a vegetable in India.

104252 to 104263—Continued.

104254. Deep blue single flowers.

104255. Dark blue double flowers.

104256. White single flowers.

104257. Pale mauve single flowers.

104258. *HELICTERES ISORA* L. Sterculiaceae.

A tomentose shrub or small tree with obliquely cordate, often lobed, serrate leaves, scabrous above, pubescent beneath, and about 3 inches long. The red flowers, about 1½ inches long, are in short cymes. Native to India and Ceylon.

104259. *PTEROCARPUS MARSUPIUM* Roxb. Fabaceae.

An erect tree with alternate leathery smooth green trifoliate leaves and small yellowish flowers one-half inch long, in copious racemes. Native to western India.

104260. *PTYCHOSPERMA* sp. Phoenicaceae. Palm.

Collected December 3, 1933, in the Botanic Garden at Trivandrum. A small, very ornamental palm.

104261. *QUASSIA AMARA* L. Simaroubaceae.

Indian cinchona. A lofty tree, native to Surniam, which resembles the ash, with large showy red flowers, followed by beautiful and decorative fruits arranged in fives around a fleshy peduncle. The wood of this tree is extremely bitter and is used as a remedy for certain fevers.

For previous introduction see 98878.

104262 and 104263. *SESAMUM ORIENTALE* L. Pedaliaceae. Sesame.

Yellu-chedi. Collected at 200 feet altitude in Shoranus, S. Malabar, India, December 19, 1933.

104264 to 104267.

From Central America. Seeds presented by Señor Julio E. Castañeda de Ranero, Huehuetenango, Huehuetenango, Guatemala, through J. L. Colom, chief, division of agricultural cooperation, Pan American Union, Washington, D. C. Received February 16, 1934.

104264. *BYRSONIMA COTINIFOLIA* H. B. K. Malpighiaceae.

Nance. An erect shrub or small tree, up to 30 feet high, with oblong-ovate leaves, 2 to 4 inches long, densely hairy beneath when young. The small reddish or yellowish flowers are succeeded by small yellow acid edible fruits one-half inch in diameter. Native to tropical America.

104265. *CROTALARIA GUATEMALENSIS* Benth. Fabaceae.

Chipilín. A small shrub with trifoliate leaves, the leaflets ovate-oblong or elliptic and short dense racemes of bright yellow flowers. Native to Guatemala.

104266. *DOLICHOS LABLAE* L. Fabaceae. Hyacinth-bean.

Morada.

104267. *PHASEOLUS CALCARATUS* Roxb. Fabaceae. Rice bean.

Choreque. A very productive pole bean of rapid growth. The seeds are small, about the size of a grain of rice, kidney-shaped, and dark red.

For previous introduction see 102672.

104268. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

From China. Scions presented by Carter D. Holton, Shunkwa, Kansu. Received February 21, 1934.

A freestone apricot received under the varietal name *Peach*, with the shape of an apricot but resembling a large peach in size. Flavor reported excellent either in the fresh or the canned state. Grafted on apricot rootstock.

104269. *CINCHONA LEDGERIANA* Moens. Rubiaceae.

From South America. Seeds presented by Col. Victor E. Ruehl, Caldwell, N. J. Received February 19, 1934.

For previous introduction and description see 104220.

104270 to 104273. *VITIS VINIFERA* L. Vitaceae. European grape.

From northern Africa. Cuttings presented by Ernestine Fenzi, Tripoli. Received February 23, 1934.

104270. A red grape resembling Flame Tokay, the vines of which make a vigorous growth. Collected at Bengasi, but said to have been introduced from the Sudan. Used as a table grape.

104271. A seedless table grape, ripening early in July, with the fruit in large loose bunches. Cultivated in vineyards in Tripoli.

104272. A white table grape from Tarhuna, said to have come originally from the Sudan.

104273. A grape from Tarhuna with round black fruits.

104274. *CISTUS CYPRIUS* Lam. Cistaceae.

From Oregon. Plants presented by Ralph A. Fenton, Portland. Received February 24, 1934.

An erect shrub up to 6 feet high, bearing large white flowers which are blotched with purple at the base. Native to southern Europe.

For previous introduction see 74515.

104275 to 104280. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

From northern Africa. Scions presented by J. B. Plessis, Jardin d'Essais, Sfax, Tunisia. Received February 24, 1934.

A collection of apricot scions received under the following varietal names for the use of Department specialists.

104275. *Amor Leuch*.

104276. *Chechi*.

104277. *Le plus précoce*.

104278. *Lenadgin*. An indigenous variety.

104279. *Luizeb-bouchoi*.

104280. *Musque*. An indigenous variety.

104281 to 104314.

From Morocco. Trees and cuttings presented by H. Brayard, Directeur de la Station Experimentale, Marrakech, Morocco Department of Agriculture. Received February 28, 1934.

104281 to 104314—Continued.

A collection of fruit trees and grape cuttings introduced under their varietal names for the use of Department specialists.

104281 to 104283. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.

104281. *Charles Foucauld.*

104282. *De Noël.*

104283. *Edouard André.*

104284. *PRUNUS DOMESTICA* L. Amygdalaceae. Common plum.

104285 to 104289. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.

104285. *Reine des Précoces.*

104286. *Senateur Cazenave.*

104287. *Soleil d'Octobre.*

104288. *Souvenir de St. Fortunat.*

104289. *Sr. du 20 Juillet.*

104290. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.

Reinette Lyonnaise.

104291 and 194292. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

104291. *Lejeune.* An indigenous variety.

104292. *Précoce du Portugal.*

104293 to 104298. *PRUNUS AVIUM* L. Amygdalaceae. Sweet cherry.

104293. *Bigarreau de Bounanol.*

104294. *Bigarreau du Centenaire.*

104295. *Bigarreau Moreau.*

104296. *Cerisier hâtif de Bâle.*

104297. *Cerisier Précoce de la Marche.*

104298. *Hâtive de Berny.*

104299. *PYRUS COMMUNIS* L. Malaceae. Common pear.

104300 to 104303. *PRUNUS DOMESTICA* L. Amygdalaceae. Common plum.

104300. *Monsieur Hâtif.*

104301. *Reine-claude de Juillet.*

104302. *Royal.*

104303. *Saint-Jean.*

104304 to 104311. *PYRUS COMMUNIS* L. Malaceae. Common pear.

104304. *Beurre d'Étampes.*

104305. *Duchesse Beierd.*

104306. *Duchesse de Poitiers.*

104307. *Gardaia.*

104308. *Professeur Lemaire.*

104309. *Tardive de Toulouse.*

104310. *Triomphe de Vienne.*

104311. *Souvenir du Congrès.*

104312 to 104314. *VITIS VINIFERA* L. Vitaceae. European grape.

104312. *Abbo.*

104313. *Bou Sfer.*

104314. *Rackel Jmel.*

104315 to 104324.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Plant Industry, Leningrad. Received February 20, 1934.

104315. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.

Collected at the northern limit of peach cultivation in the northern Caucasus region.

104316. *EPHEDRA ALATA* Decaisne. Gnetaeae.

Collected near Farab, Repetek Sand Desert Station, Turkmenistan, and presented by Dr. N. I. Vavilov. A tall freely branching shrub with rough green equisetumlike branches, small scalelike leaves, and inconspicuous flowers. Native to Arabia and northern Africa.

104317 to 104323. *MORUS ALBA* L. Moraceae. White mulberry.

104317. From the Soviet Silk Farm, no. 1, Stalinabad, Tadzhikistan, Russian Turkistan.

104318. From Uzbekistan, Russian Turkistan.

104319. From Utechkurgan Uzbekistan, Russian Turkistan.

104320. From Nijniy, Urgentch, Russian Turkistan.

104321. From Kerki, Turkmenistan, Russian Turkistan.

104322. From Amu, Darya River, Russian Turkistan.

104323. From Askeran, Azerbaijan, Transcaucasia.

104324. *PRUNUS CERASIFERA DIVARICATA* × *SPINOSA*. Amygdalaceae.

A natural hybrid, found in the forest in the northern Caucasian region.

104325 to 104330. *OLEA EUROPAEA* L. Oleaceae. Common olive.

From Tunisia, Africa. Cuttings presented by J. V. Amiable, inspector, chief of the service of La Gnaba, Direction Generale de l'Agriculture, Tunis. Received February 27, 1934.

A collection of olive varieties received under the following varietal names, for the use of Department specialists.

104325. *Barouni.*

104326. *Bidh-el-Haman.*

104327. *Marsaline.*

104328. *Meski.*

104329. *Nab Tamri.*

104330. *Satali.*

104331 to 104343.

From Trinidad. Seeds presented by M. Bruins-Lich, Curator, Royal Botanic Garden, St. Clair, Port-of-Spain. Received February 19, 1934.

104331 to 104336. *PHOENICACEAE*. Palm.

104331. *ARECA ALICAE* F. Muell.

An Australian cluster palm, with graceful shining-green leaves 3 to 6 feet long. The handsome scarlet oblong

104331 to 104343—Continued.

fruits, three-fourths of an inch long, make this one of the most attractive of all dooryard palms.

For previous introduction see 102590.

104332. *ASTROCARYUM AUREUM* Griseb. and Wendl.

A palm closely related to *Elaeis*, with a prickly trunk, pinnately divided leaves of linear-lanceolate segments, shining above and greenish golden beneath. It is native to Trinidad.

For previous introduction see 80762.

104333. *BACTRIS* sp.

These are low pinnate-leaved palms, usually with spiny trunks.

104334. *BENTINCKIA NICOBARICA* (Kurz.) Beccari.

An elegant little palm with a habit resembling that of a *Kentia*; its native home is the Nicobar Islands. The pinnate, irregularly divided fronds are large and spreading, and the branched spadix bears small purplish berries.

For previous introduction see 56530.

104335. *CHRYSALIDOCARPUS MADAGASCARIENSIS* Beccari.

A graceful palm, native to Madagascar, about 15 feet high, with pinnate leaves 10 feet long having the segments arranged in fascicles and appearing to be in threes, giving a triangular effect.

For previous introduction see 103161.

104336. *ELAËIS GUINEENSIS* Jacq. African oil palm.104337. *ERYTHROXYLON COCA* L. m. Erythroxylaceae. Cocaine-tree.

For previous introduction and description see 104192.

104338 to 104343. *Phoenicaceae*. Palm.104338. *MAXIMILIANA CARIBAEA* Griseb. and Wendl.

A tall, spineless, pinnate-leaved palm, in general habit resembling the coconut palm. The large pale-green leaves have segments about 3 inches long. Native to St. Kitts, British West Indies.

104339. *PHYTELEPHAS KARSTENI* O. F. Cook.

An ivory palm from the valley of the Magdalena River, Colombia, with no trunk. The numerous large pinnate leaves, with 80 to 100 pairs of pinnae, have no petioles.

104340. *PTYCHOSPERMA* sp.

The *ptychospermas* are pinnate-leaved palms, native to the tropical islands of the Pacific Ocean.

104341. *RHYZOCOCOS AMARA* (Jacq.) Beccari.

A tall slender perfectly straight feather palm 50 feet high, with leaves 15 feet long. The golden-yellow fruits, 2 inches long by over 1 inch wide, are covered with a pulp filled with long fibers. This pulp ferments easily and develops butyric acid. The seed is large and of the characteristic coconut shape.

For previous introduction see 99631.

104331 to 104343—Continued.

104342. *SEAFORTHIA ELEGANS* R. Br.

A palm up to 30 feet high, native to the southern coast of Australia and the neighboring islands. The dark-green, pinnate fronds are 15 feet long, and the small fruits are oval and very fibrous.

For previous introduction see 96490.

104343. *STYLOMA PACIFICA* (Seem. and Wendl.) O. F. Cook. Fiji fan palm.

Variety *longipedunculata*. A form with longer peduncles. A fan palm, native to the Fiji Islands with a smooth straight trunk up to 30 feet high and a foot in diameter. The nearly circular leaves, 4 feet long by 3 feet wide, are on petioles 3 to 4 feet long and, when young, are densely covered with whitish-brown tomentum, later becoming smooth and deep green.

For previous introduction see 80192.

104344. *MAGNOLIA SPLENDENS* Urban. Magnoliaceae.

From Puerto Rico. Seeds presented by Mrs. C. E. Horne, of Santurce, San Juan, through T. B. McClelland, Director, Insular Experiment Station, Mayaguez. Received February 26, 1934.

A Puerto Rican forest tree 45 to 90 feet high, with oval leathery leaves 3 to 7 inches long and white flowers about 3 inches across.

For previous introduction see 30912.

104345 to 104378.

From Scotland. Seeds presented by Sir William Wright Smith, Regius Keeper, Royal Botanic Garden, Edinburgh. Received February 24, 1934.

104345. *CARAGANA ARBORESCENS* Lam. Fabaceae. Siberian pea-tree.

A deciduous Siberian shrub of erect habit up to 20 feet in height which, by pruning, may be made to take the form of a small tree. The pinnate leaves are about 2 inches long, and the small yellow flowers are produced singly on slender stalks.

For previous introduction see 52691.

104346. *CARAGANA ARBORESCENS CUNEIFOLIA* (Dipp.) C. Schneid. Fabaceae.

A dwarf form of the well-known Siberian pea-tree with the leaflets quite uniformly wedge-shaped and the flowers on shorter stalks. This form was originally described from Dahuria and Mongolia.

For previous introduction see 102357.

104347. *CARMICHAELIA FLAGELLIFORMIS* Colenso. Fabaceae.

A New Zealand shrub about 4 feet high, with stiff slender shrub and short dense axillary fascicles of purplish flowers borne in great profusion.

For previous introduction see 78920.

104348. *CARMICHAELIA PETREI* T. Kirk. Fabaceae.

A stout leafless shrub, 1 to 6 feet high, with rigid branches and very small purplish flowers in lax racemes. Native to New Zealand.

104345 to 104378—Continued.

104349. *COTONEASTER AMOENA* Wilson.
Malaceae.

A branching shrub, 3 to 5 feet high, native to Yunnan, China. The oval leaves are glossy green above and thickly coated with gray wool underneath. The small cymes of white flowers are followed by bright-red fruits.

For previous introduction see 76230.

104350. *COTONEASTER* sp. Malaceae.

Received as *Cotoneaster denticulata*, a name now referred to *Amelanchier denticulata*. These seeds, however, are those of a *Cotoneaster*.

104351 to 104369. *DELPHINIUM* spp.
Ranunculaceae. Larkspur.

104351. *DELPHINIUM ALTISSIMUM* Wall.

A perennial larkspur from the mountains of Nepal where it becomes 3 to 5 feet high with only a few shining-green, palmately five-lobed leaves 2 or 3 inches across and purplish flowers in an erect raceme.

104352. *DELPHINIUM AMOENUM* Stev.

A hardy herbaceous perennial, glandular hairy throughout, with stems about 2 feet high and palmately divided leaves. The pale-blue flowers are in simple dense racemes. Native to central Asia.

104353. *DELPHINIUM AZUREUM* Michx.

A hardy herbaceous perennial 1 to 2 feet high, finely gray pubescent, with deeply three- to five-parted leaves and sky-blue flowers. Native to the southern United States.

104354. *DELPHINIUM BICOLOR* Nutt.

A perennial larkspur about 3 feet high, from the Rocky Mountains near the source of the Columbia River. The three or more leaves are divided into short linear segments. The showy flowers have large bright-blue sepals and yellow petals veined with blue.

104355. *DELPHINIUM BRUNONIANUM* Royle.

A perennial larkspur a foot or less high, with five-parted leaves, the lobes sharply cut or toothed. The blue and purple flowers are in corymbs. Native to western Tibet at 14,000 feet altitude.

104356. *DELPHINIUM BULLEYANUM* Forrest.

An alpine larkspur 2 to 4 feet high, native to Yunnan, China, between 11,000 and 12,000 feet altitude. The long-stemmed leaves are palmately divided and incised serrate, and the deep rich-blue flowers are in a paniculate raceme.

104357. *DELPHINIUM DECORUM* Fisch.

A laxly upright perennial about 1 foot high. The three-parted leaves with bifid segments are often thick and somewhat succulent, and the handsome deep-blue flowers are in dense racemes. Native to California.

104358. *DELPHINIUM DELAVAYI* Franch.

A herbaceous perennial 2 to 3 feet high, with incised five-lobed leaves and

104345 to 104378—Continued.

dense racemes of blue flowers. It is native to Yunnan, China.

For previous introduction see 93886.

104359. *DELPHINIUM DYCTIOCARPUM* Steud.

A hardy perennial from Siberia with three- to seven-lobed leaves and blue flowers in a lax-branched raceme.

104360. *DELPHINIUM DUMBERGII* Huth.

A perennial larkspur from southern Russia about 2 feet high, with five- to seven-parted leaves and pale-blue or white flowers in a narrow dense raceme.

104361. *DELPHINIUM FLEXUOSUM* Bieb.

A hardy perennial larkspur with violet flowers. Native to Armenia.

For previous introduction see 73973.

104362. *DELPHINIUM OCCIDENTALE* S. Wats.

An alpine larkspur, glandular pubescent throughout, with a stout stem 3 to 6 feet high and palmately lobed leaves. The purple or white flowers are in a loose terminal raceme. Native to the western United States.

104363. *DELPHINIUM PRZEWALSKII* Huth.

A Mongolian larkspur about 8 feet high, with three- to five-parted leaves, the divisions deeply lacinate, and sky-blue flowers that appear from July to September. Closely related to *Delphinium henryi*, which, however, blooms in March.

104364. *DELPHINIUM SCOPULORUM* STACHYDEUM Gray.

A form with narrow leaf lobes and an erect stem 3 to 7 feet high. The blue or purple flowers are in dense racemes. Native to the western United States.

104365. *DELPHINIUM SPECIOSUM GLABRATUM* Stapf.

A Himalayan variety about 3 feet high, with dark-blue flowers over an inch across, with a long spur.

104366. *DELPHINIUM TATSIENENSE* Franch.

A larkspur from western China, with slender stems and hairy leaves divided into three to five sections. The deep-blue flowers are in a large loose raceme.

104367. *DELPHINIUM TROLLIIFOLIUM* A. Gray.

A hardy herbaceous perennial with stout elongated roots, erect stems 3 to 6 feet high, and thin five- to seven-parted leaves, orbicular in outline. The dark-blue flowers are in loose many-flowered racemes. Native to Oregon.

104368. *DELPHINIUM VESTITUM* Wall.

An alpine perennial with a hispid stem 1 to 3 feet high, palmately five- to seven-lobed leaves, sometimes a foot across, on long stems, and blue flowers in long dense racemes. Native to the temperate Himalayas from 8,000 to 12,000 feet altitude.

104345 to 104378—Continued.

104369. *DELPHINIUM YUNNANENSE* Franch.

A perennial alpine with a simple or branched stem and pale-green, finely pubescent leaves that are divided to the middle into five obovate incised segments. The calyx is intensely blue while the petals are bluish violet, the entire flower being four-fifths of an inch long.

For previous introduction see 103214.

104370 to 104372. *DRACOCEPHALUM* spp. Dragonhead.

104370. *DRACOCEPHALUM RUPRECHTI* Regel.

A dwarf compact perennial 1 to 2 feet high, with ovate-lanceolate, incised and toothed leaves, and axillary clusters of rose purple to lilac, tubular two-lipped flowers 1 inch long. It is native to Turkistan.

For previous introduction see 97604.

104371. *DRACOCEPHALUM SPECIOSUM* Benth.

A robust herbaceous perennial 18 inches high, with radical leaves on petioles up to 1 foot long. The leaf-blades are orbicular-cordate, crenate, and 2 to 4 inches across; the tubular flowers, 1 inch long, are blue purple with black spots and are borne in dense heads. It is native to the Himalayas in India.

For previous introduction see 97606.

104372. *DRACOCEPHALUM STAMINEUM* Kar. and Kir.

A low bushy perennial with small orbicular-cordate, rugose leaves about two-thirds of an inch across and small dark-blue flowers in dense terminal heads. Native to Kashmir, India, between 11,000 and 16,000 feet altitude.

104373. *ESCALONIA RUBRA* (Ruiz and Pav.) Pers. Escalloniaceae.

A prostrate shrub, with foliage similar to that of *Escallonia macrantha* and large rose-red flowers.

For previous introduction see 78346.

104374. *OPHIPOGON INTERMEDIUS* D. Don. Liliaceae.

A hardy perennial indigenous to Ceylon, with grasslike leaves and white flowers. It reaches a height of 12 inches and is only suited to moist shady places.

For previous introduction see 99744.

104375 to 104377. *RHEUM* spp. Polygonaceae. Rhubarb.

104375. *RHEUM OFFICINALE* Baill.

104376. *RHEUM PALMATUM* L. Sorrel rhubarb.

A tall, leafy perennial about 5 feet high, with subcylindrical stems and broad, roundish leaves deeply palmately lobed. Native to northwestern Asia.

104377. *RHEUM RHAPONTICUM* L. Common rhubarb.

A rhubarb, native to Siberia, where it is hardy in a climate that drops to 45° F. below zero in midwinter.

For previous introduction see 76929.

104345 to 104378—Continued.

104378. *RODGERSIA AESCULIFOLIA* Batal. Saxifragaceae.

A vigorous plant with large rhizomes and slender petioles supporting six large umbellate, oval leaves, heavily veined and of a beautiful dark green, resembling those of the chestnut. The white flowers, in panicles 30 inches long, appear in June. The plant flourishes in cool, half-shaded, peaty soils.

For previous introduction see 42695.

104379. *SAGITTARIA SAGITTIFOLIA* L. Alismaceae. Old-world-arrowhead.

From China. Corms presented by the inspector for the Bureau of Plant Quarantine, Boston, Mass. Received March 2, 1934.

A Chinese vegetable grown on wet land, very much as dasheens and taros are grown in other parts of the world. The tubers are used like potatoes.

For previous introduction see 85692.

104380 and 104381. *ERIOBOTRYA JAPONICA* (Thunb.) Lindl. Malaceae. Loquat.

From Italy. Scions purchased from Giovanni Ruggiero, gardener, Hotel Schweitzerhof, Capri, through Col. Coert du Bois, American consul general, Naples. Received March 2, 1934.

Scions from exceptionally fine trees, growing in the grounds of the Schweitzerhof Hotel, Capri.

104382 to 104480. *PISTACIA VERA* L. Anacardiaceae. Pistache.

From the Union of Soviet Socialist Republics. Seeds presented by the Department of New Cultures and Introduction, Leningrad. Received March 2, 1934.

A collection of seeds, originally from Transcaucasia. The U. S. S. R. numbers follow the introduction numbers.

104382. No. 1.

104383. No. 2.

104384. No. 3.

104385. No. 4.

104386. No. 5.

104387. No. 6.

104388. No. 7.

104389. No. 8.

104390. No. 9.

104391. No. 10.

104392. No. 11.

104393. No. 12.

104394. No. 13.

104395. No. 14.

104396. No. 15.

104397. No. 16.

104398. No. 17.

104399. No. 18.

104400. No. 19.

104401. No. 20.

104382 to 104480—Continued.

- 104402. No. 21.
- 104403. No. 22.
- 104404. No. 23.
- 104405. No. 24.
- 104406. No. 25.
- 104407. No. 26.
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- 104451. No. 70.
- 104452. No. 71.
- 104453. No. 72.

104382 to 104480—Continued.

- 104454. No. 73.
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- 104459. No. 78.
- 104460. No. 79.
- 104461. No. 80.
- 104462. No. 81.
- 104463. No. 82.
- 104464. No. 83.
- 104465. No. 84.
- 104466. No. 85.
- 104467. No. 86.
- 104468. No. 87.
- 104469. No. 88.
- 104470. No. 89.

104471. U.S.S.R. no. 149856. Collected at Tadjikistan, central Asia.

Nos. 104472 to 104480 were collected at Baku, Transcaucasia.

- 104472. No. 149857.
- 104473. No. 149858.
- 104474. No. 149859.
- 104475. No. 149860.
- 104476. No. 149861.
- 104477. No. 149862.
- 104478. No. 149863.
- 104479. No. 149864.
- 104480. No. 149865.

104481 and 104482.

From China. Seeds presented by the Manshu Nosan Shokai, Inc., Dairen, Manchuria. Received February 8, 1934.

104481. ACER CARPINIFOLIUM Sieb. and Zucc. Aceraceae. Hornbeam maple.

A tree up to 30 feet high, with oblong, sharp-pointed, doubly serrate leaves 3 to 5 inches long, short racemes of greenish flowers, and glabrous fruits about an inch long. The bright-green hornbeamlike leaves turn bright brownish yellow in autumn. Native to Japan.

For previous introduction see 97495.

104482. BETULA ERMANI Champ. Betulaceae. Birch.

A tree up to 100 feet in height, with peeling, creamy white bark and orange-brown branches. Native to northeastern China. It is said to be liable to injury by spring frosts, owing to its habit of starting early into growth.

For previous introduction see 73057.

104483 to 104555.

From Italy. Scions and plants purchased from Fratelli Ingegnoli, Milan. Received March 5, 1934.

104483 to 104496. AMYGDALUS spp. Amygdalaceae.

104483 to 104555—Continued.

- 104483 to 104495. *AMYGDALUS PERSICA* L. Peach.
104483. *Bellezza di Arp.*
 104484. *Carota.*
 104485. *Celeste imper.*
 104486. *Cotogna di Siena.*
 104487. *Di Verona.*
 104488. *Gaschina Novembre.*
 104489. *Gialla tardiva di Milano.*
 104490. *Gialla Tosi.*
 104491. *Grossa di Vigevano.*
 104492. *Santa Caterina.*
 104493. *Santa Anna.*
 104494. *Santa Anna Giallo.*
 104495. *Topazio.*
104496. *AMYGDALUS PERSICA NECTARINA* Ait. Nectarine.
Bronzato di Hunt.
- 104497 to 104519. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.
104497. *Apione Rosso.*
 104498. *Araucano.*
 104499. *Bellezza d'Occidente.*
 104500. *Bianca di Luglio.*
 104501. *Brianza.*
 104502. *Corta di Wick.*
 104503. *Cortipendola Rosso.*
 104504. *Di Gerusalemme.*
 104505. *Fam brois.*
 104506. *MacCloud's family.*
 104507. *Mantovano.*
 104508. *Mio desiderato.*
 104509. *Olimpico.*
 104510. *Parmain dorato.*
 104511. *Presepio.*
 104512. *Pupina dorata d'inverno.*
 104513. *Bambour Papeleau.*
 104514. *Renetta Moscata.*
 104515. *Renetta ruggine.*
 104516. *San Pietro.*
 104517. *Sonoma.*
 104518. *Syud Alma.*
 104519. *Tanton.*
- 104520 to 104526. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.
104520. *A carne verde.*
 104521. *Del Caucaso.*
 104522. *Di Russia.*
 104523. *Giallo di Tortona.*
 104524. *Grossa bianca.*
 104525. *Pesco Reale.*
 104526. *Tentazione.*

104483 to 104555—Continued.

- 104527 to 104555. *PYRUS COMMUNIS* L. Malaceae. Common pear.
104527. *B. G. Lormier.*
 104528. *Belle des Arbres*
 104529. *Belle di Soignies.*
 104530. *Belle Guerandaïse.*
 104531. *Bergamotta Hertrich.*
 104532. *Butirra Capiaumont.*
 104533. *Butirra Daniele Lesueur.*
 104534. *Butirra Lebrum.*
 104535. *Calebasse E. Furst.*
 104536. *Catillac.*
 104537. *Colorato di Luglio.*
 104538. *Decana di Luglio.*
 104539. *Delizia d'Agosto.*
 104540. *Gnocco.*
 104541. *La France.*
 104542. *La Postale.*
 104543. *Lawson.*
 104544. *Legipont.*
 104545. *Mamam Levavasseur.*
 104546. *Maria Guisse.*
 104547. *Meraviglia d'Italia.*
 104548. *Passa Tutti.*
 104549. *Pero del Briga.*
 104550. *Pero Pasdecana.*
 104551. *President Deviolaine.*
 104552. *Professor Bazin.*
 104553. *Reale di Torino.*
 104554. *Re Umberto.*
 104555. *Ricordo di J. Guindon.*

104556 to 104604.

From France. Seeds presented by the Muséum d'Histoire Naturelle, Paris. Received March 5, 1934.

104556. *MAURANDYA ANTIRRHINIFLORA* Willd. Scrophulariaceae.

A slender vine with thin, hastate-triangular leaves and solitary, axillary pale-blue flowers 1 inch or more long. Native to northern Mexico and the southwestern United States.

104557. *ANTIRRHINUM ORONTIUM* L. Scrophulariaceae. Snapdragon.

An erect slender annual, 6 to 12 inches high, with narrow-linear leaves and purple or white flowers. Native to temperate Europe and Asia.

104558. *APIUM GRAVEOLENS* L. Apiaceae. Celery.104559. *APIUM NODIFLORUM* Reichenb. f. Apiaceae.

A perennial, native to western Germany, with pinnately divided leaves and umbels of small white flowers. The stem of this species does not take root at the internodes.

For previous introduction see 97921.

104556 to 104604—Continued.

104560. *ASTRAGALUS GLYCYPHYLLOS* L.
Fabaceae. Milkvetch.

A prostrate spreading herbaceous perennial, native to Asia Minor.

For previous introduction see 78764.

104561 to 104563. *CHRYSANTHEMUM* spp.
Asteraceae.

104561. *CHRYSANTHEMUM ALPINUM* L.

An alpine tufted perennial 2 to 6 inches high, ascending or upright, with the lower part of the stem covered with pinnately divided leaves. The golden-yellow flower heads are about 1 inch across. Native to central Europe.

104562. *CHRYSANTHEMUM DEMNATENSE* Murbeck.

A perennial composite about 1 foot high, with ashy pubescent, finely cut foliage, and flower heads with white disk flowers and pale-rose ray flowers. Native to the Atlas Mountains in Morocco.

104563. *CHRYSANTHEMUM MAWII* Hook. f. Asteraceae.

A short woody perennial, native to Morocco, forming bushes up to 2 feet high, like the marguerite, with small woolly gray triangular-oblong pinnatifid leaves. The long-stalked flowers are 1 to 2 inches across and have red-purple disks and three-toothed white rays which are reddish on the back.

For previous introduction see 101777.

104564 to 104568. *CORONILLA* spp. Fabaceae.

104564. *CORONILLA CRETICA* L.

An annual or biennial with a slender rootstock and prostrate or ascending stems up to 2 feet long. The leaves consist of about five pairs of obovate leaflets one-third of an inch long, and the white flowers are in small clusters. Native to southern Europe.

104565. *CORONILLA GLAUCA* Jusl.
Honey coronilla.

Sea-green or *day-smelling coronilla*. A small round bush with beautiful glaucous green foliage and fragrant, pure-yellow flowers. Native to southern France.

104566. *CORONILLA JUNCEA* L.

A smooth gray-green shrub with rush-like branches, linear-oblong leaflets, and umbels of golden-yellow flowers. Native to southern France.

104567. *CORONILLA VARIA* L.
Crownvetch.

A prostrate or ascending leguminous perennial, up to about 4 feet high, with a thick rootstalk, compound leaves, and pinkish flowers in dense umbels. It is native to central Europe.

For previous introduction see 78776.

104568. *CORONILLA VIMINALIS* Salisb.

A trailing shrub, native to Algeria, with odd-pinnate leaves composed of 13 to 21 leaflets and pale-red or red-striped white flowers in small umbels.

104556 to 104604—Continued.

104569. *DAUCUS CAROTA* L. Apiaceae.
Carrot.

104570 to 104573. *DELPHINIUM* spp. Ranunculaceae.
Larkspur.

104570. *DELPHINIUM HALTERATUM* Sibth.

An annual larkspur about 1 foot high, with finely divided leaves and light-blue flowers that appear from June to August. Native to the Mediterranean region.

104571. *DELPHINIUM PUBESCENS* DC.

An annual larkspur, pubescent throughout, with finely cut foliage and pale-violet or rose-colored flowers. Native to southern Europe and northern Africa.

104572. *DELPHINIUM REQUIENI* DC.

A biennial larkspur about 4 feet high, with three- or five-parted leaves and sky-blue flowers in lax racemes. Native to the islands of Corsica and Majorca.

104573. *DELPHINIUM STAPHISAGRIA* L.

A stout-stemmed perennial or biennial, soft-hairy throughout, 1 to 3 feet high. The leaves are five- to seven-lobed, sometimes three-cleft. The light-blue flowers are in a dense simple or branched raceme. Native to the Mediterranean countries.

For previous introduction see 91453.

104574 to 104576. *DIGITALIS* spp. Scrophulariaceae.
Foxglove.

104574. *DIGITALIS FERRUGINEA* L.

A biennial or perennial, 4 to 6 feet high, densely leafy, with long dense racemes of rusty-red flowers. Native to southern Europe.

104575. *DIGITALIS LANATA* Ehrh.

A perennial or biennial foxglove 2 to 3 feet high, with oblong or lanceolate leaves and grayish or creamy-yellow flowers about 1 inch long, in dense racemes. Native to southern Europe.

104576. *DIGITALIS THAPSI* L.

A perennial foxglove about 3 feet high, native to Spain. The rugose, decurrent leaves are ovate-oblong, and the purple red-dotted flowers are in a lax raceme. Native to Spain.

104577 to 104579. *LACTUCA* spp. Cichoriaceae.

104577. *LACTUCA CHONDRILLAEFLORA* Bor.

A biennial 1 to 2 feet high, whitish hairy and much branched, with the lower leaves runcinate-pinnatifid with linear lobes. The flower heads are bright yellow.

104578. *LACTUCA SAGITTATA* Waldst.

A biennial, 3 to 4 feet high, with thin ovate-elongate or sagittate leaves up to 4 inches long and small yellow flower heads in a terminal corymb. Native to Hungary.

104579. *LACTUCA SIBIRICA* (L.) Benth.

A Siberian perennial about 2 feet high, with lanceolate denticulate leaves and corymbs of small blue flower heads.

104556 to 104604—Continued.

104580. *RANUNCULUS GRAMINEUS* L. Ranunculaceae. Grassy buttercup.

A smooth herbaceous perennial with rosettes of linear to lanceolate leaves and bright-yellow flowers on stalks 6 to 12 inches high. It is native to Europe.

For previous introduction see 101954.

104581 to 104592. *SALVIA* spp. Mentha-ceae. Sage.

104581. *SALVIA AEGYPTICA* L.

A low shrub, with numerous stiff branches and few linear-oblong, bullate-crenate leaves about one-half inch long. The very small whitish flowers are in small whorls. Native to Egypt.

104582. *SALVIA AETHIOPIS* L.

A perennial a foot or less high, with erect white-woolly stems, cordate-clasping, incised-dentate leaves, and white or slightly reddish flowers.

104583. *SALVIA ALBO-CAERULEA* Linden.

A shrubby salvia, about 3 feet high, with long-acuminate leaves 4 to 6 inches long and simple racemes of creamy-white and blue flowers. It is native to the pine forests of Michoacan, Mexico.

104584. *SALVIA ALGERIENSIS* Desf.

An erect hairy annual 2 to 3 feet high, with the lower leaves ovate-oblong, crenate, 1 to 2 inches wide, and 6 inches long. The sky-blue flowers are in small whorls. Native to Algeria.

104585. *SALVIA ARGENTEA* L.

An erect white-woolly biennial 2 to 4 feet high, with broadly ovate, sinuate-lobate leaves 4 to 8 inches long and showy rose-white, purplish, or yellowish flowers. Native to the Mediterranean region.

104586. *SALVIA CLEISTOGAMA* De Bary.

An erect perennial 1 to 2 feet high, covered with long hairs, with ovate-oblong irregularly pinnatifid leaves usually about 2 inches long and distant whorls half an inch long in distant whorls. Native to southern Africa.

104587. *SALVIA GLUTINOSA* L.

A perennial sage about 3 feet tall, glutinous hairy throughout, with ovate-oblong, dentate leaves up to 7 inches long and pale-yellow flowers an inch long in lax whorls. Native to Europe and Asia.

104588. *SALVIA HISPANICA* L.

A perennial herb with ovate serrate leaves and quadrangular spikes of blue flowers. The mucilaginous seeds are used in making the Mexican drink called "chia."

104589. *SALVIA JURISICI* Kosanjin.

A perennial sage, with a long, much-branched rootstock and erect stems about 2 feet high. The lower leaves are long-stalked, ovate-oblong, crenate or dentate, and rugose, while the upper leaves are pinnatisect and short-stalked. The small blue-violet flowers are in small whorls. Native to southern Yugoslavia.

104556 to 104604—Continued.

104590. *SALVIA LYRATA* L.

A hardy perennial with erect stems 8 to 24 inches high. The radical leaves are lyrate, erose-dentate, and the stem leaves are oblong lanceolate. The bluish-purple flowers are in lax whorls. Native to the western United States.

104591. *SALVIA COCCINEA PSEUDOCOC-CINEA* (Jacq.) A. Gray.

A perennial sage with flowers the same shade of intense red as that of the cardinal flower (*Lobelia cardinalis*). The plants have from two to five stems and vary in height from 15 to 30 inches. Found in little pockets of limestone soil in dry sunny places in Mexico and Central America.

For previous introduction see 64668.

104592. *SALVIA TILIAEFOLIA* Vahl.

A perennial sage, said to be native to Mexico, with cordate, rugose, crenate-serrate leaves 2 inches or more long and sky-blue flowers nearly 1 inch long.

104593 to 104598. *SOLANUM* spp. Solana-ceae.

104593. *SOLANUM AURICULATUM* Ait.

A shrubby perennial, 4 feet high, with large hairy, mulleinlike leaves 6 to 7 inches long and small violet flowers in dense corymbs. Native to Madagascar.

104594. *SOLANUM CALDASII* Humb. and Bonpl.

A white hairy perennial with unequally pinnatisect leaves 4 inches long and small flowers, one-half inch across, in long-stalked racemes. Native to Ecuador. This species is related to the potato (*Solanum tuberosum*).

104595. *SOLANUM CORNUTUM* Lam.

A spiny annual 1 to 4 feet high, with ovate pinnately lobed leaves and yellow flowers an inch across, in small terminal clusters. Native to Mexico.

104596. *SOLANUM DULCAMARA* L.

Bitter nightshade.

An ornamental vine with red berries.

For previous introduction see 95573.

104597. *SOLANUM PSEUDOCAPSICUM* L.

Jerusalem-cherry.

104598. *SOLANUM TRIFLORUM* Nutt.

Nightshade.

A low-growing annual, with oblong seven- to nine-lobed leaves, small white flowers, and greenish fruits. Native to the western United States.

104599 to 104604. *VIOLA* spp. Violaceae. Violet.

104599. *VIOLA DELPHINIFOLIA* Nutt.

A perennial violet with a short vertical rootstock and palmately multifid leaves up to 3 inches wide. The showy violet flowers are on scapes exceeding the leaves. Native to the prairie region of the central United States.

104600. *VIOLA HIRTA* L.

A hardy perennial violet, closely related to *Viola odorata*, from which it differs in being more hairy and in having narrower leaves and scentless dull-bluish flowers. The stems are about 6

104556 to 104604—Continued.

inches high, and the leaves are narrowly cordate. Native to England and northern Europe.

104601. *VIOLA MACROCERAS* Bunge.

A Siberian violet with cordate crenate-serrate leaves with stems 3 to 4 inches long and fragrant violet flowers.

104602. *VIOLA MIRABILIS* L.

A hardy violet, native to northern Europe, which becomes about 3 inches high, producing pale-blue flowers in midsummer.

For previous introduction see 72623.

104603. *VIOLA PATRINII* Ging.

A low stemless perennial, native to northeastern Asia, with a stout root-stalk, ovate-oblong leaves, and lilac flowers about one-half inch in diameter.

For previous introduction see 103898.

104604. *VIOLA SYLVESTRIS* Lam.

A violet native to France, with stems 3 to 4 inches long, heart-shaped leaves, and inodorous violet or nearly white flowers on stalks longer than the leaves.

104605 to 104612. *PRUNUS* spp. *Amygdalaceae*.

From Palestine. Trees and scions presented by Asaph Grasovsky, Department of Agriculture and Forests, Jerusalem, through the citrus fruit specialist and chief horticultural officer, Department of Agriculture and Forests, Jaffa. Received March 9, 1934.

A collection of apricot trees and plum scions received under their varietal names, for the use of Department specialists.

104605 to 104608. *PRUNUS ARMENIACA* L.
Apricot.

104605. *Alawi*. 104607. *Baladi*.

104606. *Artassi*. 104608. *Hamawi*.

104609. *PRUNUS DOMESTICA* L.
Common plum.

Swedah.

104610 to 104612. *PRUNUS ARMENIACA* L.
Apricot.

104610. *Lozi*.

104611. *Mawi*.

104612. *Mustakawi*.

104613 to 104624.

From Bristol, England. Scions and rooted cuttings presented by Prof. B. T. P. Barker, University of Bristol, through G. T. Spinks, Research Station. Received March 9, 1934.

A collection of fruit-tree scions and rooted cuttings of a blackberry, introduced under their varietal names for the use of Department specialists.

104613 to 104618. *MALUS SYLVESTRIS* Mill.
Apple.

104613. *Gloucester Cross*.

104614. *Hereford Cross*.

104615. *Newport Cross*.

104616. *Plymouth Cross*.

104617. *Taunton Cross*.

104613 to 104624—Continued.

104618. *Worcester Cross*.

104619 to 104622. *PRUNUS DOMESTICA* L.
Amygdalaceae. Common plum.

104619. *Avon Cross*.

104620. *Severn Cross*.

104621. *Teme Cross*.

104622. *Wye Cross*.

104623. *PYRUS COMMUNIS* L. *Malaceae*.
Common pear.

Bristol Cross.

104624. *RUBUS* sp. *Rosaceae*.

Ashton Cross, a blackberry.

104625 to 104661.

From Lithuania. Bulblets and seeds presented by Prof. Dr. C. Regel, Director, Hortus Botanicus Lituaniae, Kaunas. Received March 5, 1934.

104625 to 104635. *ALLIUM* spp. *Liliaceae*.
Onion.

104625. *ALLIUM CANADENSE* L.
Meadow garlic.

Bulblets.

104626. *ALLIUM CARINATUM* L.

Bulblets of a species with narrowly linear leaves and lilac-purple flowers, produced in a comparatively large head. It is found throughout southern Europe, especially in the Alps.

For previous introduction see 91984.

104627. *ALLIUM CAERULEUM* Pall.

A blue-flowered onion with slender grassy leaves and 14-inch stalks bearing close heads of small deep-blue flowers.

For previous introduction see 95354.

104628. *ALLIUM CYANEUM* Regel.

A rather dwarf plant, less than a foot high, with small heads of pendulous pale-blue flowers. Native to northern China.

For previous introduction see 95454.

104629. *ALLIUM DARWASICUM* Regel.

A rather low allium with flat lanceolate leaves 5 to 6 inches long and white flowers in a roundish head about 1 inch across. Native to Bokhara.

104630. *ALLIUM FISTULOSUM* L.
Welsh onion.

A hardy onion, about 2 feet high, with green and yellow flowers.

For previous introduction see 101390.

104631. *ALLIUM FISTULOSUM* L.

Variety *viviparum*.

A name for which a place of publication and a description have not been found.

104632. *ALLIUM FLAVUM* L.

A wild onion with an upright or ascending stem up to a foot high, narrowly linear leaves about as long as the stem, and small yellow bell-shaped flowers in a rather dense cluster. Native to dry rocky places, especially in chalky soil, in south-central Europe.

For previous introduction see 91988.

104625 to 104661—Continued.

104633. *ALLIUM FOMINIANUM* Mischenko.

A name for which a place of publication and a description have not been found.

For previous introduction see 90599.

104634. *ALLIUM PULCHELLUM* Don.

An onion with narrow-linear leaves about 1 foot long and a rather dense umbel of bell-shaped, violet flowers. Native to Asia Minor.

For previous introduction see 93153.

104635. *ALLIUM SATIVUM* L. Garlic.

A variety with white flowers. The Chinese use both the leaves and scapes as a vegetable.

For previous introduction see 103701.

104636. *ALTHAEA NUDIFLORA* Lindl. Malvaceae.

A biennial 6 feet high, with large, roundish cordate, 3-lobed, rough-hairy leaves and large white flowers. Native to the Altai Mountains, Siberia.

104637. *APIUM GRAVEOLENS* L. Apiaceae. Celery.

104638. *CAPSICUM ANNUM* L. Solanaceae. Common redpepper.

Variety *longum*.

104639. *CHRYSANTHEMUM* sp. Astera-ceae.

From Antakiya.

104640. *CHRYSANTHEMUM* sp. Astera-ceae.

From Asia Minor.

104641. *DAUCUS CAROTA* L. Apiaceae. Carrot.

104642. *DIGITALIS NERVOSA* Steud. and Hochst. Scrophulariaceae. Foxglove.

A perennial foxglove with entire oblong-lanceolate leaves and small yellowish flowers in long dense racemes. Native to the Caucasus.

104643 to 104647. *IRIS* spp. Iridaceae.

104643. *IRIS GERMANICA* L.

A collection of mixed varieties.

104644. *IRIS LURIDA* Ait.

An iris of the section *Pogoniris*, with slightly glaucous leaves 1 foot long and three or four flowers in a cluster. The outer segments are obovate cuneate, dead purple at the top, veined with dull purple on a yellowish ground below, while the inner segments are dull purple and narrower. Native to southeastern Europe.

104645. *IRIS SINTENISII* Janka.

A beardless iris of the same general type as *Iris graminea*, with tufted evergreen leaves about 12 inches long and flower stalks little higher than the leaves. The flowers are blue purple with red purple on the style branches and hafts. Native to southeastern Europe and Asia Minor.

For previous introduction see 91821.

104625 to 104661—Continued.

104646. *IRIS* sp.

Received under the name "thunbergii."

104647. *IRIS* sp.

104648. *RHEUM UNDULATUM* L. Polygonaceae. Rhubarb.

104649. *RUBUS COREANUS* Miquel. Rosaceae. Korean raspberry.

A deciduous shrub 8 to 10 feet high, native to China and Chosen, with erect or arching, stout biennial stems. The pinnate leaves, 6 to 10 inches long, are usually composed of seven ovate, dark lustrous-green, coarsely toothed leaflets. The small fruit, varying in color from red to nearly black, is edible but of poor flavor.

104650. *RUBUS LEUCODERMIS* Dougl. Rosaceae.

An erect shrub 3 to 6 feet high, found in open woods in the northwestern United States. The leaves are usually trifoliate, the small white flowers are in few-flowered corymbs, and the black hemispherical fruits are one-half inch in diameter.

104651 to 104653. *SALVIA* spp. Mentha-ceae. Sage.

104651. *SALVIA ALGERIENSIS* Desf.

For previous introduction and description see 104584.

104652. *SALVIA BULLEYANA* Diels.

A perennial 12 to 18 inches high, with cordate, triangular-ovate, or hastate leaves 2 to 3 inches long and purplish-blue flowers in racemes. Native to the mountains of Yunnan, China, between 6,200 and 7,000 feet altitude.

104653. *SALVIA CARDUACEA* Benth.

A perennial a foot or more high, with white-woolly stems and leaves. The pinnatifid leaves have spiny, acuminate teeth. The lilac flowers are in remote, dense whorls. Native to California.

104654. *SALVIA VERTICILLATA* L.

A stout perennial 3 feet high, with white-woolly basal leaves 6 inches or more long, usually entire, and white flowers in remote whorls. Native to Asia Minor.

104655. *SALVIA PRZEWALSKII* Maxim.

A white-hairy shrub, 2 feet or more high, with entire, ovate, acute leaves and blue flowers in 6- to 10-flowered whorls. Native to Asia Minor.

104656. *SALVIA JURISICI* Kosant.

For previous introduction and description see 104589.

104657. *SALVIA ROEMERIANA* Scheele.

A perennial sage 1 or 2 feet high, with leaves roundish or reniform cordate, coarsely toothed or incised. The deep-scarlet flowers, about 1 inch long, are in few-flowered whorls. Native to Texas and Mexico.

104658. *SALVIA TILIAEFOLIA* Vahl.

For previous introduction and description see 104592.

104625 to 104661—Continued.

104659 to 104661. *SPINACIA* spp. Chenopodiaceae. Spinach.

104659. *SPINACIA OLERACEA* L. Common spinach.

104660. *SPINACIA SPINOSA* Moench.

This is very closely allied to common spinach (*Spinacia oleracea*), but it differs in having spiny, nearly triangular fruits.

104661. *SPINACIA TETRANDRA* Stev.

A wild spinach which grows in heavy soil in central Asia.

For previous introduction see 73202.

104662 and 104663.

From Dehra Dun, India. Seeds presented by the Forest Botanist. Forest Research Institute, through Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba. Received March 7, 1934.

104662. *CUDRANIA JAVANENSIS* Trecul. Moraceae.

Cocklespur. A thorny trailing shrub which should prove useful in making an almost impenetrable hedge. The greenish fruit, which is edible and of pleasant flavor, is irregular in shape and 2 to 3 inches in diameter. Native to tropical Africa.

104663. *DEGUELIA TIMORIENSIS* (DC.) Taub. Fabaceae.

A woody climber with compound leaves 3 to 6 inches long, composed of 9 to 18 leaflets, leathery, oblong, and 1 to 2 inches in length. The pale-rose flowers are in dense axillary racemes. Native to the East Indies.

104664 and 104665.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received March 7, 1934.

104664. *ENTADA SUDANICA* Schweinf. Mimosaceae.

A small tree, native to tropical Africa, with compound leaves a foot long and small white or yellowish flowers in dense cylindrical spikes 2 to 6 inches long. The straight brown pod, 8 to 15 inches long, is distinctly constricted between the seeds.

For previous introduction see 70842.

104665. *TRICHILIA HIRTA* L. Meliaceae.

A shrub or tree up to 60 feet high, with pinnately compound leaves of obliquely ovate, glabrous leaflets and 11 to 21 panicles, 9 inches long, of greenish flowers. It is native to Mexico and the West Indies.

For previous introduction see 90937.

104666 and 104667. *CITRUS SINENSIS* (L.) Osbeck. Rutaceae. Orange.

From Puerto Rico. Scions presented by Edmund H. Twilight, Department of Agriculture and Commerce, Rio Piedras. Received March 6, 1934.

104666. *Rico No. 1*. B. V. 2.

104667. *Rico No. 2*. B. V. 4.

48500—36—4

104668. *TRITICUM AESTIVUM* L. (*T. vulgare* Vill.). Poaceae.

Common wheat.

From Canada. Seeds presented by the cereal division of the Central Experimental Farm, Ottawa. Received February 14, 1934.

Ruby, Ottawa 623. Introduced for the use of Department specialists.

104669 and 104670.

From Japan. Seeds presented by Professor Nakai, Botanic Garden, Tokyo. Received March 9, 1934.

104669. *LESPEDEZA FORMOSA* (Vogel) Koehne. Fabaceae. Purple bushclover.

An erect semishrubby plant 6 to 12 feet high, with trifoliolate leaves of oblong leaflets and racemes of rose-purple flowers. It is native to Chosen.

For previous introduction see 100879.

104670. *LESPEDEZA MAXIMOWICZI* C. Schneid. Fabaceae. Bushclover.

A shrubby bushclover from Chosen, resembling *Lespedeza buergeri*, from which it differs in the structure of its calyx. The leaves are very thin, dull green above and bright green below, and the violet flowers are arranged in loose whorls.

For previous introduction see 82482.

104671 and 104672.

From Austria. Seeds presented by the Botanic Garden, Wien. Received February 24, 1934.

104671. *LESPEDEZA BICOLOR* Turcz. Fabaceae. Shrub bushclover.

A bushy perennial which bears a profusion of rose-purple flowers during the early autumn, practically covering the drooping branches which sometimes become 6 feet in length.

For previous introduction see 104065.

104672. *LESPEDEZA HIRTA* (L.) Hornem. Fabaceae.

An erect or ascending, hairy, rather stout plant, 2 to 4 feet high, with rounded or oval leaflets and yellowish-white or purple-spotted flowers in elongated terminal heads. Native to the eastern United States.

104673 to 104678.

From Poland. Seeds presented by Stowarzyzenie Lakarzy, Sarny-Zaklad Doswiadczalny. Received March 7, 1934.

A collection of grasses, introduced for the use of Department specialists working with forage crops.

104673. *BECKMANNIA ERUCAEFORMIS* (L.) Host. Poaceae. Sloughgrass.

A very good fodder plant for growing on moist soil.

For previous introduction see 60772.

104674. *DACTYLIS GLOMERATA* L. Poaceae. Orchard grass.

For previous introduction see 101103.

104673 to 104678—Continued.

104675. *FESTUCA ELATIO* L. Poaceae.
Meadow fescue.

A loosely tufted perennial European grass with short creeping rootstalks and erect stems up to 4 feet high.

For previous introduction see 99124.

104676. *HOMALOCENCHRUS ORYZOIDES* (L.) Poll. Poaceae.

A perennial grass with stout ascending culms arising from creeping rootstalks. The broadly linear leaves, about 1 foot long, are very rough.

104677. *POA PALUSTRIS* L. Poaceae.
Fowl meadowgrass.

For previous introduction see 64781.

104678. *POA PRATENSIS* L. Poaceae.
Kentucky bluegrass.

104679 to 104704. Phoenicaceae.
Palm.

From British Guiana. Seeds presented by the Director, Botanic Gardens, Georgetown. Received February 28, 1934.

104679. *ARCHONTOPHOENIX ALEXANDRAE* (F. Muell.) Wendl. and Drude.

A pinnate-leaved palm 70 to 80 feet high, with leaves several feet long, and lanceolate, usually entire leaflets, 1 to 2 feet long and whitish beneath. The yellow-green flowers are borne in a cluster about 1 foot long and are followed by small round dry fruits. It is native to Queensland, Australia.

For previous introduction see 103724.

104680. *ARECA ALICAE* F. Muell.

For previous introduction and description see 104331.

104681. *ARIKURYROBA SCHIZOPHYLLA* (Mart.) Bailey.

A slender, straight-stemmed palm with pinnate leaves.

For previous introduction see 101131.

104682. *ASTROCARYUM SEGREGATUM* Drude.

A rather low-growing Brazilian palm with a spiny trunk and large pinnate leaves armed with large stout black spines along the midribs. The oily smooth fragrant fruits are from 1 to 2 inches in diameter. Native to eastern Brazil.

For previous introduction see 98511.

104683. *ASTROCARYUM STANDLEYANUM* Bailey.

A tall slender handsome spiny palm with pinnate leaves, found in dense rain forests. The orange-yellow fruits, 1¾ by 1½ inches, are rugose and mucronate and are covered with a thin fleshy fibrous juicy sweetish pulp. They are borne in long pendent clusters.

For previous introduction see 102651.

104684. *BENTINCKIA NICOBARICA* (Kurz.) Beccari.

For previous introduction and description see 104334.

104685. *ARECASTRUM ROMANZOFFIANUM AUSTRALE* (Mart.) Becc.

104679 to 104704—Continued.

Pindo-poi. A very tall palm, with a habit like a slender reversed pyramid. In the forests of eastern Paraguay it frequently becomes over 60 feet high, equaling the tallest trees of the region. The mature specimens of this palm furnish a very hard and resistant wood.

104686. *COPERNICIA CERIFERA* Mart.
Carnauba palm.

The wax palm of Brazil becomes 25 feet high, with fan-shaped leaves. From the leaves is obtained carnauba wax, which is used in making phonograph records.

For previous introduction see 98491.

104687. *CORYPHA ELATA* Roxb.

A tall Philippine palm up to 60 feet high, with spiny stems and fan-shaped leaves.

For previous introduction see 74425.

104688. *ENGLEROPHOENIX REGIA* (Mart.) Kuntze.

Maripa. This is a massive ornate palm up to 50 feet high, with persistent leaf petioles and immense leaves, reminding one of the Cohune. The subacid fruits have thin fleshy pulp and are much appreciated by the natives of Surinam.

For previous introduction see 98499.

104689. *HYOPHOREE AMARICAULIS* Mart.
Bottle palm.

A showy pinnate-leaved palm from Mauritius, with a bottle-shaped trunk up to 60 feet tall and terminal leaves with 40 to 60 pairs of linear leaflets.

104690. *HYOPHOREE VERSCHAFFELTI* Wendl.
Spindle palm.

An unarmed palm, native to Mauritius, with a spindle-shaped trunk 25 to 30 feet high, pinnate leaves having a yellow band along the midrib, and orange-colored flowers.

For previous introduction see 81588.

104691. *INODES MEXICANA* (Mart.) Standl.

A tall palm up to 60 feet high, with palmate leaves divided into linear segments having numerous long threads on the margins. The inflorescence is short, dense, and recurved, and the flattened globose fruits are black. It is native to Oaxaca, Mexico.

For previous introduction see 80551.

104692. *LICUALA GRACILIS* Blume.

A fan palm 5 to 7 feet high, native to Java, with the stems growing in clusters. The orbicular, plicate leaves are deeply cut into cuneate segments, and the petioles are spiny along the edge.

For previous introduction see 93321.

104693. *LICUALA GRANDIS* (Bull.) Wendl.

A dwarf palm with the stem clothed with the dead leaf sheaths. The erect spreading fan-shaped leaves have closely plicate segments which are two-lobed at the end. Native to the island of New Pommern, Bismarck Archipelago.

For previous introduction see 98495.

104679 to 104704—Continued.

104694 and 104695. *LINOMA ALBA* (Bory) O. F. Cook.

A small palm up to 30 feet high, native to tropical Africa. The pinnate leaves, which become 4 to 8 feet long, have whitish petioles and greenish-white veins when the plants are young.

For previous introduction see 103163.

104696. *LIVISTONA ROTUNDIFOLIA* (Lam.) Mart. Java fan palm.

An erect pinnate-leaved palm, native to tropical Asia, about the same size as the coconut palm. The hard durable wood is used for general construction.

For previous introduction see 97548.

104697. *ORBIGNYA SPECIOSA* (Mart.) Barb.-Rodr. Babassu nut.

The *Uaussu* palm of Brazil and the Guianas is much like the Cohune palm, but its fruits, 3 to 4 inches long, are much larger. An edible oil is extracted from the seeds and is now being exported to the United States.

For previous introduction see 99608.

104698. *PAUONIS WRIGHTII* (Griseb. and Wendl.) Britton.

Guano priete. A tree often with several erect trunks 25 to 40 feet high, native to southern Florida and the West Indies. The half-orbicular, fan-shaped leaves, which spread in all directions, are yellow green above and blue green beneath, and the segments are linear lanceolate. The drooping spadix, 3 to 5 feet long, bears yellow-green flowers, followed by lustrous black fruits one-third inch in diameter.

For previous introduction see 95048.

104699. *PHOENIX ZEYLANICA* Trimen. Ceylon date palm.

A pinnate-leaved palm, native to Ceylon, with a stem 8 to 20 feet high and a crown of rather short leaves made up of numerous linear-lanceolate, light-green leaflets 7 to 10 inches long. The obovoid-oblong, violet-blue, edible fruits are half an inch long.

For previous introduction see 103732.

104700. *PTYCHOSPERMA MACARTHURI* Wendl.

A palm, native to Australia, which grows to a height of 30 feet, but is usually a dwarf in cultivation with suckers from the base, making a bushy plant. The smooth-ringed trunk is crowned by a dense cluster of pinnate leaves with arching leaflets 6 to 9 inches long.

For previous introduction see 97288.

104701. *ROYSTONEA REGIA* (H. B. K.) O. F. Cook. Cuban Royal Palm.

A Cuban palm, up to 80 feet high and 2 feet in diameter, with pinnately divided leaves 10 feet long.

For previous introduction see 93824.

104702. *SABAL GLABRA* (Mill.) Sarg. Bluestem palmetto.

An attractive palm 30 feet high. The smooth tapering trunk is marked at regular intervals with scars.

For previous introduction see 97298.

104679 to 104704—Continued.

104703. *SABAL MAURITIAEFORMIS* (Karst.) Griseb. and Wendl. Palmetto.

A handsome West Indian palm with a trunk 60 to 80 feet in height and over a foot in diameter, and large roundish leaves, multifold to the middle, up to 12 feet in diameter. The black fruits are about the size of peas.

For previous introduction see 62106.

104704. *THRINAX PARVIFLORA* Swartz. Jamaica thatch palm.

An unarmed fan palm with a ringed trunk up to 20 feet high, circular leaves 1 to 2 feet across, divided into bifid segments, and inconspicuous flowers and fruits. Native to Jamaica.

104705. *REHDERODENDRON MACROCARPUM* Hu. *Styracaceae*.

From China. Seeds presented by H. H. Hu, Director, Fan Memorial Institute of Biology, Peiping. Received March 10, 1934.

A tree about 30 feet high, native to Szechwan, China. The papery, reddish-green, oval-elliptic leaves are about 4 inches long, and the showy flowers are followed by ribbed woody oblong fruits 2 inches long.

104706 to 104713. *SOJA MAX* (L.) Piper. *Fabaceae*. Soybean.

From Poland. Seeds presented by the Director, Hortus Medicinalis, Wiño. Received March 14, 1934.

104706. *B. S.* 777.

104707. *Czarna jagoda*.

104708. *C. S.* S.

104709. *Dublańska*.

104710. *Granum*, 4041.

104711. *Putawska weresna*.

104712. *Szhotonitz*.

104713. *Wileńska*.

104714. *MANGIFERA INDICA* L. *Anacardiaceae*. Mango.

From Egypt. Plants presented by Dr. Monir Baghat, Director, Plant Quarantine Station, Alexandria. Received March 16, 1934.

A variety with very large fine fruits.

104715 to 104736. *MALUS SYLVESTRIS* Mill. *Malaceae*. Apple.

From England. Scions presented by R. G. Hatton, Director, East Malling Research Station, East Malling, Kent. Received March 17, 1934.

A collection of apple scions received under their varietal names for the use of Department specialists.

104715. *Allen's Everlasting*.

104716. *Anne Elizabeth*.

104717. *Barnack's Beauty*.

104718. *Beauty of Stoke*.

104719. *Claygate Pearmain*.

104720. *Crawley Beauty*.

104721. *Cutler Grieve*.

104715 to 104736—Continued.

104722. *Duchess Favorite*.
 104723. *Duke of Devonshire*.
 104724. *Dumelow's Seedling*.
 104725. *Edward VII*.
 104726. *Encore*.
 104727. *Irish Peach*.
 104728. *King's Acre Pippin*.
 104729. *James Grieve*.
 104730. *Lord Grosvenor*.
 104731. *Margil*.
 104732. *Mrs. Phillimore*.
 104733. *Orleans Reinette*.
 104734. *Rival*.
 104735. *Rosemary Russet*.
 104736. *Roundway Magnum Bonum*.

104737. *HEDERA HELIX POETICA* Weston.
Araliaceae. English ivy.

From Greece. Seeds presented by Prof. P. T. Anagnostopoulos, Department of Horticulture, Ecole Supérieure d'Agriculture, Athens. Received March 16, 1934.

A form with broadly ovate, shallowly lobed, cordate, bright or yellowish-green leaves and orange-yellow fruits. Native to southeastern Europe.

104738. *QUERCUS* sp. Fagaceae. Oak.

From France. Trees presented by M. Kai-kenger, Corrèze. Received March 19, 1934.

A species of oak which in France is a host to truffles.

104739 to 104771.

From Italy. Plants purchased from G. Giannini, Pistoia. Received March 20, 1934.

A collection of fruit trees, introduced for the use of Department specialists.

104739. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach. *Blondeau*.
 104740 to 104742. *CORYLUS AVELLANA* L. Betulaceae. Filbert.
 104740. *Imperiale di Trebisonda*.
 104741. *Meraviglia Bollwiller*.
 104742. *Purpurea*.
 104743 to 104745. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.
 104743. *Api rose*.
 104744. *Losa*.
 104745. *Regina della Renette*.
 104746 to 104771. *PYRUS COMMUNIS* L. Malaceae. Common pear.
 104746. *Alessandro III*.
 104747. *Alessandrine Douillard variegata*.
 104748. *Admiral Gervaise*.
 104749. *Belle Guerandaise*.
 104750. *Blanquet*.

104739 to 104771—Continued.

104751. *Borsani*.
 104752. *Butirra Bererd*.
 104753. *Butirra Ballet Père*.
 104754. *Butirra Sopraffina*.
 104755. *Butirra Sterckmans*.
 104756. *Carlo Ernesto*.
 104757. *Consigliere d'Appello*.
 104758. *Coscia d'Inverno*.
 104759. *Costant Lesueur*.
 104760. *Cremisine Rochette*.
 104761. *Decana del Comizio*.
 104762. *Eva Ballet*.
 104763. *General de Villebois-Mareuil*.
 104764. *Giovanna d'Arco*.
 104765. *Henry Martinet*.
 104766. *Luisa Invernale*.
 104767. *Madame Ernest Ballet*.
 104768. *Notaro Lepin*.
 104769. *Ricardo di M. Capecci*.
 104770. *Robitaille Père*.
 104771. *Suzette de Bayay*.

104772 to 104775. *VITIS VINIFERA* L. Vitaceae. European grape.

From France. Cuttings purchased from Richard Waller, Domaine de la Grande, Lauzade, Le Luc. Received March 21, 1934.

104772. *Couderc 62-66*.
 104773. *Coudero 161-49*.
 104774. *Couderc 261-50*.
 104775. *Melegue 106-8*.

104776 to 104836.

From Sweden. Scions presented by Dr. Carl G. Dahl, Director, Experimentalfältet, Åkarp, Alnarp. Received March 16, 1934.

- 104776 to 104818. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.
 104776. *Åkerö*.
 104777. *Alnarps Rosmarin*.
 104778. *Antonovka*.
 104779. *Arreskov*.
 104780. *Arvidsäpple*.
 104781. *Bodil Neergaard*.
 104782. *Brunnsäpple*.
 104783. *Danzigsäpple*.
 104784. *Dronning Louise*.
 104785. *Eldrott Duväpple*.
 104786. *Flädie*.
 104787. *Fraas Kalvill*.
 104788. *Freiherr von Berlepsch*.
 104789. *Friedrich von Baden*.
 104790. *Frogmore*.
 104791. *Frösaker*.
 104792. *Granatäpple*.

104776 to 104836—Continued.

104793. *Gul Richard*.
 104794. *Gyllenkroks Astrakan*.
 104795. *Hampus*.
 104796. *Herbert's Reinette*.
 104797. *Hornsberg*.
 104798. *Kalmar Glasäpple*.
 104799. *Kavlds*.
 104800. *Kesäter*.
 104801. *Langeland*.
 104802. *Large transparente Astrakan*.
 104803. *Mank's Codlin*.
 104804. *Ökna lökåpple*.
 104805. *Ökna vita vintergytting*.
 104806. *Oranie*.
 104807. *Pederstrup*.
 104808. *Ringstad*.
 104809. *Risäter*.
 104810. *Rossvik*.
 104811. *Sävstaholm*.
 104812. *Sommarkryddäpple*.
 104813. *Sparreholm*.
 104814. *Stenbock*.
 104815. *Suislepper*.
 104816. *Tornpipping*.
 104817. *Vitgylling*.
 104818. *Zuccalmaglios Renett*.
 104819 to 104823. *PRUNUS CERASUS* L.
 Amygdalaceae. **Sour cherry**.
 104819. *Brysselska Brunkörsbär*.
 104820. *Imperatrice Eugenie*.
 104821. *Ostheimer*.
 104822. *Stora klarbär*.
 104823. *Triaux*.
 104824 to 104827. *PRUNUS DOMESTICA* L.
 Amygdalaceae. **Common plum**.
 104824. *Gulplommon*.
 104825. *Hagbyholms sviskon*.
 104826. *Lojo*.
 104827. *Rött äggplommon*.
 104828 to 104836. *PYRUS COMMUNIS* L.
 Malaceae. **Common pear**.
 104828. *Cecilia*.
 104829. *Esperens herrepäron*.
 104830. *Experimentalfattets Augustipäron*.
 104831. *Fursilicht taffelpäron*.
 104832. *Goteborg's Diamant*.
 104833. *Gröppäron*.
 104834. *Hostbergamott*.
 104835. *Johantorp*.
 104836. *Lybeckerbergamott*.

104837 to 104851.

- From England. Seeds presented by Sir Arthur W. Hill, Director, Royal Botanic Gardens, Kew, Surrey. Received March 16, 1934.
- 104837 to 104839. *ALTHAEA* spp. Malvaceae.
 104837. *ALTHAEA FICIFOLIA* Cav.
 Antwerp hollyhock.
 A biennial 3 to 6 feet high, with large 7-lobed leaves and large lemon-yellow or orange flowers in terminal spikes.
 104838. *ALTHAEA OFFICINALIS* L.
 Marshmallow.
 A downy perennial 3 to 4 feet high, with ovate, often heart-shaped leaves, and small pinkish flowers, 1 inch across. Native to Europe.
 104839. *ALTHAEA ROSEA* (L.) Cav.
 Hollyhock.
 A variety with dark-violet, almost black flowers; used as a dye in Siberia.
 104840. *CARAGANA AMBIGUA* Stocks. Fabaceae.
Shinaluk. A subshrubby, leguminous plant, with large conspicuous flowers that are said to be eaten by the natives of Baluchistan, where the plant is native. It is said to grow between 5,000 and 9,000 feet altitude.
 104841. *CARAGANA AURANTIACA* Koehne. Fabaceae.
 A deciduous shrub about 4 feet high, with graceful, ultimately pendulous, long slender leafy branches armed with triple spines. The short-stalked leaves consist of four narrow, linear leaflets up to one-half inch wide. The orange-yellow, bell-shaped flowers, less than an inch long, are produced in great profusion, the flowers hanging thickly from the under side of the branches, 3 or 4 to the inch. It is native to central China.
 104842. *CELTIS BUNGEANA* Blume. Ulmaceae. **Hackberry**.
 A tree, native to China, with small deep-green leaves and black fruits the size of small peas.
 For previous introduction see 62168.
 104843. *CELTIS GLABRATA* Stev. Ulmaceae. **Hackberry**.
 A shrubby hackberry, from the Caucasus region, with coarsely serrate, obliquely ovate, short-acuminate, deep-green leaves, pale yellowish green beneath, and 1 to 2½ inches long. The tree is leafless in the spring when the small greenish flowers appear.
 104844 to 104846. *COTONEASTER* spp. Malvaceae.
 104844. *COTONEASTER AMOENA* Wilson.
 For previous introduction and description see 104349.
 104845. *COTONEASTER* sp.
 Received as *Cotoneaster denticulata*, a name now referred to *Amelanchier denticulata*.
 104846. *COTONEASTER LUCIDA* Schlecht.
 A deciduous bushy shrub, 6 to 8 feet high, with bright-green leaves, whitish green beneath. The bright rose-colored flowers are followed by globose black fruits. Native to northern Asia.

104837 to 104851—Continued.

104847 to 104851. DELPHINIUM spp. Ranunculaceae. Larkspur.

104847. DELPHINIUM DUHMBERGII Huth.

For previous introduction and description see 104360.

104848. DELPHINIUM DICTIOCARPUM Steud.

For previous introduction and description see 104359.

104849. DELPHINIUM FLEXUOSUM Bieb.

For previous introduction and description see 104361.

104850. DELPHINIUM GAYANUM Wilmott.

An annual larkspur, 2 to 3 feet high, with trifid leaves and blue, rosy, or white flowers in numerous dense racemes. Native to central Europe.

104851. DELPHINIUM TATSIENSE Franch.

For previous introduction and description see 104366.

104852 to 104864.

From England. Seeds presented by the Botanic Garden, Cambridge. Received March 19, 1934.

104852. CELTIS GLABRATA Stev. Ulmaceae. Hackberry.

For previous introduction and description see 104843.

104853. IRIS MILESHI Baker. Iridaceae. Himalayan iris.

A semi-evergreen Himalayan iris related to *Iris tectorum*, with seven or eight leaves 2 to 3 feet long on the tall flower stem; the latter is branched and bears about four heads of flowers, rosy lilac and more or less spotted with darker magenta.

For previous introduction see 92318.

104854. LACTUCA SCARIOLA L. Cichoriaceae. Prickly lettuce.

An annual or biennial, sometimes 6 feet high, with a stiff stem, leaves 5 inches long and 1 to 2 inches wide, and inconspicuous yellow flowers. Native to Europe.

104855 and 104856. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

104857. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Cherry tomato.

Variety *Cerasiforme*.

104858. PISUM JOMARDI Schrank. Fabaceae. Pea.

A hardy, white-flowered, annual pea about 3 feet high, native to Egypt.

For previous introduction see 66475.

104859. RHEUM RHAPONTICUM L. Polygonaceae. Common rhubarb.

104860 to 104862. RUBUS spp. Rosaceae.

104860. RUBUS BIFLORUS Buch.-Ham.

A rambling shrub with large leaves, woolly beneath, and subacid yellow berries about the size of a thimble. Native to the Himalayas.

For previous introduction see 66604.

104852 to 104864—Continued.

104861. RUBUS BIFLORUS QUINQUEFLORUS Focke.

This ornamental shrub, native to western Szechwan, China, between 5,800 and 6,800 feet altitude, produces its clusters of orange-yellow berries through so long a period as to be almost perpetual-fruiting. Because of its white wax-coated stems, it is one of the most striking plants in the garden in autumn and winter.

104862. RUBUS FRAXINIFOLIUS Poir.

A sturdy, upright, little-branched bramble, with a stiff stem up to 15 feet high and over half an inch in diameter under favorable conditions. The stems and branches are red, armed with short sharp recurved hooks. The white flowers are followed by attractive bright-red fruits, half an inch in diameter, borne in large clusters. They are fairly juicy and edible, but rather tasteless.

For previous introduction see 68359.

104863. SOLANUM ATROPURPUREUM Schrank. Solanaceae.

A spiny shrub, with purple stems and deeply pinnatifid leaves. The sulphur-yellow flowers are in small umbels. Native to Brazil.

104864. SOLANUM NODIFLORUM Jacq. Solanaceae.

A woody perennial about 2 feet high, with ovate entire leaves 2 to 5 inches long and very small white flowers in small umbels, followed by small black globose berries. Native to tropical America.

104865. COUMAROUNA PANAMENSIS Pittier. Fabaceae.

From the Canal Zone. Seeds presented by J. E. Higgins, Director, Plant Introduction Gardens, Summit. Received March 19, 1934.

A large tropical tree up to 150 feet high, with alternate compound leaves made up of five to eight obliquely elliptic leaflets 6 to 12 inches long, loosely branching terminal panicles of large pink flowers, and flattened, elliptic, chocolate-brown fruits 2 to 3 inches long. It is native to the Canal Zone.

For previous introduction see 88113.

104866. TINNEA AETHIOPICA Kotschy and Peyr. Menthaceae.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received March 20, 1934.

An ornamental, much-branched shrub about 4 feet high, with short-stemmed, oblong leaves. The dark purplish-brown flowers are produced in axillary whorls and have an odor like violets. Native to tropical Africa.

For previous introduction see 90893.

104867 to 104879.

From China. Seeds presented by H. K. Fu, Director, Botanic Garden, Dr. Sun Yat-Sen's Memorial Park, Nanking. Received March 21, 1934.

104867 to 104879—Continued.

104867. ACANTHOPANAX EVODIAEFOLIUM Franch. Araliaceae.

An unarmed shrub 10 feet high, with trifoliolate leaves crowded at the ends of the branchlets. The small lanceolate acuminate leaflets are 3 to 4 inches long. Native to Yunnan, China.

For previous introduction see 93871.

104868. CARPINUS LAXIFLORA DAVIDII Franch. Betulaceae.

A Japanese tree up to 50 feet high, with ovate or elliptic, doubly serrate, long-acuminate, stiff leaves 2 to 3 inches long and inconspicuous flowers.

104869. CELASTRUS MONOSPERMA Roxb. Celastraceae.

A shrubby climber with glossy green, oblong-obovate leaves 3 to 5 inches long and numerous small pale greenish-yellow flowers followed by smooth, oblong capsules enclosing solitary seeds covered with an orange-colored ariel. Native to India.

104870. DIOSPYROS GLAUCIFOLIA Metcalf. Diospyraceae.

A tree up to 50 feet high, with ovate or broad-elliptic, dull-green leaves about 5 inches long and small globose smooth fruits. Native to southeastern China.

104871. ERYTHRINA ARBORESCENS Roxb. Fabaceae. Coraltree.

When covered with its bright scarlet flowers, this small tree is very attractive and is often planted as an ornamental. There are but few prickles on its branches, and the thin greenish leaves are often a foot in width. The strongly curved pods are about an inch wide and 6 to 9 inches long. The tree is native to the central and eastern Himalayas up to 7,000 feet altitude.

For previous introduction—see 63334.

104872. MAACKIA TENUIFOLIA (Hemsl.) Hand.-Mazz. Fabaceae.

A tender shrub with five-foliolate membranous leaves 6 to 8 inches long and white flowers, less than an inch long, in graceful racemes. Native to southeastern China.

104873. MANGLIETIA FORDIANA Oliv. Magnoliaceae.

A tender evergreen tree about 25 feet high, closely allied to the magnolias. The stiff, leathery, oblanceolate leaves are 4 to 6 inches long, and the solitary terminal white flowers are about 4 inches across. Native to Hong Kong.

104874. ORMOSIA sp. Fabaceae.

The ormosias are handsome subtropical trees with pinnately compound leaves, showy flowers in large racemes, and red or red and black seeds.

104875. SINOJACKIA XYLOCARPA Hu. Sty-
racaceae.

A small tree closely allied to the styraxes, from Kiangsu, China. The leaves are membranous, obovate, cuneate, about 3 inches long, and the showy white pendulous flowers, one-half inch long, are in numerous axillary cymes, covering the tree in late April.

104876. STYRAX sp. Styracaceae.

104877. VACCINIUM sp. Vacciniaceae.

104867 to 104879—Continued.

104878. (Undetermined.)

No. 20.

104879. (Undetermined.)

No. 21.

104880. CITRUS MEDICA L. Rutaceae.
Citron.

From New York. Seeds presented by Dr. A. Reich. Received March 26, 1934.

Pome citron. A lemonlike fruit native to Palestine and Syria. The essential oil from the skin has a very fine odor.

104881. SOJA MAX (L.) Piper. Fabaceae.
Soybean.

From China. Seeds presented by Dr. Sheo Wang, University of Nanking, Nanking, through W. J. Morse, Bureau of Plant Industry. Received March 27, 1934.

Nanksoy. A medium-sized, glossy, yellow bean with a brown hilum. It resembles quite closely in seed characters the Nanking. The variety was developed by Dr. Wang from a native Chinese variety in the vicinity of Nanking. In field tests it has excelled other varieties in seed yield by as much as 45 percent.

104882 to 104893.

From Czechoslovakia. Seeds presented by Prof. Adolf Kutfn, Horti Praefectus, Tabor. Received March 23, 1934.

104882 to 104887. ALLIUM spp. Lilia-
ceae.

104882. ALLIUM BAICALENSE Willd.

An allium with flat linear leaves and lilac flowers in semiglobose heads. Native to the Lake Baikal region, Siberia.

104883. ALLIUM FALLAX Schult. f.

An Austrian allium, 5 to 10 inches high, with linear leaves and lilac-purple flowers in a hemispherical head.

For previous introduction see 66427.

104884. ALLIUM KOCHII Lange.

An allium native to Denmark, with strap-shaped or almost terete leaves and kermisine-red flowers in a dense head, with very few bulbels in the inflorescence.

104885. ALLIUM LEDEBOURIANUM
Schult. f.

A stout-stemmed allium 1 to 2 feet high, native to the Altai region in Siberia. The linear leaves are terete, and the rosy-pink flowers are in dense hemispherical umbels about 1 inch in diameter.

104886. ALLIUM OPHIOSCORDON G. Don.

Bulbs of an allium very closely allied to *A. sativum*, with a strongly curved stem sometimes 3 feet high and having whitish or greenish flowers. The bulbels of the inflorescence are often nearly one-half inch in diameter.

104887. ALLIUM TULIPAEFOLIUM Ledeb.

A Siberian allium with oblong acute leaves 8 inches long and white or pinkish flowers in small hemispherical umbels.

104882 to 104898—Continued.

104888. *CORONILLA SCORPIOIDES* (L.) Koch. Fabaceae.

An erect yellow-flowered herbaceous perennial about 8 inches high, native to the Mediterranean countries.

For previous introduction see 78775.

104889. *CORONILLA VARIA* L. Fabaceae. Crownvetch.

For previous introduction and description see 104567.

104890 to 104895. *DELPHINIUM* spp. Ranunculaceae. Larkspur.

104890. *DELPHINIUM DECORUM* Fisch.

For previous introduction and description see 104357.

104891. *DELPHINIUM DISCOLOR* Fisch.

A name for which a description and a place of publication have not been found.

104892. *DELPHINIUM DICTIOCARPUM* Steud.

For previous introduction and description see 104848.

104893. *DELPHINIUM EXALTATUM* Ait.

A stout perennial larkspur 2 to 4 feet high, with flat leaves deeply cleft into three to seven wedge-shaped lobes. The blue flowers, marked with yellow on the upper petals, are in erect crowded racemes. Native to the United States from Alabama to Minnesota.

104894. *DELPHINIUM PRZEWALSKII* Huth.

For previous introduction and description see 104363.

104895. *DELPHINIUM TIROLENSE* Kern.

A perennial herb with pubescent stem and leaves, the leaves 3-parted. The blue flowers are in loose racemes. Native to central Europe.

104896 to 104898. *DIGITALIS* spp. Scrophulariaceae. Foxglove.

104896. *DIGITALIS ARGYROSTIGMA* Fisch.

A name for which a place of publication and a description have not been found.

104897. *DIGITALIS LAEVIGATA* Waldst.

A perennial foxglove 2 to 3 feet high, with linear-lanceolate leaves and scattered yellow flowers. Native to south-central Europe.

104898. *DIGITALIS NERVOSA* Steud.

For previous introduction and description see 104642.

104899 to 104920.

From France. Seeds presented by Vilmorin-Andrieux & Cie., Verrieres-le-Buisson. Received March 24, 1934.

104899 to 104908. *BETULA* spp. Betulaceae. Birch.

104899. *BETULA CORYLIIFOLIA* Regel and Maxim.

This is allied to the river birch (*Betula nigra*) of the eastern United States. The coarsely dentate leaves are broadly elliptic or obovate, $1\frac{3}{4}$ to $2\frac{1}{2}$ inches long, and silky hairy on the veins beneath. Native to Japan.

104899 to 104920—Continued.

104900. *BETULA ERMANI* Champ.

For previous introduction and description see 104482.

104901. *BETULA EXCELSA* Ait.

A large tree with yellowish-brown bark and broadly ovate, acute leaves over 2 inches long, pubescent beneath. Native to northern North America.

104902. *BETULA HUMILIS* Schrank.

A shrubby birch 2 to 6 feet high, with rounded or ovate, crenately serrate leaves from one-half to over an inch long. Native to northern Europe and Asia.

104903. *BETULA JAPONICA* SZECHUANICA C. Schneid. Japanese white birch.

A tree up to 60 feet high, native to western China. The rhombic-ovate leaves, 2 to 3 inches long, are unequally dentate-serrate and are deeply glandular-punctate beneath. The dark dull-green color of the leaves persists until late autumn.

For previous introduction see 102216.

104904. *BETULA PAPIRYFERA* OCCIDENTALIS Sarg.

This is one of the very finest of the birches, and it reaches sometimes a height of 120 feet. The bark is reddish brown to whitish, peeling, and the young shoots are warted, downy, and yellowish brown. The ovate leaves, with a rounded or heart-shaped base, are ordinarily 3 to 4 inches long, but on young trees they are often over 5 inches long, hairy along the midrib and veins on the under surface. This tree is closely allied to the paper birch (*Betula papyrifera*), but is distinguished by its downy fruiting scales, its brown bark, its larger size, and bigger leaves.

104905. *BETULA MAXIMOWICZIANA* Regel.

This is considered, by some, 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.

For previous introduction see 63342.

104906. *BETULA PUMILA* FASTIGIATA Rehd.

A shrubby variety with upright branches, narrow-pyramidal in habit. The leaves are roundish or broadly rhombic. The typical form is native to the northern United States.

104907. *BETULA TRISTIS* Wormsk.

A shrub 3 to 12 feet high, with broadly ovate or elliptic acuminate leaves about 2 inches long. Native to northeastern Asia.

For previous introduction see 102471.

104908. *BETULA ULMIFOLIA* Sieb. and Zucc.

A large handsome tree, up to 50 feet high, with yellowish-brown bark and ovate, irregularly doubly serrate, long-acuminate leaves 2 to $3\frac{1}{2}$ inches long. Native to Japan and Manchuria.

104899 to 104920—Continued.

104909 to 104915. *COTONEASTER* spp. Malvaceae.

104909. *COTONEASTER UNIFLORA* Bunge.

A dwarf deciduous shrub, 2 to 3 feet high, closely related to *C. integerrima*, and native to Siberia. The thin, broadly oval to obovate leaves, less than 1 inch long, are smooth above and downy beneath when young. The single, usually solitary, white flowers are followed by globose red fruits.

For previous introduction see 102479.

104910. *COTONEASTER* sp.

No. 2005. Hers.

104911. *COTONEASTER* sp.

No. 2007. Hers.

104912. *COTONEASTER* sp.

No. 2061. Hers.

104913. *COTONEASTER* sp.

No. 3737. M. V.

104914. *COTONEASTER* sp.

No. 7087. M. V.

104915. *COTONEASTER* sp.

No. A. 144. Forrest.

104916. *PHILADELPHUS INCANUS* Koehne. Hydrangeaceae. Gray mockorange.

A late-flowering species up to 6 feet high, with oval leaves, dull grayish beneath. The white flowers are produced 5 to 9 together on racemes about 2 inches long, at the end of short leafy shoots, and have an odor like that of hawthorn. The flowering season is from the middle to late July.

104917. *PHILADELPHUS SERICANTHUS* Koehne. Hydrangeaceae. Silk mockorange.

A white-flowered shrub, 10 feet high, native to thickets of western Szechwan, China, at 4,000 feet altitude.

104918. *STRANVAESIA* sp. Malaceae.

The *stranvaesias* are evergreen shrubs, or sometimes small trees, up to 20 feet high, with loose clusters of white or pinkish flowers followed by orange or scarlet fruits. They are native to high altitudes in eastern Asia.

104919. *STYRAX WILSONII* Rehder. Styracaceae. Chinese snowbell.

A handsome free-flowering western Chinese shrub which begins flowering when very small. It reaches a height of 12 feet and has ovate leaves, clusters of white flowers, and small grayish fruits.

For previous introduction see 76275.

104920. *TROCHODENDRON ARLIODES* Sieb. and Zucc. Trochodendraceae.

A hardy evergreen shrub 3 feet high, with greenish flowers. Native to Japan.

For previous introduction see 73285.

104921 to 104938.

From Ventimiglia, Italy. Seeds presented by S. W. McLeod Braggins, Superintendent, La Mortola Botanic Gardens. Received March 26, 1934.

104921 to 104923. *ALTHAEA* spp. Malvaceae.

104921 to 104938—Continued.

104921. *ALTHAEA FICIFOLIA* Cav. Antwerp hollyhock.

For previous introduction and description see 104837.

104922. *ALTHAEA NARBONENSIS* Jacq.

A white-hairy perennial with an erect stem 4 to 6 feet high, lanceolate serrate leaves, and rosy-purple flowers. Native to the Mediterranean region.

104923. *ALTHAEA ROSEA* (L.) Cav. Hollyhock.

104924. *ANTIRRHINUM LATIFOLIUM* Mill. Scrophulariaceae. Snapdragon.

A wild antirrhinum, native to Spain.

For previous introduction see 100958.

104925. *ANTIRRHINUM ORONTIUM* L. Scrophulariaceae. Snapdragon.

For previous introduction and description see 104557.

104926. *CLEMATIS ARMANDI* Franch. Ranunculaceae. Armand clematis.

A tender woody evergreen vine with lustrous coriaceous trifoliolate leaves with entire lanceolate leaflets, panicles of white flowers 2 inches across, and fruits with long plumose styles. Native to central and western China.

For previous introduction see 80105.

104927. *CORONILLA* spp. Fabaceae.

104927. *CORONILLA EMERUS* L. Scorpion-senna.

A dense, half-hardy, symmetrical shrub, native to southern Europe, 3 to 5 feet high, with glossy deep-green compound leaves and large showy flowers that are yellow tipped with red. In warm regions this species is evergreen.

104928. *CORONILLA GLAUCA* Jusl. Honey coronilla.

For previous introduction and description see 104565.

104929. *CORONILLA JUNCEA* L.

For previous introduction and description see 104566.

104930. *CORONILLA MINIMA* L.

A shrubby diffuse procumbent plant, 3 to 4 inches high, with leaves composed of 7 to 13 ovate leaflets and sweet-scented, golden-yellow flowers in small umbels. Native to dry sandy places in southern Europe.

104931. *CORONILLA SCORPIOIDES* (L.) Koch.

For previous introduction and description see 104888.

104932. *CORONILLA VALENTINA* L.

A herbaceous perennial about 2 feet high, with small compound leaves made up of 4 to 6 pairs of narrow leaflets, and yellow pendent flowers, fragrant at night, in 6- to 12-flowered racemes. Native to dry places in central Europe.

104933. *CORONILLA VARIA* L. Crownvetch.

For previous introduction and description see 104567.

104921 to 104938—Continued.

104934. *HYACINTHUS TRIFOLIATUS* Tenore.
Liliaceae.

An Italian hyacinth, 8 to 16 inches high, with usually three linear-lanceolate leaves and violet flowers in a loose head of 10 to 30 flowers.

104935 to 104938. *IRIS* spp. Iridaceae.

104935. *IRIS LUTESCENS* Lam.

A dwarf iris of the Pogoniris section, with leaves 6 to 9 inches long, the stem being about the same length as the leaves. The flowers are bright yellow with outer segments obovate-cuneate, over 2 inches long, and streaked with pale brown; the inner segments are broader and abruptly narrowed to a claw, which is streaked with purple. Native to the stony mountain slopes of southern France.

104936. *IRIS CHAMAEIRIS OLBIIENSIS* (Henon) Baker.

An iris of the Pogoniris section, with a stout rhizome, broadly ensiform, pale-green leaves, and dark-violet flowers on a stem about 6 inches high. Native to south-central Europe.

104937 and 104938. *IRIS UNGUICULARIS* Poir.
Algerian iris.

An iris with bright-green leaves 2 feet long, growing in tufts of about six; tube up to 6 inches long, filiform, exerted from the spathe; limb bright lilac, rarely white; outer segments 3 inches long, 1 inch broad, with a yellow keel streaked with lilac on a white ground at the throat; inner segments oblong. The fragrant flowers appear in January and February. Native to the Mediterranean countries.

104937. Typical form.

104938. Variety *alba*. A white-flowered form.

104939 to 104947.

From Germany. Seeds presented by Direktor des Botanischen Gartens, Berlin-Dahlem. Received March 27, 1934.

104939 to 104943. *DELPHINIUM* spp. Ranunculaceae.
Larkspur.

104939. *DELPHINIUM BULLEYANUM* Forrest.

For previous introduction and description see 104356.

104940. *DELPHINIUM DELAVAYI* Franch.

For previous introduction and description see 104358.

104941. *DELPHINIUM FISSUM* Waldst.

A perennial larkspur with a thickened rootstock, three- to five-parted hairy leaves, and blue flowers in dense elongated racemes. Native to south-eastern Europe.

104942. *DELPHINIUM SULPHUREUM* Boiss.

An annual larkspur not more than 8 inches high, with racemes of three to five sulphur-yellow flowers. Native to Syria.

104943. *DELPHINIUM TRISTE* Fisch.

A perennial larkspur with three- to five-parted leaves and lax racemes of dark reddish-tan flowers. Native to Siberia.

104939 to 104947—Continued.

104944 to 104947. *SYRINGA* spp. Oleaceae.
Lilac.

104944. *SYRINGA PINETORUM* W. W. Smith.

A shrub related to *S. microphylla*, about 10 feet high, with densely pilose branchlets, ovate to ovate-lanceolate leaves 2 to 4 inches long, and purplish flowers in panicles about 9 inches long. It is native to southwestern China.

For previous introduction see 97629.

104945. *SYRINGA TOMENTELLA* Bur. and Franch.
Feltly lilac.

A bushy shrub about 10 feet high, with elliptic leaves which are hairy beneath, and loose long-branched spikes of fine mauve-pink flowers, produced in late May and early June. It is native to western China.

For previous introduction see 97628.

104946. *SYRINGA WOLFFI* C. Schneid.

An ornamental shrub remarkable for its peculiar foliage; the elliptic oblong leaves are up to 6 inches long, cuneate, and grayish green beneath. The fragrant dark-lilac flowers are in much-branched panicles. Native to Manchuria and Chosen.

For previous introduction see 80717.

104947. *SYRINGA YUNNANENSIS* Franch.

A shrub from 3 to 8 feet high, with fragrant pink flowers. Native to southwestern China.

For previous introduction see 103350.

104948 to 104960.

From the Netherlands. Seeds presented by Prof. Dr. L. G. M. Baes Becking, Botanical Gardens, Leiden. Received March 26, 1934.

104948 and 104949. *ANTIRRHINUM MAJUS* L.
Scrophulariaceae.
Common snapdragon.

104950 to 104953. *DELPHINIUM* spp. Ranunculaceae.
Larkspur.

104950. *DELPHINIUM BRUNONIANUM* Royle.

For previous introduction and description see 104355.

104951. *DELPHINIUM CONSOLIDA* L.
Field larkspur.

An erect hairy annual over a foot high with blue or white flowers in loose panicles. It is native to Europe.

For previous introduction see 81884.

104952. *DELPHINIUM TRICOLOR* Bernh.

A name for which a description and a place of publication have not been found.

104953. *DELPHINIUM TRISTE* Fisch.

For previous introduction and description see 104943.

104954 to 104960. *DIGITALIS* spp. Scrophulariaceae.
Foxglove.

104954. *DIGITALIS FONTANESII* Steud.

A name for which a description and a place of publication have not been found.

104948 to 104960—Continued.

104955. *DIGITALIS LANATA* Ehrh.

For previous introduction and description see 104575.

104956. *DIGITALIS LUTEA* L.
Straw foxglove.

A glabrous perennial foxglove with oblong or lanceolate, denticulate leaves and many-flowered racemes of yellow or white flowers. Native to southern Europe.

104957. *DIGITALIS MINIANA* Sampaio.

A stout biennial foxglove, native to Portugal, with lanceolate, dentate, reticulate-veined leaves, and purplish flowers about one-half inch long in dense elongated racemes.

104958. *DIGITALIS NERVOSA* Steud. and Hochst.

For previous introduction and description see 104642.

104959. *DIGITALIS NEVADENSIS* Kuhnze.

A slender-stemmed perennial foxglove from the mountains of Spain, with large oblong leaves and lax secund racemes of showy purple flowers.

104960. *DIGITALIS PARVIFLORA* Jacq.

A perennial foxglove 2 or 3 feet high, with sessile, oblong acute leaves and a spike of rather small, rust-colored flowers. Cultivated in southern Europe.

104961 to 104987.

From England. Plants purchased from Maurice Pritchard & Sons, Ltd., Riverslea Nurseries, Christchurch, Hants. Received March 31, 1934.

104961 to 104967. *ERICA CARNEA* L. Ericaceae.
Spring heather.

104961. *King George*. A winter-flowering variety with bright rich-pink flowers.

104962. *Mrs. S. Doncaster*. Flowers light pink.

104963. *Praecox rubra*. A form which commences to bloom in January; the flowers are a rich shade of pink.

104964. *Queen of Spain*. Flowers rosy red.

104965. *Rubra*. Flowers deep ruby pink.

104966. *Vivellii*. A form with dark foliage and deep-rose flowers.

104967. *Winter beauty*. Flowers pink.

104968 to 104980. *KNIPHOFIA* spp. Liliaceae.
Torchlily.

104968. *C. M. Pritchard*. The largest of the yellow-flowered kniphofias.

104969. *Dr. Legate*. Flowers a good scarlet; bloom in July; plant becomes 4 to 5 feet high.

104970. *Erecta*. The good red flowers of this variety are held erect. Blooming season, September.

104971. *Greybeard*. Flowers red, aging to pale gray; blooming in July and August; plant becomes 4 to 5 feet high.

104972. *Lemon Queen*. The lemon-yellow flowers are borne from July to September; the plant is 3½ feet high.

104961 to 104987—Continued.

104973. *Leviathan*.

104974. *Lighthouse*. Massive scarlet heads of flowers, from July to the end of August.

104975. *Majestic*. Very rich red flowers, blooming in September.

104976. *Mrs. Samuel Smith*. Flowers light scarlet, fading to yellow, appearing in June and July. Plant becomes 5 to 6 feet high.

104977. *Preciosa*. Flowers scarlet with rosy sheen, appearing in August; plant becomes 4 to 5 feet high.

104978. *Searchlight*. Large red flowers with widened spikes, appearing in September. Plant becomes 6 feet tall.

104979. *Triumphans*. Flowers light scarlet; blooming in August and September; plant 3 to 4 feet high.

104980. *Vincent's Delight*. Flowers large, yellow-toned orange, each spike with tailed center; blooms in September; plant becomes 4 feet high.

104981. *PRIMULA* sp. Primulaceae.
Primrose.

Arthur Dumoulin. A *Juliae* hybrid with double violet-blue flowers.

104982. *PRIMULA* sp. Primulaceae.
Primrose.

Croussei. Flowers double, plum purple, with a fine white wire edge to the petals.

104983. *VERONICA ASTONI* Petrie. Scrophulariaceae.

A veronica that forms a low dense or rounded bush, with very small, four-angled, closely imbricated leaves and small white flowers. Native to New Zealand and similar to *Veronica tetragona*.

104984. *HEBE BUCHANANI* (Hook. f.) Cockayne and Allen (*Veronica buchanani* Hook. f.). Scrophulariaceae.

A small woody evergreen bush up to a foot high, with stout spreading branches, sometimes tortuous and decussate, closely imbricate, leathery, broadly oblong leaves about one-half inch in length. The small white flowers are in short spikes near the tips of the branches. Native to New Zealand.

For previous introduction see 98252.

104985. *VERONICA LYCOPODIODES* Hook. f. Scrophulariaceae.

A stout shrub 6 to 30 inches high, with acutely four-angled branches, densely imbricating, broadly oblong, acute leaves one-eighth inch long, and small white flowers in ovate terminal heads. Native to New Zealand.

104986. *VERONICA* sp. Scrophulariaceae.
Received under the name "pagei."

104987. *HEBE PROPINQUA* (Cheeseman) Cockayne and Allen (*Veronica propinqua* Cheeseman). Scrophulariaceae.

A low woody evergreen bush 1 to 3 feet high, with spreading, sometimes tortuous, branches and densely imbricated leaves in opposite pairs, connate for the greater part of their length, forming a closed sheath around the branch. The white flowers are in small terminal heads. Native to New Zealand.

For previous introduction see 89297

104988 and 104989.

From South Australia. Seeds presented by A. C. Trumble, agronomist, Waite Agricultural Research Institute, Glen Osmond, University of Adelaide. Received March 31, 1934.

104988. *PHALARIS TUBEROSA* L. Poaceae.
Grass.

Perennial canary grass. A forage grass which has proved particularly successful at the Waite Institute.

For previous introduction see 100113.

104989. *TRIFOLIUM SUBTERRANEUM* L. Fabaceae. Subterranean clover.

Originally from Dwalganup, Western Australia. An early subterranean clover which has proved particularly successful at the Waite Institute.

For previous introduction see 99489.

104990 to 104999. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.

From South Dakota. Trees presented by N. E. Hansen, horticulturist, South Dakota State Agricultural College, Brookings. Received March 31, 1934.

A collection of Russian varieties from I. V. Mitchurin.

104990. *Antonofka*.

104991. *Bellefleur* (Red).

104992. *Bellefleur* × *Katayka*.

104993. *Bellefleur Rekord*.

104994. *Komsomolez*.

104995. *Pepping Shafran*.

104996. *Red Standard*.

104997. *Seedless of Mitchurin*.

104998. *Wisantowoye*.

104999. *Yakhontowoye*.

105000 to 105003. *VITIS VINIFERA* L. Vitaceae. European grape.

From France. Cuttings purchased from Rene Salomon, Maire à Thomery (Seine et Marne). Received March 31, 1934.

A collection of table grapes, introduced for the use of Department specialists.

105000. *Chasselas Coulard-Dismante* Traube.

105001. *Ezerjo*.

105002. *Grois Coulard*.

105003. *Marechal Gallieni*.

105004 to 105014. *CITRUS* spp. Rutaceae.

From Morocco. Budsticks presented by H. Brayard, Directeur de la Station Experimentale, Marrakech, Morocco Department of Agriculture. Received March 22, 1934.

A collection of citrus budsticks introduced for the use of Department specialists.

105004. *CITRUS MEDICA* L. Citron.
Sanguin panaché.

105005. *CITRUS MEDICA* L. Citron.
Inerne Illiput.

105004 to 105014—Continued.

105006. *CITRUS NOBILIS DELICIOSA* (Ten.) Swingle. Mandarin orange.
Sanguine.

105007. *CITRUS* sp.
De Tétouan.

105008. *CITRUS* sp.
Précoce de Valence.

105009. *CITRUS* sp.
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105010. *CITRUS* sp.
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105011. *CITRUS* sp.
Gzezel (Gzel-Gzel).

105012. *CITRUS* sp.
Pajarito.

105013. *CITRUS* sp.
Taregrosso.

105014. *CITRUS* sp.
Sanguine grosse ronde.

105015. *PYRUS COMMUNIS* L. Malaceae. Common pear.

From Italy. Plant purchased from Fratelli Ingegnoli, Milan. Received March 5, 1934.
Risparmio.

105016. *DIANTHUS BALBISII* Ser. Silenaceae.

From France. Seeds presented by R. Salgues, Director, Botanic Garden, Brignoles. Received March 29, 1934.

105017 to 105034.

From China. Seeds presented by H. K. Fu, Director, Botanic Garden, Dr. Sun Yat-Sen's Memorial Park, Nanking. Received March 21, 1934.

105017. *CELASTRUS* sp. Celastraceae.

105018. *GORDONIA AXILLARIS* (Roxb.) Dietrich. Theaceae.

A large evergreen shrub or small tree up to 25 feet high, native to southern China. The oblanceolate leaves, 4 to 6 inches long, are dark green above, and the solitary, creamy-white flowers are 2 to 3 inches across.

For previous introduction see 102249.

105019. *ILLICIAM* sp. Magnoliaceae.

105020. *LUCULIA GRATISSIMA* (Wall.) Sweet. Rubiaceae.

A Himalayan shrub up to 15 feet high, growing at altitudes of 4,000 to 5,000 feet, with opposite ovate leaves 6 inches long and gorgeous rounded panicles of pink or rose flowers.

For previous introduction see 76903.

105021. *MUSSAENDA* sp. Rubiaceae.

105022. *ORMOSIA HENRYI* Prain. Fabaceae.

A small handsome tree, native to central China, with velvety branches, pale-green, compound leaves composed of 7 to 9 very stiff, narrow leaflets, yellowish-white flowers in axillary racemes, followed by small black pods.

105017 to 105034—Continued.

105023. *Oroxylon indicum* (L.) Vent.
Bignoniaceae.

East Indian trumpetflower.

A tropical ornamental tree up to 40 feet high, with glossy compound leaves 2 to 4 feet across and terminal panicles of white or purple flowers. The large flat pods, up to 3 feet in length, contain winged seeds. Native to southeastern Asia.

For previous introduction see 88104.

105024. *Pieris* sp. Ericaceae.

105025. *Pinus yunnanensis* Franch.
Pinaceae. Yunnan pine.

A large forest tree, native to Yunnan. The long slender drooping leaves are up to 10 inches long, and the cones, 2 to 4 inches long, have flat scales.

For previous introduction see 100586.

105026. *Pinus* sp. Pinaceae.

105027. *Pittosporum glabratum* Lindl.
Pittosporaceae.

A tree, native to central China, with evergreen foliage and orange fruits.

For previous introduction see 99196.

105028. *Polygala wattersi* Hance.
Polygalaceae.

A herbaceous perennial from central China with woody stems, membranous elliptic-lanceolate leaves over 2 inches long, and small yellow flowers in lax terminal racemes.

105029. *Porana racemosa* Roxb. Con-
volvulaceae. Snow creeper.

A vine, native to the Himalayan region of India. It occurs in dense masses,

105017 to 105034—Continued.

climbing over other plants in the jungle. The dazzling-white flowers resemble patches of snow.

For previous introduction see 61618.

105030. *Psychotria* sp. Rubiaceae.

For previous introduction see 104116.

105031. *Schima argentea* Pritz. Thea-
ceae.

An evergreen tree native to southwest-
ern China.

For previous introduction see 99220.

105032. *Tripterygium forrestii* Loesner.
Celastraceae.

A shrub about 3 feet high, with oval crenulate-serrate papery leaves 2 to 3 inches long, and terminal panicles of small green-brown flowers. Native to open situations on the Tali Range, Yunnan.

For previous introduction see 100610.

105033. *Wistaria* sp. Fabaceae.

105034. (Undetermined.)

Received as *Mallotus* sp., but the seeds are not of that genus.

105035. *Avena bromoides* Gouan. Poa-
ceae.

From France. Seeds presented by R. Sal-
gues, Director, Botanic Garden, Brig-
noles. Received March 20, 1934.

A slow-growing perennial grass up to 2 feet high, with thick, very tough, rough-
hairy leaves. It is confined almost entirely to the Mediterranean countries.

For previous introduction see 89816.

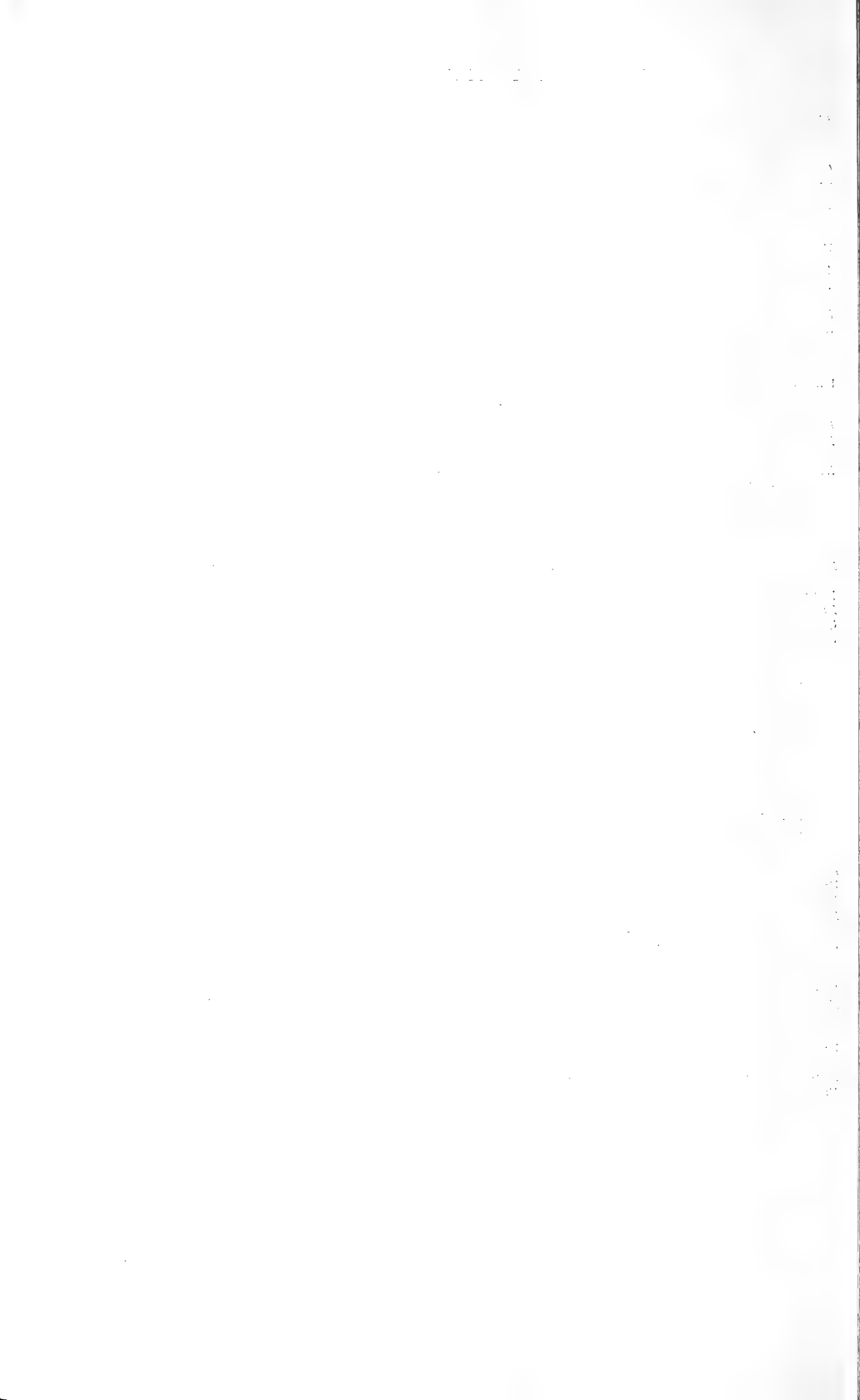
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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 119



Washington, D. C.

Issued October 1936

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, APRIL 1 TO JUNE 30, 1934 (Nos. 105036-105932)

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INTRODUCTORY STATEMENT

The present inventory, no. 119, is a record of the plant introductions (nos. 105036-105932) received by the Division of Plant Exploration and Introduction during the period from April 1 to June 30, 1934.

Conspicuous among the introductions listed are several large shipments of scions and plants of deciduous fruit varieties, chiefly from Europe; these will be grown for comparison with our present commercial varieties, in continuation of a plan inaugurated by this Division a few years ago. The countries of origin are Norway, Lithuania, the Union of Soviet Socialist Republics, Italy, Spain, and Australia; and the kinds of fruit included are apples, pears, peaches, nectarines, cherries, apricots, grapes, figs, and olives.

Pathologists working with potato diseases will be interested in a lot of tubers of reputedly wart-immune potato varieties (nos. 105478-105482) presented by the Norwegian Agricultural High School at Aas, Norway. The introduction from Turkey of two lots of seeds of native vegetable varieties (nos. 105258-105268, 105442-105447) and another lot of similar nature from China (nos. 105332-105347) indicates a growing interest in the testing of locally developed foreign vegetable varieties in the United States. These three lots include onions, beets, celery, carrots, tomatoes, and peppers.

From central and western China there is recorded a shipment of seeds of hardy plants (nos. 105311-105331), including relatives of several of our well-known American trees and shrubs, such as hackberries, hollies, etc. These will be tested in the moderately cold sections of the country. Two shipments of somewhat similar nature

were received from the University of Nanking (nos. 105584-105645 and 105676-105706); these were collected in Kwangsi Province, southern China. Many types of woody plants are represented, including several wild species of *Ficus*, *Rubus*, and *Viburnum*.

Sixty lots of seeds from northern India (nos. 105873-105932), collected by Dr. Walter Koelz and presented through the University of Michigan, include many rare woody and herbaceous plants from high altitudes in the Himalayas, among them being several species of *Clematis*, *Cotoneaster*, *Rhododendron*, and *Rosa*.

The botanical determinations have been made and the nomenclature determined by Paul Russell, who has had general supervision of this inventory.

B. Y. MORRISON,
Principal Horticulturist, in Charge.

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D. C., April 30, 1936.

INVENTORY¹

105036. ANANAS SATIVUS Schult. f.
Bromeliaceae. **Pineapple.**

From Hawaii. Plants presented by J. L. Collins, geneticist, experiment station, Association of Hawaiian Pineapple Canners, Honolulu. Received April 18, 1934.

Spiny Samoa. Originally from Samoa, and probably identical with the variety *Queen*.

105037 and 105038.

From India. Seeds presented by Durgd Dott, fruit specialist, Department of Agriculture, Lyallpur. Received April 11, 1934.

105037. PHOENIX DACTYLIFERA L. Phoenicaceae. **Date palm.**

105038. PHOENIX DACTYLIFERA L. Phoenicaceae. **Date palm.**

105039. XANTHOCERAS SORBIFOLIA
Bunge. Sapindaceae.

From Grand Junction, Colo. Seeds presented by Charles M. Jaquette, through G. P. Van Esetine, Agricultural Experiment Station, Geneva, N. Y. Received April 13, 1934.

A Chinese shrub or small tree with ash-like leaves and large drooping racemes of white flowers with yellow stamens. The kernels of the large fruits are eaten by the Chinese.

For previous introduction see 77022.

105040 to 105042. RHODODENDRON spp.
Ericaceae.

From the Philippine Islands. Seeds collected at Bangpio, Mountain Province, and presented through the Bureau of Forestry, Manila. Received April 5, 1934.

105040. RHODODENDRON SCHADENBERGII Warb.

A tropical shrub with leathery oblong acute leaves nearly 4 inches long. The flowers, about 1 inch across, are in terminal clusters. Native to Luzon, Philippine Islands.

105040 to 105042—Continued.

105041. RHODODENDRON SUBSESSILE Rendle.

A Philippine shrub with brown-hairy young twigs and small oval leaves 1 inch long, brown hairy beneath. The solitary pink flowers are less than 1 inch across.

105042. RHODODENDRON VIDALII Rolfe.

An evergreen shrub of rather stiff habit, with smooth branches and oblanceolate leaves 2 inches long, the lower surface marked with black glandular scales. The flowers, white or pink tinged, are about 1 inch across. Native to the Philippines.

105043 to 105049. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From the Philippine Islands. Cuttings presented by the Philippine Sugar Association, Manila. Received April 10, 1934.

105043. P. S. A. no. 48.

105044. P. S. A. no. 49.

105045. P. S. A. no. 50.

105046. P. S. A. no. 51.

105047. P. S. A. no. 52.

105048. P. S. A. no. 53.

105049. P. S. A. no. 54.

105050 to 105054. ASTER spp. Astera-ceae.

From England. Plants purchased from Ernest Ballard, Old Court, Colwell, near Malvern. Received April 12, 1934.

105050. Bab Ballard. A dwarf *Novi-belgii* aster, 6 to 9 inches high, with neat leathery foliage and large lavender-blue flowers.

105051. Little Boy Blue. Very dwarf, early. Neat upright little pyramids, completely smothered with semidouble, deep-blue flowers.

105052. Little Pink Lady. A very dwarf, bushy variety with large semidouble deep-pink flowers.

¹ It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Plant Exploration and 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 seed samples or 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

105050 to 105054—Continued.

105053. *Purple Emperor*. An early blooming, dwarf variety with large numerous semidouble flowers of a beautiful rich purple. The buds are very dark and the stem is a black purple.

105054. *Snow Sprite*. A new type of the *Lovi-belgii* aster. It has a very dwarf, branching habit and flowers freely when only 1 foot high. The foliage is dark green, and the semidouble white flowers, produced in profusion down to the ground, appear in the midseason.

105055 to 105085.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Plant Industry, Leningrad. Received April 6, 1934.

105055 to **105065.** *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.

105055. U. S. S. R. no. 141589. A white peach from Turtkul, Middle Asia.

105056. U. S. S. R. no. 141590. From Turtkul, Middle Asia.

105057. U. S. S. R. no. 142058. From Faisabad, Tadjikistan, Middle Asia.

105058. U. S. S. R. no. 142886. *Krasny Zafrani*, a red peach from Georgia, Transcaucasia.

105059. U. S. S. R. no. 142887. *Gru-dinskiy Celiy*, a white peach from Georgia, Transcaucasia.

105060. U. S. S. R. no. 142888. *Elberta*, from Yalta, Crimea.

105061. U. S. S. R. no. 142890. *Eri-vanskiy*, a yellow peach from Erivan, Armenia, Transcaucasia.

105062. U. S. S. R. no. 142891. *Tchuguri*, a white peach from Erivan, Armenia, Transcaucasia.

105063. U. S. S. R. no. 142892. *Dage-sanskiy Celiy*, a white peach from Dagestan, Caucasus.

105064. U. S. S. R. no. 142893. *Yellow Zafrani*, from Transcaucasia.

105065. U. S. S. R. no. 142894. *Rartule*, from Georgia, Transcaucasia.

105066 to **105073.** *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

105066. U. S. S. R. no. 141556. *Spi-tack*, from Erivan, Transcaucasia.

105067. U. S. S. R. no. 141557. *Pei-vast-zavrja*, from Ordubad, Azer-baidjan, Transcaucasia.

105068. U. S. S. R. no. 141560. *Sha-luck*, from Erivan, Transcaucasia.

105069. U. S. S. R. no. 141561. *Pei-vact*, from Ordubad, Azerbaidjan, Transcaucasia.

105070. U. S. S. R. no. 141562. *Sha-lack*, from Erivan, Transcaucasia.

105071. U. S. S. R. no. 141563. From near Erivan, Transcaucasia.

105072. U. S. S. R. no. 141566. *Tzum-Erick*, from near Yalta, Crimea.

105073. U. S. S. R. no. 143036. *Hos-rovshai*, from Erivan, Transcaucasia.

105055 to 105085—Continued.

105074 to **105085.** *VITIS VINIFERA* L. Vi-taceae. European grape.

105074. U. S. S. R. no. 150192. A black grape from the Katakalis district, Middle Asia.

105075. U. S. S. R. no. 150193. A black grape from Kurati, Middle Asia.

105076. U. S. S. R. no. 150194. A black grape from Kara-Kala, Middle Asia.

105077. U. S. S. R. no. 150195. *Kus-sayne*, from Kara-Kala, Middle Asia.

105078. U. S. S. R. no. 150197. *Kul-Dari*, from the Bakander district, Middle Asia.

105079. U. S. S. R. no. 150198. From Kara-Kala, Middle Asia.

105080. U. S. S. R. no. 150199. A white grape from Middle Asia.

105081. U. S. S. R. no. 150200. A white grape from Nuchur, Middle Asia.

105082. U. S. S. R. no. 150201. A black grape from Sumbar, Middle Asia.

105083. U. S. S. R. no. 150202. *Al-Shaytan*, from the Kayne-Kassira district, Middle Asia.

105084. U. S. S. R. no. 150203. *Kok-Uzum*, from the Karakalpak district, Middle Asia.

105085. U. S. S. R. no. 150204. From Kara-Kala, Middle Asia.

105086 to 105091.

From Denmark. Seeds presented by Prof. K. Jessen, Universitetets Botaniske Have, Copenhagen. Received April 9, 1934.

105086. *CANNA FLACCIDA* Rosc. Cannaceae.

A tall green-stemmed canna, 4 to 6 feet high, very leafy below, with ovate-lanceolate or narrowly elliptic, acute, green leaves. The sulphur-yellow, iris-like flowers are about 5 inches long. Native to the southeastern United States.

105087. *CANNA LUTEA* Mill. Cannaceae.

A tall slender canna, 3 to 4 feet high, with oblong acute leaves and pale yellowish-white flowers in a lax simple raceme. Native from Mexico to Brazil.

105088 to **105090.** *DELPHINIUM* spp. Ranunculaceae. Larkspur.

105088. *DELPHINIUM CILIATUM* Stev.

A stout upright perennial larkspur 1 to 3 feet high, with digitately five- to seven-parted leaves and blue flowers in simple or branched racemes. Native to the Caucasus region.

105089. *DELPHINIUM HALTERATUM* Sibth. and Sm.

An annual larkspur about 1 foot high, with finely divided leaves and light-blue flowers which appear from June to August. Native to the Mediterranean region.

For previous introduction see 104570.

105086 to 105091—Continued.

105090. DELPHINIUM REQUIENI DC.

A biennial larkspur about 4 feet high, with three- or five-parted leaves and sky-blue flowers in lax racemes. Native to the islands of Corsica and Majorca.

For previous introduction see 104572.

105091. ROMULEA COLUMNARIS Sebast. Iridaceae.

A crocuslike plant from the Mediterranean region, with linear leaves much longer than the scape that bears the solitary blue or violet or whitish flowers, each about 1 inch across.

105092 and 105093. SOLANUM TUBEROSUM L. Solanaceae. Potato.

From Canada. Tubers presented by J. W. Scannell, Department of Agriculture, Indian Head, Saskatchewan. Received April 14, 1934.

Introduced for the use of Department specialists.

105092. B. C. no. 32. 105093. B. C. no. 62.

105094 to 105099. TRITICUM AESTIVUM L. Poaceae. Common wheat.

From Finland. Seeds presented by Dr. Vilho A. Pesola, Chief, Central Experiment Station, Division of Plant Breeding, Jokioinen. Received April 11, 1934.

Introduced for the use of specialists working with cereals.

105094. *Hopea*, spring wheat.105095. *Pohjola*, autumn wheat.105096. *Sampo*, autumn wheat.105097. *Sopu*, spring wheat.105098. *Touko*, spring wheat.105099. *Varma*, autumn wheat.

105100 to 105106.

From England. Plants purchased from Maurice Pritchard & Sons, Ltd., Riverslea Nurseries, Christchurch, Hants. Received April 2, 1934.

105100. IRIS RUBRO-MARGINATA Baker. Iridaceae.

A dwarf iris of the Pogoniris section, not more than 4 inches high, with ensiform-falcate, red-edged leaves 2 to 3 inches long and stemless flowers, two to a root. The tube, 2 inches long, is green tinged with purple above; the limb is yellow or lilac and 2 inches long, and the segments are all oblong spatulate. Native to Asia Minor.

105101. THALICTRUM AQUILEGIFOLIUM L. Ranunculaceae. Columbine meadowrue.

Variety *Purple Cloud*.

For previous introduction see 95600.

105102 to 105106. TRADESCANTIA spp. Commelinaceae.

105102. *Blue Stone*.105103. *Lilac Time*.105104. *Pauline*.105105. *Purewell Giant*.105106. *Purple Dome*.

105107. ELEOCHARIS TUBEROSA (Roxb.) Schult. Cyperaceae. Waternut.

From China. Tubers presented by Albert P. Ding, Portland, Oreg. Received April 2, 1934.

A Chinese vegetable which grows very much in the same manner as wet-land rice. The corms or tuberous rhizomes are mostly eaten raw, but are also sliced or shredded in soups and in meat and rice dishes. The plants, which are grown on mulch or clay soil, need a hot summer to mature.

For previous introduction see 102620.

105108. CHRYSANTHEMUM CINERARIAEFOLIUM (Trevir.) Vis. Asteraceae.

From France. Seeds purchased from Vilmorin-Andrieux & Cie., Paris, by the United States Department of the Interior. Received April 3, 1934.

A slender unbranched glaucous perennial 12 to 15 inches high. The long-petioled leaves are silky beneath with distant segments. The plant, grown commercially in southern and western Europe, is used in making insect powder.

For previous introduction see 40631.

105109 to 105149.

From Italy. Plants purchased from Martino Bianchi, Pistoia. Received April 2, 1934.

Purchased under the following varietal names for the use of Department specialists.

105109 to 105122. AMYGDALUS PERSICA L. Amygdalaceae. Peach.

105109. *Alexis Lepère*.105110. *Arthur Chevreau*.105111. *Baltet*.105112. *Buco Incavato*.105113. *Cotogna del Poggio*.105114. *Cotogna di Rosano*.105115. *Cotogna gialla*.105116. *Cotogna Massima*.105117. *Morellone*.105118. *Poppa di Venere d'Ognissanti*.105119. *Principe di Piemonte*.105120. *Reine des Verges*.105121. *Sanguigna*.105122. *Senator Carlo Ridolfi*.

105123 to 105132. MALUS SYLVESTRIS Mill. Malaceae. Apple.

105123. *Abbondanza*.105124. *Calvilla di Danzica*.105125. *Calvilla Lesans*.105126. *Calvilla rosso d'autunno*.105127. *Del Commercio*.105128. *Grand Alexandre*.105129. *Renetta Ananassa*.105130. *Renetta grande di Cassel*.105131. *Rosa*.105132. *Signe Tillisch*.

105133 to 105135. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.

105133. *Di Germania*.

105109 to 105149—Continued.

105134. *Tardivo di Bourbon*.105135. *Tardivo d'Orleans*.105136 to 105149. *PYRUS COMMUNIS* L.
Malvaceae. Common pear.105136. *Bergamotta de Pentecôte*.105137. *Bergamotta Esperen*.105138. *Butirra d'Areberg*.105139. *Butirra Diel*.105140. *Butirra Giffard*.105141. *Butirra bianca Toscana*.105142. *Butirra Hardy*.105143. *Butirra dell'Assunta*.105144. *Coscia*.105145. *Gentil Bianca*.105146. *Louis Buone d'Avranches*.105147. *Margherita Marillat*.105148. *Passa Crassarn*.105149. *Spadona d'Estate*.105150. *TRIFOLIUM PRATENSE* L. Fa-
baceae. Red clover.From Poland. Seeds purchased from Udycz,
Hodowla Nasion, Warszawa. Received
April 4, 1934.Variety *Gloria*.

105151 to 105154.

From Cuba. Seeds presented by Robert M.
Grey, Superintendent of the Atkins In-
stitution of the Arnold Arboretum, Sole-
dad, Cienfuegos, through F. G. Walsing-
ham. Received April 2, 1934.105151. *ASSONIA NATALENSIS* (Sond.)
Kuntze. Sterculiaceae.A shrub or small tree, native to south-
ern Africa, with cordate, angular, toothed
leaves and axillary 6- to 8-flowered um-
bels of large, pure-white, fragrant flow-
ers.

For previous introduction see 90876.

105152. *SAPINDUS TRIFOLIATA* L. Sapin-
daceae. Soapnut tree.A stout tree, native to India, with alter-
nate pinnate leaves and dull-white flowers.
The round fruits, the size of cherries, are
used in southern India as a substitute for
soap. An oil is also extracted from them.
The hard yellow wood is used in house
building.

For previous introduction see 23315.

105153. *STIGMAPHYLLON PUBERUM* (Rich.)
Juss. Malpighiaceae.A woody vine, native to the West Indies,
with the branchlets covered with ap-
pressed brown hairs. The ovate-acumi-
nate leaves, 2 inches long, are nearly
glabrous above and appressed pubescent
beneath. The petals of the bright-yellow
flowers, an inch across, are fringed on the
margin, and the maplelike fruits are more
than an inch long.

For previous introduction see 102681.

105151 to 105154—Continued.

105154. *STIGMAPHYLLON SAGRAEANUM*
Juss. Malpighiaceae.A woody vine, native to the West
Indies, with rigid, leathery, linear to ovate
leaves, coarsely reticulated beneath. The
bright-yellow flowers are in axillary clus-
ters, and the maplelike fruits are oblong
with straight edges.

For previous introduction see 102680.

105155 to 105157. *MALUS SYLVESTRIS*
Mill. Malaceae. Apple.From Michigan. Scions presented by Prof.
F. G. Bradford, Michigan State College,
East Lansing. Received April 9, 1934.105155. *Cilligos*. A Hungarian variety
with small fruits which do not color as
well in the North as they do farther
south.105156. *Daru*. A hardy, very late-flower-
ing apple which will stand 12° F. with-
out injury.105157. *Fenville*. A seedling, probably a
French crab, which sprang up as a root
sprout from a tree whose top had died.
Its sole merit is its very late blossom-
ing, as the fruit is small and inferior.

105158 to 105167.

From Sweden. Seeds presented by Prof. C.
Skottsberg, Botaniske Have, Göteborg.
Received April 7, 1934.105158. *ALTHAEA HELDBREICHII* Boiss. Mal-
vaceae.A slender hairy perennial, with rounded,
heart-shaped leaves and rosy-pink flowers
in small clusters. Native to southeastern
Europe.105159 to 105161. *RHEUM* spp. Polygona-
ceae. Rhubarb.105159. *RHEUM ALEXANDRAE* Batal.A stout herbaceous perennial, native
to China, with a rosette of elliptic-
ovate, dark glossy green leaves and
flower stems, 3 to 4 feet high, bearing
large pale-yellow overlapping leaflike
bracts.105160. *RHEUM FRANZENBACHII* Muen-
ter.A rapidly growing species of rhu-
barb, native to temperate Asia, which
is a striking ornamental, suitable for
borders and possibly useful for breed-
ing purposes.

For previous introduction see 69105.

105161. *RHEUM PALMATUM* L.
Sorrel rhubarb.A leafy perennial about 5 feet high,
with subcylindrical stems and broad
roundish leaves deeply palmately lobed.
Native to northwestern Asia.

For previous introduction see 104376.

105162. *RUBUS ARMENIACUS* Focke. Ro-
saceae.A stout thorny shrub with long branch-
es, coarsely serrate leaflets, white hairy
beneath, red flowers, and rather large,
black, juicy fruits of good flavor. Native
to Asia Minor.105163. *RUBUS HISPIDUS* L. Rosaceae.A prostrate shrub with more or less
prickly stems, firm, dark-green leaflets,
and small, sour, reddish-purple fruits.
Native to southeastern Canada.

105158 to 105167—Continued.

105164 to 105167. THYMUS spp. Mentha-
ceae.

105164. THYMUS BRITANNICUS Ronni-
ger.

An upright, much-branched perennial about 6 inches high, beset with long hairs throughout. The lowermost leaves are small and linear; the stem leaves are elliptic and about one-half inch long. The white flowers are on long stems. Native to the Balkans.

105165. THYMUS LANICAULIS Ronniger.

A small hairy perennial about 3 inches high, with small linear or elliptic leaves about one-half inch long and small heads of purplish flowers. Native to the Balkan region.

105166. THYMUS SERPYLLUM MONTANUS (Kit.) Benth.

A variety of the common creeping thyme with more erect branchlets and larger leaves. Native to central Europe.

105167. THYMUS SERPYLLUM VULGARIS Benth. Lemon thyme.

A perennial or subshrubby plant with wiry stems and small strongly veined, elliptic ovate leaves about one-fourth inch long. The minute rose-colored or lilac flowers are in sessile whorls. Native to Europe. Received as *T. sudeticus*, now considered to be identical with the above variety.

105168 to 105176.

From Lithuania. Scions presented by Frank Kokaska, Alytus. Received April 17, 1934.

105168 and 105169. MALUS SYLVESTRIS Mill. Malaceae. Apple.

Autumn varieties.

105168. No. 8. 105169. No. 9.

105170 to 105176. PYRUS COMMUNIS L. Malaceae. Common pear.

105170. Bartlett. A large pear.

105171. No. 2. 105174. No. 5.

105172. No. 3. 105175. No. 6.

105173. No. 4. 105176. No. 7.

105177 to 105179. DELPHINIUM spp. Ranunculaceae. Larkspur.

From the Union of Soviet Socialist Republics. Seeds presented by the Botanic Garden, Academy of Science, Leningrad. Received April 9, 1934.

105177. DELPHINIUM SIMPLEX Doug.

An erect hairy plant 3 feet or more high, with three-parted multifid leaves and intensely blue flowers in long narrow racemes. Native to the subalpine Rocky Mountains, northwestern United States.

105178. DELPHINIUM TIROLENSE Kern.

A pubescent perennial herb with three-parted leaves. The blue flowers are in loose racemes. Native to central Europe.

For previous introduction see 104895.

105177 to 105179—Continued.

105179. DELPHINIUM PRZEWALSKII Huth.

A Mongolian larkspur about 8 feet high, with three- to five-parted leaves, the divisions deeply lacinate, and sky-blue flowers that appear from July to September. Closely related to *D. henryi* which, however, blooms in March.

For previous introduction see 104894.

105180. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

From Australia. Seeds presented by Thomas Mansell, The Summit, southwestern Queensland. Received April 11, 1934.

Densonia. A variety which produces large, bushy, wilt-proof plants and is a heavy midseason bearer.

105181 to 105199.

From Norway. Scions presented by Prof. Olav Moen, Norges Landbrukshøiskole, Aas. Received April 18, 1934.

105181 to 105184. MALUS SYLVESTRIS Mill. Malaceae. Apple.

105181. *Silkeple* (Annie Elizabeth).

105182. *Flaskeple*.

105183. *Ribston*.

105184. *Signe Tillisch*.

105185 to 105190. PRUNUS sp. Amygdalaceae.

105185. *Früheste der Mark* (cherry).

105186. *Hedelønger kjempe* (cherry).

105187. *Kronberg* (cherry).

105188. *Lucien* (cherry).

105189. *Skyggekirsebaer* (cherry).

105190. *Werderske* (cherry).

105191 to 105198. PYRUS COMMUNIS L. Malaceae. Common pear.

105191. *Bergamotte Hildesheimer*.

105192. *Bergamotte Høst*.

105193. *Clara Frijs*.

105194. *Espersen herrepære*.

105195. *Fondante de Charneau*.

105196. *Gråpære*.

105197. *Grev. A. V. Moltke*.

105198. *Keiserindepære*.

105199. RUBUS sp. Rosaceae.

Askerbringebær raspberry.

105200 to 105218.

From the Union of Soviet Socialist Republics. Cuttings presented by the Mitchurin Horticultural Institute, Koslov, through the Institute of Plant Industry, Leningrad. Received April 18, 1934.

The Institute number follows the varietal name.

105200 to 105203. MALUS SYLVESTRIS Mill. Malaceae.

105200. *Anissovka*, 150622.

105201. *Krasnyi standard* (red), 150628.

105202. *Paradiska Mitchurina*, 150613.

105203. *Rebristoe*, 150623.

105200 to 105218—Continued.

105204 to 105217. PRUNUS spp. Amygdalaceae.

105204 to 105206. PRUNUS CERASUS L.
Sour cherry.

105204. *Polëvka*, 150624.

105205. *Yubileinaya*, 150617.

105206. *Zachariëvskaya* [number illegible].

105207. PRUNUS CERASUS × AVIUM.

Krassa Severa, 150630a.

105208. PRUNUS CERASUS × FRUTICOSA.

Monomach, 150621.

105209. PRUNUS DOMESTICA L.

Common plum.

Persikovaya, 150615.

105210. PRUNUS DOMESTICA × SPINOSA.

Renklod ternoviy, 150629.

105211. PRUNUS FRUTICOSA × MAACKII.

Cerapadus, 150627.

105212. PRUNUS FRUTICOSA × PENNSYLVANICA.

Ideal, 150611.

105213. PRUNUS FRUTICOSA × PENNSYLVANICA × MAACKII.

Cerapadus stadkiy, 150619.

105214. PRUNUS INSITITIA × DOMESTICA.

Tchernosliv Kozlovskiy, 150612.

105215. PRUNUS JAPONICA Thunb.
Cherry.

Yaponskaya, 150618.

105216. PRUNUS SPINOSA × DOMESTICA.

Tern stadkiy, 150610.

105217. PRUNUS sp.

Plodorodnaya, a cherry, 150616.

105218. PYRUS sp. Malaceae.

Dotch Blankovaya, 150625.

105219 and 105220.

From Canada. Plants presented by F. L. Skinner, Dropmore, Manitoba. Received April 21, 1934.

105219. CLEMATIS LIGUSTICIFOLIA × SERRATIFOLIA. Ranunculaceae.

A hybrid Clematis developed by F. L. Skinner.

105220. POPULUS TRISTIS Fisch. Salicaceae.

A rather small poplar from central Asia, with dark-brown branchlets and oblong-oval, crenate-serrate leaves about 4 inches long having whitish pubescent lower surfaces.

105221. (Undetermined.)

From Brazil. Bulbs presented by J. R. Swallen, Bureau of Plant Industry. Received April 26, 1934.

An unidentified terrestrial orchid, collected at Maranhão.

105222. ILEX PARAGUARIENSIS St. Hil.
Aquifoliaceae. Yerba maté.

From Argentina. Seeds presented by Ing. Raul Ramella, Director de La Estación Experimental Central, Pargamino, through J. L. Colom, Chief, Division of Agricultural Cooperation, Pan American Union, Washington, D. C. Received April 14, 1934.

A tender evergreen Paraguayan holly, the leaves of which are dried and used to make the beverage known as maté, or Paraguay tea.

For previous introduction see 103698.

105223. TRIPLARIS AMERICANA L. Polygonaceae.

From Cuba. Seeds presented by Robert M. Gray, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. C. Walsingham. Received April 16, 1934.

A small tropical evergreen tree, with ovate acuminate leaves and curious three-angled woody fruits. Native to Central America.

For previous introduction see 80709.

105224. MALUS SYLVESTRIS Mill. Malaceae. Apple.

From South Dakota. Scions presented by N. E. Hansen, South Dakota State College, Brookings. Received April 19, 1934.

Red Soviet.

105225. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

From Australia. Seeds presented by Mrs. A. Savage, Gloncurry, Queensland. Received April 2, 1934.

A small tomato used for jam and pickling.

105226. CITRUS NOBILIS UNSHIU Swingle. Rutaceae. Satsuma orange.

From the Union of Soviet Socialist Republics. Budwood presented by A. Zaretsky, citriculturist, Introduction Garden of Subtropical Cultures, Sukhum, Transcaucasia, through the All-Union Institute of Plant Industry, Leningrad. Received April 18, 1934.

A broad-leaved variety.

105227 to 105229.

From the West Indies. Bulbs and seeds collected by the Allison V. Armour expedition, through David Fairchild, Bureau of Plant Industry. Received April 24, 1934.

105227. BLETIA PATULA Hook. Orchidaceae.

Collected at Sawanar, on San Lorenzo Bay, Santo Domingo, by Mrs. Thomas Barbour. Large round bulbs with purple flowers.

105228. EPIDENDRUM sp. Orchidaceae.

Collected on Beata Island by Mrs. Thomas Barbour. Small flat green bulbs which produce large mauve flowers.

105229. PINUS OCCIDENTALIS Swartz. Pinaceae.

Collected in the mountains of Haiti by F. C. Baker. A native pine which resembles *Pinus caribaea*, but generally

105227 to 105229—Continued.

has five leaves in the fascicle instead of two. Formerly this pine covered the island above 2,500 feet altitude, but is now found only in small patches. The tree is a rapid grower and is now being planted on the mountain sides to prevent soil erosion.

For previous introduction see 102615.

105230 to 105239.

From the Union of Soviet Socialist Republics. Cuttings presented by A. Richter, division of pomology, Government Botanical Garden, Nikita, Yalta, Crimea. Received April 19, 1934.

105230 to 105233. *FICUS CARICA* L. Moraceae. Common fig.

105230. *Bijas injir* C.

105231. *Chara injir* N 2 Cr.

105232. *E. de Caucase noire* C.

105233. *Lob injir* Cr.

105234 to 105239. *OLEA EUROPAEA* L. Oleaceae. Common olive.

105234. *Gorvala*.

105235. *Nikitsky* N. 53.

105236. *O. de Crimée* N. 128.

105237. *O. de Crimée* N. 172.

105238. *Otour*.

105239. *Tassijakaja*.

105240 to 105243.

From French Indo-China. Seeds presented by M. Poilane, Institut des Recherches Agronomiques de Indochine, Division de Botanique. Received April 25, 1934.

105240. *BAUHINIA MALABARICA* Roxb. Caesalpiniaceae.

A small erect bushy tree, native to southeastern Asia, with thick, rigid, deeply bifid, somewhat heart-shaped leaves 2 to 3 inches long. The small white flowers are in dense sessile axillary clusters. The rather turgid, straight, firm, narrow pods fall at the end of the dry season, and cattle are very fond of them.

For previous introduction see 101091.

105241. *CROTALARIA* sp. Fabaceae.

From Blao, French Indo-China, at 2,500 feet altitude. A crotalaria of spreading habit, with a deep taproot.

105242. *MEIBOMIA GYROIDES* (DC.) Kuntze. Fabaceae.

Collected at Blao, French Indo-China, at 2,500 feet altitude. A shrubby leguminous plant 8 to 10 feet high, native to the warmer parts of the central and eastern Himalayas. It has pubescent leaves and terminal racemes of red-purple flowers. It is found growing in valleys, at times even on the borders of swamps, but doing equally well on good soil. It may prove of value as a forage plant.

105243. (Undetermined.)

A leguminous shrub of very rapid growth, with elongated branches that quickly afford a light shade.

71562—36—2

105244 to 105248. *SACCHARUM OFFICINARUM* L. Poaceae. Sugarcane.

From India. Cuttings presented by Rao Bahadur T. S. Venkatraman, Government sugarcane expert, Imperial Department of Agriculture, Coimbatore. Received April 24, 1934.

Cuttings introduced for the use of Department specialists interested in sugarcane.

105244. G-496 Coimbatore.

105245. G-297 Coimbatore.

105246. Co. 285.

105247. Co. 399.

105248. Co. 515.

105249 to 105251. *BRASSICA CAMPESTRIS* L. Brassicaceae. Rutabaga.

From Turkey. Seeds presented by Charles E. Allen, American consul, Istanbul, through the State Department, Washington, D. C. Received April 9, 1934.

105249. Red. 105251. White.

105250. Red.

105252. *RUBUS* sp. Rosaceae.

From Canada. Plants presented by Edward Lowden, Hamilton, Ontario. Received April 24, 1934.

Lowden blackberry. A large blackberry that has an extra strong root system.

105253 and 105254.

From Trinidad, British West Indies. Seeds presented by the Director of Agriculture, through the Director of the Royal Botanic Gardens, Port-of-Spain. Received April 12, 1934.

105253. *ASTROCARYUM AUREUM* Griseb. and Wendl. Phoenicaceae. Palm.

A palm closely related to *Elaeis*, with a prickly trunk and pinnately divided leaves of linear-lanceolate segments, shining above and greenish golden beneath. It is native to Trinidad, British West Indies.

For previous introduction see 104332.

105254. *ERYTHROXYLON COCA* Lam. Erythroxylaceae. Cocaine-tree.

A tropical shrub, native to Peru, 5 to 6 feet high, with slender rust-brown branches and clusters of yellowish flowers borne along the branchlets. It is grown commercially throughout South America and the East Indies for the production of cocaine, which is extracted from the dried leaves.

For previous introduction see 104337.

105255 and 105256.

From southern India. Seeds collected by Dr. E. W. Erlanson, Science College, Trivandrum, Travancore. Received April 13, 1934.

105255. *CROTON TIGLIUM* L. Euphorbiaceae. Croton-oil plant.

A small ornamental shrub or tree with ovate leaves varying in color from metallic green to bronze and orange. The powerful purgative, croton oil, is obtained from the seeds by crushing. It is used locally as a fish poison.

For previous introduction see 98369.

105255 and 105256—Continued.

105256. *RANDIA DUMETORUM* (Retz.) Lam.
Rubiaceae.

Collected at 3,000 feet altitude. A deciduous thorny shrub or small tree, found throughout India and distributed eastward to southern China. The bark and fruit are used medicinally.

For previous introduction see 49557.

105257. *BASSIA HYSSOPIFOLIA* (Pall.)
Volk. Chenopodiaceae.

From the Union of Soviet Socialist Republics. Seeds presented by Dr. N. I. Vavilov, Director, Institute of Plant Industry, Leningrad. Received April 21, 1934.

From Bakuriany, Transcaucasia. A gray-hairy annual 2 or 3 feet high, with somewhat flashy linear leaves and small inconspicuous axillary flowers. Native to sandy places in southwestern Europe, and of possible use in preventing soil erosion.

105258 to 105268.

From Turkey. Seeds grown in the Merzifon region and presented by Harold T. Pence, Gaziantep. Received April 21, 1934.

Introduced for the use of Department specialists.

105258. *ALLIUM CEPA* L. Liliaceae. Onion.

A light onion.

105259. *ALLIUM PORRUM* L. Liliaceae. Leek.

Prosa.

105260. *BETA VULGARIS CICLA* L. Chenopodiaceae. Leaf-beet.

Chard.

105261. *BRASSICA OLERACEA CAPITATA* L. Brassicaceae. Cabbage.

105262. *CAPSIUM ANNUUM* L. Solanaceae. Common redpepper.

A variety used for stuffing.

105263. *CUCUMIS SATIVUS* L. Cucurbitaceae. Cucumber.

105264. *CUCURBITA PEPO* L. Cucurbitaceae. Pumpkin.

105265. *DAUCUS CAROTA* L. Apiaceae. Carrot.

105266. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

105267. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

105268. *PETROSELINUM HORTENSE* Hoffm. Apiaceae. Parsley.

Mydanos.

105269 to 105275. *TRIFOLIUM HYBRIDUM*
L. Fabaceae. Alsike clover.

From Canada. Seeds presented by R. I. Hamilton, agrostologist, Central Experimental Farm, Ottawa, Ontario. Received April 23, 1934.

105269. From the Kenora district, Ontario.

105270. From Prince George, British Columbia.

105271. From the Joseph Laboratories, Belle Vallée, Ontario.

105269 to 105275—Continued.

105272. From Woodpecker, British Columbia.

105273. Sample no. 1. From Scarborough, York County, Ontario.

105274. Sample no. 2. From Akona, Ontario.

105275. Sample no. 3. From Hagersville, Ontario.

105276 and 105277.

From the Canal Zone. Seeds presented by J. E. Higgins, Experiment Station, Summit. Received in April 1934.

105276. *BELOTIA PANAMENSIS* Pittier. Tiliaceae.

Received April 24, 1934. A tropical tree up to 35 feet high, with gray bark, elliptic, long-acuminate leaves 3 to 7 inches long, and small purplish flowers in axillary cymes. Native to Panama.

105277. *TARAOTOGENOS KURZII* King. Flacourtiaceae.

Received April 23, 1934. A large tree, 40 to 50 feet high, native to India. The seeds yield the true chaulmoogra oil, used in the treatment of leprosy.

For previous introduction see 56633.

105278 and 105279. *MALUS SYLVESTRIS*
Mill. Malaceae. Apple.

From England. Scions presented by G. T. Spinks, University of Bristol Research Station, Long Ashton, Bristol. Received April 26, 1934.

105278. *Bulmer's Norman.*

105279. *White Alphonso.*

105280 to 105304.

From South Africa. Seeds and bulbs purchased from John Martley, Banhoek, Stellenbosch. Received April 26, 1934.

105280. *GALAXIA GRAMINEA* Thunb. Iridaceae.

The numerous leaves that compose the rosette of this galaxia are linear, convolute, dilated, membranous at the base, and 1 to 2 inches long. The small fugacious lilac or yellow flowers are an inch in diameter when expanded. Native to the coastal region of South Africa. (Bulbs.)

105281. *GALAXIA OVATA* Thunb. Iridaceae.

A bulbous plant with a dense rosette of firm, ribbed, ovate leaves nearly 2 inches long. The borders of the leaves are pale and cartilaginous. The bright-yellow, fugacious flowers, 1 inch long, are borne in sessile spathes. Native to the coastal region of South Africa. (Bulbs.)

105282. *GEISSORHIZA SPLENDISSIMA* Diels. Iridaceae.

A low irislike plant from South Africa, 4 to 6 inches high, with three linear leaves 2 to 5 inches long and small azure blue flowers in a three- to five-flowered lax spike. (Bulbs.)

105283. *GLADIOLUS* spp. Iridaceae.

105283. *GLADIOLUS ALATUS* L.

A very interesting plant with flowers of a delightful fragrance not unlike that of the sweetbrier. The three upper

105280 to 105304—Continued.

petals are bright orange scarlet and the three lower ones are yellowish tipped with orange scarlet. The bulbs are not larger than ordinary peas and cannot remain long out of the ground. Native to South Africa. (Bulbs.)

For previous introduction see 81292.

105284. *GLADIOLUS ALATUS* L.

A variety with rose-pink flowers. (Bulbs.)

105285. *GLADIOLUS BLANDUS* Ait. Iridaceae.

A South African plant with sword-shaped leaves somewhat shorter than the stem, which is from 6 inches to 2 feet in height and bears 3 to 10 white or reddish-tinged scentless flowers. (Bulbs.)

For previous introduction see 44724.

105286. *GLADIOLUS CALLISTUS* Bolus f.

A tall plant, 30 to 40 inches high, with four to seven narrow sword-shaped basal leaves 1 to 2 feet long and two stem leaves. The flowers, white suffused with pink and 9 to 12 in number, are produced on 1 to 3 branches. (Bulbs.)

For previous introduction see 77223.

105287. *GLADIOLUS CUSPIDATUS* Jacq.

An erect bulbous plant, 2 to 3 feet high, with sword-shaped leaves usually shorter than the stem and four to eight white or pinkish flowers in a lax open-sided spike. It is native to the Cape of Good Hope, where it flowers in May and June. (Bulbs.)

For previous introduction see 44725.

105288. *GLADIOLUS GRACILIS* Jacq.

A plant with about three rigid, subterete leaves a foot or less long, and very slender stems up to 2 feet high bearing two to six pale-lilac scentless flowers in a lax second spike. Native to South Africa. (Bulbs.)

105289. *GLADIOLUS GRANDIS* Thunb.

Closely related to *Gladiolus tristis*, this has three strongly subterete leaves 12 to 18 inches long and a slender stem up to 2 feet high. The purplish brown-tinged flowers are 2 to 3 inches long, in a lax second spike. Native to the southeastern part of the Cape of Good Hope. (Bulbs.)

105290. *GLADIOLUS HIRSUTUS* Jacq.

A species about a foot high, with bright-red, fragrant flowers, borne in a very lax, few-flowered spike, and sword-shaped, strongly ribbed leaves; found growing in sandy stretches which are moist only during the winter. Native to South Africa. (Bulbs.)

For previous introduction see 88680.

105291. *GLADIOLUS MARTLEYI* L. Bolus.

Seeds of an autumn-flowering species which becomes about a foot high, producing a single very narrow leaf and 1 to 11 flowers $1\frac{1}{2}$ inches long, white suffused with pink, in a second spike. Native to sandy places, Stellenbosch, South Africa.

105280 to 105304—Continued.

105292. *GLADIOLUS ODORATUS* L. Bolus.

A gladiolus about a foot high, with one spirally twisted leaf 8 inches long and a spike that sometimes bears 5 to 13 flowers; these flowers are a mixture of reddish purple, brown, and dull yellow, and have a sweet odor. Native to the Cape of Good Hope. (Bulbs.)

105293. *GLADIOLUS ORCHIDIFLORUS* Andr.

The three or four leaves of this gladiolus are linear, firm, crowded and 6 to 12 inches long, and the four to six greenish flowers are in a very lax spike on a stem the same height as the leaves. Native to South Africa. (Seeds.)

105294. *GLADIOLUS PAPPEI* Baker.

A gladiolus with three leaves up to 6 inches long, with linear, rigid tips. The pink flowers are in small lax spikes. Native to the summit of Table Mountain, Cape of Good Hope. (Bulbs.)

105295. *GLADIOLUS RECURVUS* L.

A slender-stemmed species, up to 2 feet high, native in boggy sandy places of South Africa. The two to six fragrant flowers, which appear in August, are borne in a very lax spike and vary in color from blue to flushed pink, with minute blackish-lilac spots. (Bulbs.)

For previous introduction see 64654.

105296. *GLADIOLUS TRICHONEMIFOLIUS* Ker.

A species with a very slender stem 6 to 18 inches high, and, generally, three rigid, slender, long-sheathing leaves, the lower one often overtopping the stem. The one to three erect flowers, an inch long, have a yellow perianth, with the three lower segments blotched with purple at the throat. Native to South Africa. (Bulbs.)

105297. *GLADIOLUS VILLOSUS* Ker.

The simple stems of this gladiolus are up to 2 feet long, and the sheaths are very hairy, the lowest without any leaf blade. The upper sheaths enclose thick, rigid, linear leaves up to 12 inches long. The bright-red or lilac flowers are in a lax second spike. Native to South Africa. (Bulbs.)

105298. *GLADIOLUS WATERMEYERI* L. Bolus.

A species with three or four leaves about 10 inches long, conspicuously two-nerved, and flowers $1\frac{1}{2}$ inches long. The upper segments are pale, flushed with pinkish purple, and the lower ones are yellowish green. Native to Cape Province, South Africa. (Seeds.)

105299. *HESPERANTHA* sp. Iridaceae.

Received under the name "buhrii", for which a place of publication has not been found. (Bulbs.)

105300 to 105302. *MORAEA* spp. Iridaceae.

Bulbs.

105300. *MORAEA PAPILIONACEA* Ker.

A dwarf moraea, 4 to 6 inches high, with red or lilac flowers, yellow on the claw. The stems, simple or forked

105280 to 105304—Continued.

lower down, bear one to six flower clusters, and the linear hairy leaves are 3 to 6 inches long. Native to South Africa.

105301. MORAEA TORTA L. Bolus.

A rather stiffly upright plant with sky-blue flowers about 1 inch long in small cymes. The two spirally twisted leaves are about 15 inches long. Native to the Cape of Good Hope.

105302. MORAEA PAVONIA VILLOSA (Ker.) Baker.

An irislike plant with one long, narrow, linear leaf and fugitive flowers 1 inch long borne on a slender stem up to 2 feet high. The flowers have bright purple falls with a blue-black spot and hairy claw. Native to the Cape of Good Hope.

105303. NERINE FILIFOLIA Baker. Amaryllidaceae.

A nerine with 6 to 20 slender, subulate, grass-green leaves 6 to 8 inches long and a centripetal umbel of 8 to 10 bright-red flowers with a deeply cut perianth about 1 inch long. Native to the Kalahari region, South Africa.

105304. NERINE HUMILIS (Jacq.) Herb. Amaryllidaceae.

The six linear, bright-green channeled leaves of this nerine are about 1 foot long and are contemporary with the bright-pink flowers. These are in a centrifugal umbel of 10 to 20 flowers with slender pedicels. Native to South Africa.

105305. OLEA EUROPAEA L. Oleaceae.
Common olive.

From Syria. Cuttings presented by Selim Challah, Damascus, through H. S. Goad, American consul general, Beirut. Received April 27, 1934.

Yulkutt or *Yalut* olive.

105306. LACTUCA SATIVA L. Cichoriaceae.
Garden lettuce.

From China. Seeds presented by Andrew Tse, Hong Kong. Received April 14, 1934. Introduced for Department specialists.

105307. SOLANUM TUBEROSUM L. Solanaceae.
Potato.

From Canada. Tubers presented by J. W. Scannell, Indian Head, Saskatchewan. Received April 27, 1934.

Snowflake.

105308. AMYGDALUS PERSICA L. Amygdalaceae.
Peach.

From Italy. Plants purchased from Fratelli Sgaravatti, Saonara, Padova. Received April 28, 1934.

Agostinella.

105309 and 105310.

From Cuba. Seeds and cuttings presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received April 26, 1934.

105309 and 105310—Continued.

105309. MYRCIARIA CAULIFLORA (Mart.) Berg. Myrtaceae. **Jaboticaba.**

A Brazilian tree up to 35 feet high, with narrowly elliptic sharp-pointed leaves, short-petioled flowers produced directly from the bark of the trunk and branches, and purplish violet globose fruits half an inch to 1½ inches in diameter.

For previous introduction see 51830.

105310. TABEUTIA SERRATIFOLIA (Vahl.) Nicholson. Bignoniaceae.

Cuttings of an evergreen tree, native to the West Indies, with digitately compound leaves made up of four or five oblong-ovate leaflets 3 to 5 inches long and terminal panicles of yellow funneliform flowers.

For previous introduction see 98095.

105311 to 105331.

From China. Seeds presented by the director, Botanic Garden, the Sun Yat-Sen Tomb and Memorial Park Commission, Nanking. Received April 16, 1934.

105311. CARPINUS TURCZANINOVII OVALIFOLIA Winkler. Betulaceae. **Hornbeam.**

A small graceful shrubby tree, 12 to 15 feet high, with ovate, serrate, dark-green leaves 1 to 2 inches long. Native to western China.

For previous introduction see 63346.

105312. CASTANOPSIS SCLEROPHYLLA (Lindl.) Schottky. Fagaceae. **Evergreen chinquapin.**

A hardy evergreen tree, up to 65 feet high, with edible nuts having a flavor like that of the chinquapin. Native to south-central China.

For previous introduction see 71037.

105313 to 105315. CELTIS spp. Ulmaceae.

105313. CELTIS BIONDII Pampan.

A stout-branched hackberry from western China, with rather stiff, broadly ovate, long-acuminate leaves 2 to 3 inches long and small black fruits.

105314. CELTIS BUNGEANA Blume. **Hackberry.**

A large tree up to 50 feet high, with light-gray bark, small deep-green leaves, and black fruits the size of small peas. Native to northeastern Asia.

For previous introduction see 104842.

105315. CELTIS sp.

105316. DAPHNIPHYLLUM MACROPODIUM Miquel. Euphorbiaceae.

An evergreen shrub with elliptic-oblong, dark-green, leathery leaves 5 to 8 inches long, inconspicuous flowers, and small ellipsoidal fruits in axillary racemes 3 inches long. Native to eastern Asia.

For previous introduction see 99238.

105317. DIANTHUS BREVICALIS Fenzl. Silenaceae. **Pink.**

A low caespitose plant, with erect glaucous linear leaves and small red-purple flowers borne singly. Native to the Taurus Mountains of Asia Minor.

For previous introduction see 101924.

105311 to 105331—Continued.

105318. HOLBOELLIA CORIACEA Diels.
Lardizabalaceae.

An evergreen climbing shrub with dark-green, leathery, compound, digitate leaves of three to seven leaflets and small flowers in axillary racemes; the staminate flowers are white and the pistillate flowers are violet. Native to China.

105319. HOVENIA DULCIS Thunberg.
Rhamnaceae.

An ornamental deciduous Japanese tree with leaves often 4 or 5 inches long and inconspicuous white or greenish-white flowers. After flowering the peduncles thicken and become edible, being red, pappy, and of sweetish taste.

For previous introduction see 45620.

105320 to 105323. ILEX spp. Aquifoliaceae.
Holly.

105320. ILEX PURPUREA Hassk.

An evergreen tree with crenate-serrulate, elliptic, lanceolate leaves 2 to 3 inches long and red berries half an inch long, in clusters of two to five. It is native to Japan and central China.

For previous introduction see 102075.

105321. ILEX ROTUNDA Thunb.

A large evergreen tree, sometimes over 40 feet high, with glossy, green, entire, elliptic, or oblong leaves 2 to 4 inches long and small, globose, scarlet berries. Native to Japan and Chosen.

For previous introduction see 102300.

105322. ILEX TRIFLORA VIRIDIS Loes.

A small tree, with stiff, small, ovate or oblong leaves 2 or 3 inches long and black globose fruits about one-fourth inch in diameter. Native to mountainous districts of eastern India.

105323. ILEX WILSONII Lees.

An ornamental evergreen Chinese shrub with broad, spiny, glistening green leaves.

For previous introduction see 78146.

105324. LILIUM BROWNII Poit. Liliaceae.

A Chinese lily with stems 2 to 3 feet high and lanceolate leaves 3 to 5 inches long. The flowers, usually solitary but sometimes two to four together, are 6 to 8 inches long and nearly as wide and are delicately fragrant. The waxy segments are creamy white inside, fading to pure white and tinged with yellow at the base. Outside they are white with brown-purple midribs, the three outer ones being variably tinged with brownish purple.

For previous introduction see 102076.

105325. LOROPETALUM CHINENSE (R. Br.)
Oliver. Hamamelidaceae.

A handsome but somewhat tender bushy evergreen Chinese shrub of loose open habit and about 5 feet high. It has oval unsymmetrical leaves and curious white witch-hazellike flowers during the early spring.

For previous introduction see 104207.

105326. PINUS ARMANDI Franch. Pinaceae.
Armand pine.

A tall 5-leaved pine 60 to 100 feet high, with a trunk often 6 feet in diameter, that grows in western China on

105311 to 105331—Continued.

well-drained, moist mountain slopes between 8,000 and 10,000 feet altitude. The slender, bright-green leaves are about 4 inches long. The edible seeds are sold in Chinese markets.

For previous introduction see 95373.

105327. PTEROCELTIS TATARINOWII Maxim.
Ulmaceae.

A tall deciduous tree, native to north-western and central China, closely resembling *Celtis* in foliage and habit. The ovate to ovate-oblong, acuminate leaves, irregularly and sharply serrate, are over 3 inches long. The slender-stalked fruits, unlike those of *Celtis*, have wings usually emarginate at the apex.

For previous introduction see 46433.

105328. STEWARTIA MONADELPHA Sieb.
and Zucc. Theaceae.

A tree up to 75 feet high, native to Japan. The bright-green ovate leaves are 2 to 4 inches long, and the fragrant, white, cup-shaped flowers, 1 to 2 inches across, are solitary in the axils of the leaves.

For previous introduction see 102261.

105329. STYRAX PHILADELPHOIDES Perkins.
Styracaceae.

A large shrub, 5 to 6 feet high, with thin, narrowly oblong, hairy leaves, 1 to 3 inches long, and white flowers, half an inch long, in small axillary and terminal racemes. Native to eastern China.

105330. TRIPTERYGIUM FORRESTII Loesner.
Celastraceae.

A shrub about 3 feet high, with oval, crenulate, serrate, papery leaves 2 to 3 inches long and terminal panicles of small green-brown flowers. Native to open situations on the Tali Range, Yunnan.

For previous introduction see 105032.

105331. ZELKOVA SERRATA (Thunb.)
Planch. Ulmaceae. Sawleaf zelkova.

A handsome tree, native to Japan, up to 90 feet high, with a short trunk dividing into many upright, spreading branches and forming a broad, round-topped head. The sharply serrate leaves are ovate and are usually 2 to 3 inches long, or, on the young shoots, up to 7 inches long.

For previous introduction see 98780.

105332 to 105347.

From China. Seeds collected west of Peiping by Peter Liu. Received April 25, 1934.

105332. ALLIUM CEPA L. Liliaceae.
Onion.

Ta Ts'ung. A large onion which is grown on ridges. The Chinese plant it any time from early spring to fall.

105333. APIUM GRAVEOLENS L. Apiaceae.
Celery

Ch'in Tsai. A Chinese celery with very small seeds.

105334. BENINCASA HISPIDA (Thunb.)
Cogn. Cucurbitaceae. Waxgourd.

Chia Tung Kwa. A winter gourd, used mostly in soups. The seed is planted in the middle of March in a coldframe, and transplanted when two or three leaves

105332 to 105347—Continued.

have developed. Only one gourd is allowed to grow on a vine, but each gourd weighs from 15 to 20 pounds.

105335. BETA VULGARIS L. Chenopodiaceae.
Common beet.

Tzu Lo Pu Tou. Purple beet root. Said to be an introduced variety.

105336. BRASSICA SP. Brassicaceae.

Pao Tou Pai Tsai. Folded-leaf cabbage. This is planted in the middle of July and transplanted when the seedlings are 6 to 7 inches high. In October the outside leaves are tied over the head, and it is harvested in November.

105337. BRASSICA SP. Brassicaceae.

Hsiao Ching Kou Pai Tsai. Small green cabbage. Cultivated in the same way as *Pao Tou Pai Tsai* [105336].

105338. CAPSICUM ANNUUM L. Solanaceae.
Common redpepper.

Ta Shih Tzu Chiao. Large persimmon pepper which grows 3 to 4 inches in diameter.

105339. CAPSICUM ANNUUM L. Solanaceae.
Common redpepper.

Hsiao Chin Chiao. A small pepper about 3 inches long which ripens in June.

105340. CUCUMIS SATIVUS L. Cucurbitaceae.
Cucumber.

Kuai Huang Kwa. An early-maturing cucumber which the Chinese plant in cold-frames in the middle of March.

105341. CUCUMIS SATIVUS L. Cucurbitaceae.
Cucumber.

Ch'iu Huang Kwa. An autumn cucumber, planted early in August.

105342. LYCOPERSICON ESCULENTUM Mill. Solanaceae.
Tomato.

Ta Hsi Hung Shih. A red tomato 3 inches in diameter. A tall plant which bears fruit until late in the fall.

105343 to 105345. RAPHANUS SATIVUS L. Brassicaceae.
Radish.

105343. *Hsiao Shui Lo Pu,* small water radish. These are planted 3 inches apart and require very little water. If overirrigated they produce tops at the expense of the root.

105344. *Ch'ing Tsui Lo Pu,* green fragile radish. A late radish always eaten raw. Planted in August and ripens early in November.

105345. *Hsiang Ya Pai Lo Pu,* elephant-tusk radish. Planted 4 inches apart and pickled or used for soup.

105346. SOLANUM MELONGENA L. Solanaceae.
Eggplant.

Lao Lai Hei Chieh Tzu. A black eggplant 6 to 7 inches in diameter. Plant begins to bear when it has nine leaves and continues to set fruit until late fall.

105347. SOLANUM MELONGENA L. Solanaceae.
Eggplant.

Liu Ke Yieh Chieh Tzu, an early eggplant from 4 to 5 inches in diameter, with a rather short bearing period.

105348. (Undetermined.)

From Brazil. Seeds presented by J. R. Swallen, Bureau of Plant Industry. Received April 30, 1934.

An unidentified orchid collected on the Chapada Mesa between Caxias and Carolina, Maranhão, Brazil.

105349 to 105355.

From the Philippine Islands. Seeds presented by Dr. Arthur F. Fischer, Director of Forestry, Manila. Received April 23, 1934.

105349. CORYPHA ELATA Roxb. Phoenicaceae.
Palm.

A tall palm up to 60 feet high, with a spirally ridged trunk and lunate, fan-shaped leaves 8 to 10 feet across, made up of 80 to 100 sword-shaped segments. Native to Burma and Bengal.

For previous introduction see 104678.

105350. HETEROSPATHE ELATA Scheff. Phoenicaceae.
Palm.

A tall unarmed palm with a straight slender trunk and a terminal cluster of pinnate leaves. It is an attractive and graceful palm, suitable for the conservatory. Native to the island of Ambuyna, Dutch East Indies.

For previous introduction see 103971.

105351. LIVISTONA RÖTUNDFOLIA LUZONENSIS Becc. Phoenicaceae.
Palm.

A Philippine palm up to 35 feet high, with a straight terete trunk 6 to 10 inches thick. The fan-shaped leaves, 3 to 5 feet in diameter, are used for thatching. Native to the island of Luzon.

For previous introduction see 103783.

105352. ONCOSPERMA TIGILLARIA (Jack) Ridley. Phoenicaceae.
Palm.

An elegant palm with a trunk 30 to 40 feet high, armed with long black spines. The drooping pinnate leaves are 10 to 12 feet in length, with coriaceous pinnae 2 feet long, scurfy beneath. The blue-black berries are half an inch in diameter. Native to Malaya.

For previous introduction see 51777.

105353. ORANIA PALINDAN (Blanco) Merr. Phoenicaceae.
Palm.

A tall unarmed ornamental palm, native to Mindanao, Philippine Islands, at about 1,000 feet altitude. The trunk is straight and remarkably uniform in diameter, rarely exceeding 6 inches. The leaves are pinnate and silvery beneath.

For previous introduction see 94197.

105354. PINANGA INSIGNIS Beccari. Phoenicaceae.
Palm.

A rather small Philippine palm with a slender smooth trunk about 6 inches in diameter, graceful feathery leaves, and oval reddish fruits 2 inches in length. The seeds are occasionally used as a substitute for betel nuts in preparing "buayo," the mixture of leaves of *Piper betle*, lime, and betel nuts, which, when chewed, colors the saliva a characteristic red and is held to be a tonic and general stimulant.

105355. ZIZIPHUS TALANAI (Blanco) Merrill. Rhamnaceae.

A large forest tree of the Philippines, with alternate, obliquely obovate-lanceolate leaves, small flowers, and globose fruits. The seeds are said to be roasted and eaten.

105356 to 105440.

From Italy. Plants purchased from Fratelli Sgaravatti, Saonara. Received March 20, 1934.

105356 to 105375. *AMYGDALUS PERSICA* L.
Amygdalaceae. Peach.

105356. *Ammirabile*.

105357. *Clara Mayer*.

105358. *Di S. Martino*.

105359. *Dreyfus*.

105360. *Edouard André*.

105361. *Fogato*.

105362. *Genovese*.

105363. *Grossa giallo di Verona*.

105364. *Incomparabile Guilloux*.

105365. *Jacques Rarrerip*.

105366. *La France*.

105367. *Lorenzina*.

105368. *Lugliatica*.

105369. *Ornamento del mercato*.

105370. *Pavia giallo*.

105371. *Perla di Zolia*.

105372. *Pescantina*.

105373. *Poppa di Venere tardiva*.

105374. *Re Umberto*.

105375. *Trionfo di Solferino*.

105376 to 105409. *MALUS SYLVESTRIS* Mill.
Malaceae. Apple.

105376. *Attalino*.

105377. *Belle Agathe*.

105378. *Borsdorfer aus Palmyra*.

105379. *Britzer Dauerapfel*.

105380. *Calamana*.

105381. *Calvilla bianca d'estate*.

105382. *Carpentola dolce*.

105383. *Cedrata della Brianza*.

105384. *Clara bianca*.

105385. *Grossa di Bohn*.

105386. *Imperatore Guglielmo*.

105387. *La Zingarella*.

105388. *Paradiso*.

105389. *Principe verde*.

105390. *Ranciata di Coæ*.

105391. *Regina Luigia di Danimarca*.

105392. *Renetta di Berk*.

105393. *Renetta dei Carmelitani*.

105394. *Renetta dorata Peter Eusgen*.

105395. *Renetta dorata Reder*.

105396. *Renetta Federico il Grande*.

105397. *Renetta di Gaesdonk*.

105398. *Renetta di Zuccalmaglio*.

105399. *Renetta Oberdick*.

105400. *Renetta Rambour dott. Lucas*.

105401. *Renetta sczeziata*.

105402. *Renetta vera*.

105356 to 105440—Continued.

105403. *Rheinischer Krummstiel*.

105404. *Riccardo giallo*.

105405. *Rosa della Virginia*.

105406. *Scodellini*.

105407. *Sergente*.

105408. *Taffetà d'Autunno*.

105409. *Trovatello di Bedfordshire*.

105410 to 105412. *PRUNUS ARMENIACA* L.
Amygdalaceae. Apricot.

105410. *Della Val Venosta*.

105411. *Peche*.

105412. *Precoce giallo*.

105413 to 105440. *PYRUS COMMUNIS* L.
Malaceae. Common pear.

105413. *Angelica di Saonara*.

105414. *Bella Angevina*.

105415. *Bella di Fiandra*.

105416. *Bergamotta d'estate*.

105417. *Bergamotta di Pasqua*.

105418. *Bergamotta Fortune*.

105419. *Buona di Malines*.

105420. *Butirra a sapore di Mandorla*.

105421. *Butirra Liegel*.

105422. *Cannellino*.

105423. *Charbonnière*.

105424. *Commisario Delmotte*.

105425. *Consigliere d'Appello*.

105426. *Conte di Parigi*.

105427. *Direttore Alphand*.

105428. *Fertilita*.

105429. *Imperatore Alessandro*.

105430. *Madama*.

105431. *Maddalena Verde*.

105432. *Minsitro dott. Lucius*.

105433. *Moscattello S. Pietro*.

105434. *Nuovo Poiteau*.

105435. *Pelle di Dama*.

105436. *Professor Grosdemange*.

105437. *Soldato agricoltore*.

105438. *Sorbetto*.

105439. *Trionfo di Jodoigne*.

105440. *Trovatello di Hohensaatz*.

105441. *DELPHINIUM ZALIL* Aitch. and
Hemsl. Ranunculaceae.

From Scotland. Seeds presented by Thompson & Morgan, Ipswich, through Sir William Wright Smith, Rezius Keeper, Royal Botanic Garden, Edinburgh. Received April 27, 1934.

An erect perennial, 1 to 2 feet high, with slender ternately divided or triternate leaves 3 to 4 inches across and yellow flowers about 1 inch in diameter in a lax raceme. Native to Khorasan, Asia.

105442 to 105447.

From Turkey. Seeds presented by Harold T. Pence, Gaziantap. Received April 26, 1934.

A collection of locally grown vegetable seeds, collected at Merzifon; introduced for the use of Department specialists working in the north-central part of the United States.

105442. *ABELMOSCHUS ESCULENTUS* (L.) Moench. Malvaceae. **Okra.**

Flowering okra.

105443. *ALLIUM CEPA* L. Liliaceae. **Onion.**

Kelle; a large onion.

105444. *CAPSICUM ANNUUM* L. Solanaceae. **Common redpepper.**

A mild pepper.

105445. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. **Watermelon.**

105446. *SOLANUM MELONGENA* L. Solanaceae. **Eggplant.**

105447. *SPINACIA OLERACEA* L. Chenopodiaceae. **Spinach.**

105448 to 105461.

From Jamaica, British West Indies. Material presented by Col. Robert H. Montgomery, Director, Coconut Grove arboretum and T. A. Fennell, Bureau of Plant Industry. Received April 30, 1934.

105448. *ADENIUM OBESUM* (Forsk.) Roem. and Schult. Apocynaceae.

Cuttings collected in Hope Garden, Kingston. A slow-growing shrub, not over 3 feet high, native to the dry regions of Arabia and named after the desert port of Aden. The gorgeous rose-pink to white flowers are 3 inches across and remind one of enormous oleander blossoms. The flowers are borne so abundantly that they cover the entire shrub.

For previous introduction see 102644.

105449. *AMHERSTIA NOBILIS* Wall. Caesalpiniaceae.

Plants collected in the Castleton Gardens, Kingston. This gorgeous red-flowered tree is considered by some to be the most beautiful of all the flowering trees. It is native to the Malay Peninsula, and was named after Lady Amherst.

105450. *ANANAS SATIVUS* Schult. f. Bromeliaceae. **Pineapple.**

Seeds collected in Kingston.

105451. *ANANAS SATIVUS* Schult. f. Bromeliaceae. **Pineapple.**

Sugarloaf pineapple; purchased in the market at Kingston.

105452. *ARTOCARPUS INTEGRALIS* (Thunb.) Skeels. Moraceae. **Jackfruit.**

Seeds bought in the public market at Kingston.

105453. *ASTROCARYUM VULGARE* Mart. Phoenicaceae.

Plants purchased in the Castleton Gardens, Kingston. A spiny pinnate-leaved palm, 20 to 40 feet high, native to northern Brazil. The 8 to 10 leaves are about 9 feet long, with lanceolate shining-green segments, silvery white beneath.

105448 to 105461—Continued.

105454. *BUGINVILLEA* sp. Nyctaginaceae.

Cuttings, collected in the Hope Gardens, of a hybrid buginvillea (a seedling of *B. spectabilis lateritia*) with large bracts of a soft rosy-orange color.

105455. (Undetermined.)

Cuttings, collected in the Hope Gardens, of a large erect cactus, said to be a native species and to produce large white nocturnal flowers.

105456. *CHRYSOPHYLLUM CAINITO* L. Sapotaceae. **Star-apple.**

Seeds from a very large fruit of the purple variety served in a hotel at Kingston. The star-apple is a handsome West Indian tree with striking dark-green leaves, copper-colored underneath. The smooth, round, dark-purple fruit is about 3 inches in diameter. When the fruit is ripe, the white jellylike substance surrounding the seed is sweet and agreeable.

For previous introduction see 73003.

105457. *DILLENIA BURBIDGEI* (Hook. f.) Gilg. Dilleniaceae.

Plants purchased in the Castleton Gardens, Kingston. A small ornamental tree, native to Borneo, with large leaves and very beautiful bright-yellow flowers 2 inches in diameter.

For previous introduction see 66213.

105458. *LICUALA ELEGANS* Blume. Phoenicaceae. **Palm.**

Plants purchased in the Castleton Gardens, Kingston. A fan palm, native to Sumatra, with a short thick trunk about 4 feet high, a crown of orbicular leaves on petioles 3 to 5 feet long, with linear-lanceolate lobes obliquely truncate at the end.

For previous introduction see 80764.

105459. *NAPOLEONA IMPERIALIS* Beauv. Lecythidaceae.

Plant purchased in the Castleton Gardens, Kingston. An interesting ornamental tree from west Africa with oblong leaves, sometimes 18 inches in length, and solitary, saucer-shaped axillary flowers, dominantly reddish and bluish, and about 2 inches across; these are borne on the trunk and larger branches.

For previous introduction see 60439.

105460. *ONCOSPERMA FASCICULATUM* Thwaites. Phoenicaceae. **Palm.**

Seeds collected in Kingston. A graceful cluster palm, 40 to 60 feet high, with spiny stems and equally pinnate leaves about 18 feet long. Native to Ceylon.

For previous introduction see 103730.

105461. *THUNBERGIA ERECTA* (Benth.) T. Anders. Acanthaceae.

Plants purchased in the Castleton Gardens, Kingston. Variety *alba*, a form with white flowers.

For previous introduction see 103933.

105462. *DIOSCOREA ALATA* L. Dioscoreaceae. **Winged yam.**

From Florida. Tubers presented by H. O. Albert, Brooksville; originally from Hawaii. Received May 3, 1934.

A strain of the Hawaiian purple-skinned yam (F. P. I. 47446) with nearly pure-

105462—Continued.

white flesh instead of the purple-streaked or tinted flesh common in the ordinary form of this yam. The tubers are of desirable form and size, weighing usually 12 to 20 ounces each.

For previous introduction see 101189.

105463 to 105466. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.

From Argentina. Seeds presented by the manager of the Tigre Packing Co., Province of Buenos Aires, through A. M. Warren, American consul general, Buenos Aires. Received May 1, 1934.

A collection of seeds from trees native to the lower end of the delta of the Parana River, Argentina. Introduced for the use of Department specialists interested in plant breeding.

105463. Fruit ripens the end of February.

105464. Fruit ripens the first week in March.

105465. Fruit ripens the first week in March.

105466. [No data.]

105467. *SOJA MAX* (L.) Piper. Fabaceae. Soybean.

From Spain. Seeds presented by Alfonso Regoyos, Madrid. Received May 9, 1934.

A variety, originally from Chosen, which is most promising under semiarid conditions in Spain.

105468 to 105471.

From French Indo-China. Seeds presented by M. Poilane, Institut des Recherches Agronomiques de l'Indochine, Division de Botanique Forestiere, Cholon, Cochinchina. Received May 3, 1934.

105468. *BAUHINIA MALABARICA* Roxb. Caesalpiniaceae.

For previous introduction and description see 105240.

105469. *CROTALARIA* sp. Fabaceae.

105470. (Undetermined.)

A leguminous shrub with foliage excellent for shading crops.

105471. (Undetermined.)

A leguminous shrub whose leaves are browsed by cattle.

105472 to 105477.

From the Union of Soviet Socialist Republics. Seeds presented by the Alma Ata Botanic Garden, Alma Ata, Kazakstan. Received May 4, 1934.

105472. *ALTHAEA NUDIFLORA* Lindl. Malvaceae.

A biennial 6 feet high, with large roundish cordate, three-lobed, rough-hairy leaves and white flowers. Native to the Altai Mountains, Siberia.

For previous introduction see 104636.

105473. *HEDYSARUM SONGARICUM* Bong. Fabaceae.

An erect herbaceous perennial, a foot or more high, with several branched stems, small compound leaves, and pink flowers in spikelike clusters. Native to central Asia.

105472 to 105477—Continued.

105474. *IRIS ALBERTI* Regel. Iridaceae.

A bearded iris with glaucous sword-shaped leaves, about as long as the stem, and purplish flowers, yellowish toward the base, nearly 2 inches long. Native to Turkistan.

105475. *ROSA* sp. Rosaceae.105476. *TULIPA OSTROWSKIANA* Regel. Liliaceae. Tulip.

A tulip from eastern Turkistan, with a stem about 8 inches high, bearing three linear-lanceolate leaves and a solitary flower. The perianth segments are cinnamon-purple and more or less spreading.

105477. *TULIPA* sp. Liliaceae.105478 to 105482. *SOLANUM TUBEROSUM* L. Solanaceae. Potato.

From Norway. Tubers presented by A. P. Lunden, Akervektforsakene Norges Landbrukskole i Aas. Received May 11, 1934.

A collection of wart-immune potatoes introduced for the use of Department specialists.

105478. *Arnica*. Of German origin.105479. *Hindenburg*. Of German origin.

105480. *Hindenburg* × *Centifolia*, plant 9. A cross made at the garden at Aas. A medium early potato, which is resistant to common scab.

105481. *Hindenburg* × *Centifolia*, plant 15. A cross made at the garden at Aas. Matures rather late and is resistant to late blight of foliage and tubers.

105482. *Jubel*. Of German origin.

105483 to 105577.

From Spain. Plants purchased from Viveros Manuel San Juan, Sabinan, Zaragoza Province. Received May 4, 1934.

Introduced for the use of Department specialists.

105483 to 105497. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.105483. *Agra*.105484. *Amarillo de Sastago*.105485. *Anteado*.105486. *Blanca*.105487. *Blanquilla*.105488. *De Conserva*.105489. *De Gallur amarillo*.105490. *De Gallur encarnado*.105491. *De Grio*.105492. *De Zuera*.105493. *Encarnado de Agosto*.105494. *Encarnado tardio*.105495. *Espartana*.105496. *Jeróninia*.105497. *Zaragozano encarnado*.105498 to 105535. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.105498. *Bella de Jardines*.105499. *Calvilla amarilla de Oquendo*.105500. *Camuesca castellana de verano*.

105483 to 105577—Continued.

105501. *Camuesa Real*.
 105502. *Champ Gaillard*.
 105503. *Comadres*.
 105504. *Cullauchee*.
 105505. *Del Cirio*.
 105506. *De San Felipe*.
 105507. *Esperiega de Ademuz*.
 105508. *Ferdinana*.
 105509. *Flamenche*.
 105510. *Garcias*.
 105511. *Helada Verde de Levante*.
 105512. *Helada Verde (Glase)*.
 105513. *Hocico de Perro*.
 105514. *Homony*.
 105515. *Hueteveta*.
 105516. *Morro de liebre*.
 105517. *Moulin a Vent*.
 105518. *Normanda*.
 105519. *Pero Pardo*.
 105520. *President des Pays Dusoceau*.
 105521. *Rebolton*.
 105522. *Reina de las Reinetas*.
 105523. *Reineta d'Anjou*.
 105524. *Reineta de Caravia*.
 105525. *Reineta dorato del Canada*.
 105526. *Renetta Parda*.
 105527. *Repinaldo castellano*.
 105528. *Repinaldo de Liebana*.
 105529. *Roja del Valle de Benejama*.
 105530. *Sanroqueras*.
 105531. *Sensación*.
 105532. *Velasca*.
 105533. *Verde Doncella blanca*.
 105534. *Verde Doncella encarnada*.
 105535. *Viña de Oro*.
 105536 to 105540. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.
 105536. *Alemania*.
 105537. *Blanco de Murcia*.
 105538. *De Héllin*.
 105539. *Encarnado fino*.
 105540. *Zaragozano*.
 105541 to 105577. PYRUS COMMUNIS L. Malaceae. Common pear.
 105541. *Abugos (Siete en boca)*.
 105542. *Alphonse Alegatiere*.
 105543. *Amadeo Thirriot*.
 105544. *Azúcar verde*.
 105545. *Bella de Bruselas*.
 105546. *Banzach*.
 105547. *Buena Luisa*.
 105548. *Buerre Flon*.
 105549. *Buerre Superfina*.

105483 to 105577—Continued.

105550. *Castell*.
 105551. *Cristalina de verano (Cristalina de San Juan)*.
 105552. *De Agua (Blanca de Aranjuez)*.
 105553. *De Amor*.
 105554. *De la Forestiere*.
 105555. *De limon*.
 105556. *Duquesa Elena de Orleans*.
 105557. *Epine du Mar*.
 105558. *Espadón de Agua*.
 105559. *Fondant des Bois*.
 105560. *Gamusinas*.
 105561. *General Tholeben*.
 105562. *Leonardeta (de Magallón)*.
 105563. *Louis Pasteur*.
 105564. *Malacara*.
 105565. *Monterrey*.
 105566. *Praviana*.
 105567. *Rey Eduardo*.
 105568. *Senador Belle*.
 105569. *San Antonio*.
 105570. *Sán German*.
 105571. *Sanroqueras*.
 105572. *Sideria de verano*.
 105573. *Sucree de Montlucon*.
 105574. *Tardiva de Solesmes*.
 105575. *Ternales*.
 105576. *Triomphe de Gadoyne*.
 105577. *Urraca de Galicia*.

105578. CHRYSANTHEMUM SP.

From Normal, Ill. Plants presented by A. M. Augustine, American Association of Nurserymen. Received May 11, 1934.

A chrysanthemum, originally from Germany, which bears bronze and pink flowers with a pineapple odor.

105579. SOJA MAX (L.) Piper. Fabaceae. Soybean.

From the Union of Soviet Socialist Republics. Seeds presented by J. W. Pincus, of the Amtorg Corporation, New York City. Received May 11, 1934.

A soybean which was developed under French conditions by Prof. L. Rouest. The seed is medium large, olive yellow with a black hilum.

105580 and 105581.

From Mexico. Seeds presented by Dr. C. A. Purpus, Hacienda Zacuapam, Huatusco, Vera Cruz. Received May 11, 1934.

105580. CHAMAEDOREA SP. Phoenicaceae. Palm.

A shade-loving palm, apparently of the section of genus to which *Chamaedorca sartorii* belongs, in which the seedlings have simple bifid leaves.

105580 and 105581—Continued.

105581. *IPOMOEA TUXTLENSIS* House. Convolvulaceae.

A slender perennial vine 6 to 12 feet long, softly pubescent, with ovate-cordate leaves 2 to 3 inches long and deep-purple flowers about 1½ inches across. Native to Chiapas, Mexico.

105582. *CUCURBITA MOSCHATA* Duchesne. Cucurbitaceae. Cushaw.

From Washington, D. C. Seeds presented by A. J. Pieters, Bureau of Plant Industry. Received May 16, 1934.

A globular green cushaw, originally from northern Africa. The plant roots at all the internodes, so that if part of the vine is injured by insects the rest of the plant continues to grow.

105583. *ASTRAGALUS DAVURICUS* (Pall.) DC. Fabaceae. Milkvetch.

From China. Seeds presented by S. T. Shen, Yenching University, Peiping. Received May 10, 1934.

A perennial 3 to 5 feet high, with purple flowers, that grows wild around Peiping and is considered to be promising as a green manure.

For previous introduction see 90545.

105584 to 105645.

From Nanking, China. Seeds collected in Kwangsi Province by Albert N. Steward and H. C. Cho, University of Nanking. Received April 28, 1934.

105584. *ADINA* sp. Rubiaceae.

Sha Tung Kua. No. F. 101. Collected October 25, 1933, at Ta Tseh Tsuen, Yung Hsien. A small evergreen tree with small flowers in globose heads and globose green fruits one-half inch in diameter.

105585. *ALANGIUM CHINENSE* (Lour.) Rehd. Cornaceae.

No. F. 85. Collected August 25, 1933, at Ta Tseh Shan, Yung Hsien, in forest at 1,600 feet above sea level. An evergreen tree of remarkably rapid growth, reaching its full height of 50 feet in 5 years, after which the trunk merely thickens. The small, whitish, fragrant flowers are in cymes, and the ovate black fruits are one-half inch long.

For previous introduction see 93175.

105586. *ALBIZZIA* sp. Mimosaceae.

No. F. 43. Collected October 1, 1933, at Tseh Tsuen, Yung Hsien, at 1,000 feet altitude, along the roadside.

105587. *ALBIZZIA* sp. Mimosaceae.

No. F. 112. Collected November 10, 1933, in a valley at Kwei Ling, Hsien. A small tree with pods nearly 2 inches long.

105588. *ALBURITES FORDII* Hemsl. Euphorbiaceae. Tung-oil tree.

Tung Tze. No. F. 23. Collected at Loh Hoh Tsuen, Ling Yui Hsien, June 1, 1933, at 3,000 feet altitude.

105589. *ALNUS* sp. Betulaceae. Alder.

Pei Fan Mu. No. F. 4. Collected March 16, 1933, in the valley foothills at Loh Hoh Tsuen, Ling Yui Hsien. A small tree about 20 feet high, fairly common in this region.

105584 to 105645—Continued.

105590. *BENZOIN* sp. Lauraceae. Spicebush.

No. F. 34. Collected September 1, 1933, at 1,000 feet altitude in a valley at Ta Tseh Tsuen, Yung Hsien. A small tree about 10 feet high with black fruits.

105591. *BENZOIN* sp. Lauraceae. Spicebush.

No. F. 89. Collected October 21, 1933, along a stream at Chang An, Yung Hsien, at 1,500 feet altitude. A moderate-sized tree with globose black fruits about two-fifths of an inch in diameter.

105592. *CALLICARPA* sp. Verbenaceae.

Tze Chu. No. F. 99. Collected October 26, 1933, at 1,100 feet altitude at Ta Tseh Tsuen, Yung Hsien. A small tree with globose violet fruits.

105593. *CELTIS* sp. Ulmaceae.

Ching P'oh. No. F. 79. Collected October 21, 1933, in dense forest, 1,500 feet altitude at Chang An, Yung Hsien. A tree with globose green fruits.

105594. *CITRUS GRANDIS* (L.) Osbeck. Rutaceae. Grapefruit.

Yu Tze. No. F. 67. Collected October 25, 1933, at 1,500 feet altitude at Chang An, Yung Hsien. A cultivated tree with yellow fruits of good flavor.

105595. *CITRUS* sp. Rutaceae.

Chu Tze. No. F. 2. Collected March 2, 1933, in the market at Ling Yui Hsien. A lemon-yellow fruit, 6 inches in diameter, of good flavor but not very juicy.

105596. *CUNNINGHAMIA LANCEOLATA* (L.) Hook. Pinaceae. China-fir.

Shan Muh. No. F. 69. Collected October 20, 1933, on a slope at 1,600 feet altitude at Ta Tseh Tsuen, Yung Hsien. A common forest tree about 65 feet tall.

For previous introduction see 99157.

105597. *DIOSPYROS KAKI* L. f. Diospyraceae. Kaki persimmon.

Yah Shih Tze. No. F. 83. Collected November 2, 1933, in a valley at 1,000 feet altitude at Ta Tseh Tsuen, Yung Hsien. A small tree with ovoid yellow fruits over an inch long.

105598. *DIOSPYROS SINENSIS* Hemsl. Diospyraceae. Persimmon.

Shih Tze. No. F. 88. Collected in a cultivated field at 1,000 feet altitude at Ta Tseh Tsuen, Yung Hsien. A small semievergreen Chinese tree with a short thick trunk, widespread branches, and spiny branchlets, thick oblong-lanceolate leaves 2 to 3 inches long, and globose or ovoid golden-yellow edible fruits nearly 2 inches long.

For previous introduction see 95650.

105599. *ELAEAGNUS* sp. Elaeagnaceae.

Hu Teh Tze. No. F. 14. Collected May 6, 1933, on a slope at 4,000 feet altitude at Chu Tung, Ling Yui Hsien. An ornamental deciduous tree with small but fragrant flowers and red edible fruits.

105600. *EUSCAPHIS JAPONICA* (Thunb.) Dipp. Staphyleaceae.

Yeh Yah Chung. No. F. 52. Collected October 20, 1933, in a valley at 1,000 feet altitude near Ta Tu Tsuen, Yung

105584 to 105645—Continued.

Hsien. A shrub or small tree with compound leaves composed of 7 to 11 ovate-lanceolate serrate leaflets 1 to 3 inches long. The small white flowers, in upright panicles, are followed by brown-red pods which open, exposing the steel-blue fruits.

For previous introduction see 102938.

105601 to 105607. *FICUS* spp. Moraceae.105601. *FICUS* sp.

Yen Pa Teu. No. F. 19. Collected May 10, 1933, on a rocky slope at 3,500 feet altitude near Loh Hoh Tsuen, Ling Yui Hsien. A woody vine with black globose fruits.

105602. *FICUS* sp.

No. F. 20. Collected May 20, 1933, in a valley at 3,500 feet altitude near Loh Hoh Tsuen, Ling Yui Hsien. A small tree with black edible fruits.

105603. *FICUS* sp.

No. F. 30. Collected August 12, 1933, in mixed forest at 1,600 feet altitude, near Ta Tseh Tsuen, Yung Hsien. A tree over 30 feet high with yellow fruits.

105604. *FICUS* sp.

No. F. 39. Collected June 14, 1933, in a valley at 3,000 feet altitude near Nê I, Ling Yui Hsien. A vine with red fruits.

105605. *FICUS* sp.

No. F. 63. Collected October 23, 1933, in a forest at 600 feet altitude at Ch'ang An, Yung Hsien. A shrub with globose yellow fruits.

105606. *FICUS* sp.

No. F. 65. Collected October 23, 1933, on a rocky slope at 600 feet altitude near Ch'ang An, Yung Hsien. A small tree.

105607. *FICUS PUMILA* L.

No. F. 86. Collected October 30, 1933, in a valley at 1,100 feet altitude near Ta Tseh Tsuen, Yung Hsien. A woody vine with black ovate fruits nearly 3 inches long.

105608. *GARDENIA* sp. Rubiaceae.

Chih Tze Hua. No. F. 54. Collected October 20, 1933, in a valley at 1,100 feet altitude near Ta Tseh Tsuen, Yung Hsien. A shrub over 4 feet high with reddish-yellow fruits.

105609. *GLEDITSIA SINENSIS* Lam. Caesalpiniaceae. Chinese honeylocust.

No. F. 115. Collected November 10, 1933, along the roadside at 300 feet altitude, near Kwei Ling, Hsien. A large tree with black pods 10 inches long and over an inch wide.

For previous introduction see 90349.

105610. *ILEX* sp. Aquifoliaceae.

No. F. 87. Collected September 15, 1933, on a slope at 1,000 feet altitude, near Ta Tseh Tsuen, Yung Hsien. A shrub with globose fruits less than half an inch in diameter.

105584 to 105645—Continued.

105611. *LIQUIDAMBAR FORMOSANA* Hance. Hamamelidaceae. Formosa sweetgum.

Lo Lo Tung. No. F. 77. Collected November 20, 1933, in a valley at 1,100 feet altitude, near Ta Tseh Tsuen, Yung Hsien. A handsome tree up to 100 feet high, with a straight trunk, a much-branched head, and frequently buttressed roots. The leaves turn to chestnut brown or red in the autumn and are retained late into the winter. The fruits are globose spiny-headed capsules.

For previous introduction see 99187.

105612. *MELIA* sp. Meliaceae.

No. F. 24. Collected May 10, 1933, in a valley at 4,000 feet altitude, near Chu Tung, Ling Yui Hsien. A tree over 60 feet high, with handsome pinnate foliage and yellow globose fruits.

105613. *MELIA* sp. Meliaceae.

Ku Lien Muk. No. F. 82. Collected October 23, 1933, on the roadside at 600 feet altitude, near Ch'ang An, Yung Hsien. An ornamental tree about 30 feet high, with handsome pinnate foliage.

105614. *MUCUNA* sp. Fabaceae.

No. F. 13. Collected June 9, 1933, in a valley over 3,000 feet altitude, near Nê I, Ling Yui Hsien. An ornamental woody vine with pods about 18 inches long.

105615. *MYRICA* sp. Myricaceae.

Yang Mei. No. F. 9. Collected June 8, 1933, on a slope at 4,000 feet altitude, near Ping Shan, Ling Yui Hsien. A shrub over 6 feet high, with sour, red, edible fruits.

105616. *MYRICA* sp. Myricaceae.

Yang Mei. No. F. 21. Collected May 21, 1933, in a valley at 3,500 feet altitude near Loh Hoh Tsuen, Ling Yui Hsien. A small tree over 10 feet high, with red edible fruits.

105617. *ORMOSIA* sp. Fabaceae.

No. F. 29. Collected August 20, 1933, in a forest at 1,600 feet altitude, near Ta Tseh Tsuen, Yung Hsien. A tree about 35 feet high, with black pods containing red seeds.

105618. *PALURUS* sp. Rhamnaceae.

No. F. 106. Collected November 10, 1933, along a roadside at 300 feet altitude, near Kwei Ling, Hsien. A small deciduous tree with yellowish flowers and round flat brown fruits.

105619. *PITTIOSPORUM* sp. Pittosporaceae.

Hai Tung. No. F. 62. Collected October 25, 1933, in a valley at 1,100 feet altitude, near Ta Tseh Tsuen, Yung Hsien. A small evergreen tree about 10 feet high, with yellow globose fruits.

105620. *PITTIOSPORUM* sp. Pittosporaceae.

No. F. 74. Collected October 25, 1933, in a valley at 1,100 feet altitude, near Ta Tseh Tsuen, Yung Hsien. A small evergreen tree about 10 feet high, with globose capsules.

105621. *PRUNUS* sp. Amygdalaceae.

Ku Li. No. F. 26. Collected September 1, 1933, in a valley at 1,600 feet altitude, near Ta Tseh Tsuen, Yung Hsien. A tree about 15 feet high, with globose fruits, edible, but somewhat bitter.

105584 to 105645—Continued.

105622. PTEROCARYA STENOPTERA DC.
Juglandaceae. Chinese wingnut.

Feng Young. No. F. 56. Collected at about 700 feet altitude along a roadside near Ch'ang An, Yung Hsien. A large tree over 50 feet high, with large pinnate leaves 6 to 12 inches long, inconspicuous flowers, and small winged nuts.

105623. PUNICA GRANATUM L. Punicaceae. Pomegranate.

Shih Liu. No. F. 111. Collected in the Kwei Ling market. A small globose, reddish-yellow pomegranate about 3 inches in diameter.

105624. PYRUS sp. Malaceae.

Yeh Li. No. F. 68. Collected October 10, 1933, at 1,100 feet altitude, along the roadside near Ta Tseh Tsuen, Yung Hsien. A tree about 25 feet high, with dark-yellow globose fruits.

105625. PYRUS sp. Malaceae.

Lu. No. F. 92. Collected October 23, 1933, in a cultivated field near Ch'ang An, Yung Hsien. A globose yellow fruit about 1 inch in diameter.

105626. RADERMACHEERA sp. Bignoniaceae.

No. F. 114. Collected November 10, 1933, along the roadside near Kwei Ling City. A handsome tree with large pinnate leaves and terminal panicles of yellowish flowers.

105627. REEVESIA sp. Sterculiaceae.

No. F. 48. Collected October 15, 1933, along a roadside at 1,100 feet altitude, near Ta Tseh Tsuen, Yung Hsien. An evergreen tree over 30 feet high. The reevesias have alternate entire leaves and dense corymbs of white or pink flowers.

105628. RHUS sp. Anacardiaceae.

Yeh Chih Shu. No. F. 38. Collected October 14, 1933, at 1,100 feet altitude, in a valley near Ta Tseh Tsuen, Yung Hsien.

105629 to 105632. RUBUS spp. Rosaceae.

105629. RUBUS sp.

No. F. 5. A vine collected on a slope at 3,500 feet altitude, near Loh Hoh Tsuen, Ling Yui Hsien. The edible fruits are dark red.

105630. RUBUS sp.

Hwang Pao. No. F. 8. Collected June 6, 1933, at 3,500 feet altitude in a valley near Loh Hoh Tsuen, Ling Yui Hsien. A shrub about 5 feet high, with sweet, edible, yellow fruits.

105631. RUBUS sp.

Shan Pao Tze. No. F. 11. Collected June 14, 1933, on the slope of Lao Shan, at 4,000 feet altitude, near Né Kwang, Ling Yui Hsien. A shrub over 10 feet high, with edible yellow fruits.

105632. RUBUS sp.

No. F. 18. Collected June 6, 1933, in a valley at 3,900 feet altitude, near Né Hung, Ling Yui Hsien. A shrub over 6 feet high, with hairy red fruits.

105633. SAPINDUS MUKOROSI Gaertn. Sapindaceae. Soapberry.

Wu Hwan Tze. No. F. 108. Collected November 10, 1933, in a valley near Kwei

105584 to 105645—Continued.

Ling, Hsien. A Chinese tree about 35 feet high, with alternate pinnate leaves and round yellow fruits an inch in diameter.

For previous introduction see 50724.

105634. SAPIUM SEBIFERUM (L.) Roxb. Euphorbiaceae. Chinese tallowtree.

Wu Chu. No. F. 55. Collected November 10, 1933, in a valley at 1,100 feet altitude near Ta Tseh Tsuen, Yung Hsien. A tree 25 feet high, with rhombic-ovate leaves, handsomely red colored with age, and inconspicuous flowers in terminal racemes. The oil from the seeds is used for making machine oil and the tallow from the outer seed coat for making candles.

For previous introduction see 95655.

105635. SORBUS sp. Malaceae.

No. F. 90. Collected October 25, 1933, at 1,600 feet altitude at Ta Tseh Shan, Yung Hsien. A small tree.

105636. SPIRAEA sp. Rosaceae.

Chen Chu Hwa. No. F. 46. Collected September 18, 1933, in a valley at 6,500 feet altitude near Ling Wang Shan, San Kiang Hsien. A shrub over 4 feet high, with yellow fruits.

105637. STRANVAESIA sp. Malaceae.

Shan Hu Shu. No. F. 98. Collected September 18, 1933, in dense forest at 6,500 feet altitude near Ling Wang Shan, San Kiang Hsien. A small tree with globose red edible fruits.

105638. STYRAX sp. Styracaceae.

No. F. 45. Collected October 2, 1933, at 1,600 feet altitude at the edge of the forest near Ta Tseh Tsuen, Yung Hsien. A tree about 35 feet high, with white flowers and grayish drupes.

105639. THEA sp. Theaceae.

Cha Tze. No. F. 22. Collected May 6, 1933, in a cultivated field at 4,000 feet altitude at Chu Tung, Ling Yui Hsien. A small tree about 10 feet high, from whose seeds oil is obtained.

105640. THEA sp. Theaceae.

Cha Tze. No. F. 44. Collected October 20, 1933, on a slope at 1,100 feet altitude at Ta Tseh Tsuen, Yung Hsien. A cultivated tree 75 feet high, with reddish-green fruits and black seeds which are a source of oil.

105641 to 105643. VIBURNUM spp. Caprifoliaceae.

105641. VIBURNUM sp.

No. F. 35. Collected September 18, 1933, in a valley at 6,500 feet altitude near Ling Wang Shan, San Kiang Hsien. A small tree over 6 feet high, with edible red fruits.

105642. VIBURNUM sp.

No. F. 51. Collected October 25, 1933, in a valley at 1,100 feet altitude near Ta Tseh Tsuen, Yung Hsien. A small tree about 8 feet high, with red ovate fruits.

105584 to 105645—Continued.

105643. *VIBURNUM* sp.

No. F. 100. Collected September 17, 1933, at 6,500 feet altitude near Ling Wang Shan, San Kiang Hsien. A tree about 10 feet high, with small globose red edible fruits.

105644. *VITIS* sp. Vitaceae.

Pu Tao. No. F. 91. Collected October 23, 1933, at Ch'ang An, Yung Hsien. A vine with black globose fruits.

105645. *WISTARIA* sp. Fabaceae.

No. F. 102. Collected October 20, 1933, in a valley at 1,100 feet altitude near Ta Tseh Tsuen, Yung Hsien. A vine with pods over 5 inches long and less than half an inch wide.

105646 to 105652.

From China. Seeds presented by H. H. Chung, Wu-Han University, Wuchang, Hupeh. Received May 9, 1934.

Nos. 105646 to 105648 were collected in the Lushan Mountains, Kiangsi Province, by H. H. Chung and S. C. Sun.

105646. *ACER* sp. Aceraceae. **Maple.**105647. *CEPHALOTAXUS FORTUNEI* Hook. Taxaceae. **Chinese plum-yew.**

A small tree up to 30 feet high, native to central China. The linear leaves, 2 to 3 inches long, spread nearly horizontally and are glossy green above with two pale bands beneath, and the ovoid purple fruits are 1 inch long.

For previous introduction see 100521.

105648. *CORNUS* sp. Cornaceae.105649. *EUCOMMIA ULMOIDES* Oliver. Trochodendraceae. **Tu-chung.**

Shih mien shu. Collected in Hupeh Province by S. C. Sun. A tree which reaches a height of 80 feet and seems to grow best when sheltered by other trees. It is native to the southwestern part of China. The native name means stone cotton tree, in reference to the rubber-like threads of shining whitish color which appear when the pieces of bark or leaf are snapped across.

For previous introduction see 98370.

Nos. 105650 to 105652 were collected in the Lushan Mountains, Kiangsi Province, by H. H. Chung and S. C. Sun.

105650. *LIRIODENDRON CHINENSE* (Hemsl.) Sargent. Magnoliaceae. **Chinese tuliptree.**

An ornamental deciduous tree up to 50 feet high, native to central China. The leaves, 5 to 6 inches long, have four acute or acuminate lobes, rounded or slightly cordate at the base; the lilylike flower is about 2 inches long. This variety is somewhat more tender than our native species, *Liriodendron tulipifera*.

For previous introduction see 104206.

105651. *NYSSA SINENSIS* Oliv. Cornaceae.

A deciduous shrub or small tree about 20 feet high, with oblong-elliptic, membranous leaves 4 to 6 inches long, inconspicuous flowers, and ovoid blue fruits about one-half inch long. The leaves become brilliant red in autumn. It is native to western China.

105646 to 105652—Continued.

105652. *SASSAFRAS TZUMU* Hemsl. Lauraceae.

The Chinese sassafras is common in moist woods in western Hupeh, China, where it becomes a handsome tree sometimes 100 feet tall with horizontal branches. The yellow flowers are produced in great quantity in early spring before the leaves unfold; the globose fruits are black with a glaucous bloom.

105653 to 105660.

From the Belgian Congo, Africa. Seeds presented by J. B. H. Lejeune, Director, Government Agronomic Station, Kisozi, Territories of Ruanda-Urundi. Received May 11, 1934.

105653 to 105655. *CROTALARIA* spp. Fabaceae.105653. *CROTALARIA INCANA* L.

A tropical American plant about 3 feet high, somewhat shrubby, and softly pubescent. The yellow flowers are in dense racemes 2 to 8 inches long.

105654. *CROTALARIA SPINOSA* Hochst.

A spiny perennial with an annual stem 6 to 18 inches long, oblanceolate leaflets one-third of an inch long, and scattered yellow flowers. Native to tropical Africa.

105655. *CROTALARIA* sp.105656. *ERYTHRINA* sp. Fabaceae.105657. *LUPINUS* sp. Fabaceae.105658. *PSEUDARTHRA HOOKERI* Wight and Arn. Fabaceae.

A tall herbaceous leguminous plant which, at a distance, looks like a pink spirea. It is abundant in the tree savanna country and may be useful as a green manure or even as an ornamental.

For previous introduction see 50052.

105659. *VICIA* sp. Fabaceae. **Vetch.**

105660. (Undetermined.)

105661 to 105675.

From southwestern China. Seeds presented by Lord Aberconway, Bodnant Gardens, Tal-y-Cafn, North Wales. Received May 10, 1934.

105661. *ACER CAPPADOCICUM SINICUM* Rehd. Aceraceae. **Maple.**

McL. no. 16. A Chinese maple, sometimes 50 feet high, with bright-green, five-lobed leaves about 3 inches long and small pale-yellow flowers. This variety differs from the typical form chiefly in having smaller leaves.

105662. *ANEMONE DEMISSA* Hook. f. and Thoms. Ranunculaceae.

McL. no. 60. A lovely alpine plant, common in limestone soil in mountain meadows at altitudes between 11,000 and 13,000 feet in Yunnan. The leaves form a basal rosette, and the large white flowers are in umbels.

Received as variety *villosa*, for which a place of publication has not been found.

For previous introduction see 100148.

105661 to 105675—Continued.

105663. *BERGENIA DELAVAYI* (Franch.) Engler. Saxifragaceae.

McL. no. 23. A handsome perennial with broadly obovate leaves 3 to 4 inches long and large purple flowers in small racemes. Native to Yunnan and closely allied to *Bergenia purpurascens*.

105664. *EUONYMUS HAMILTONIANUS* Wall. Celastraceae.

McL. no. 126. A large Himalayan shrub which, under favorable circumstances, becomes a moderate-sized tree 30 to 35 feet high, with a short straight trunk 4 to 5 feet in circumference. The clusters of greenish-white flowers are followed by yellow capsules, the seeds of which are entirely surrounded by a scarlet aril. The fruit begins to ripen in August, and the leaves are brilliantly colored in the autumn.

For previous introduction see 103773.

105665. *EUONYMUS ILICIFOLIA* Franch. Celastraceae.

McL. no. 121. A much-branched shrub 6 to 12 feet high, with evergreen, leathery, ovate-lanceolate leaves, remotely dentate, and small flowers. The foliage strongly resembles that of certain hollies. Native to Yunnan, China.

105666. *GLYCYRRHIZA ECHINATA* L. Fabaceae.

McL. no. 110. An upright, little-branched perennial, with compound leaves composed of 5 or 6 pairs of elliptic leaflets and bluish flowers in compact globose heads. Native to Europe and western Asia.

For previous introduction see 65868.

105667. *INCARVILLEA GRANDIFLORA BREVIPES* Sprague. Bignoniaceae.

McL. no. 33. A low perennial herb, native to Yunnan, China. The pinnately divided leaves, 1 foot long, are made up of ovate, nearly entire segments, and the brilliant-crimson, trumpet-shaped flowers, 2 to 3 inches long, are borne in clusters of 8 to 12 on scapes a foot high.

For previous introduction see 99877.

105668. *INDIGOFERA PENDULA* Franch. Fabaceae.

McL. no. 39. An exceedingly ornamental shrub 10 to 15 feet high, with handsome bluish-purple flowers in large pendulous racemes.

For previous introduction see 59419.

105669. *KETELEERIA DAVIDIANA* (Bertrand) Beissner. Pinaceae.

McL. no. P. 28. A coniferous tree, native to western China, which is closely allied to the firs. It sometimes becomes 100 feet tall, is of pyramidal habit, and has handsome green glossy 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.

For previous introduction see 101964.

105670. *MELIOSMA CUNEIFOLIA* Franch. Sabiaceae.

McL. no. P. 80. A beautiful shrub or small tree up to 12 feet high. In habit it resembles the weeping willow, with

105661 to 105675—Continued.

drooping branches bearing at their tips large pyramidal clusters of cream-colored flowers.

For previous introduction see 55936.

105671. *PAEONIA DELAVAYI* Franch. Ranunculaceae. **Peony.**

McL. no. 5. A very attractive vigorous shrub 4 feet high, with deep-crimson flowers 3 inches in diameter.

For previous introduction see 103259.

105672. *PRIMULA LITTONIANA* Forrest. Primulaceae.

McL. no. 37. A handsome plant of the section *Muscarioides*, 2 to 3 feet tall, growing in swampy meadows in southwestern China between 10,000 and 11,000 feet altitude. The gray-green hairy leaves form a rosette from which rises the scapes bearing pendent deep indigo-blue flowers in densely packed spikes, sometimes 5 inches long. The blood-red bracts and calyxes of the flowers form a wonderful contrast to the blue flowers.

For previous introduction see 100026.

105673. *RHODODENDRON BEESIANUM* Diels. Ericaceae.

McL. no. 64. A shrub 15 to 20 feet high, with leathery purple-green, narrowly lanceolate leaves about 6 inches long and deep rich-rose flowers up to 2 inches across. Allied to *R. delavayi*, and native to Yunnan.

For previous introduction see 103430.

105674. *RHODODENDRON CUNEATUM* W. W. Smith. Ericaceae.

McL. no. 73. A small shrub 4 feet high, with elliptical-oval leaves, silky beneath, and deep lavender flowers.

For previous introduction see 97390.

105675. *BELAMCANDA CHINENSIS* (L.) DC.

McL. no. 201. A low-growing form with yellowish flowers.

105676 to 105706.

From Nanking, China. Seeds collected in Kwangsi Province by A. N. Steward and H. C. Cheo, University of Nanking. Received April 28, 1934.

105676. *BOEHMERIA* sp. Urticaceae.

No. F. 6. Collected June 6, 1933, on a rocky slope at Loh Hoh Tsuen, Ling Yui Hsien, at 3,500 feet altitude. A shrub about 10 feet high, with red fruits.

105677. *CALAMUS* sp. Phoenicaceae.

No. F. 32. Collected August 12, 1933, at 1,800 feet altitude in dense forest near Ta Tseh Tsuen, Yung Hsien. A climbing palm with spiny stems and yellow edible fruits.

105678. *CLERODENDRUM* sp. Verbenaceae.

No. F. 57. Collected October 1, 1933, in a valley at 1,200 feet altitude near Ta Tseh Tsuen, Yung Hsien. A small tree about 18 feet high.

105679. *EUONYMUS* sp. Celastraceae.

No. F. 58. Collected October 1, 1933, at 1,800 feet altitude in a forest near Ta Tseh Shan, Yung Hsien. A tree about 40 feet high, with round yellow fruits.

105676 to 105706—Continued.

105680. *EURYA* sp. Theaceae.

No. F. 70. Collected September 18, 1933, along a roadside at 6,600 feet altitude near Ling Wang Shan, San Kiang Hsien. A tree about 18 feet high, with black globular fruits.

105681. *FICUS* sp. Moraceae.

No. F. 15. Collected May 12, 1933, along a stream at 3,300 feet altitude near Nè I, Ling Yuin Hsien. A tree about 35 feet high, with red fruits.

105682. *MALLOTUS* sp. Euphorbiaceae.

No. F. 33. Collected August 3, 1933, at 1,200 feet altitude near Ta Tseh Tsuen, Yung Hsien. A tree about 18 feet high, with red fruits.

105683. *MALLOTUS* sp. Euphorbiaceae.

No. F. 64. Collected October 25, 1933, in a valley at 1,200 feet altitude near Ta Tseh Tsuen, Yung Hsien. A tree about 7 feet high, with round black spiny fruits.

105684. *NAGEIA* sp. Taxaceae.

No. F. 72. Collected October 16, 1933, in a valley at 1,200 feet altitude near Ta Tseh Tsuen, Yung Hsien. An evergreen tree 20 feet high, with globose green fruits.

105685. *RHODOMYRTUS TOMENTOSA* (Ait.) Wight. Myrtaceae. Downy rosemyrtle.

No. F. 109. Collected November 10, 1933, in the Kwei Ling market. A shrub with black edible fruits about one-half inch long. The fruits as well as the under sides of the leaves are covered with fine gray hairs.

For previous introduction see 65849.

105686. *CORIARIA* sp. Coriariaceae.

No. F. 7. Collected June 8, 1933, on a slope at nearly 4,000 feet altitude near Loh Hoh Tsuen, Ling Yuin Hsien. A shrub over 6 feet high, with racemes of black fruits.

105687. (Undetermined.)

No. F. 10. Collected May 30, 1933, along a stream at 3,800 feet altitude near Nè I, Ling Yuin Hsien. A small tree 10 feet high, with black fruits.

105688. (Undetermined.)

No. F. 17. Collected May 6, 1933, in a valley at 4,300 feet altitude near Nè Hung, Ling Yuin Hsien. A leguminous tree over 60 feet high.

105689. (Undetermined.)

No. F. 27. Collected September 1, 1933, at 1,800 feet altitude along the roadside near Ta Tseh Tsuen, Yung Hsien. A tree over 30 feet high, with red fruits.

105690. (Undetermined.)

No. F. 28. Collected September 17, 1933, in a valley at 1,800 feet altitude near Ta Tseh Tsuen, Yung Hsien. A small tree about 6 feet high, with greenish-red fruits.

105691. (Undetermined.)

No. F. 31. Collected September 1, 1933, in a forest near Ta Tseh Shan, Yung Hsien. A tree over 30 feet high, with yellow edible fruits.

105676 to 105706—Continued.

105692. (Undetermined.)

Pei Tón. No. F. 37. Collected October 1, 1933, along the roadside at 1,200 feet altitude near Ta Tseh Tsuen, Yung Hsien. A tree about 25 feet high, with yellow fruits.

105693. (Undetermined.)

No. F. 40. Collected June 14, 1933, on a slope at 4,500 feet altitude near Nè Kwang, Ling Yuin Hsien. A small tree about 7 feet high, with green fruits.

105694. *MORUS* sp.

Feng Shu. No. F. 50. Collected October 15, 1933, in a valley at 1,200 feet altitude near Ta Tseh Tsuen, Yung Hsien. A tree about 25 feet high, with greenish-yellow globose fruits.

105695. *ANTIDESMA* sp. Euphorbiaceae.

No. F. 53. Collected October 1, 1933, in forest at 1,800 feet altitude near Ta Tseh Tsuen, Yung Hsien. A shrub about 8 feet high, with red edible fruits.

105696. *VITEX* sp. Verbenaceae.

No. F. 71. Collected October 6, 1933, in a forest near Ta Tseh Tsuen, Yung Hsien, at 3,800 feet altitude. A tree about 10 feet high, with digitate leaves.

105697. (Undetermined.)

No. F. 76. Collected October 23, 1933, in a dense forest at 6,000 feet altitude near Ch'ang An, Yung Hsien. A tree with egg-shaped black fruits.

105698. (Undetermined.)

No. F. 78. Collected October 23, 1933, in a rocky situation near Ch'ang An, Yung Hsien, at 6,000 feet altitude. A tree with globose yellow fruits.

105699. *CIPADESSA* sp. Meliaceae.

No. F. 80. Collected October 23, 1933, in a forest at 6,000 feet altitude near Ch'ang An, Yung Hsien. A small tree with globose black fruits.

105700. *PAVETTA* sp. Rubiaceae.

No. F. 81. Collected October 23, 1933, in a forest at 6,000 feet altitude near Ch'ang An, Yung Hsien. A shrub with globose green fruits.

105701. (Undetermined.)

No. F. 93. Collected October 8, 1933, in a valley near Ta Tseh Tsuen, Yung Hsien, at 1,200 feet altitude. A vine with greenish-red ovate fruits almost an inch long.

105702. *VITEX* sp. Verbenaceae.

No. F. 94. Collected October 23, 1933, on a rocky slope at 6,000 feet altitude near Ch'ang An, Yung Hsien. A tree with roundish green fruits about one-half inch in diameter.

105703. (Undetermined.)

No. F. 95. Collected October 20, 1933, at 1,200 feet altitude near Ta Tseh Tsuen, Yung Hsien. A shrub with ovate greenish fruits three-fifths of an inch long.

105704. (Undetermined.)

No. F. 96. Collected October 23, 1933, at 6,000 feet altitude near Ch'ang An, Yung Hsien. A vine with globose reddish-yellow fruits about an inch in diameter, found growing in rocky places.

105676 to 105706—Continued.

105705. *THEA JAPONICA* (L.) Baill. Theaceae.

No. F. 103. Collected October 20, 1933, in a valley at 1,200 feet altitude near Ta Tseh Tsuen, Yung Hsien. An evergreen shrub, native to Japan and China, sometimes becoming a small tree up to 40 feet high, with glossy deep-green leaves 3 to 4 inches long and solitary red flowers up to 4 inches wide, appearing at the end of the branchlets. The oil expressed from the seeds is used by the Japanese women for dressing their hair.

For previous introduction see 43923.

105706. *MORUS* sp. Moraceae.

No. F. 116. Collected November 10, 1933, near Chang Shan Park, Kwei Ling Hsien, at 300 feet altitude. A large tree with red globose fruits over an inch in diameter.

105707 to 105712.

From Africa. Seeds presented by the Superintendent of Plantations, East African Agricultural Research Station, Amani, Tanganyika Territory, through Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba. Received May 12, 1934.

105707. *ADENANTHERA MICROSPERMA* L. Mimosaceae.

A handsome deciduous tree, native to the East Indies, with spreading branches. The bipinnate leaves have 2 to 6 pairs of pinnae, each pinna having 2 to 12 pairs of oval, obtuse, glabrous leaflets. The small white and yellow fragrant flowers, borne in racemes, are followed by glossy scarlet biconvex seeds.

For previous introduction see 94176.

105708. *DEQUELIA DALBERGIOIDES* (Baker) Taub. Fabaceae.

A small spreading tree about 20 feet high, with rigid, dark-green compound leaves and copious racemes of pink flowers. Native to eastern India and Java.

For previous introduction see 69111.

105709. *ELETTARIA CARDAMOMUM* (L.) Maton. Zinziberaceae. Cardamon.

A perennial with large leafy shoots. The dried and powdered fruits of this tropical Asiatic plant are used as a spice.

For previous introduction see 98791.

105710. *FICUS NATALENSIS* Hochst. Moraceae.

A shrub or small tree with oblanceolate-obovate, papery dull-green leaves 2 to 3 inches long. The small globose-obovoid fruits, one-half inch long, are mostly in axillary pairs. Native to eastern Africa from the Nile to Natal.

105711. *INTSIA BIJUGA* (Colebr.) Kuntze (*Afzelia bijuga* Gray). Caesalpinaceae. Ipil.

A tall tree, 100 feet or more in height, with fragrant white and reddish flowers borne in large conspicuous clusters. The wood is valued as building material.

For previous introduction see 94193.

105712. *MAESOPSIS EMINII* Engler. Rhamnaceae.

A tropical shrub from eastern Africa, with thick, leathery, oblong acuminate leaves, small greenish flowers in small axillary clusters, and small ovoid fruits.

105713 and 105714.

From Brazil. Seeds collected by J. G. Myers, and presented through David Fairchild, Bureau of Plant Industry. Received May 15, 1934.

105713. *CUCURBITA PEPO* L. Cucurbitaceae. Pumpkin.

Jirimú caboco, or Indian pumpkin, collected in September 1933 at Santarem, Amazon. An excellent pumpkin with dry yellow flesh.

105714. *ROLLINIA DELICIOSA* Safford. Annonaceae. Biribá.

Collected in July 1933 at Manáos, Amazon. The fruit is like the sugar-apple in shape and color, but considerably larger and with soft drooping spines arranged in slight vertical ridges. The pulp is very smooth, almost custardlike, with a delicate flavor. The tree is said to fruit in 3 years from seed.

For previous introduction see 38171.

105715. *EORA BAUERI* (Wendl. and Drude) O. F. Cook (*Rhopalostylis baueri* Wendl. and Drude). Phoenicaceae. Norfolk Island palm.

From California. Seeds presented by David Barry, Jr., Los Angeles. Received May 15, 1934.

A tall spineless palm with equally pinatisect leaves 6 feet or more long, in a stiffly erect terminal cluster. The spadix is 1 to 2 feet long, the flowers are white, and the globose fruits are scarlet. Native to Norfolk Island.

105716. *ANNONA DIVERSIFOLIA* Safford. Annonaceae. Ilama.

From Guatemala. Seeds presented by Mariano Pecheco H., Director General de Agricultura. Received May 14, 1934.

Anona blanca. A small tree, native to Mexico and tropical America, with brown-gray, aromatic bark. The thin membranous leaves, 5 inches long, are broadly elliptical to oblanceolate. The broadly ovoid, densely tomentose fruit, about 6 inches long, is usually covered with stout thick protuberances. The golden-brown, nutlike seeds are embedded in the edible cream-colored or rose-tinted flesh.

For previous introduction see 101256.

105717 to 105719.

From Mexico. Seeds presented by Peter Heinz, Brownsville, Tex. Received May 21, 1934.

105717. *CEIBA* sp. Bombacaceae.

Collected on an arid mountain slope near Tasco. A tree whose seeds are in conspicuous bunches of cottony expanded capsules.

105718. *SERJANIA MEXICANA* Willd. Sapindaceae.

A climbing evergreen shrub with spiny stems, thick biternate leaves 2 to 4 inches long, and small fragrant white flowers. Native to Mexico. The plant is used as a fish poison in Mexico.

105719. (Undetermined.)

A shrub from 6 to 10 feet high, found on arid rocky slopes. The large flower clusters are like those of hydrangea.

105720 to 105725. NICOTIANA TABACUM
L. Solanaceae. **Tobacco.**

From Venezuela. Seeds presented by the Ministerio de Salubridad y de Agricultura y Cria, through Dr. H. Pittier, Museo Comercial, Caracas. Received May 19, 1934.

105720. *Tabaco corriente.* From Distrito Nigua, Estado Yaracuy.

105721. *Tabaco corriente.* From Municipio Caturao, Distrito Rivero, Estado Sucre.

105722. *Tabaco Guácharo.* From La Cueva del Guácharo, Estado Monagas.

105723. *Tabaco Negro.* From Municipio Santa Maria, Distrito Rivero, Estado Sucre.

105724. *Tabaco Negro.* From Municipio Santa Cruz, Distrito Rivero, Estado Sucre.

105725. *Tabaco Rabo de Gallo* (Cocktail). From Municipio Cocorote, Distrito San Feipe, Estado Yaracuy.

105726. CROTALARIA sp. Fabaceae.

From the Belgian Congo, Africa. Seeds presented by J. B. H. Lejeune, Director, Government Agronomic Station, Kisozi, Territories of Kuanda-Urundi. Received May 21, 1934.

105727 to 105734.

From Cuba. Seeds and plants presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received in May 1934.

105727. ARIKURYROBA SCHIZOPHYLLA
(Mart.) Bailey. Phoenicaceae. **Palm.**

A small slender-stemmed palm, about 15 feet high, with pinnate leaves. Native to Brazil.

For previous introduction see 104681.

105728. BAUHINIA RACEMOSA Lam. Caesapiaceae.

A small shrub with drooping branches and rounded leaves, the two lobes rounded oval, white-hairy beneath. The small yellow flowers are in racemes of 12 to 18. Native to eastern India.

105729. LIVISTONA CHINENSIS (Jacq.) R. Br. Phoenicaceae. Palm.

A palm, native to China, with a short thick trunk up to 6 feet high and 1 foot thick, having a crown of reniform palmately divided leaves 4 to 6 feet across on petioles about 5 feet long, which are armed below the middle with recurved brown spines more than an inch long.

For previous introduction see 93412.

105730. LIVISTONA COCHINCHINENSIS
(Blume) Mart. Phoenicaceae. **Palm.**

A slender palm about 50 feet high, with a crown of large fan-shaped leaves. It is native to Malacca.

For previous introduction see 104240.

105731. ADENIUM OBESUM (Forsk.) Roem. and Schult. Apocynaceae.

For previous introduction and description see 105448.

105727 to 105734—Continued.

105732. DOLICHANDRONE CRISPA Seem.
Bignoniaceae.

A large tropical tree, 40 to 60 feet high, with compound leaves a foot or less in length, the two to four broadly elliptic leaves being 2 to 4 inches long. The white flowers are in small corymbs. Native to southern India.

105733. FAGRAEA OBOVATA Wall.

Plants of a tropical tree of moderate size, with ovate or rounded thick leaves 5 or 6 inches long and fragrant white flowers, 2 inches long, in corymblike clusters. Native to Assam, India.

105734. LONCHOCARPUS NEUROSCAPHA
Benth. **Lancepod.**

An evergreen tree with alternate pinnate leaves and racemes of purplish pea-like flowers.

For previous introduction see 94776.

105735. ARTOCARPUS COMMUNIS Forst.
Breadnut.

From Central Mercedita, Pinar del Rio, Cuba. Seeds presented through W. A. Mace, Madruga, Cuba, and L. H. Dewey, Bureau of Plant Industry. Received June 1, 1934.

A tree, native to the East Indies, 30 to 40 feet high, with viscid milky juice and leathery ovate leaves 3 feet long, entire at the base but divided above into 3 to 9 lobes. The large fruits, 4 to 6 inches in diameter, are often seedless, but in this variety the seeds are present and are much the size, shape, and flavor of chestnuts.

For previous introduction see 80173.

105736. OLEA EUROPAEA L. Oleaceae.
Common olive.

From Spain. Cuttings presented by Julius Matz, Bureau of Plant Industry. Received June 25, 1934.

Variety *Zorzalena*. A relatively tender variety. The tree is leafy, compact, and a good early bearer whose fruit is grown for its oil.

105737 to 105743. HELIANTHUS TUBEROSUS L. Asteraceae.
Jerusalem-artichoke.

From the Union of Soviet Socialist Republics. Tubers presented by the Chicory Institute, Moscow. Received May 26, 1934.

105737. No. 8. 105741. No. 92.

105738. No. 9. 105742. No. 166.

105739. No. 48. 105743. No. 167.

105740. No. 53.

105744 and 105745.

From the Canal Zone. Seeds presented through David Fairechild, Bureau of Plant Industry. Received May 28, 1934.

105744. CAVANILLESIA PLATANIFOLIA
H. B. K. Bombacaceae.

A Colombian tree up to 100 feet high with a large thick trunk, smooth pale bark, large shallowly five- to seven-lobed leaves, and red flowers 1 inch long. The soft coarse pithlike wood is white or yellowish and is used for making canoes and rafts.

For previous introduction see 98928.

105744 and 105745—Continued.

105745. MYRCIARIA CAULIFLORA (Mart.)
Berg. Myrtaceae. Jaboticaba.

For previous introduction and description see 105309.

105746 to 105748. ALLIUM spp. Liliaceae.

From Cochinchina. Bulbs presented by the Directeur du Jardin Botanique et Zoologique de Saigon. Received May 25, 1934.

105746. ALLIUM CEPA L. Onion.

105747. ALLIUM SATIVUM L. Garlic.

105748. ALLIUM TRIQUETRUM L.

A bulbous plant with a three-angled stem, common on the coast of Algeria. In its usual surroundings this plant is a rather dwarfed weed of dry texture, but it has been found that when transplanted to good garden soil with plenty of fresh water it produces, during the winter, large plants with white, tender, and succulent underground parts. If the green leaves are removed, the rest of the stem forms a delicate vegetable with no odor of garlic.

For previous introduction see 82018.

105749 and 105750. NICOTIANA TABACUM L. Solanaceae. Tobacco.

From Puerto Rico. Seeds presented by Dr. J. A. B. Nolla, Department of Agriculture and Commerce, San Juan. Received June 8, 1934.

105749. *Ambalema*. A mosaic-resistant variety. Seed gathered under bags, but not pure lined.

105750. *Ambalema*. A pure-line variety which is mosaic resistant.

105751 to 105754. AVENA SATIVA L. Poaceae. Oats.

From Nanking, China. Seeds presented by Sheo Wang, Department of Agronomy, University of Nanking. Received May 23, 1934.

105755 to 105760. ZEA MAYS L. Poaceae. Corn.

From Peru. Seeds presented by L. S. Blaisdell, general manager, Southern Railway, Arequipa, through M. Cooper. Received May 23, 1934.

Native varieties grown near Puno in the region of Chucuito.

105761 to 105764. MACADAMIA TERNIFOLIA F. Muell. Proteaceae.

Queensland-nut.

From Queensland, Australia. Seeds presented by R. Allsopp, Queensland Acclimatization Society, Lawnton. Received June 11, 1934.

An evergreen tree up to 50 feet high, native to shady jungles in the eastern part of Australia where the soil is rich and the annual rainfall is over 60 inches. It is cultivated for its edible nuts which have sweet white flesh, with the flavor of chestnuts, incased in a shell which is, typically, very hard.

For previous introduction see 103738.

105761. Giant thin shell.

105761 to 105764—Continued.

105762. Giant thin shell.

105763. Mammoth thick shell.

105764. Thin shell no. 2.

105765 and 105766. CUCURBITA MAXIMA Duchesne. Cucurbitaceae. Squash.

From California. Seeds presented by Claude D. Tribble, Elk Grove. Received May 25, 1934.

A squash with thick flesh of the very finest grain and quality; it grows to a large size, averaging about 65 pounds, and originally came from Japan.

105767 and 105768. LINUM USITATISSIMUM L. Linaceae. Flax.

From the Netherlands. Seeds presented by B. C. Algra, Stiens, Zaadhandel. Received May 28, 1934.

Concurrent. A white-flowered variety that not only produces a large quantity of seed but also yields an excellent quality of fiber.

105769. ANTIGONON sp. Polygonaceae.

From Puerto Rico. Seeds presented by T. B. McClelland, Director, Agricultural Experiment Station, Mayaguez. Received June 7, 1934.

A very beautiful double antigonon, differing from the common *Rosa de montana* in having a much larger and very different flower, somewhat suggestive of a wild rose in appearance but of paler pink. The seeds were brought from Venezuela to Puerto Rico many years ago.

105770 to 105779. AVENA spp. Poaceae. Oats.

From India. Seeds presented by the Imperial economic botanist, Imperial Institute of Agricultural Research, Pusa. Received June 11, 1934.

A collection of hybrid oats, introduced for the use of Department specialists.

105770. AVENA sp.

Pusa Hybrid A.

105771. AVENA sp.

Pusa Hybrid D.

105772. AVENA sp.

Pusa Hybrid F.

105773. AVENA sp.

Pusa Hybrid G.

105774. AVENA sp.

Pusa K. S. no. 10.

105775. AVENA sp.

Pusa Hybrid IV-104.

105776. AVENA sp.

Pusa Hybrid IV-106.

105777. AVENA sp.

Pusa Hybrid VII-194.

105778. AVENA sp.

Pusa Hybrid VII-265.

105779. AVENA sp.

Pusa Hybrid VII-578.

105780. MELINIS MINUTIFLORA Beauv.
Poaceae. Molasses grass.

From Brazil. Seeds presented by B. H. Hunicutt, Mackenzie College, São Paulo. Received June 18, 1934.

Gordura grass. Collected from the highest altitude at which this is known to grow in Brazil.

105781 to 105786.

From Puerto Rico. Cuttings and plants collected by K. A. Ryerson, Bureau of Plant Industry. Received May 21, 1934.

105781. MAGNOLIA PORTORICENSIS Bello.
Magnoliaceae.

Cuttings from a handsome tree, endemic in the forests of western Puerto Rico, with leathery, broadly oval leaves about 6 inches long and terminal, solitary white flowers 4 inches in diameter with about 12 perianth divisions.

105782. TILLANDSIA sp. Bromeliaceae.
Plants.

105783. (Undetermined.)

Plant of an undetermined orchid.

105784. (Undetermined.)

Plants of an undetermined orchid.

105785. (Undetermined.)

Plants of an undetermined orchid.

105786. (Undetermined.)

A shrub with white flowers 1 inch across, resembling those of anemone, and red fruits. Collected in the mountains.

105787. LESPEDEZA SATSUMENSIS Nakai. Fabaceae.

From Japan. Seeds presented by T. Nakai, Director, Botanic Garden, Imperial University, Tokyo. Received May 28, 1934.

Collected at Kinsin, on Mount Isoma, Satsuma Province. This bushy shrub is a rare species and is found only on the summit of Mount Isoma. It has oblong-obovate leaflets up to four-fifths of an inch long, reflex or emarginate, and very short axillary racemes of deep purple flowers. Allied to *Lespedeza floribunda*, but differing chiefly in its smaller size and in having shorter racemes.

105788. HETEROPHRAGMA ADENOPHYLLUM (DC.) Seem. Bignoniaceae.

From Florida. Seeds presented by W. D. Carrier, Crescent City. Received June 14, 1934.

An ornamental African tree related to the catalpa, but adapted for cultivation in subtropical regions only, as it is very susceptible to frost. It reaches a height of 30 to 50 feet, with large opposite pinnate leaves and brownish-yellow woolly flowers in terminal panicles.

For previous introduction see 59679.

105789 to 105797. CASUARINA spp. Casuarinaceae.

From Western Australia. Seeds presented by C. A. Gardner, Government botanist, State Herbarium, Department of Agriculture, Perth. Received June 11, 1934.

105789 to 105797—Continued.

105789. CASUARINA ACUARIA F. Muell.

A leafless shrub with erect rigid branches and numerous deciduous branchlets; these are erect, slender but rigid, and each consists of but two internodes. The cones, globular and solitary or in small clusters, are about 1 inch in diameter. Native to Western Australia.

105790. CASUARINA ACUTIVALVIS F. Muell.

An erect branched shrub with the internodes marked by 12 lines of low linear-subulate teeth and with rather large globular cones. The minute dark-brown leaves are easily dislodged. Native to Victoria, Australia.

For previous introduction see 93780.

105791. CASUARINA CAMPESTRIS Diels.

A dioecious shrub 3 to 6 feet high, with numerous erect branches; native to Western Australia. The internodes are glaucous or shining green and striate.

For previous introduction see 93782.

105792. CASUARINA DECUSSATA Benth.

A small tree, native to Western Australia, closely allied to *Casuarina torulosa*, with slender elongated branches arranged in fours. The stems have a decussate appearance, owing to the prominence of alternate pairs of angles at the nodes.

For previous introduction see 93784.

105793. CASUARINA sp.

Received under the name "dielsiana", for which a place of publication has not been found.

105794. CASUARINA GLAUCA Sieber.

An Australian tree 60 to 70 feet high, usually straight and of rapid growth. The timber is red, beautifully marked, hard and tough and is there used for cabinetwork. In periods of drought the foliage is used for stock feed. When the trees are cut down, the young growth shoots up quickly from the stump. This variety grows in the coastal districts, marshy country, and frequently in land submerged with tidal water. It makes a very handsome shade tree.

For previous introduction see 93788.

105795. CASUARINA GREVILLEOIDES Diels.

A low much-branched shrub about 1 foot high, with the branches and branchlets much-jointed and the younger joints white tomentose. Native to Western Australia.

105796. CASUARINA HUMILIS Otto and Dietr.

An erect shrub 2 to 6 feet high, with the branchlets usually in whorls of four and the angles of the internodes prominent but obtuse. It is native to Western Australia.

For previous introduction see 93791.

105797. CASUARINA THUYOIDES Miquel.

A straggling shrub 3 to 5 feet high, with numerous spreading slender branchlets about 1 inch long arranged in whorls of four or five. The ribs on the nearly round internodes are scarcely noticeable. It is native to Western Australia.

For previous introduction see 93793.

105798. ACER NIVEUM Blume. Aceraceae. Maple.

From the Philippine Islands. Seeds presented by Arthur F. Fischer. Director of forestry, Department of Agriculture, Manila. Received June 12, 1934.

Collected in Bakiling National Park, Laguna. A large ornamental maple, sometimes over 100 feet tall, with undivided elliptic or oblong leaves 8 inches long, white glaucous beneath, and yellowish-green flowers in lax racemes. Native to upper Assam, India.

105799 to 105801.

From Java. Seeds presented by A. M. Cramer, Wonosobo. Received June 1, 1934.

105799. ALLIUM PORRUM L. Liliaceae. Leek.

Shimonita. A large, fast-growing, hollow-leaved Japanese variety of good flavor. It is grown from seed and seeds abundantly.

105800. BRASSICA PEKINENSIS (Lour.) Rupr. Brassicaceae. Pe'tsai.

White Longhead. The seed of this variety is imported from and grown in the Netherlands, where the seed is not sown before early July, to prevent flowering. This is the best of all varieties of pe'tsai; very sweet and of a fine flavor.

105801. BRASSICA PEKINENSIS (Lour.) Rupr. Brassicaceae. Pe'tsai.

Witte Reuzen or *Giant Round*. A variety grown in Japan which forms a very large round head.

105802 to 105820.

From the Union of Soviet Socialist Republics. Seeds presented by Hortus Botanicus Bakuensis, Baku, Azerbaïdhan. Received June 15, 1934.

Introduced for testing by soil-erosion specialists.

105802. AMYGDALUS COMMUNIS L. Amygdalaceae. Almond.**105803. AMYGDALUS FENZLIANA (Fritsch) Korsh. Amygdalaceae.**

A shrubby tree with long purplish branches and narrowly ovate leaves. The reddish flowers appear before the leaves in few-flowered clusters and are smaller than those of *Amygdalus communis*. The small peachlike fruits have rather dry flesh. Native to the Caucasus region.

For previous introduction see 43302.

105804. ARISTIDA PENNATA Trin. Poaceae. Grass.

A grass, native to Turkistan, where it is abundant in dry sandy places.

For previous introduction see 101979.

105805. ATRIPLEX INCISA Bieb. Chenopodiaceae.

A desert-loving annual, native to the Caucasus region, with rhombic-sinuate, shallowly incised leaves and small four-angled fruits.

105806. ATRIPLEX DESERTORUM (Iljin) D. Sosn. Chenopodiaceae.

A succulent desert plant.

105802 to 105820—Continued.**105807 to 105810. CALLIGONUM spp. Polygonaceae.****105807. CALLIGONUM CAPUT-MEDUSAE Schrenk.**

Native to northern and central Asia, where it is used as a sand binder.

105808. CALLIGONUM COMOSUM L'Her.

A densely branched shrub 10 to 15 feet high, with minute subulate leaves and small, ovate, densely-spiny, nut-like fruits. Native to the eastern Mediterranean region.

For previous introduction see 98208.

105809. CALLIGONUM ERIPODUM Bunge.

A slender-branched shrub with whitish branchlets and linear-subulate, minute leaves which are early deciduous. Native to Turkistan, where it is used as a sand binder.

For previous introduction see 94931.

105810. CALLIGONUM SETOSUM Litv.

A leafless shrub native to the Caspian region, where it is used as a sand binder.

For previous introduction see 98209.

105811. EPHEDRA MAJOR PROCERA (Fisch. and Mey.) Aschers and Graebn. Gnetaceae. Jointfir.

A leafless shrub, 4 to 5 feet high, native to the Caucasus, with stiff branches and nearly sessile flower clusters, followed by red fruits.

For previous introduction see 79906.

105812. HALIMODENDRON HALODENDRON (Pall.) Voss. Fabaceae. Salt-tree.

A hardy, drought-resistant, ornamental shrub 6 feet high, with pink flowers. Native to Turkistan.

For previous introduction see 73604.

105813. HALOXYLON AMMODENDRON (Meyer) Bunge. Chenopodiaceae. Saxaul.

A Persian shrub or sometimes a small tree with a thick gnarled trunk, either leafless or with rudimentary leaves, and small fruits with thin papery wings.

For previous introduction see 78481.

105814. LOTUS CORNICULATUS CILIATUS (Tenore) C. Koch. Fabaceae.

A variety with hairy leaflets and calyx.

105815. ONOBRYCHIS MICHAUXII DC. Fabaceae.

An erect perennial with oblong-elliptic, mucronate leaflets and elongate spikes of yellowish flowers. Native to Asia Minor.

105816. PROSOPIS STEPHANIANA (Bieb.) Kunth. Mimosaceae.

A deep-rooted shrubby legume which grows abundantly on dry lands in the interior plain of the island of Cyprus. Sheep and cattle browse on it, and the bees make good honey from its abundant flowers.

For previous introduction see 88697.

105817. RHAMNUS PALLASII Fisch. Rhamnaceae.

An ornamental deciduous shrub, native to very dry sterile places in the Caucasus region.

For previous introduction see 33002.

105802 to 105820—Continued.

105818. SALSOLA SUBAPHYLLA Meyer.
Chenopodiaceae.

A leafless, much-branched shrub about a foot high, native to desert places on the shores of the Caspian Sea.

For previous introduction see 98219.

105819. SCORZONERA RIGIDA Auch. Ci-
choriaceae.

A stemless perennial with rigid entire linear leaves and yellow flower heads on scapes four times as long as the leaves. Native to the mountainous regions of Asia Minor.

105820. (Undetermined.)

Received as *Eremosparton aphyllum*, but the seeds are not of that genus.

105821. BAUHINIA RACEMOSA Lam. Cae-
salpiniaceae.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received June 20, 1934.

105822 to 105828.

From California. Seeds presented by David Barry, Jr., Los Angeles. Received June 18, 1934.

105822. CYRTOSTACHYS RENDA Blume.
Phoenicaceae. **Palm.**

A tall slender palm, 25 to 30 feet high, crowned by a graceful cluster of pinnate leaves, with linear or ensiform segments and brownish-red petioles. Native to Sumatra.

For previous introduction see 99560.

105823. ERYTHEA EDULIS (Wendl.) S.
Wats. Phoenicaceae. **Guadaloupe palm.**

A stout spineless palm, 50 feet high, with a terminal cluster of much-divided leaves 3 feet across. The shining black fruits are produced on a long, white-tomentose, paniculate spadix. Native to the island of Guadaloupe, Baja California, Mexico.

For previous introduction see 77153.

105824. LICUALA PALUDOSA Griff. Phoe-
nicaceae. **Palm.**

A handsome dwarf palm, 4 to 10 feet high, with a smooth slender trunk and roundish fan-shaped leaves about 3 feet across. Native to Malacca.

105825. PHOENICOPHORUM BORSIGIANUM
(Koch.) Stuntz. Phoenicaceae. **Palm.**

A handsome, pinnate-leaved palm, native to the Seychelles Islands. When mature it is entirely spineless, whereas in the young state the deep orange-red petioles are clothed with black needlelike spines 1 to 3 inches long. The young leaves are orange beneath and mottled with orange spots above. The spadix is 3 to 6 feet long, divided into numerous slender branches, swollen at the base, and densely covered above with yellow flowers, each about one-fourth of an inch in diameter.

For previous introduction see 103731.

105822 to 105828—Continued.

105826. PHOENIX PUSILLA Gaertn. Phoe-
nicaceae. **Date palm.**

A dwarf palm about 4 feet high, with pinnate leaves having leafy petioles, dark-green, sword-shaped, rigid leaflets, and black fruits. The stem is said to contain a farinaceous pith. It is native to Ceylon.

For previous introduction see 103110.

105827. PHOENIX ZEYLANICA Trimen.
Phoenicaceae. **Ceylon date palm.**

A pinnate-leaved palm, native to Ceylon, with a stem 8 to 20 feet high and a crown of rather short leaves made up of numerous linear-lanceolate, light-green leaflets 7 to 10 inches long. The obovoid-oblong, violet-blue, edible fruits are half an inch long.

For previous introduction see 104699.

105828. SEAFORTHIA ELEGANS R. Br.
Phoenicaceae. **Palm.**

A palm up to 30 feet high, native to the south coast of Australia and the neighboring islands. The dark-green, pinnate fronds are eventually 15 feet long, and the small fruits are oval and very fibrous.

For previous introduction see 104342.

105829 to 105833.

From Australia. Plants and budwood presented by George Althofer, Dripstone, New South Wales. Received June 25, 1934.

Introduced for the use of Department specialists.

105829. AMYGDALUS PERSICA L. Amyg-
dalaceae. **Peach.**

Glen Ora.

105830. AMYGDALUS PERSICA L. Amyg-
dalaceae. **Peach.**

High's Early Canada.

105831. AMYGDALUS PERSICA NECTARINA
Ait. Amygdalaceae. **Nectarine.**

Irrewarra.

105832. PRUNUS SALICINA Lindl. Amyg-
dalaceae. **Japanese plum.**

Narrabeen plum (budwood).

105833. PRUNUS SALICINA Lindl. Amyg-
dalaceae. **Japanese plum.**

Wilson (budwood).

105834 and 105835.

From French Indo-China. Seeds presented by M. Pollane, Institut des Recherches Agronomiques de Indochine, Division de Botanique. Received October 13, 1933, Numbered in June 1934.

105834. UVARIA sp. Annonaceae.

A vine with edible fruits, collected at 1,500 feet altitude in Annam, Col d'Ailao.

105835. DIOSPYROS KAKI L. f. Diospy-
raceae. **Kaki persimmon.**

Collected at Col de Blao near Haut Donai in a forest at 3,000 feet altitude. A wild kaki which becomes 30 to 60 feet high with a trunk circumference of 2 to 3 feet. It is a vigorous tree with a large taproot, excellent as a stock for cultivated kakis.

105836. SACCHARUM OFFICINARUM L.
Poaceae. Sugarcane.

From Hawaii. Cuttings presented by the experiment station of the Hawaiian Sugar Planters' Association, Honolulu. Received June 23, 1934.

Introduced for the use of Department specialists.

105837 to 105863.

From Australia. Plants purchased from L. P. Rosen & Son, Carlingford, New South Wales. Received June 27, 1934.

A collection of fruit trees introduced under the following varietal names for the use of Department specialists.

105837 to 105854. AMYGDALUS PERSICA L.
Amygdalaceae. Peach.105837. *Aunt Becky.*105838. *Bell's Improved.*105839. *Blackburn.*105840. *Braddock.*105841. *Christmas Box.*105842. *Doncaster.*105843. *Edward VII.*105844. *Governor Rawson.*105845. *King of All.*105846. *La France.*105847. *Princess Royal.*105848. *Rennie.*105849. *Robert Stewart.*105850. *Roger Louis.*105851. *Rowe's Champion.*105852. *Ruby Red.*105853. *Shanghai Seedling.*105854. *Shanghai Slip.***105855 to 105858. AMYGDALUS PERSICA NECTARINA Ait.**
Amygdalaceae. Nectarine.105855. *Lady Carrington.*105856. *Lee's.*105857. *The Jury.*105858. *W. C. Fripp.***105859 to 105863. PRUNUS ARMENIACA L.**
Amygdalaceae. Apricot.105859. *Cattell Early.*105860. *Colorado.*105861. *Kingston Early.*105862. *Mansfield's.*105863. *Cullin's Early.***105864. CARICA QUERCIFOLIA (St. Hil.)**
Benth. and Hook. Papayaceae.

From France. Seeds presented by M. Garry Desloges, Caravan. Received June 30, 1934.

A small tree with palmately 3-lobed leaves and small fruits which contain a greater percentage of papain than those of *Carica papaya*. The plant is said to be hardy in southern California.

Received as *Carica hastaeifolia*, which is now considered a synonym of this species.

For previous introduction see 73837.

105865. TRITHRINAX BRASILIENSIS
Mart. Phoenicaceae. Palm.

From California. Seeds presented by David Barry, Jr., Los Angeles. Received June 25, 1934.

A slender-stemmed fan palm 6 to 12 feet high, with palmate-labelliform leaves divided into 20 or 30 segments. The much-branched spadix has numerous spirally arranged flowers. Native to Brazil.

105866 to 105868. CLEMATIS spp.
Ranunculaceae.

From Sydney, Australia. Seeds presented by the School of Botany, University of Sydney, New South Wales, through J. E. Spingarn, Armenia, N. Y. Received June 23, 1934.

105866 and 105867. CLEMATIS ARISTATA
R. Br.

An evergreen woody vine with trifoliate leaves of cordate to narrowly lanceolate, entire or serrate leaflets 1 to 3 inches long, and yellowish white flowers 2 inches across in short panicles. It is native to Australia.

For previous introduction see 88318.

105868. CLEMATIS GLYCINOIDES DC.

A woody climber that trails over rocks and bushes or ascends tall trees in several parts of Australia. The long-stalked leaves are three-parted and 1 to 3 inches long, and the white or yellowish flowers, in short clusters, are about 1½ inches across.

105869 to 105871.

From Egypt. Seeds presented by Thomas W. Brown, Director, horticultural section, Ministry of Agriculture, Giza. Received June 25, 1934.

105869. ACACIA LAETA R. Br.
Mimosaceae.

A small tree armed with short, black, hooked prickles or sometimes unarmed. The small glaucous leaves, 2 to 3 inches long, consist of two to three pairs of oblong-oblique leaflets, and the flowers are in small spikes. Native to Ethiopia.

105870 and 105871. BAUHINIA RETUSA
Ham. Caesalpinaceae.

A tree with rounded, stiff, leathery leaves about 5 inches long and small yellow flowers in large terminal panicles sometimes a foot long and broad. Native to the western Himalayas up to 4,000 feet altitude.

105872. WARSZEWICZIA COCCINEA
(Vahl.) Klotzsch. Rubiaceae.

From the Canal Zone. Seeds presented by J. E. Higgins, Canal Zone Experiment Gardens, through E. M. Dickins, Lake Worth, Fla. Received June 28, 1934.

An ornamental tree with dark-green foliage and clusters of small flowers each one-fourth inch across. One sepal of each cluster is brilliant scarlet and over 2 inches long, making a startling splash of color against the dark leaves. The tree blooms during the wet season, whereas most of the showy flowering trees of the Tropics bloom in the dry season. Native to Trinidad, British West Indies.

For previous introduction see 97986.

105873 to 105932.

From India. Seeds presented by Dr. Walter Koelz, through Prof. H. H. Bartlett, University of Michigan, Ann Arbor, Mich. Received June 12, 1934.

105873 and 105874. AMPHICOME ARGUTA Royle. Bignoniaceae.

A low herbaceous perennial, not over 3 feet high, native to northern India. The compound leaves are made up of 5 to 9 deeply serrate, lanceolate leaflets 2 inches long, and the rose-colored, funnel-shaped flowers, 1 inch long, are borne in terminal racemes 6 to 8 inches long.

105873. Collected on sunny bare cliffs at Urni, Rampur, Bashahr.

105874. Collected at Wangtu, Rampur, Bashahr.

105875. AMYGDALUS sp. Amygdalaceae.

From Roghi, Rampur, Bashahr. A wild white peach which becomes 30 feet high. The flowers are attractive, but the fruit is useless.

105876. ASTER sp. Asteraceae.

From Rapshu, at 1,300 feet altitude. A very attractive aster with purple flowers 6 inches in diameter.

105877. CITRUS sp. Rutaceae.

From Buzuri, Kulu. A thick-skinned, orange-colored lemon 6 inches long.

105878 to 105880. CLEMATIS spp. Ranunculaceae.

105878. CLEMATIS sp.

From Nago, Rampur, Bashahr, at 12,000 feet altitude in a cold dry situation. An attractive vine with yellow flowers.

105879. CLEMATIS sp.

From Kibor, Spiti, at 12,000 feet altitude in a dry cold situation.

105880. CLEMATIS sp.

From Sungram, Rampur, Bashahr, at 10,000 feet altitude.

105881. COLUTEA sp. Fabaceae.

From Rampur, Bashahr, at 10,000 feet altitude. The coluteas are ornamental leguminous shrubs, useful as soil binders.

105882. COTONEASTER sp. Malaceae.

A very attractive shrub, 3 feet high, with dark-green leaves.

105883. COTONEASTER sp. Malvaceae.

From Dankhar, Spiti, a dry cold region. A shrub 7 feet high, with very attractive carmine fruits.

105884. CUCURBITA PEPO L. Cucurbitaceae. Pumpkin.

From Nachar, Rampur, Bashahr. A cultivated green pumpkin which grows chiefly in a hot climate.

105885. EREMURUS HIMALAIICUS Baker. Liliaceae. Himalayan desertcandle.

From Hang La, Rampur, Bashahr, at 13,000 feet altitude. A tall herbaceous perennial, found growing in masses, with lanceolate leaves 1 to 2 feet long in a rosette at the base of the stem. This stem rises to 6 feet and bears a spike 2 to 3 feet long of white flowers. It is native to India.

For previous introduction see 91626.

105873 to 105932—Continued.

105886. HIPPOPHAE RHAMNOIDES L. Elaeagnaceae. Common sea-buckthorn.

From Po, Spiti, at 10,000 feet altitude. A hardy spiny deciduous shrub with silvery foliage and orange-yellow fruits, found along watercourses.

For previous introduction see 92240.

105887. HORDEUM VULGARE L. Poaceae. Barley.

From Gya, Ladakh, at 1,400 feet altitude.

105888. ILEX sp. Aquifoliaceae.

From Sarahan, Rampur, Bashahr. An attractive tree with a trunk 12 inches in diameter.

105889. IRIS sp. Iridaceae.

From Po, Spiti, in a field at 10,000 feet altitude.

105890. JASMINUM sp. Oleaceae.

From Bathad, Kulu. A vine which bears very fragrant white flowers throughout the summer.

105891. NEPETA sp. Menthaceae.

From Taho, Spiti, at 10,000 feet altitude. A prostrate annual mint with pale-lilac flowers; found in a dry cold atmosphere.

105892. NEPETA FLOCCOSA Benth. Menthaceae.

From Hemis, Ladakh, at 11,000 feet altitude. A stout herb up to 3 feet high, white woolly throughout, with rounded cordate long-stemmed leaflets 1 to 3 inches across and dense whorls of rose-colored or purple flowers. Native to northwestern India at altitudes of 7,000 to 11,000 feet.

105893. LILIUM GIGANTEUM Wall. Liliaceae. Giant lily.

From Bathad, Kulu. A lily, native to the Himalayas between 5,000 and 12,000 feet altitude, with bulbs that grow close to the surface. The hollow stems are 6 to 9 feet high, and the handsome cordate leaves are shining dark green above and paler beneath. The large fragrant white flowers, often 12 in a raceme, are slightly greenish without, and the inner surface of the segments is tinged with deep purple.

For previous introduction see 102833.

105894. LONICERA sp. Caprifoliaceae. Honeysuckle.

From Sungram, Rampur, Bashahr, on a cold semiarid slope at 10,000 feet altitude. A well-formed bush 7 feet high, with transparent white fruits that are eaten by birds.

105895. LONICERA BICOLOR Klotzsch. Caprifoliaceae. Honeysuckle.

From Sungram, Rampur, Bashahr, at 10,000 feet altitude. A small much-branched shrub with small, elliptic-ovicular, entire leaves, green and nearly glabrous above, more or less hairy beneath. The orange flowers are borne in pairs toward the ends of the branchlets. Native to the Himalayas, and closely allied to *L. hypoleuca*.

105873 to 105932—Continued.

105896. *MALUS* sp. Malaceae.

From Po, Spiti, in a cold dry climate at 10,000 feet altitude. A tree 2 feet in diameter, with pale-pink to white blossoms and very attractive fruits.

105897. *MEIBOMIA* sp. Fabaceae.

From Chaura, Rampur, Bashahr. A pink-flowered shrub 8 feet high, found in damp situations in semishade.

105898 to 105900. *PEDICULARIS* spp. Scrophulariaceae.

From Losar, Spiti, at 13,000 feet altitude. Found along the irrigation canals.

105898. *PEDICULARIS* sp.105899. *PEDICULARIS* sp.105900. *PEDICULARIS* sp.105901. *PINUS* sp. Pinaceae. Pine.

From Kulu, Kulu, Punjab. A 5-leaved pine.

105902. *PODOPHYLLUM EMODI* Wall. Berberidaceae.

From Bushero La, at 12,000 feet altitude. A forest mandrake of possible interest to wild-flower growers.

105903. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

From Balistan. This fruit is one of the principal foods of the hill people, who eat it fresh or stewed with barley flour. The fruit thus prepared needs no sugar. The edible seeds are used like almonds.

105904. *PYRACANTHA* sp. Malaceae.

From Arsu, Kulu. An attractive tree with a trunk 12 inches in diameter. It stands full sunshine but not severe cold.

105905. *PYRUS* sp. Malaceae.

From the Kulu Valley at 7,000 feet altitude. A wild pear tree with a trunk 2 feet in diameter. The flowers are attractive, and the small fruits are eaten by the natives.

105906. *RHAMNUS* sp. Rhamnaceae.

From Po, Spiti, at 11,000 feet altitude. A bushy shrub with blackish fruits.

105907. *RHAMNUS* sp. Rhamnaceae.105908. *RHODOENDRON ARBOREUM* J. E. Smith. Ericaceae. Tree rhododendron.

From Bathad, Kulu. A bushy tree found on slopes too sunny for pines, and also among oaks on shady cold slopes.

For previous introduction see 97657.

105909. *RHODOENDRON CAMPANULATUM* Don. Ericaceae.

From Bushero La, at 12,000 feet altitude, a region covered with snow in winter and never hot in summer, with monsoon rains from July to September. A large evergreen shrub of stiff spreading habit, sometimes 12 feet high, with oval leaves that are densely covered beneath with red-brown felt. The flowers, of various rosy purple shades and 2 inches across, are borne during April in rather loose clusters about 4 inches across. It is native to India.

For previous introduction see 80656.

105873 to 105932—Continued.

105910 to 105917. *ROSA* spp. Rosaceae. Rose.105910. *ROSA MOSCHATA* Mill.

Musk rose.

From Nacahr, Rampur, Bashahr.

105911. *ROSA* sp.

From Huling, Tibet, at 12,000 feet altitude; a cold dry region. A very attractive shrub 7 feet high, with abundant single pink flowers.

105912. *ROSA* sp.

From Nago, Rampur, Bashahr. An attractive bush 8 feet high, with single pink flowers.

105913. *ROSA* sp.

From Li, Rampur, Bashahr, at 10,000 feet altitude. A bush 8 feet high, with attractive single pink flowers.

105914. *ROSA* sp.

From Nachar, Rampur, Bashahr. A rambler, said to be native, but may be an escape.

105915. *ROSA* sp.105916. *ROSA* sp.105917. *ROSA* sp.

From Nago, Rampur, Bashahr. A shrubby rose 8 feet high, with very large hips.

105918. *SALVIA* sp. Menthaceae. Sage.

An attractive herb collected on a dry slope.

105919. *ULEX* sp. Fabaceae.

From Nachar, Rampur, Bashahr. A cultivated leguminous shrub 6 feet high, with yellow flowers which appear before the leaves.

105920. *VIBURNUM* sp. Caprifoliaceae.

From Pangli, Rampur, Bashahr, at 10,000 feet altitude. A well-formed bush.

105921. *VITIS VINIFERA* L. Vitaceae. European grape.

From Nago, Rampur, Bashahr, at 10,000 feet altitude where it is dry and cold. A cultivated Malaga grape with sweet white fruits in clusters a foot long. The origin is unknown, but it is not grown below this altitude because of the monsoon which splits the fruit, permitting the entry of decay-producing fungi.

105922. *VITIS VINIFERA* L. Vitaceae. European grape.

From Li, Rampur, Bashahr. Fruits said to be red and to ripen a month earlier than the white grape with smaller bunches.

105923. (Undetermined.)

From Nago, Rampur, Bashahr, on dry slopes at 15,000 feet altitude. A very attractive mint, 3 feet high, found growing in clumps with purple, blue, and pink flowers.

105924. (Undetermined.)

From Bathad, Kulu, at 9,000 altitude. An orchid found in dense forest.

105873 to 105932—Continued.

105925. (Undetermined.)

From Sungnam, Rampur, Bashahr. A very attractive bush, 8 feet high, with clusters of cream-colored flowers.

105926. (Undetermined.)

From Wangtu, Rampur, Bashahr. A very attractive composite shrub over 3 feet high with yellow flowers. Found chiefly on cliff faces.

105927. (Undetermined.)

From Banjar, Kulu. A very attractive tree 18 inches in diameter, with clusters of white flowers.

105928. (Undetermined.)

From Chaura, Rampur, Bashahr. An herb 6 feet high, found in deep shade.

105873 to 105932—Continued.

105929. (Undetermined.)

From Nachar, Rampur, Bashahr. A wild flower found in the soft earth in open or semishade.

105930. (Undetermined.)

From Nachar, Rampur, Bashahr. A wild flower found in open or semishade where it is not subject to heavy frost.

105931. (Undetermined.)

From Arsu, Kulu. A tree with very attractive long clusters of purple flowers. Will not stand frost.

105932. (Undetermined.)

From Nachar, Rampur, Bashahr. A very attractive bush.

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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 120



Washington, D. C.

Issued August 1937

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, JULY 1 TO SEPTEMBER 30, 1934 (Nos. 105933-106560)

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INTRODUCTORY STATEMENT

This inventory, No. 120, is a record of the plant material received by the Division of Plant Exploration and Introduction from July 1 to September 30, 1934 (nos. 105933-106560).

Particular attention should be called to the introduction of seeds of 135 wheat crosses from Australia (nos. 106026-106053, 106146-106180, 106183-106188, 106192-106229, 106295-106310, 106315-106326), presented by the Director of Plant Breeding, Sydney, New South Wales. These crosses, in which American varieties appear frequently as one of the parents, were made chiefly at the Wagga Experiment Farm, Bomen, and their introduction into this country is a contribution to the plant materials available to Department specialists.

Also worthy of special note, and from the same part of the world, are seeds of an interesting lot of dry-land plants, including several native forage grasses (nos. 106467-106482). These were collected in semiarid central Australia and will be tested in the drier portions of the United States where the winters are not too severe. A number of forage grasses from desert regions likewise are included in a collection of miscellaneous seeds from South Africa (nos. 106073-106100), presented by the McGregor Museum at Kimberley, Cape Colony.

Tubers of 25 native Peruvian varieties of the potato (nos. 106390-106414) were presented by the Estación Experimental Agrícola, La Molina, Lima. Coming as these do from the general region where the potato is believed to have had its origin, this lot of tubers will have especial interest for plant breeders.

The Director of the Station Experimentale de Kisozi, Ruanda-Urundi, Africa, has sent in seeds (nos. 106452-106461) of native leguminous plants, suitable for testing as cover crops in the southern United States. All of these, with one exception, appear never before to have been introduced into this country.

The botanical determinations have been made and the nomenclature determined by Paul Russell, who has had general supervision of this inventory.

B. Y. MORRISON,

Principal Horticulturist, in Charge.

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D. C., April 24, 1937.



INVENTORY¹

105933 to 105935. *CYNODON* spp. Poaceae. **Kweek grass.**

From the Union of South Africa. Seeds and plants presented by I. B. Pole Evans, Chief, Division of Plant Industry, Department of Agriculture, Pretoria. Received July 9, 1934.

105933. *CYNODON* sp.

Plants of a cold-resistant variety collected at nearly 6,000 feet altitude in the high country around Johannesburg.

105934. *CYNODON* sp.

Plants collected near Vereening, at nearly 3,000 feet altitude.

105935. *CYNODON* sp.

Seed from the Rietondale Pasture Station, Pretoria.

105936 to 105943.

From the Union of South Africa. Seeds presented by Ellis Thomas, School of Agriculture, Grooifontein, Middleburg Cape. Received July 9, 1934.

A collection of plants native to South Africa, introduced for Department specialists.

105936. *ATRIPLEX HORTENSIS* L. Chenopodiaceae. **Garden orach.**
Vaalbrak.

105937. *EURYOPS MULTIFIDUS* (Thunb.) DC. Asteraceae.

A stout bush a foot or more high, with linear-filiform leaves one-half to 1½ inches long and numerous small yellow flower heads on slender stems an inch long.

105938. *PEGOLETTIA* sp. Asteraceae.

Members of this genus are small, rigid, shrubby plants with yellow flower heads.

105939. *PENTZIA SPHAEROCEPHALA* DC. Asteraceae.

A rigid twiggy shrub with long erect branches and trifid leaves an inch or more long with linear lobes. The yellow flower heads are half an inch across.

105936 to 105943—Continued.

105940. *PHYMASPERMUM PARVIFOLIUM* (DC.) Benth. and Hook. Asteraceae.

A rigid, much-branched shrub, 1 to 2 feet high, with thinly silky tufted linear leaves up to an inch long and chrysanthemumlike flowers having reddish or yellow disk flowers and white rays. It is said to be a valuable pasture plant for sheep.

For previous introduction see 93291.

105941. *SALSOLA GLABRESCENS* Burtt-Davy. Chenopodiaceae.

A dwarf shrub 1 to 3 feet high, with very small ovate or triangular, spirally arranged leaves and inconspicuous flowers.

105942. *TETRAGONIA ARBUSCULA* Fenzl. Alizoaceae.

A much-branched, semishrubby perennial with fleshy leaves less than 1 inch long, varying from linear to ovate-oblong. The small inconspicuous flowers are borne in leafy racemes and are followed by 3- to 4-winged nutlike fruits.

For previous introduction see 91238.

105943. *TRIPTERIS PACHYPTERIS* Harv. Asteraceae.

A bushy shrub 1 to 3 feet high, with alternate linear leaves, entire or 3-toothed, and numerous small flower heads.

105944. *SACCHARUM OFFICINARUM* L. Poaceae. **Sugarcane.**

From the Dominican Republic. Cuttings presented by James C. Scarffe, San Pedro de Macoris. Received July 14, 1934.

Porvenir-30. An erect vigorous variety which becomes 7 to 9 feet high. It matures in 5 months, is fairly drought resistant, and has never been seen with mosaic.

Introduced for the use of Department specialists working with sugarcane.

105945 to 105949. *IPOMOEA BATATAS* (L.) Lam. Convolvulaceae. **Sweetpotato.**

¹It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Plant Exploration and 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 seed samples or 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 identification, 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

105945 to 105949—Continued.

From the Union of Soviet Socialist Republics. Tubers presented by V. P. Alekseev, Chief, Foreign Plant Introduction, Leningrad. Received July 19 and 23, 1934.

A collection of tubers grown at the Institute of Applied Botany, Sukhum; introduced for the use of Department specialists.

105945. N-85. A creamy white, yellow-fleshed variety with moist flesh of excellent quality. The large tubers are short, smooth, of very good and regular shape.

105946. N-172.

105947. N-82. A heavy-yielding yellow-skinned, orange-fleshed variety of exceedingly high quality with a honey sweetness and aroma.

105948. N-67. 105949. N-25.

105950 to 105954. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

From Colombia. Seeds presented by the Director, Ministerio de Agricultura y Comercio, Bogotá. Received July 9, 1934.

A collection of native tobacco types introduced for the use of Department specialists.

105950. [No data.]

105951.

105952.

105953. *Burley* variety.

105954. No. 12.

105955. INODES CAUSIARUM O. F. Cook. Phoenicaceae.

From Puerto Rico. Seeds presented by T. B. McClelland, Director, Agricultural Experiment Station, Mayaguez. Received July 6, 1934.

A palm which becomes 50 feet high, with a white trunk 2 feet in diameter and palmately divided leaves about 12 feet wide. Most of the palm-leaf hats made in Puerto Rico are from the leaves of this palm. This species of palm has proved hardy in Florida and deserves a wide distribution because of its striking beauty when young as well as when old.

For previous introduction see 96489.

105956. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

From Peru. Seeds presented by Ing. J. A. Ocampo, Director, Granja Escuela del Cuzco, Keaira. Received July 10, 1934.

A native tobacco with pink flowers, found at 10,000 feet altitude in the vicinity of Cuzco.

105957 to 105959. CITRUS spp. Rutaceae.

From Palestine. Budsticks presented by S. H. Holzman, Rehovoth. Received July 16, 1934.

105957. CITRUS MEDICA L. Citron.

Yemen citron. Apart from its importance for religious purposes, this citron is sweet and has a very pleasant flavor.

105958. CITRUS SINENSIS (L.) Osbeck. Orange.

Avana.

105959. CITRUS SINENSIS (L.) Osbeck. Orange.

Avana blood.

105960 and 105961. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

From Brazil. Seeds presented by the Ministerio da Agricultura, Industria e Comercio, Campo de Sementes Bragantina, Tracuateua. Received July 6, 1934.

Locally grown strains introduced for the use of Department specialists.

105960. NICOTIANA TABACUM L.

Americano tracuateua.

105961. NICOTIANA TABACUM L.

S. Gaugolo.

105962. RUBECKIA HIRTA L. Asteraceae. Black-eyed-susan.

From Texas. Seeds purchased from C. F. Wagner, Houston. Received July 2, 1934. Introduced for genetical studies.

105963 to 106016. HIBISCUS ROSA-SINENSIS L. Malvaceae. Chinese hibiscus.

From Puerto Rico. Cuttings presented by H. Atherton Lee, Director, Agricultural Experiment Station, Mayaguez. Received July 20, 1934.

105963. *A g n e s* 105987. *Wilhelmina Tenny*.

105964. *A g n e s* 105988. *Yellow*.

Gault No. 2. 105989. *729*.

105965. *Cristine*. 105990. *1142*.

105966. *Common* 105991. *1234*.

P. R. 105992. *1422*.

105967. *Dr. Britton*. 105993. *1423*.

105968. *Flame*. 105994. *1481*.

105969. *Florence* 105995. *1485*.

McClelland. 105996. *1443*.

105970. *Frances* 105997. *1447*.

Horne. 105998. *1537*.

105971. *H. No. 11*. 105999. *1645*.

105972. *H. 233. 1*. 106000. *1735*.

105973. *H. 205. 2*. 103001. *1845*.

105974. *Heylman*. 106002. *1929*.

105975. *J e a n* 106003. *1946*.

Whittemore. 106004. *2029*.

105976. *Katherine* 106005. *2030*.

Garrett. 106006. *2108*.

105977. *Lily*. 106007. *2130*.

105978. *Lily* × 106008. *2228*.

M. M. 106009. *2230*.

105979. *Marvin*. 106010. *2232*.

105980. *Mary* 106011. *2413*.

McClelland. 106012. *2631*.

105981. *Minnie* 106013. *2673*.

Troutman. 106014. *2968*.

105982. *P. 1*. 106015. *2971*.

105983. *P. 2*. 106016. *3160*.

105984. *P. 11*.

105985. *Pink Wolf's*

Lair.

105986. *St. Thom-*

as Yellow.

106017. IPOMOEA BATATAS (L.) Lam. Convolvulaceae. Sweetpotato.

From Australia. Roots presented by H. Wenholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received July 21, 1934.

Hawaii. From the Grafton Experiment Farm.

106018. ICHTHYOMETHIA PISCIPULA (L.)
Hitche. Fabaceae.

From the Virgin Islands. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received July 18, 1934.

An attractive leguminous shade tree which becomes 50 feet high, with a spreading habit and large pinnate leaves. The large racemes of pale-pink flowers appear before the leaves and somewhat resemble those of the black locust.

For previous introduction see 99336.

106019. PRUNUS SARGENTII Rehder.
Amygdalaceae. Sargent cherry.

From Jamaica Plain, Mass. Seeds presented by the Arnold Arboretum. Received July 23, 1934.

A tall handsome tree, native to northern Japan, up to 75 feet high, with smooth, dark-brown bark and ovate or ovate-lanceolate sharply serrate leaves from 1 to 5 inches long. The single pink flowers, up to 1½ inches wide, are in few-flowered clusters, and the black fruits are about the size of peas.

For previous introduction see 93847.

106020. BRACHYPODIUM PINNATUM (L.)
Beauv. Poaceae. Grass.

From Italy. Seeds presented by Dr. Mario Calvino, San Remo. Received July 18, 1934.

A perennial grass which is used for grazing and for hay in Italy.

For previous introduction see 89820.

106021 to 106024. IRIS spp. Iridaceae.

From Turkey. Roots presented by Harold T. Pence, American Mission, Gaziantep. Received July 25, 1934.

106021. IRIS HISTRIOIDES Foster.

A bulbous iris of the Xiphium section, native to Asia Minor, with one or two leaves that appear with or after the flowers. The flowers, over 4 inches across, are vivid blue except for the triangular white patch on the upper part of the falls.

106022. IRIS SUSIANA L.

An *Oncocycclus* iris, with narrowly sword-shaped leaves 6 to 9 inches long and one or two flowers veined and dotted with brown black on a brownish-white ground. Native to Asia Minor and Iran.

106023. IRIS PERSICA L.

A short-stemmed iris of the section *Juno*, native to the mountainous regions of Asia Minor. The four to five linear-complicate leaves are barely 2 to 3 inches long at flowering time, becoming a foot long ultimately. The flowers are pale lilac with a dark-purple blotch at the top of the falls, an orange keel, and purple lines and spots.

106024. IRIS LUPINA Foster.

An *Oncocycclus* iris with a fleshy, creeping rhizome and about six erect narrow leaves 9 inches or more high. The stem, 6 inches high, bears a single flower with falls and standards greenish yellow marked with brownish-red veins. Native to Asia Minor.

106025. (Undetermined.)

From Burma. Seeds presented by Winfield H. Scott, American consul, Rangoon. Received July 23, 1935.

Received as *Cycas siamensis*, but the seeds appear to be of some leguminous plant allied to *Dalbergia*.

106026 to 106053. TRITICUM AESTIVUM
L. Poaceae. Common wheat.

From Australia. Seeds presented by H. Wenzholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received July 27, 1934.

A collection of wheat crosses, grown at the Experiment Farms Cowra and Wagga, New South Wales, and introduced for the use of Department specialists.

106026. Bowmen × *Federation*. C. 8738.
From Cowra.**106027. Canberra** × *Hard Federation seln*
× *Clarendon*. C. 4329. From Wagga.**106028. Canberra** × *Hard Federation seln*
× *Clarendon*. C. 5902. From Wagga.**106029. Federation** × *Dart's Imperial*. C.
5503. From Cowra.**106030. Federation** × *Dart's Imperial*. C.
5831. From Wagga.**106031. Federation** × *Galgalos*. C. 5699.
From Cowra.**106032. Federation** × *Hope* × *Federation*.
C. 9736. From Cowra.**106033. Federation** × *Hope* × *Federation*.
C. 9737. From Cowra.**106034. Federation** × *Khaphi*. C. 4919.
From Wagga.**106035. (Federation × Nabawa)** 6. C.
9366. From Cowra.**106036. (Galgalos × Bena × Federation)**.
C. 9802. From Cowra.**106037. (Galgalos × Federation × Aus-**
sia) 5. C. 10-1-2.**106038. (Galgalos × Federation × Aus-**
sia). C. 10-1-1.**106039. (Galgalos × Federation × Aus-**
sia). C. 10-7-1.**106040. (Galgalos × Federation × Aus-**
sia). C. 10-7-2.**106041. (Galgalos × Federation × Fed-**
eration). C. 9745. From Cowra.**106042. Hard Federation** × *Mudgee Mill-*
ing Co. C. 5891. From Wagga.**106043. Hard Federation** × *Mudgee Mill-*
ing Co. × Sands. C. 5839. From
Wagga.**106044. Hard Federation seln** × *Claren-*
don. C. 9079. From Wagga.**106045. Hard Federation seln** × *Claren-*
don. C. 9084. From Wagga.**106046. Hard Federation** × *Wandilla*. C.
9790. From Cowra.**106047. Nabawa** × *Federation*. C. 9863.
From Cowra.**106048. (Nabawa × Federation × Mar-**
tin × Sonora × Sonora) 5. From
Cowra.**106049. (Riverina × Federation)** 5. From
Cowra.**106050. Wandilla** × *Hard Federation*. C.
4377. From Cowra.**106051. Wandilla** × *Hard Federation*. C.
4377. From Wagga.**106052. Wandilla** × *Hard Federation*. C.
5903. From Wagga.**106053. Wandilla** × *Hard Federation*. C.
5903. From Cowra.

106054. ALLIUM sp. Liliaceae.

From Spain. Seeds presented by Miguel Echeagaray, agricultural attaché, Spanish legation, Washington, D. C. Received July 25, 1934.

Bambosa. A very early maturing Spanish onion.

106055 to 106072.

From the Union of South Africa. Trees purchased from H. E. V. Pickstone & Bro., Simondium, Cape of Good Hope. Received July 30, 1934.

106055 to 106063. AMYGDALUS PERSICA L. Amygdalaceae. Peach.

106055. *Constantia.*

106056. *Rimer.*

106057. *Schoongezicht.*

106058. *White Parvie.*

106059. *Briggs Red May.*

106060. *Van Rensburg.*

106061. *Brook.*

106062. *Killiekrankie.*

106063. *Shackleford.*

106064. AMYGDALUS PERSICA NECTARINA
Ait. Amygdalaceae. Nectarine.

Albert.

106065 and 106066. MALUS SYLVESTRIS
Mill. Malaceae. Apple.

106065. *Granny Smith.*

106066. *Versfeld's.*

106067 and 106068. PRUNUS ARMENIACA L.
Amygdalaceae. Apricot.

106067. *Early Cape.*

106068. *Old Cape.*

106069 to 106072. PYRUS COMMUNIS L.
Malaceae. Common pear.

106069. *Sweet Safraan.*

106070. *December.*

106071. *Tongres.*

106072. *Winter Safraan.*

106073 to 106100.

From the Union of South Africa. Seeds presented by the McGregor Museum, Kimberley. Received July 18, 1934.

106073 to 106075. ALOE spp. Liliaceae.

106073. ALOE PRETORIENSIS Pole Evans.

An aloe with dense rosettes of tapering leaves, usually withered at the red tips, and a stoutish stem 4 to 5 inches in diameter. The dark-brown to black stem is extremely rough and clothed throughout its entire length by the remains of withered leafstalks. The most distinctive feature of the plant is its tall branched inflorescence with dense racemes of bright-scarlet flowers.

For previous introduction see 103101.

106074. ALOE sp.

106075. ALOE sp.

106076. ARCTOTIS STOCHADIFOLIA Berzius.
Asteraceae.

A bushy composite from the Cape of Good Hope, which has long hairy branches with whitish hairy leaves and large showy orange-colored flower heads.

For previous introduction see 64169.

106073 to 106100—Continued.

106077. STAPELIA sp. Asclepiadaceae.

106078. CELTIS RHAMNIFOLIA Presl.
Ulmaceae.

A tree about 20 feet high, with smooth, gray bark, ovate, abruptly acuminate leathery leaves, and inconspicuous flowers. Native to South Africa.

106079. CERATOTHECA TRILOBA E. Mey.
Pedaliaceae.

An erect annual plant up to 6 feet high. The obtusely quadrangular stems are hairy, and the coarsely crenate leaves, 1 to 6 inches long, vary from broadly cordate and 3-lobed near the base to lanceolate and sparingly crenate at the top of the plant. The solitary axillary flowers, 2 to 3 inches long, are lilac streaked with purple, and the loosely pubescent capsules, an inch long, have two horns at the tip.

For previous introduction see 103104.

106080 to 106082. CLEMATIS spp. Ranunculaceae.

106080. CLEMATIS BRACHIATA Thunb.

A climbing vine, native to southern Africa, with bipinnately- or tripinnately-parted leaves having ovate-toothed leaflets. The fragrant white flowers, 1 to 2 inches across, are borne in elongated panicles and are followed by orbicular margined fruits with long feathery tails.

For previous introduction see 94239.

106081. CLEMATIS sp.

106082. CLEMATIS sp.

106083. CUCUMIS sp. Cucurbitaceae.

106084. DIGITARIA sp. Poaceae.

106085. PAPPOPHORUM CENCHROIDES Licht.
Poaceae. Grass.

A hairy, tufted, perennial grass, with stems 1 to 3 feet tall and narrow acuminate leaves 3 to 8 inches long. Native to the Union of South Africa. Received as *Enneapogon mollis*, now considered a synonym of this species.

106086 to 106090. ERAGROSTIS spp. Poaceae.

106086. ERAGROSTIS BRIZANTHA Nees.

An annual grass, native to sandy foothills in South Africa, with numerous stems and slender, flat, rigid leaves 1 to 2 inches long.

106087. ERAGROSTIS OBTUSA Munro.

A densely caespitose perennial grass, native to South Africa, with wiry stems 6 to 18 inches high and linear, long-pointed leaves 2 to 5 inches long.

106088. ERAGROSTIS POROSA Nees.

A grass native to South Africa.

106089. ERAGROSTIS SUPERBA Peyr.

An excellent native pasture grass, about 3 feet tall, with broad compressed spikelets.

For previous introduction see 60454.

106090. ERAGROSTIS sp.

106091. GAZANIA LONGISCAPA DC. Asteraceae.

A nearly stemless perennial, native to the Cape of Good Hope. The white-woolly leaves are lanceolate and entire or pinnatisect with linear-lanceolate lobes

106073 to 106100—Continued.

and are 4 to 5 inches long. The showy yellow flower heads are borne on stems a foot long.

106092. GREWIA CANA Sond. Tiliaceae.

Rozijntjes bos (raisin bush). A branching shrub up to 5 feet high, with yellow flowers and black fruits, found up to 4,000 feet altitude in South Africa. The small sweet fruits, each containing a large stone, are eaten by the natives.

For previous introduction see 27519.

106093. HEURNIOPSIS DECIPIENS N. E. Brown. Asclepiadaceae.

A low succulent plant with 4-angled procumbent branches up to 3 inches long and half as thick and bell-shaped purple flowers 1 inch across, in small cymes. Native to South Africa.

106094. HYPARRHENIA HIRTA (L.) Stapf. Poaceae.

A perennial grass about 3 feet high, native to tropical and northern Africa.

For previous introduction see 89832.

106095. RHIGOZUM BREVISPINOSUM Kuntze. Bignoniaceae.

An erect shiny shrub 4 to 10 feet high. The oblong to oblanceolate leaves, 1 to 2 inches long, are tomentose and clustered at the tips of the branchlets, and the campanulate-funnel-shaped yellow or white flowers are less than an inch long and are axillary or fascicled in the leaf clusters.

For previous introduction see 103105.

106096. RHUS sp. Anacardiaceae.

106097. SESAMUM CAPENSE Burm. f. Pedaliaceae.

An erect simple or branched herbaceous plant up to 6 feet high. The leaves are palmately divided into three to five ovate to linear leaflets 1 to 3 inches long, and the tubular violet flowers are 1 inch long with spreading lobes about an inch across. The plant can thrive in very dry situations where the annual rainfall is only 4 inches.

For previous introduction see 103106.

106098. SOLANUM sp. Solanaceae.

A plant with yellow, rather dry fruits, 1 inch in diameter.

106099. VENIDIUM FASTUOSUM (Jacq.) Stapf. Asteraceae.

A showy annual a foot or more high, with lanceolate or obovate irregularly lobed leaves 1 to 2 inches long and terminal solitary bright-orange flower heads up to 4 inches across. Native to South Africa.

106100. VERNONIA sp. Asteraceae.

106101 and 106102.

From the Philippine Islands. Seeds presented by Arthur F. Fischer, Director, Bureau of Forestry, Manila. Received July 26, 1934.

106101. EUPHORIA DIDYMA Blanco. Sapindaceae.

Alpay or *alupag*. A small attractive tree up to 50 feet high, with compound leaves made up of prominently veined leathery lanceolate leaflets and compact terminal clusters of small flowers followed by green warty fruits an inch in

106101 and 106102—Continued.

diameter having a shell-like rind and juicy sweet translucent pulp enclosing a large seed. Native to the Philippine Islands.

For previous introduction see 100648.

106102. NEPHELIUM MUTABILE Blume. Sapindaceae. **Pulasan.**

A small Malayan tree 30 feet high, with compound leaves composed of two to four pairs of oblong to elliptic, acuminate leaflets 5 to 10 inches long. The red fruit, commonly borne in small clusters, is about the size of a walnut, the pericarp is thick and covered with short blunt stout fleshy spines. The flesh (properly the aril) is translucent, whitish, and juicy and of sweet, slightly acidulous flavor. It contains a single large oblong seed.

For previous introduction see 60171.

106103. DIOSCOREA sp. Dioscoreaceae.

From Japan. Tubers intercepted at New York by inspectors of the Bureau of Plant Quarantine. Received August 6, 1934.

A small kidney-shaped white yam weighing about 8¼ ounces. To be grown for identification and to test its value as a food plant.

106104. PHOENIX RECLINATA Jacq. Phoenicaceae. **Senegal date palm.**

From Africa. Seeds collected by Prof. N. J. G. Smith, near Grahamstown, South Africa, and presented by John S. L. Gilmore, Royal Botanic Gardens, Kew. Received July 26, 1934.

A date palm 20 to 30 feet high, native to tropical and subtropical parts of Africa. The reclinate pinnate leaves are 6 to 9 feet long and have rigid green leaflets. The yellowish fruits with sweet edible pulp are half an inch long.

For previous introduction see 104217.

106105. NIEREMBERGIA FRUTESCENS Durien. Solanaceae. **Tall cupflower.**

From China. Seeds presented by the Director, Botanical Garden, Dr. Sun Yat-Sen's Memorial Park, Nanking. Received February 17, 1933. Numbered in July 1934.

A half-hardy perennial, usually self sowing, with slender flaxlike habit and masses of 2-inch, lavender-tinted white salver-shaped flowers produced freely from midsummer until frost. Native to Chile.

106106. ACACIA GIRAFFAE Willd. Mimosaceae.

From the Union of South Africa. Seeds presented by the McGregor Museum, Kimberley. Received July 25, 1934.

The *Kameel-doorn* of the Transvaal is a valuable tree for arid regions in the warm Temperate Zone. The ripe pods are eaten greedily by stock. The tree thrives in sandy soil, attains a large size, and the dark reddish-brown wood is used by the natives in making spoons, knife handles, etc.

For previous introduction see 94235.

106107 to 106109.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received July 25, 1934.

106107 to 106109—Continued.

106107. *CELTIS SWARTZII* Planch.

An unarmed tree 25 to 45 feet high, native to the West Indies, with ovate-lanceolate, acuminate, serrate leaves 1 to 3 inches long and purple fruits one-third of an inch in diameter.

106108. *DILLENIA BURBIDGEI* (Hook. f.) Gilg. Dilleniaceae.

A small ornamental tree from Borneo with large leaves and very showy bright-yellow flowers 2 inches across.

For previous introduction see 66213.

106109. *DIOSPYROS HALESIOIDES* Griseb. Diospyraceae.

A Cuban tree with elliptic acute leaves about 1 inch long, hairy on both surfaces, and depressed-globose fruits 1 inch in diameter.

106110. *GARCINIA MANGOSTANA* L. Clusiaceae. **Mangosteen.**

From the Canal Zone. Seeds presented by J. E. Higgins, Director, Canal Zone Experiment Gardens, Summit. Received August 8, 1934.

106111. *BORASSUS FLABELLIFER* L. Phoenicaceae. **Palmyra palm.**

From Brazil. Seeds presented by Dr. Thomas Barbour, Harvard University, through Dr. Afranio Amaral, Butantan, São Paulo. Received August 8, 1934.

A large handsome palm, 60 to 70 feet high, with an unarmed ringed trunk and fan-shaped leaves 8 to 10 feet long. It is native to the dry coastal regions of Ceylon, thrives well in alkaline soil, and is said to be useful as a sand binder.

For previous introduction see 98487.

106112 to 106119.

From the Territories of Ruanda-Urundi, Belgian Congo. Seeds presented by J. B. Lejeune, Director, Station Experimentale de Kisozi. Received August 3, 1934.

106112. *ACACIA* sp. Mimosaceae.106113. *CASSIA* sp. Caesalpiniaceae.

A small climbing shrub collected at 4,500 feet altitude in Urundi Territory.

106114 to 106116. *CROTALARIA* spp. Fabaceae.106114. *CROTALARIA* sp.106115. *CROTALARIA* sp.106116. *CROTALARIA* sp.106117. *ERIOSEMA MONTANUM* Baker. Fabaceae.

An erect perennial with trifoliolate leaves having ovate leaflets 1 to 2 inches long and axillary racemes of yellow flowers. Collected at 6,500 feet altitude in Urundi Territory. It is native to Ethiopia.

106118. *INDIGOFERA* sp. Fabaceae.

Collected at 6,500 feet altitude in Urundi Territory.

106119. *MEIBOMIA* sp. Fabaceae.

A semiwoody legume collected at 3,500 feet altitude in Urundi Territory.

106120 to 106141. *TRITICUM AESTIVUM* L. Poaceae. **Common wheat.**

From Australia. Seeds presented by Lindley Walker Wheat Co., Ltd., Sydney, New South Wales. Received August 7, 1934.

Samples of a collection of wheats exhibited at the Royal Agricultural Show, Sydney, in 1934.

106120. *Robin*. From Cowra, New South Wales. Weak flour.106121 to 106123. *Comeback* variety.

106121. From Carnamah, Western Australia. Strong white wheat.

106122. From Merridin, Western Australia. Best bushel, strong white wheat.

106123. From Grenfell, New South Wales. Best strong white wheat.

106124. *Commonwealth Champion* variety. From Cudal, New South Wales.106125 to 106127. *Dundee* variety.

106125. From West Wyalong, New South Wales. Medium strong flour wheat.

106126. From Grenfell, New South Wales.

106127. From Cudal, New South Wales. Best bushel of wheat.

106128. *Commonwealth Champion* variety. From Cudal, New South Wales. Medium strong white wheat.106129 to 106131. *Ford* variety.

106129. From Cudal, New South Wales. Medium strong white wheat.

106130. From Grenfell, New South Wales. Medium strong flour wheat.

106131. From Cootamundra, New South Wales. Best medium strong white wheat.

106132 to 106135. *Nabawa* variety.

106132. From Euchareena, New South Wales. Best weak flour wheat.

106133. From Euchareena, New South Wales. Best bushel of wheat.

106134. From Euchareena, New South Wales. White wheat other than strong or medium strong.

106135. From Goolgowi, New South Wales. Best bushel of wheat.

106136. *Petatz Surprise* variety. From Barmedman, New South Wales. Soft white wheat.106137. *Ranes* variety. From Mungeribar, New South Wales. Soft white wheat.106138 to 106141. *Waratah* variety.

106138. From Cowra, New South Wales. Best bushel of weak flour wheat.

106139. From Euchareena, New South Wales. Weak flour wheat.

106140. From Euchareena, New South Wales. Best bushel of white wheat other than strong or medium strong.

106141. From Euchareena, New South Wales. Weak flour wheat.

106142 to 106145.

From the Philippine Islands. Seeds presented by Arthur F. Fischer, Director, Bureau of Forestry, Manila. Received August 7, 1934.

106142 to 106145—Continued.

106142. *ADONIDIA MERRILLII* Beccari. **Palm.**
Phoenicaceae.

Bonga de China or *bonga de Jolo*. A medium-sized palm with graceful, somewhat curved pinnate leaves, resembling the common betel-nut palm, but not so tall. The crimson fruits, less than an inch long, are borne just below the leaves. In Manila this palm is grown as an ornamental.

For previous introduction see 103976.

106143. *CARYOTA CUMINGII* Lodd. **Phoenicaceae.**
Palm.

A palm, native to the Philippine Islands, with a tall stout spineless ringed trunk about 20 feet high crowned by a few spreading bipinnate leaves. The small globular fruits are purple.

For previous introduction see 103734.

106144. *LITCHI PHILIPPINENSIS* Radlk. **Sapindaceae.**

A Philippine relative of the lychee (*Litchi chinensis*). The tree is about 50 feet high, with dark green pinnate leaves similar to those of the lychee and roundish oblong fruits about 1 inch long borne in loose terminal clusters. The tough leather-like shell encloses a scant edible pulp in which is embedded a relatively large seed. This seed is roasted and eaten.

For previous introduction see 94064.

106145. *SAGUERUS PINNATUS* Wurm. **Sugar palm.**
Phoenicaceae.

A handsome palm 20 to 40 feet high, with about 25 immense pinnate leaves and enormous bunches of fruit, the individual fruits being the size of an apple. A rich-flavored palm sugar is made from the sap which flows from the bruised fruitstalk.

For previous introduction see 99632.

106146 to 106180. *TRITICUM AESTIVUM* L. **Common wheat.**
Poaceae.

From Australia. Seeds presented by H. Wenholz, Director of Plant Breeding, New South Wales Department of Agriculture, Sydney. Received August 17, 1934.

A collection of common wheats, chiefly red-grained segregates of crosses of American and Australian varieties; introduced for the use of Department specialists.

106146. *Barwang* × (*Pentad* × *Marquis*). G-100-0.

106147. *Clarendon* × (*H.44* × *Marquis*). G-13-0.

106148. *Dan* × (*H.44* × *Marquis*). G-4-0.

106149. *Dan* × (*Pentad* × *Marquis*). G-10-0.

106150 to 106152. *Dundee* × (*H.44* × *Marquis*).

106150. G-10-0.

106151. G-59-0.

106152. G-69-0.

106153. (*Euston* × *Hope*) × *Federation*. C-3-G-5-4-0.

106154. *Florence* × (*H.44* × *Marquis*). G-100-0.

106155. *Ford* × (*Pentad* × *Marquis*). G-12-0.

106156. *Ford* × (*Pentad* × *Marquis*). G-61-0.

106146 to 106180—Continued.

106157. (*Geeralying* × *Cleveland*) × *Hope*. G-88-8-0.

106158. (*Geeralying* × *Cleveland*) × *Hope*. G-88-10-0.

106159. *H.44* × *Marquis* × *Nabawa*. G-401-0.

106160 to 106162. *Hope* × *Currawa*.

106160. G-147-4-0.

106161. G-240-44-0.

106162. G-240-45-0.

106163 to 106166. *Hope* × (*Currawa* × *Dundee*).

106163. G-1-6-0.

106164. G-52-6-0.

106165. G-59-3-0.

106166. G-232-6-0.

106167 to 106169. *Hope* × *Waratah*.

106167. c5-G-5-0-0.

106168. c5-G-7-0-0.

106169. c2-G-9-13-0.

106170. *Hope* × *Yandilla King*. c2-G-1-2-0.

106171. *Hope* × *Yandilla King*. c2-G-1-8-0.

106172. *Kenya* × *Reward*. F₃. Unselected.

106173. *Lawson* × (*H.44* × *Marquis*). G-18-0.

106174. *Nabawa* × (*H.44* × *Marquis*). G-7-0.

106175. *Pentad* × *Marquis* × *Dundee*. G-90-0.

106176. *Pentad* × *Marquis* × *Hard Federation*. G-17-0.

106177. *Pusa 4* × (*H.44* × *Marquis*). G-1-0.

106178. *Pusa 4* × *Pentad* × *Marquis*. G-0-0.

106179. *Waratah* × *Hope*. G-32-7-0.

106180. *Waratah* × *Hope*. G-63-1-0.

106181 and 106182.

From the Union of South Africa. Seeds presented by the McGregor Museum, Kimberley. Received August 11, 1934.

106181. *ACACIA STOLONIFERA* Burchell. **Mimosaceae.**

A spiny shrub said to have underground stoloniferous stems. The bipinnate leaves have 3 to 7 pairs of pinnae, each bearing 7 to 15 pairs of oblong-lanceolate leaflets. The stipular spines, in pairs, are spreading and are white with recurved brown tips. The heads of fragrant whitish flowers are followed by straight yellow obliquely striate pods. It is native to southern Africa.

For previous introduction see 94237.

106182. *OTHONNOPSIS* sp. **Asteraceae.**

A shrubby composite with yellow flowers.

106183 to 106188. *TRITICUM AESTIVUM* L. **Common wheat.**
Poaceae.

From Australia. Seeds presented by H. Wenholz, Director of Plant Breeding, New

106183 to 106188—Continued.

South Wales Department of Agriculture, Sydney. Received August 17, 1934.

A collection of common wheats, chiefly red-grained segregates of crosses of American and Australian varieties; introduced for the use of Department specialists.

106183. *Currawa* × (*Dundee* × *Marquillo*). G-12-0.

106184 to 106186. (*Dundee* × *H.44*) × *Marquis*.

106184. G-46-0.

106185. G-71-0.

106186. G-400-0.

106187. *Hope* × (*Currawa* × *Dundee*). G-55-7-0.

106188. *Hope* × (*Currawa* × *Dundee*). G-319-33-0.

106189. TRIFOLIUM SUBTERRANEUM L. Fabaceae. Subterranean clover.

From Australia. Seeds presented by F. H. Brunning Pty. Ltd., Melbourne, Victoria. Received August 17, 1934.

Early Strain.

106190. AVENA SATIVA L. Poaceae. Oats.

From the West Indies. Seeds purchased on the island of Martinique by W. A. Archer, Bureau of Plant Industry. Received July 26, 1934.

No. 2231. A variety said to have been introduced from France.

106191. TRICHILIA EMETICA Vahl. Meliaceae.

From Africa. Seeds presented by Dr. Guidotti, head of the Department of Agriculture of Eritrea, through Dr. Leon Croizat, New York. Received August 16, 1934.

A tree, native to tropical Africa, with pinnately compound leaves of 7 to 11 leaflets, 3 to 6 inches long, clusters of greenish flowers, and globose fruits an inch in diameter. An oil used in cooking and for soap making is obtained from the seeds.

For previous introduction see 77216.

106192 to 106229. TRITICUM AESTIVUM L. Poaceae. Common wheat.

From Australia. Seeds presented by H. Wenholz, Director of Plant Breeding, New South Wales Department of Agriculture, Sydney. Received August 18, 1934.

A collection of common wheats, chiefly red-grained segregates of crosses from American and Australian varieties; introduced for the use of Department specialists.

106192 to 106197. *Clarendon* × *Hope*.

106192. G-11-0-2.

106193. G-11-0-3.

106194. G-37-0-1.

106195. G-37-0-2.

106196. G-295-0-0.

106197. G-316-0-0.

106198 to 106200. *Ford* × *Minturki*.

106198. G-0.

106199. G-1-0.

106192 to 106229—Continued.

106200. G-8-0.

106201 to 106203. *Geeralying* × *Cleveland* × *Hope*.

106201. G-88-0-4.

106202. G-124-15-0.

106203. G-223-7-0.

106204. *H.44* × *Marquis* × *Nabawa*. F₃.

106205. *H.44* × *Reward* × *Baringa*. F₃. Unselected.

106206. *H.44* × *Reward* × *Minflor*. F₃. Unselected.

106207. *Hope* × *Clarendon*. G-94-45-3.

106208 to 106213. *Hope* × *Currawa*.

106208. G-240-85-0.

106209. G-271-1-1.

106210. G-271-1-2.

106211. G-302-4-0.

106212. G-436-0-1.

106213. G-436-0-2.

106214. *Hope* × *Currawa* × *Dundee*. G-59-10-0.

106215. *Hope* × *Currawa* × *Dundee*. G-236-6-0.

106216. *Hope* × *Waratah*. G-29-14-0.

106217. *Kenya* × *Dundee* × *Florence*. F₃.

106218. *Kenya* × *Florence*. F₃. Selected.

106219. *Kenya* × *Florence* × *Dundee*. F₃.

106220. *Kenya* × *Ford*. F₃. Unselected.

106221. *Kenya* × *Pusa 4*. F₃. Unselected.

106222. *Nabawa* × *H.44* × *Marquis*. G-6-0.

106223. *Nabawa* × *H.44* × *Marquis*. G-32-0.

106224. *Pentad* × *Marquis* × *Hard Federation*. G-90-0.

106225 to 106229. *Waratah* × *Hope*.

106225. G-81-1-(L).

106226. G-85-5-(L).

106227. G-85-5-2.

106228. G-91-2-1.

106229. G-91-2-3.

106230 to 106248.

From New Zealand. Plants presented by H. R. Wright, Avondale, Auckland. Received August 21, 1934.

106230. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.

Gray seedling. An early, white-fleshed seedling of Elberta.

106231. *AMYGDALUS PERSICA* NECTARINA Ait. Amygdalaceae. Nectarine.

Riverhale. A 'white-fleshed cling, a cross between the *J. H. Hale* and the *John Rivers* nectarines.

106232. *AMYGDALUS PERSICA* NECTARINA Ait. Amygdalaceae. Nectarine.

Wright's orange nectarine. A second-generation seedling of *Paragon* peach × *Goldmine* nectarine.

106233 to 106236. *CITRUS LIMONIA* Osbeck. Rutaceae. Lemon.

106230 to 106248—Continued.

106233. *Doncaster*. A heavy-bearing Australian seedling.
106234. *Meyer cross*. A thornless cross between the *Lisbon* and the *Meyer* lemons.
106235. *Meyer thornless*. A thornless sport of the *Meyer* lemon.
106236. *Utility*. A sport of the *Sicily* lemon.
106237. DIOSPYROS sp. Diospyraceae.
Persimmon Charming. A persimmon of good quality.
106238. FRAGARIA sp. Rosaceae.
Strawberry.

Raspberry strawberry. Fruit of excellent quality.

106239. MALUS sp. Malaceae.
Bledisloe. A deep crimson crab apple, a cross between the *Delicious* apple and *Gorgeous* crab.

106240. MALUS SYLVESTRIS Mill. Malaceae.
Apple.
A *Delicious* seedling of excellent quality.

106241. MALUS sp. Malaceae.

Robert Nairn crab. Fruits small, orange yellow.

106242 to 106246. PRUNUS spp. Amygdalaceae.

106242. PRUNUS CERASIFERA Ehrh.
Bests Early. A very yellow cherry plum which can be cooked green.

106243. PRUNUS SALICINA × PISSARDI.
Haleardi. A heavy-bearing cross between the *Hale*, Japanese plum, and *Prunus cerasifera pissardi*.

106244. PRUNUS SALICINA Lindl.
Japanese plum.

Omega. A late-ripening, red-fleshed Japanese plum; the fruit keeps and ships well.

106245. PRUNUS SALICINA × CERASIFERA.
Lippiatt's Early. Japanese and cherry-plum cross.

106246. PRUNUS sp.
De Montford plum. A variety that bears well.

106247. PYRUS COMMUNIS L. Malaceae.
Common pear.

Bewre de Lindauer. Fruits large.

106248. PYRUS COMMUNIS L. Malaceae.
Common pear.

Laxton's Superb. A cross between the *Bartlett* and *Bewre* α .

106249 to 106251.

From British Guiana. Seeds presented by the Botanic Garden at Georgetown, through W. A. Archer, Bureau of Plant Industry. Received August 14, 1934.

106249. GUSTAVIA AUGUSTA L. Lecythidaceae.

No. 2348. A small evergreen tree, native to tropical America, which bears flowers 4 inches across, cream-white tinged with rose inside, and externally rose colored. The stamens form a circle in the

106249 to 106251—Continued.

center of the flower and are white at the base, with rosy filaments and yellow anthers.

For previous introduction see 98553.

106250. GUSTAVIA sp.
No. 2408. A small ornamental tree with showy yellow flowers.

106251. TALISIA sp. Sapindaceae.
No. 2378. *Mauraballi*. A tropical American tree with pinnate leaves and panicles of small flowers.

106252 and 106253. QUERCUS spp. Fagaceae.

From the Arboretum de Trang Bom, Cochinchina. Seeds collected by M. Poilane, Institut des Recherches Agronomiques de L'Indochine, Division de Botanique. Received August 21, 1934.

106252. QUERCUS sp.

106253. QUERCUS sp.

106254 to 106268.

From Palestine. Bulbs purchased from the American Colony Stores, Jerusalem. Received August 28, 1934.

106254 to 106257. IRIS spp. Iridaceae.

106254. IRIS AURANITICA Dinsm.

An iris of the section *Oncocyclus*, from the sandy regions in Palestine, with six nearly erect leaves 6 to 8 inches long and a bronze-yellow flower about 3 inches long, closely dotted with reddish brown.

106255. IRIS BASALTICA Dinsm.

A stout iris nearly 2 feet high, of the section *Oncocyclus*, with erect closely sheathing leaves a foot or more long and a flower with rounded falls and standards, closely veined and dotted with dark blue on a whitish ground. This has a taller stem and larger flowers than any other of the Palestine irises.

106256. IRIS BIGGERI Dinsm. *Bigger's iris*.

An *Oncocyclus* iris, about a foot high, with closely sheathing leaves 9 inches long. The large flower, 4 to 5 inches long, has reddish falls and whitish standards closely covered with purple veins. Native to rocky places in Palestine.

106257. IRIS GRANT-DUFFII Baker.

An iris of the section *Apogon*, found in swampy situations in Palestine. The stem is 6 inches high, while the narrow linear leaves are twice that height. The flower has greenish-yellow falls; the claw is veined with lilac on a yellowish-white ground.

106258. IRIS HAURANENSIS Dinsm.

An *Oncocyclus* iris with a compact rhizome and a stem 12 to 16 inches high. The erect narrow leaves, closely sheathing to the top, are about 5 inches long. The flower is white, so closely veined and dotted with dark purple that the ground color is almost entirely hidden. Native to Palestine.

106259. IRIS HELENÆ Barbey.

A slender-stemmed iris of the section *Oncocyclus*, with falcate leaves 3 to 4 inches long and a pale-lilac flower with fine red-brown veins. Native to the desert regions between Palestine and Egypt.

106254 to 106263—Continued.

106260. IRIS HERMONA Dinsm.

An iris, section *Oncocyclus*, with eight partly evergreen leaves a foot long that appear very early. The large flower, often 6 inches across, has falls veined with lilac and spotted pink on a creamy ground and standards thickly lined with faint purple on a white ground. Native to rocky places in Palestine.

106261. IRIS KASRUWANA Dinsm.

An iris of the section *Oncocyclus*, a foot or more high, with about eight acute leaves 6 to 8 inches long. The falls are dotted and veined with embossed dark-purple spots on a whitish ground, and the standards are minutely dotted and lined with purple on a white ground. Native to the mountains of Palestine.

106262. IRIS MELANOSTICTA Bornm.

An Apogon iris, native to Syria, with a caespitose-branching rhizome, leaves up to 32 inches long, and 1-flowered stems 6 inches high. The yellow falls are veined and spotted with black violet, and the standards are pale yellow. This iris resembles *Iris grant-duffii*, but it grows in drier soil and the flowers are spotted and appear much later.

106263. IRIS NAZARENA Dinsm.

An *Oncocyclus* iris from Palestine with a short rhizome, very long stolons, and a stout stem 12 to 20 inches high. The eight spreading, fanlike leaves are 9 to 16 inches long, and the large flower is often 6 inches wide. The falls are covered with embossed red-brown spots on a creamy ground, and the standards are heavily marked with blue veins and purple dots on a white ground.

106264. IRIS PALAESTINA (Baker) Boiss.

A winter-flowering Juno iris closely related to *Iris caucasica*, with falcate leaves 3 to 9 inches long and a very short stem bearing one to three flowers. These are pale yellow tinged with lilac, the outer segments are oblong with auriculate claws, and the narrowly lanceolate inner segments are very minute. Native to Palestine.

For previous introduction see 80869.

106265. IRIS SAMARIAE Dinsm.

Samaria iris.

An *Oncocyclus* iris from rocky hillsides in Palestine with a stout stem 12 to 16 inches high, leafy throughout. The 3 to 13 nearly erect, fan-shaped leaves are 8 to 16 inches long. The flower, about 5 inches in diameter, is purple lined and dotted on a creamy ground.

106266. IRIS VARTANI Foster.

The two slender leaves of this iris, of the section *Xiphium*, are 8 to 9 inches long, and the stem is very short. The solitary flower has slaty-lilac outer segments, while the inner ones, erect and narrow, are pale lilac. Native to Palestine.

106267. IRIS WESTII Dinsm.

A short-stemmed *Oncocyclus* iris, often with two stems and six gray-green, slightly falcate leaves 6 to 8 inches long. The large flower, resembling that of *Iris hermona*, has creamy-white falls covered closely with purple dots and pale-lilac standards covered with lilac-blue veins. Native to Palestine.

106254 to 106263—Continued.

106263. STERNBERGIA CLUSIANA Ker-Gawl. Amaryllidaceae.

A low-growing plant, native to Asia Minor, with short, 1-flowered stems. The pale-yellow, funnel-shaped flowers, about an inch long, are produced in the fall, and the narrow linear leaves, 3 to 4 inches long, appear in the spring.

106269 to 106273.

From China. Seeds collected at Patung, Western Hupeh, and presented by H. H. Chung, National Wu-Han University, Wu-chang, Hupeh. Received August 22, 1934.

106269. BETULA sp. Betulaceae. Birch.

106270. ELAEAGNUS sp. Elaeagnaceae.

106271. OSMANTHUS sp. Oleaceae.

106272. PRUNUS sp. Amygdalaceae.

106273. SALIX sp. Salicaceae. Willow.

106274. ELEOCHARIS TUBEROSA (Roxb.) Schult. Cyperaceae. Waternut.

From China. Tubers presented by G. Weidman Groff, Lingnan University, Canton. Received August 31, 1934.

Variety *Ma Tai*. A Chinese vegetable which grows very much in the same manner as wet-land rice. The corms or tuberous rhizomes are mostly eaten raw, but are also sliced or shredded in soups and in meat and rice dishes. The plants, which are grown on muck or clay soil, need a hot summer to mature.

For previous introduction see 102620.

106275 to 106294. SACCHARUM OFFICINARUM L. Poaceae. Sugarcane.

From Hawaii. Cuttings presented by the experiment station, Hawaiian Sugar Planters' Association, Honolulu. Received August 27, 1934.

Introduced for the use of Department specialists.

106275. Akoki. Station No. 22.

106276. Iioopua. Station No. 29.

106277. Kea. Station No. 31.

106278. Maikoiko.

106279. Manahu. Station No. 40.

106280. Moano. Station No. 48.

106281. Ohia. Station No. 1.

106282. Pakaweli. Station No. 2.

106283. Pilimai. Station No. 60.

106284. Uala. Station No. 61.

106285. Ulukui. Station No. 67.

106286. Station No. 6.

106287. Station No. 24.

106288. Station No. 26.

106289. Station No. 36.

106290. Station No. 38.

106291. Station No. 39.

106292. Station No. 41.

106293. Station No. 43.

106294. Station No. 71.

106295 to 106310. TRITICUM AESTIVUM
L. Poaceae. Common wheat.

From Australia. Seeds presented by H. Wenholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received August 28, 1934.

A collection of wheat crosses from the Wagga Experiment Farm, which have Federation as one of the parents and which mature somewhat later than Federation.

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| 106295. <i>Aussie.</i> G-6659. | 106303. <i>Gresley.</i> C-6489. |
| 106296. <i>Bena.</i> C-6662. | 106304. <i>Major.</i> C-2579. |
| 106297. <i>Canberra.</i> C-6665. | 106305. <i>Nizam.</i> C-6680. |
| 106298. <i>Canimbla.</i> C-3199. | 106306. <i>Ranee.</i> C-6683. |
| 106299. <i>Duchessa.</i> C-3569. | 106307. <i>Riverina.</i> C-6685. |
| 106300. <i>Dundee.</i> C-3949. | 106308. <i>Sepoy.</i> C-9146. |
| 106301. <i>Duri.</i> C-6485. | 106309. <i>Union.</i> C-6687. |
| 106302. <i>Ghurka.</i> C-9302. | 106310. <i>Wandilla.</i> C-6688. |

106311 to 106314. LONCHOCARPUS spp.
Fabaceae.

From British Guiana. Cuttings collected in the Botanic Garden, Georgetown, by W. A. Archer, Bureau of Plant Industry. Received August 14, 1934.

- 106311.** LONCHOCARPUS sp.
No. 2339. *Black Haiari.*
- 106312 and 106313.** LONCHOCARPUS NICOU (Aubl.) DC.

A woody vine climbing to the tops of trees, with alternate compound leaves made up of about seven sharp-pointed leaflets and axillary spikes of pea-shaped purple flowers. It is native to the Guianas and Peru.

For previous introduction see 97923.

- 106312.** No. 2415. *White Haiari.*
- 106313.** No. 2416. *Black Haiari.*
- 106314.** LONCHOCARPUS sp.
No. 2418. *White Haiari.*

106315 to 106326. TRITICUM AESTIVUM
L. Poaceae. Common wheat.

From Australia. Seeds grown at the Wagga Experiment Farm, Bomen, New South Wales, and presented by H. Wenholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received August 30, 1934.

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| 106315. <i>Boomey.</i> C-9304. |
| 106316. <i>Bundar.</i> C-5835. |
| 106317. <i>Clarendon.</i> C-6667. |
| 106318. <i>Cookapoi.</i> C-3494. |
| 106319. <i>Dan.</i> C-3851. |
| 106320. <i>Gullen.</i> C-2895. |
| 106321. <i>Mallan.</i> C-4889. |
| 106322. <i>Morley.</i> C-5211. |
| 106323. <i>Stockman.</i> C-5854. |
| 106324. <i>Tuella.</i> C-4199. |

106315 to 106326—Continued.

- 106325.** *Yetna.* C-3693.
- 106326.** *Zealand.* C-190.

106327 to 106331.

From Australia. Seeds presented by C. A. Gardner, Government botanist, Department of Agriculture, Perth, Western Australia. Received August 25, 1934.

106327. CALOTHAMNUS GILESII F. Muell.
Myrtaceae.

A graceful evergreen shrub with linear terete leaves and loose lateral clusters of reddish flowers. Native to Australia.

For previous introduction see 77277.

106328. CONOSPERMUM BRACTEOSUM Meisn.
Proteaceae.

An undershrub with usually simple stems 1 to 2 feet high and petioled basal leaves having nearly orbicular blades 1 inch long. The stem leaves are bractlike, closely appressed, and only half an inch long. The flexuose spikes, 2 to 3 inches long, are in the axils of the upper leaves and bear small white or violet flowers densely covered with silky white hairs. It is native to Western Australia.

For previous introduction see 93835.

106329. HIBISCUS HUGELII Endl. Malvaceae.

A tall shrub, native to Australia, with 3- to 5-lobed coarsely toothed leaves 1 to 3 inches long and large violet-purple flowers.

For previous introduction see 95327.

106330. LEPTOSPERMUM SPINESCENS Endl.
Myrtaceae.

A low spiny evergreen shrub with very small lanceolate leaves one-fourth of an inch long and small solitary axillary white flowers. Native to southwestern Australia.

106331. PILEANTHUS PEDUNCULARIS Endl.
Myrtaceae.

A low shrub with opposite fleshy semiterete leaves crowded at the ends of the branches and small purplish flowers in the leaf axils.

106332 to 106343. EUCALYPTUS spp.
Myrtaceae.

From Australia. Seeds presented by F. H. Baker, Richmond, Victoria. Received August 25, 1934.

106332. EUCALYPTUS AMYGDALINA Labill.
Almond eucalyptus.

Peppermint gum. An Australian tree up to 300 feet high, with lanceolate leaves 4 inches long, crowded umbels of small flowers, and hemispheric fruits one-fourth of an inch broad. The leaves have a strong odor of peppermint and are rich in oil.

For previous introduction see 93228.

106333. EUCALYPTUS CALOPHYLLA Lindl.

Variety *Rosea*. A form with pink flowers.

106334. EUCALYPTUS CORYMBOSA J. E. Smith.

A medium-sized evergreen tree, native to Australia, with leathery lanceolate leaves and large corymbs of fragrant yellowish-white flowers.

106332 to 106343—Continued.

For previous introduction see 80066.

106335. EUCALYPTUS DIVERSICOLOR F. Muell. Karri gum.

A tall tree, up to 350 feet in height, native to Western Australia, straight in habit and a fairly rapid grower. The very dense and elastic wood is considered superior timber, being used by wheelwrights and for shipbuilding. The tree prefers a moist climate and is quite frost resistant, but it does not endure dry heat.

For previous introduction see 48988.

106336. EUCALYPTUS DIVES Schauer.

A small tree up to 12 feet in height, native to New South Wales. The large cordate leaves are opposite, but tend to become alternate toward the tips of the branches. The flowers are borne in dense axillary umbels.

For previous introduction see 75624.

106337. EUCALYPTUS ERYTHROCORYS F. Muell.

Usually a shrub 8 to 10 feet high, but sometimes a tree up to 30 feet. The broadly linear rigid leaves are 6 inches long, and the large flowers, in axillary clusters, have bright red fleshy caps over the buds and the long stamens are yellow. The ribbed, hemispherical fruits are 1 to 2 inches long. It is native to Western Australia.

For previous introduction see 93837.

106338. EUCALYPTUS GIGANTEA Hook. f.

A large tree often 300 feet high and 30 feet in diameter, with white bark and smooth glaucous branchlets. The ovate-lanceolate leaves are 4 to 6 inches long, and the small flowers, numerous in dense heads, are followed by spherical fruits. It is native to Australia.

For previous introduction see 90695.

106339. EUCALYPTUS LEHMANNI (Schauer) Preiss. Lehmann gum.

A large shrub or small tree, with rough reddish bark peeling off in irregular sheets. The greenish-yellow flowers open from July to September. Native to Western Australia.

For previous introduction see 104167.

106340. EUCALYPTUS MARGINATA J. E. Smith.

An Australian shrub or small tree, often clear of branches for two-thirds of its height. The hard durable wood is used for timber, piles, and railway ties. The tree will grow in a great variety of soils, but prefers moist, well-drained situations.

For previous introduction see 86402.

106341. EUCALYPTUS MICROCORYS F. Muell.

A tall tree with persistent wrinkled bark, thin broadly lanceolate leaves, and small white flowers. The yellowish timber is especially useful for ballroom floors because of its greasy nature. Native to Australia.

106342. EUCALYPTUS PREISSIANA Schau.

A shrubby eucalyptus about 8 feet high, with rigid branchlets, shining green, oblong-elliptic leaves nearly 4 inches long, and small yellowish flowers in axillary clusters. Native to southern Australia.

For previous introduction see 104171.

106332 to 106343—Continued.

106343. EUCALYPTUS PYRIFORMIS Turcz.

Red Mallet. A shrub or small tree, found in Western and southern Australia, where it attains a height of 8 to 10 feet. The very thick narrow leaves are rarely more than 3 inches long, and the large flowers are red when fresh. The yellowish-white timber is hard, heavy, and durable.

For previous introduction see 48997.

106344 to 106363.

From British Guiana. Material collected by W. A. Archer, Bureau of Plant Industry. Received August 27, 1934.

Unless otherwise mentioned, the following were introduced as seeds.

106344. ANACARDIUM GIGANTEUM Hance. Anacardiaceae.

No. 2324. A tropical tree with alternate, obovate, thick leaves about 5 inches long and small, kidney-shaped fruits. Native to Brazil.

106345. ANANAS SATIVUS Schult. f. Bromeliaceae. Pineapple.

No. 2353. Seedling of the *Montserrat* pineapple.

106346. CACOUCIA COCCINEA Aubl. Combretaceae.

No. 2373. A woody climber that reaches the tops of the tallest trees in British Guiana. The rigid ovate alternate leaves are long-acuminate, and the showy red flowers are in long terminal spikes.

106347. CARAPA GUIANENSIS Aubl. Meliaceae. Crabwood tree.

No. 2406. *Andiroba*, meaning "bitter oil." A quick-growing tree which becomes 60 feet high, with compound leaves 18 inches long, small axillary flowers, and thick-shelled russet-brown fruits about 3 inches in diameter containing two to six chestnutlike seeds. The bitter oil expressed from the seeds is used by the natives, who rub it into their skin to protect themselves from noxious insects; it is also made into a varnish or lacquer for iron objects, protecting them from rust.

For previous introduction see 44711.

106348. CLEOME POLYGAMA L. Capparidaceae.

No. 2414. An annual about 2 feet high, with compound leaves composed of three lanceolate leaflets 1 to 4 inches long and white or pale-rose flowers an inch long. Native to the West Indies.

106349. COMBRETUM sp. Combretaceae.

No. 2404. The combretums are woody climbers with racemes or spikes of small flowers which are sometimes very showy.

106350 to 106352. TEPHROSIA TOXICARIA Pers. Fabaceae.

A leguminous shrub up to 7 feet high, with leaves made up of nine or more leaflets and racemes of white and pink flowers. It is used as a cover crop.

For previous introduction see 101188.

106350. No. 2315.

106351. No. 2423.

106352. No. 2409.

106344 to 106363—Continued.

106353. CRINUM sp. Amaryllidaceae.

No. 2372.

106354. GUSTAVIA AUGUSTA L. Lecythidaceae.

No. 2399.

For previous introduction and description see 106249

106355. HIPPEASTRUM sp. Amaryllidaceae.

No. 2410. Bulbs.

106356. IPOMOEA TILIACEA (Will.) Choisy. Convolvulaceae.

No. 2306. *Casire*. Tubers of a perennial vine 6 feet or more long, with thin ovate-cordate leaves 2 to 3 inches long and purple, pink, or nearly white flowers about 2 inches long. Native to tropical America.

106357. LONCHOCARPUS sp. Fabaceae.

No. 2420. *Ebecoro*. Cuttings.

106358. PAULLINIA PINNATA L. Sapindaceae.

No. 2350. A strong-growing vine that climbs 30 to 40 feet to the tops of trees. The bright red fruits, the size of cherries, are borne in racemes 6 inches or more in length.

For previous introduction see 99001.

106359. SECURIDACA CORIACEA Bonpl. Polygalaceae.

No. 2349. A woody vine with alternate ovate emarginate leaves and pinkish flowers in lax panicles. Native to British Guiana.

106360. BANISTERIOPSIS LEPTOCARPA (Benth.) R. O. Williams. Malpighiaceae.

No. 2396. A climbing shrub with ovate leaves 3 to 4 inches long and yellow flowers in dense panicles. Native to British Guiana.

106361. SERJANIA MEMBRANACEA Splitg. Sapindaceae.

No. 2319. A tropical woody vine with alternate compound leaves and small white or yellowish flowers in axillary racemes. Native to Surinam.

106362. TALISIA sp. Sapindaceae.

No. 2378. *Mauraballi*.

106363. (Undetermined.)

No. 2410. Small bulb.

106364. CITRUS AURANTIFOLIA (Christm.) Swingle. Rutaceae.

Lime.

From Brazil. Budwood obtained at Estação Pomicultura, Deodoro, and presented by Harold Comper, American consulate, Rio de Janeiro. Received September 4, 1934.

Locally known as *limão cravo*, *limão rosa*, and *limão francez*. When young it makes a vigorous growth, but it is a short-lived tree.

106365 to 106369.

From India. Seeds presented by Dr. Walter Koelz, University of Michigan, Ann Arbor, Mich. Received September 5, 1934.

106365. AQUILEGIA sp. Ranunculaceae.

From Guntung, Purog, Kashmir, July 1933. A columbine with large, exquisitely scented, pale-blue flowers.

106365 to 106369—Continued.

106366. CITRUS sp. Rutaceae.

From Singapore. A very sweet Mandarin orange, 2½ inches in diameter, with orange-red skin.

106367. CITRUS sp. Rutaceae.

From Ceylon. A green-skinned orange 3 inches in diameter, with a fair flavor, but the inner skin is very tough.

106368. CUCUMIS MELO L. Cucurbitaceae. Muskmelon.

Sharbat amar (sirup pomegranate). Purchased at Kamaloporam, between Bombay and Madras, March 1934. A melon the size of a grapefruit, with a very fine flavor.

106369. CUCUMIS MELO L. Cucurbitaceae. Muskmelon.

From Poona, India, March 1934. A large yellow melon.

106370 to 106377.

From British Guiana. Collected by W. A. Archer, Bureau of Plant Industry. Received September 14, 1934.

106370. CARYOCAR NUCIFERUM L. Caryocaraceae. Sawarri tree.

No. 2337. A lofty tree, eventually 100 feet high, with trifoliate leaves and large purple flowers with very numerous white stamens. The large fruit, several inches in diameter, contains two to four flat kidney-shaped nuts with edible white almond-like meat. Native to British Guiana. (Seeds.)

106371. ANTONIA OVATA Pohl. Loganiaceae.

No. 2488. Plants of a tropical shrub, with thick leathery, oval-elliptic, dark-green leaves and small white flowers in large terminal cymes. It is native to Brazil.

106372. ASPIDOSPERMA EXCELSUM Benth. Apocynaceae.

No. 2483. *Garuru*. Plants of a handsome tree, with leathery elliptic leaves, shining green above and 4 to 6 inches long, and large yellow flowers. Native to sandy places in British Guiana.

106373. BAUHINIA sp. Caesalpinaceae.

No. 2476. Plants.

106374. JACARANDA COPAIA D. Don. Bignonaceae.

No. 2492. Seedlings of a large handsome tree 60 to 80 feet high, with opposite bipinnate leaves 1 to 2 feet long and sky-blue flowers in large terminal panicles. Native to British Guiana.

106375. CONOMORPHA MAGNOLIFOLIA Mez. Myrsinaceae.

No. 2437. *Teterumaballi*. Seedlings collected near Mazaruni Station of a tropical shrub with leathery, elliptic leaves up to 8 inches long and lax racemes of inconspicuous flowers.

Native to Surinam and British Guiana.

106376 and 106377. SERJANIA PAUCIDENTATA DC. Sapindaceae.

Seedlings of *Abaho*. A woody vine with biternate leaves, the leaflets oval, attenuate, and coarsely dentate at the apex. Native to French Guiana.

106376. No. 2445. From Kanw Creek, near Mazaruni Forest Station, August 11, 1934.

106377. No. 2462. Near Mazaruni Forest Station September 15, 1934.

106378. LUPINUS sp. Fabaceae.

From France. Seeds presented by Dr. J. Dufrenoy, Station de Pathologie Vegetale, Pont de la Maye, Gironde. Received September 4, 1934.

A hardy perennial, grown in the Pyrenees, but originally from Liberia.

106379. BAUHINIA TOMENTOSA L. Caesalpiniaceae. St. Thomas tree.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received September 5, 1934.

An erect shrub or small tree which has obtusely lobed leathery leaves, broader than long, and few-flowered clusters of pure yellow flowers. It is native to India.

For previous introduction see 98802.

106380. TARCHONANTHUS MINOR Less. Asteraceae.

From the Union of South Africa. Seeds presented by the McGregor Museum, Kimberley. Received September 10, 1934.

A strongly resin-scented shrub, native to southern Africa, with oblong to obovate, entire leaves up to 2 inches long and short racemes of small woolly flower heads. It is said to be a good stock feed and to be drought resistant.

For previous introduction see 98012.

106381 to 106386.

From India. Seeds presented by the forest botanist, Forest Research Institute, Dehra Dun, United Provinces. Received September 11, 1934.

106381. ALBUCA VIRIDIFLORA Jacq. Liliaceae.

A South African bulbous plant with six to nine linear-subulate, channeled, hairy leaves a foot long and green yellow-margined flowers in a lax raceme on a scape as long as the leaves.

106382. LAGERSTROEMIA FLORIBUNDA Jack. Lythraceae.

A handsome tropical tree, native to Malaya, with ovate-oblong acute leaves and very numerous pale-rose flowers in much-branched terminal panicles. Larger in all parts than *Lagerstroemia indica*.

106383. LAGERSTROEMIA TOMENTOSA Presl. Lythraceae.

A tall tropical tree 70 to 100 feet high, with elliptic-lanceolate leaves 3 to 6 inches long, hairy beneath, and purple flowers in axillary and terminal panicles. Native to Burma. Much larger than *Lagerstroemia indica*, but with less showy flowers.

106384. MUSA ARNOLDIANA Wildem. Musaceae.

A tropical banana relative about 12 feet high, with leaves 7 feet long and fruits 4 inches long.

For previous introduction see 75282.

106385. URGINEA INDICA (Roxb.) Kunth. Liliaceae.

A bulbous perennial 12 to 18 inches high, native to India and tropical America. The flower scape, appearing before the linear leaves, bears a raceme 6 to 12 inches long of drooping campanulate flowers an inch long, greenish white with green nerves.

106381 to 106386—Continued.

For previous introduction see 103630.

106386. ZEPHYRANTHES CITRINA Baker. Amaryllidaceae. Zephyrily.

A bulbous plant, unknown except in cultivation, with linear bright-green leaves a foot long and bright-yellow, red, or white flowers over an inch long on scapes about 5 inches high.

For previous introduction see 68125.

106387 and 106388. TRITICUM AESTIVUM L. Poaceae. Common wheat.

From Argentina. Seeds presented by the Director, Chacra Experimental de Alto de Sierra, San Juan. Received August 20, 1934.

106387. Alto de Sierra, 01-4.

106388. Alto de Sierra, 01-10-d4.

106389. QUERCUS sp. Fagaceae.

From Nanking, China. Seeds collected in Kwangsi Province by A. N. Steward and H. C. Cho, University of Nanking. Received April 28, 1934. Numbered in September 1934.

F. 84. *Li Shu*. Collected October 23, 1933, at 1,000 feet altitude at Ta Tseh Tsuen, Yung Hsien. A tree with ovate fruits an inch long and almost as wide.

106390 to 106414. SOLANUM TUBEROSUM L. Solanaceae. Potato.

From Peru. Tubers presented by the Estación Experimental Agrícola, La Molina, Lima. Received September 8, 1934.

A collection of potatoes introduced for the use of Department specialists.

106390. *Alalayso.* **106403.** *Huaccoto.*

106391. *Alemana.* **106404.** *Isolde.*

106392. *Alemana.* **106405.** *Largas.*

106393. *Amarilla.* **106406.** *Lazapa.*

106394. *Apaluqui.* **106407.** *Lloronas.*

106395. *Apparo.* **106408.** *Paltacac.*

106396. *Ayqui.* **106409.** *Redondal.*

106397. *Canahuiri.* **106410.** *Rocas.*

106398. *Ccanchalli.* **106411.** *T a b a r d i l l o .*

106399. *Ccolla.* **106412.** *Ucururi.*

106400. *Chataas Negras.* **106413.** *Y a n a Chilca.*

106401. *Cochama (Choquepito).* **106414.** [Without notes.]

106402. *Cuzqueña.*

106415. ZEA MAYS L. Poaceae. Corn.

From Sumatra. Seeds sent by Rev. Hagnar Alm, Tandjong, Balei, and intercepted by the plant quarantine office in New York. Received September 12, 1934.

106416 to 106444. Poaceae. Grass.

From Arizona. Seeds collected by R. E. Burton, Santa Cruz, Calif. Received September 5, 1934.

Collected for Department specialists.

106416. AGROPYRON PAUCIFLORUM (Schwein.) Hitchc.

Water Lily Canyon, July 30, 1934.

106416 to 106444—Continued.

106417. *AGROSTIS EXARATA* Trin.
Water Lily Canyon, July 1934.
106418. *AGROSTIS EXARATA* Trin.
Sego Canyon, July 1934.
106419. *AGROSTIS VERTICILLATA* Vill.
Water Lily Canyon, July 31, 1934.
106420. *AGROSTIS VERTICILLATA* Vill.
Water Lily Canyon, July 20, 1934.
106421. *BOUTELOUA CURTIPENDULA* (Michx.) Torr.
Water Lily Canyon, July 2, 1934.
106422. *BOUTELOUA GRACILIS* (H. B. K.) Lag.
Sego Canyon, July 10, 1934.
106423. *BROMUS LAEVIPIES* Shear.
Water Lily Canyon, July 24, 1934.
- 106424 and 106425. *BROMUS MARGINATUS* Nees.
A perennial grass of some value for grazing, growing on alluvial soils under dry conditions.
For previous introduction see 24633.
106424. Water Lily Canyon.
106425. Sego Canyon between 6,800 and 7,500 feet altitude, July 10, 1934.
106426. *BROMUS MOLLIS* L.
Water Lily Canyon, July 16, 1934.
106427. *BROMUS TECTORUM GLABRATUS* Spenner.
Water Lily Canyon, July 21, 1934.
106428. *ELYMUS SALINA* Jones.
From the top of Skeleton Mesa, July 10, 1934.
106429. *ELYMUS SALINA* Jones.
Sego Canyon, July 15, 1934.
106430. *FESTUCA OCTOFLORA* Walt.
Water Lily Canyon, June 25, 1934.
106431. *MUHLENBERGIA POLYCAULIS* Scribn.
Water Lily Canyon, June 23, 1934.
106432. *MUHLENBERGIA PUNGENS* Thurb.
106433. *MUHLENBERGIA* sp.
Sego Canyon, August 5, 1934.
- 106434 and 106435. *ORYZOPSIS HYMENOIDES* (Roem. and Schult.) Ricker.
A deep-rooted, drought-resistant perennial grass found on steep alluvial banks. It is a good grazing grass, and the Indians used the seed as food.
106434. Water Lily Canyon, July 20, 1934.
106435. Sego Canyon, July 5 and 6, 1934.
106436. *ORYZOPSIS MICRANTHA* (Trin. and Rupr.) Thurb.
Water Lily Canyon, July 1, 1934. A rare grass in this region, found growing in the shade of oak trees.
106437. *PANICUM BULBOSUM* H. B. K.
Sego Canyon, August 3, 1934. A bulbous-rooted caespitose Mexican grass, with erect stems 3 to 4 feet high and narrow long-pointed leaves.
For previous introduction see 59354.

106416 to 106444—Continued.

- 106438 and 106439. *PANICUM LONGILIGULATUM* Nash.
A perennial grass with a good root system; it tolerates some shade and is food for grazing.
106438. Water Lily Canyon, June 25, 1934.
106439. Sego Canyon between 6,500 and 8,000 feet altitude, July 5, 1934.
106440. *POLYPOGON MONSPELIENSIS* (L.) Desf.
Keet Seel, July 28, 1934. An annual grass found on the Pacific coast, with soft bristly, green or yellowish spikes up to 6 inches long.
For previous introduction see 53067.
106441. *SPHENOPHOLIS OBTUSATA* (Michx.) Scribn.
From the top of Skeleton Mesa at 8,000 feet altitude.
106442. *SPOROBOLUS CRYPTANDRUS* (Torr.) A. Gray.
Sego Canyon, July 25, 1934.
106443. *STIPA COMATA* Trin. and Rupr.
Sego Canyon, July 10, 1934, and Water Lily Canyon, July 13, 1934.
106444. *STIPA SPECIOSA* Trin. and Rupr.
Water Lily Canyon, July 18, 1934.
106445. *IRIARTEA* sp. Phoenicaceae.
Palm.
From British Guiana. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received August 27, 1934.
No. 2371. *Bobo* palm. The iriarteas are tall spineless palms with cylindrical or swollen trunks rising from pyramids of exposed roots, and with rather few unequally pinnate leaves. Native to tropical South America.
106446. *STIFFITIA CHRYSANTHA* Mikan. Asteraceae.
From Cape Town, Union of South Africa. Seeds presented by Dr. Thomas Barbour, Harvard University. Received September 4, 1934.
A shrub or small tree with alternate, ovate-lanceolate, entire leaves 3 to 5 inches long and golden-yellow flower heads about 3 inches across. Native to Brazil.
106447. *PHOENIX ROBUSTA* Hook. f. Phoenicaceae.
Palm.
From India. Seeds collected in the Godaveri district, Madras Presidency, and presented by the Royal Botanic Gardens, Kew, England. Received August 27, 1934.
A palm 15 to 20 feet high the trunk of which is clothed with the sheaths of the fallen leaves. The pinnate leaves, 3 feet long, have rigid fasciated leaflets. Native to Behar, British India.
106448. *PASSIFLORA MOLLISSIMA* (H. B. K.) Bailey. Passifloraceae.
From Colombia. Seeds presented by Eduardo Hernandez, Pijao, Department of Caldas. Received September 17, 1934.
A climbing plant which produces ovate pointed yellow acid fruits of excellent quality.
For previous introduction see 100701.

106449 to 106451.

From Colombia. Seeds presented by M. J. Rivero, Estación Agrícola Experimental, Palmira, Departamento del Valle del Cauca. Received September 13, 1934.

106449. GUILIELMA SP. Phoeniceaceae.
Palm.

A palm, native to the Valle del Cauca, which is more ornamental than *Guilielma utilis*.

106450. JUGLANS HONOREI Dode. Juglandaceae.

A wild walnut, native to the highlands of northern South America, which resembles closely the black walnut of the United States. The thick-shelled nut contains a kernel of mild pleasant flavor.

For previous introduction see 73394.

106451. PASSIFLORA MANICATA Pers. Passifloraceae.

An ornamental vine, native to Colombia, with red flowers which are followed by green fruits about 3 inches long. The seeds are smaller and the pulp is not so highly flavored as in some of the other varieties.

For previous introduction see 51567.

106452 to 106461.

From Ruanda-Urundi, Belgian Congo, Africa. Seeds presented by J. B. Lejeune, Director, Station Experimentale de Kisozi. Received September 15, 1934.

106452. CASSIA SP. Caesalpiniaceae.

106453. TEPHROSIA, SP. Fabaceae.

Collected in Urundi District.

106454. TEPHROSIA SP. Fabaceae.

Collected in Ruanda District.

106455. CROTALARIA SP. Fabaceae.

Collected in Urundi District.

106456. CROTALARIA SP. Fabaceae.

Collected in Urundi District.

106457. ERIOSEMA SP. Fabaceae.

Received under the name *Eriosema lejeunei*.

106458. MEIBOMIA LASIOCARPA (Beauv.) Kuntze. Fabaceae.

Collected in the Belgian Congo.

For previous introduction see 103618.

106459. DESMODIUM SALICIFOLIUM DC. Fabaceae.

A bushy shrub with lanceolate-oblong leaflets and flowers in terminal panicles. Native to the East Indies.

106460. VIGNA SP. Fabaceae.

Collected in Urundi District.

106461. (Undetermined.)

A perennial leguminous plant collected in Urundi District.

106462 to 106466.

From the Union of Soviet Socialist Republics. Bulbs presented by the Institute of Subtropical Cultures, Sukhum, Transcaucasia, through the Institute of Plant Industry, Leningrad. Received September 14, 1934.

106462. ARUM ELONGATUM Stev. Araceae.

An arum from Asia Minor, about a foot high, with brownish, broadly hastate-

106462 to 106466—Continued.

sagittate leaves. The spathe tube is oblong ovoid, white within, with the limb intense black purple.

106463. COLCHICUM UMBROSUM Stev. Melanthiaceae. Autumn crocus.

A low bulbous plant, native to the Caucasus, with about five narrow leaves and small clusters of lilac flowers.

For previous introduction see 67014.

106464. CROCUS SCHAROJANI Rupr. Iridaceae.

A crocus with a very small globose bulb. In the Caucasus region, where it is native, the leaves appear in the spring and remain until the bright-yellow flowers appear the latter part of July and August. The throat of the corolla is yellowish white, the anthers are pale yellow, and the style branches are orange red.

For previous introduction see 90616.

106465. ORNITHOGALUM BALANSAE Boiss. Liliaceae.

A low bulbous plant with two or three linear leaves 3 to 4 inches long and small white flowers in a small dense raceme, on a scape about as long as the leaves. Native to Armenia.

106466. SCILLA WINOGRADOWII Sosn. Liliaceae.

A squill from the Caucasus with one to three pale-blue suberect flowers more than three-fifths of an inch long. The leaves are oblong-linear or linear lanceolate.

106467 to 106482.

From central Australia. Seeds collected by Dr. T. G. Strehlow, University of Adelaide, Adelaide. Received September 14, 1934.

A collection of native Australian plants.

106467. BRACHIARIA GILESII (Benth.) Chase. Poaceae.

Naljara. Collected in the MacDonnell Ranges. A perennial grass with long leafy stolons and short firm leaves. The flowering culms, erect or ascending, are 6 to 18 inches high, and the edible seeds are eaten by the natives.

106468. CHLORIS VIRGATA Swartz. Poaceae. Feather fingergrass.

Collected at Alice Springs. A fine grazing grass.

106469. DACTYLOCTENIUM AEGYPTIUM (L.) Richter (*Eleusine aegyptiaca* Desf.). Poaceae.

Collected at Alice Springs. A tropical prostrate annual grass which forms mats by rooting at the nodes.

For previous introduction see 73115.

106470. ERAGROSTIS SP. Poaceae.

Collected at Alice Springs. A very nutritious fodder.

106471. ERYTHRINA SP. Fabaceae.

Collected north of Alice Springs, in the northern part of central Australia. *Intina*, or bean tree. The red seeds of this tree are used as ornaments by the natives, and the wood is used in the manufacture of shields and putchis (vessels) of all kinds. The beanwood is very light, one of the few soft woods found in central Australia.

106467 to 106482—Continued.

106472. *HIBISCUS* sp. Malvaceae.*Rose*. From the river banks near Alice Springs.106473. *MIDA ACUMINATA* (R. Br.) Kuntze. Santalaceae. **Quandong.***Pambala*, a native tree from the sand-hill country southwest of Alice Springs. An evergreen tree up to 30 feet high, with long narrow leaves which are eaten by sheep and cattle in times of drought. The inconspicuous flowers are in terminal clusters and are followed by red fruits 1 to 2 inches in diameter. The fleshy part of the fruit is used for jelly, and the kernel of the nut, besides being edible, contains an oil which may be burned for illumination.

For previous introduction see 77021.

106474. *NAGEIA* sp. Taxaceae.*Aragwia*. A native "plum" collected in the MacDonnell Ranges.106475. *PANICUM* sp. Poaceae. **Grass.***Ntenbera*. A grass with edible seeds, collected in the MacDonnell Ranges.106476. *PAPPOPHORUM AVENACEUM* Lindl. Poaceae. **Grass.**

An erect tufted perennial grass with whitish spikelike panicles.

106477. *PORTULACA* sp. Portulacaceae.*Manyeroo*. Collected in the MacDonnell Ranges. An herb with edible leaves which are used as a salad.106478. *SPOROBOLUS PALLIDUS* Lindl. Poaceae. **Grass.**

Collected in the MacDonnell Range. A caespitose grass with narrow leaves 6 to 12 inches high and a very loose panicle 3 to 5 inches long and broad.

106479. *STURTIA GOSSYPIOIDES* R. Br. Malvaceae.*Mountain Rose*. Collected in the Krichauff Ranges. A large shrub closely related to cotton (*Gossypium* spp.), with broadly oval, stiff leaves up to 2 inches long and large purple flowers.

For previous introduction see 90739.

106480. *XANTHORRHOEA* sp. Liliaceae.

Collected in the sand hills west of Hermansburg.

106481. (Undetermined.)

Uratnaya. Collected on the alluvial flats near Alice Springs.

106482. (Undetermined.)

Mbultjisa. A native "orange" from the MacDonnell Ranges.

106483 to 106498.

From British Guiana. Material collected by W. A. Archer, Bureau of Plant Industry. Received September 10, 1934.

Unless otherwise mentioned, the following were introduced as seeds.

106483. *ANANAS SATIVUS* Schult. f. Bromeliaceae. **Pineapple.**

No. 2451. Cuttings.

106484. *BAUHINIA* sp. Caesalpinaceae.

No. 2443. Cuttings.

106483 to 106498—Continued.

106485. *BYRSONIMA ALTISSIMA* (Aubl.) DC. Malpigiaceae.*Arakadako*. No. 2467. A tree 60 to 80 feet high, with ovate-oblong leaves, rough hairy beneath, and racemes of white flowers. Native to British Guiana.106486. *BYRSONIMA RUGOSA* Benth. Malpigiaceae.*Canoaballi*. No. 2440. A scandent shrub with obovate rugose leaves 5 to 7 inches long and yellow flowers in racemes 6 inches long. Native to British Guiana.106487. *CASSIA ALATA* L. Caesalpinaceae.

No. 2424. An erect shrub 5 to 10 feet high, with pinnate leaves up to 2 feet long and showy yellow flowers. Native to tropical America.

For previous introduction see 88426.

106488. *CLATHROTROPIS BRACHYPETALA* (Tul.) Kleinh. Fabaceae.No. 2452. *Arumatta*. A shrub or small tree with unequally pinnate leaves, the leaflets leathery, broadly elliptic oblong, 5 to 7 inches long, and small flowers in spreading racemes. Native to Surinam.106489. *HIPPEASTRUM SOLANDRIFLORUM* Herb. Amaryllidaceae.

No. 2448. Mazaruni Station, August 12, 1934. Bulbs of a plant 1½ feet high, with strap-shaped leaves 1 inch broad and an umbel of two to four flowers; these are 7 to 10 inches long, white with pink stripes. Native to northern South America.

106490. *EUPHORBIA COTINOIDES* Miq. Euphorbiaceae.

No. 2446. Cuttings of a cultivated shrub with red leaves.

106491. *LONCHOCARPUS RARIFLORUS* Mart. Fabaceae.

No. 2444. Cuttings of a woody plant, native to northern Brazil, with leathery ovate leaflets and rosy purple flowers about one-half inch long, in elongated racemes often over a foot long.

106492. *PITHECOLLOBIUM TRAPEZIFOLIUM* Benth. Mimosaceae.No. 2466. *Huruwasa*. A tropical tree, native to French Guiana, with compound leaves made up of two to four pairs of leaflets, each with five to nine pinnules. The flower heads are solitary in the axils.106493 to 160495. *SERJANIA PAUCIDENTATA* DC. Sapindaceae.106493. No. 2430. *Abaho*.

106494. No. 2445. Cuttings.

106495. No. 2462. *White Abaho*.106496. *SOLANUM LEUCOCARPON* Dun. Solanaceae.

No. 2470. A twiggy shrub with small paired leaves, one orbicular and the other one-third as large and lanceolate. The large white flowers are in cymes, and the round berries are shining white. Native to northern South America.

106497 and 106498. *CONOMORPHA MAGNOLIFOLIA* Mez. Myrsinaceae.

For previous introduction and description see 106375.

106497. No. 2437. Near Mazaruni Forest Station, August 10, 1934.

106498. [No Archer number.]

106499. CARICA PAPAYA L. Papayaceae. Papaya.

From California. Seeds presented by James Stewart, La Habra Heights. Received September 20, 1934.

A fine-flavored South African papaya, pollinized by a plant from the Sandwich Islands.

106500. LICANIA RIGIDA Benth. Rosaceae.

From Ceará, Brazil. Seeds collected by H. A. Gardner and presented by the Institute of Paint and Varnish Research, Washington, D. C., through the Bureau of Chemistry and Soils. Received September 26, 1934.

A large tropical tree of the Brazilian forests, with rigid leathery oblong leaves 3 to 5 inches long and shining green above. The greenish, ovoid-cylindrical fruits, about 2 inches long, yield an oil known as Oiticica oil, that is used in the paint and varnish industry.

106501. CARICA CANDAMARCENSIS Hook. f. Papayaceae.

From Chile. Seeds purchased through Arthur W. Burrows, American consular agent, Coquimbo. Received October 10, 1934.

A small papaya $3\frac{1}{2}$ by $4\frac{1}{2}$ inches, with very thin flesh which is highly acid and is used only in making preserves and sirups. The fruit is yellow when ripe with a spicy aromatic flavor and fragrance, but is never eaten fresh.

106502 to 106505.

From Brazil. Seeds presented by J. I. Case Co., through Reginald S. Castleman, American consul, Porto Alegre. Received September 20, 1934.

106502. ORYZA SATIVA L. Poaceae. Rice.

Santa Maria. A new type of rice developed near Rio Pardo, State of Rio Grande do Sul, which develops abnormally large ears and is a heavy yielder.

106503 to 106505. TRITICUM AESTIVUM L. Poaceae. Common wheat.

Rust-immune wheat developed in Rio Grande do Sul.

106503. *Fronteira.*

106504. *Fronoso.*

106505. *Surpreza.*

106506. CARAPA GUIANENSIS Aubl. Meliaceae.

From Brazil. Seeds collected in the Jardim Botânico, Rio de Janeiro, by H. A. Gardner and presented by G. S. Jamieson, Bureau of Chemistry and Soils. Received September 27, 1934.

For previous introduction and description see 106347.

106507. KIGELIA PINNATA (Jacq.) DC. Bignoniaceae.

From East Africa. Seeds collected by Mrs. Thomas Barbour on the road between Ressano Garcia and Lourenço Marques, Mozambique. Received September 24, 1934.

The "sausage tree" of eastern tropical Africa becomes 30 to 50 feet high, with

106507—Continued.

rough ternate leaves made up of seven to nine elliptic-oblong leaflets; the large claret-colored flowers are in long spikes, and the blunt sausagelike fruits are 12 to 18 inches long.

106508 and 106509. TRIFOLIUM SUBTERRANEUM L. Fabaceae. Subterranean clover.

From Australia. Seeds presented by F. H. Brunning Pty. Ltd., Melbourne. Received September 28, 1934.

106508. *Dwalganup.* An extra early strain.

106509. *Wenigup.* A late clover.

106510 to 106519.

From British Guiana. Material collected by W. A. Archer, Bureau of Plant Industry. Received September 13, 1934.

Unless otherwise mentioned the following were introduced as seeds.

106510. ANTONIA OVATA Pohl. Loganiaceae.

No. 2488. A tropical shrub with thick leathery oval-elliptic dark-green leaves and small white flowers in large terminal cymes. It is native to Brazil.

For the introduction of plants see 106371.

106511. ASPIDOSPERMA EXCELSUM Benth. Apocynaceae.

No. 2483. *Garuru.* A handsome tree with leathery elliptic leaves shining green above and 4 to 6 inches long and large yellow flowers. Native to sandy places in British Guiana.

For the introduction of plants see 106372.

106512. CAPSICUM ANNUUM L. Solanaceae. Common redpepper.

No. 2493. A cultivated variety.

106513. CARYOCAR GLABRUM Pers. Caryocaraceae.

No. 2490. Cuttings of a large tropical tree with opposite digitately 3- to 5-foliate leathery leaves, large greenish flowers, and hard-shelled nuts with white edible kernels. Native to northern South America.

106514. CASSIA BACILLARIS L. f. Caesalpinaceae.

No. 2478. Cuttings from a small tree of rather straggly habit with golden-yellow flowers in loose racemes.

For previous introduction see 97567.

106515. CITRULLUS VULGARIS Schrad. Cucurbitaceae.

No. 2491. A cultivated watermelon collected at Bartica, on the Essequiba River.

106516. CRINUM sp. Amaryllidaceae.

No. 2449. Bulbs of cultivated plants collected at Mazaruni Station.

106517. CRINUM sp. Amaryllidaceae.

No. 2450. Bulbs of cultivated plants.

106518. MAXIMILIANEA sp. Cochlospermaceae.

No. 2480. *Kanakuiballi.*

106510 to 106519—Continued.

106519. *CONOMORPHA MAGNOLIFOLIA* Mez. Myrsinaceae.

No. 2437. Cuttings. Near Mazaruni Forest Station August 10, 1934.

For previous introduction of seeds and a description see 106375.

106520 to 106535.

From Europe. Material collected by Edgar Anderson, Arnold Arboretum Balkan Expedition. Received September 18, 1934.

Unless otherwise mentioned, the following were introduced as seeds. All were collected in situations unusually far north for the particular species.

106520. *ACTAEA SPICATA* L. Ranunculaceae. Black baneberry.

No. 33. August 13, 1934. Rila Monastery, Bulgaria, at 4,500 feet altitude in gravelly loam. A herbaceous perennial 1 to 2 feet high, with racemes of deep-blue fruits in autumn.

For previous introduction see 81947.

106521. *CORONILLA VARIA* L. Fabaceae. Crownvetch.

No. 28. August 13, 1934. Rila Monastery, Bulgaria, at 4,200 feet altitude in stony soil. A prostrate or ascending perennial up to 4 feet high, with a thick rootstock, compound leaves, and pinkish flowers in dense umbels. It is native to central Europe.

For previous introduction see 104933.

106522. *CROCUS BANATICUS* Heuff. Iridaceae.

No. 63. Bulbs collected in Turda, Rumania. A Hungarian cocus with two or three linear-lanceolate leaves and short-stalked flowers, dark purple with several heart-shaped darker spots near the tips of the segments. The anthers are orange, a little longer than the white filaments, and the short orange-yellow style branches are somewhat fringed at the tips.

106523. *DIGITALIS AMBIGUA* Murr. Scrophulariaceae.

No. 51. August 18, 1934. Gabrovo Monastery, Bulgaria, at 3,000 feet altitude on a steep sunny slope in gravelly loam. A perennial or biennial 2 to 3 feet high, with sessile or clasping, ovate-lanceolate leaves and large flowers, yellowish marked with brown and 2 inches long. An unusually fine-flowered form. Native to Europe.

106524. *DIGITALIS VIRIDIFLORA* Lindl. Scrophulariaceae.

No. 27. August 13, 1934. Rila Monastery, Bulgaria, at 4,200 feet altitude, on a gentle slope in stony soil. An alpine, native to Greece, with hairy oblong dentate basal leaves, narrower above, and small yellowish-green flowers.

106525. *GERANIUM MACRORRHIZUM* L. Geraniaceae.

No. 32. August 13, 1934. Rila Monastery, Bulgaria, at 4,500 feet altitude. A large-rooted herbaceous perennial with a woody base and stems up to 2 feet high. The 3- to 5-lobed leaves are often colored red, and the blood-red flowers are in bunches at the end of the stems. Native to southern Europe.

For previous introduction see 91427.

106520 to 106535—Continued.

106526. *LUNARIA REDIVIVA* L. Brassicaceae.

No. 39. August 14, 1934. Bank of the na River, near the Rila Monastery, Bulgaria, at 4,200 feet altitude, in deep shade. A herbaceous perennial with large broadly cordate leaves, terminal racemes of gray-purple flowers, and large flat disk-shaped translucent fruits. Native to southern Europe.

106527. *PRIMULA VERIS SUAVEOLENS* Reichb. Primulaceae. Primrose.

No. 29. August 13, 1934. Rila Monastery, Bulgaria, at 4,200 feet altitude. A variety of the cowslip primrose with the calyx campanulate and the corolla almost flat. The cordate leaves are densely white tomentose beneath.

106528. *RHEUM RHAPONTICUM* L. Polygonaceae. Rhubarb.

No. 31. August 13, 1934. Ilenyi, Vrch-Rila, Bulgaria, at 6,000 feet altitude. Cultivated from wild plants by a monk at St. Luke's Shrine.

106529. *SAXIFRAGA ROTUNDFOLIA* L. Saxifragaceae.

No. 40. August 14, 1934. Banks of the Iliina River, near the Rila Monastery, Bulgaria, at 4,200 feet altitude, in deep shade. A herbaceous perennial 8 to 12 inches high, erect from a thickened rhizome, with thick, more or less hairy, roundish leaves and white flowers, spotted red or purple, in a branched panicle. Native to Europe.

106530. *SEMPERVIVUM BLANDUM* Schott. Crassulaceae.

From Turda, Rumania. Plants of an Austrian sempervivum with obovate, spatulate, pale gray-green leaves up to 2 inches long. The pink flowers, marked with a central stripe of bright carmine, are borne on a stem 7 to 10 inches high.

106531. *SOLDANELLA MONTANA* Willd. Primulaceae.

No. 30. August 13, 1934. Rila Monastery, Bulgaria, at 4,500 feet altitude. An alpine perennial up to 14 inches high with long-stemmed, roundish leaves, and violet flowers on slender scapes. Native to southeastern Europe.

106532. *THYMUS MOESIACUS* Velen. Menthaceae.

No. 41. August 13, 1934. Rila Monastery, Bulgaria, at 4,200 feet altitude. A Bulgarian thyme resembling *Thymus chamaedrys* in habit and size, with simple prostrate creeping stems and obovate-spatulate leaves.

106533. *THYMUS* sp. Menthaceae.

No. 12. August 9, 1934. Sofia, Bulgaria, at 2,000 feet altitude. A shrub found on a stony gravelly slope in the full sun.

106534. *VERBASCUM LYCHNITIS* L. Scrophulariaceae.

No. 25. August 13, 1934. Rila Monastery, Bulgaria, at 4,200 feet altitude. A tomentose biennial found in turf in full sun, with oblong-elliptic crenate leaves and panicles of small yellow flowers. Native to Europe and the Caucasus.

106535. *VERONICA URTICIFOLIA* Jacq. Scrophulariaceae.

No. 44. August 14, 1934. Found in gravelly loam in deep shade on the banks

106520 to 106535—Continued.

of the Iliña River, near the Rila Monastery, Bulgaria. A herbaceous perennial over a foot high, with narrowly ovate serrate rugose leaves and small pale-pink flowers in terminal racemes. Native to central Europe.

106536 to 106544.

From British Guiana. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received September 30, 1934.

106536. CENTROSEMA PLUMIERI (Turp.) Benth. Fabaceae.

No. 2499. From Georgetown. A tropical ornamental vine, native to Brazil, with white and red flowers. It is of value as a green manure.

For previous introduction see 99807.

106537. CLEOME SPECIOSISSIMA Deppe. Capparidaceae.

No. 2497. From Georgetown. A showy annual, native to Jalapa, Mexico, with digitately 5- to 7-foliolate leaves, and deep-pink flowers in a terminal raceme.

106538 and 106539. CLIBADIUM SURINAMENSE L. Asteraceae.

Collected in the Northwest district. A large bushy perennial 8 to 10 feet high, with broadly ovate leaves and small white flower heads in dense clusters.

106538. No. 2405. **106539.** No. 2407.

106540. DIOCLEA MACRANTHA Huber. Fabaceae.

No. 2495. Mazaruni Forest Station, August 23, 1934. A perennial, somewhat woody, tropical climber with trifoliolate leaves, the leaflets broadly ovate and about 2 inches long. The small flowers are in axillary racemes. Native to northern Brazil.

106541. FICUS sp. Moraceae.

No. 2485. Macouri Creek, August 21, 1934. *Kumakaballi*. A semi-climbing shrub with milky sap. Birds eat the small fruits.

106542. GUETTARDA ACREANA K. Krause. Rubiaceae.

No. 2496. Kamira Falls, Cyuuni River, August 1934. A shrub or small tree with ovate or oblong leaves 3 to 6 inches long, crowded toward the ends of the branches, and small greenish-yellow axillary flowers one-third of an inch long.

106543. SERJANIA PYRAMIDATA Radlt. Sapindaceae.

No. 2498. Mabaruma, Northwest district, August 24, 1934. A woody climber, native to northwestern South America, with biternate leaves having ovate-elliptic leaflets 4 inches long. The winged fruits are more than 1 inch long.

106544. (Undetermined.)

No. 2500. Georgetown Botanic Garden, August 6, 1934.

106545 to 106558.

From Africa. Seeds presented by Dr. Thomas Barbour, Harvard University, Cambridge, Mass. Received September 24, 1934.

106545. ACACIA sp. Mimosaceae.

An acacia with handsome flowers, from the low veldt in eastern Transvaal.

106545 to 106558—Continued.

106546. ACACIA sp. Mimosaceae.

From Skukusa, Kriega Park, eastern Transvaal.

106547. ALBIZZIA sp. Mimosaceae.

From the eastern Transvaal.

106548. ARISTOLOCHIA GLAZIOVII M a s t. Aristolochiaceae.

An attractive perennial climber, native to the state of Rio de Janeiro, Brazil. The glabrous leaves, about 4 inches long and 1½ to 2 inches in width, are pandurate and deeply cordate lobed at the base, with the obtuse-subquadrate lobes parallel, and the petiole about 1 inch long. The strongly scented, solitary, axillary flowers are unequally ventricose below, while above the purple-spotted limb is about 2 inches long.

106549. BARYXYLUM AFRICANUM (Sond.) Pierre. Caesalpinaceae.

From Letaba, eastern Transvaal. A handsome yellow-flowered tree with a habit like a mimosa, native to tropical and subtropical Africa. It becomes 20 to 30 feet high.

For previous introduction see 93578.

106550. COMBRETUM sp. Combretaceae.

From the Oliphant River, eastern Transvaal. A climbing shrub with red flowers.

106551. COPAIVA MOPANE (Kirk) Kuntze. Caesalpinaceae.

From Letaba, Krupel Park, eastern Transvaal. Native names: *Mopani*, *ilipani*, *mu vanga*, and *mu wani*. A large forest tree from tropical Africa that grows in a semiarid country where water may stand over the soil after heavy rains. The stiff compound leaves, 2 to 3 inches long, are deep shiny green, and the roundish flat pods look very much like the leaflets. The dark heavy wood is very durable and resists the attacks of termites.

For previous introduction see 61644.

106552. ENCEPHALARTOS sp. Cycadaceae.

From the Botanic Garden, Lourenço Marques, Mozambique. Tall palmlike plants with a terminal tuft of thick, spiny, pinnate leaves.

106553. LONCHOCARPUS sp. Fabaceae.

From Letaba, Krupel Park, eastern Transvaal. A fine shade tree.

106554. (Undetermined.)

From Grand Lac, near Majunga, Madagascar.

106555. (Undetermined.)

From Letaba, eastern Transvaal.

106556 to 106558. HYPHAENE spp. Phoenicaceae.

106556. HYPHAENE sp.

From Majunga, Madagascar. A tall silver-gray palm.

106557. HYPHAENE sp.

From Majunga, Madagascar. A tall silver-gray palm.

106558. HYPHAENE sp.

A wild palm collected at Grand Lac, near Majunga, Madagascar.

106559 and 106560.

From Alaska. Seeds presented by Thomas Berryman, Kotzebue, through Dr. Ales Hrdlička, Smithsonian Institution, Washington, D. C. Received September 27, 1934.

106559. IRIS SETOSA Pall. Iridaceae.

Arctic iris.

This was originally described as an Asiatic plant, but forms that cannot be separated from it are found in North America. At least half a dozen forms

106559 and 106560—Continued.

come true from seed. The peculiarity of this iris is that the standards are reduced to small points about one-half inch long. The color is usually bluish purple or lavender, but some shades are so light as to be almost gray.

For previous introduction see 91030.

106560. NYMPHAEA sp. Nymphaeaceae.

Arctic lily.

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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 121



Washington, D. C.

Issued July 1938

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, OCTOBER 1 TO DECEMBER 31, 1934 (Nos. 106561-107747)

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INTRODUCTORY STATEMENT

This inventory, No. 121, records the plant material (Nos. 106561-107747) received by the Division of Plant Exploration and Introduction during the period from October 1 to December 31, 1934. Much of this material may be credited to the agricultural exploring expeditions that were in the field, all of which were engaged in special projects for the Department.

Of the nearly 2,000 lots of seeds collected by Messrs. Westover and Enlow, a large proportion are from regions in Turkistan and Turkey where the low winter temperatures and scanty rainfall make it appear probable that plants growing under those conditions would be able to withstand the similar climatic conditions in many parts of our Western and Southwestern States. The plant material collected, which consists largely of grasses, leguminous plants, and local strains of vegetables, will also be useful, in large part, for the replanting of areas denuded by erosion.

Similar comments may be made on the results of the Asiatic expedition conducted by H. G. MacMillan and J. L. Stephens, as the result of which about 60 lots of seeds and plants of grasses and other forage plants were introduced.

Through the courtesy of the Botanical Institute at Ashkhabad, Turkmenistan, Union of Soviet Socialist Republics, the Bureau received 83 lots of seeds, mostly grasses and leguminous perennials and shrubs, and including several species never before introduced (Nos. 106828-106838, 106842-106913). Judging from their native habitat, many of these should be of use in the western and southwestern sections of the United States.

An expedition to the Balkan countries, made by Dr. Edgar Anderson, of the Arnold Arboretum, Jamaica Plain, Mass., resulted in the introduction of 33 lots of seeds of ornamental trees and shrubs (Nos. 107622-107644, 107720-107729). While many of these already are known in cultivation, the fact that the seeds were taken from plants growing in unusually cold, dry situations will, it is believed, extend northward their possible growing range in this country.

Many Australian plants have become acclimated to southern California and other parts of the Southwest. That part of the United States should benefit,

ultimately, through the introduction of 51 lots of seeds from New South Wales (Nos. 106673-106723), presented by Albert Morris, of Broken Hill. These include browsing plants of the genera *Acacia* and *Atriplex*, and several new or little-known shade trees and ornamental shrubs.

The botanical determinations of seeds have been made and the nomenclature determined by Paul Russell, who has had general supervision of this inventory.

B. Y. MORRISON,

Principal Horticulturist, in Charge.

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D. C., December 28, 1937.

INVENTORY¹

106561 and 106562. MUSA PARADISIACA SAPIENTUM (L.) Kuntze. Musaceae.

Banana.

From the Philippine Islands. Plants presented by the College of Agriculture, Los Banos, Laguna, through the Bureau of Agriculture, Manila. Received October 11, 1934.

106561. Kanabanse. C. A. No. 5667.

106562. Martaban. C. A. No. 4971.

106563. HEVEA BRASILIENSIS (H. B. K.) Muell. Arg. Euphorbiaceae.

Para rubber-tree.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received October 9, 1934.

A tropical tree, native to Brazil, extensively cultivated for rubber.

For previous introduction see 89078.

106564 to 106581.

From British Guiana. Material collected by W. A. Archer, Bureau of Plant Industry. Received October 1, 1934.

Introduced for the use of Department specialists; unless otherwise mentioned, the following were introduced as seeds.

106564. BAUHINIA sp. Caesalpiniaceae.

No. 2515. *Guayamupati*. Red Hill, Barima River, September 10, 1934. (Plants.)

106565. CAPSICUM ANNUM L. Solanaceae. Common redpepper.

No. 2511. *Weri weri*. Red Hill, Barima River, September 10, 1934. A small, round, cultivated redpepper, one-fourth inch in diameter.

106566. CASSIA OCCIDENTALIS L. Caesalpiniaceae.

106564 to 106581—Continued.

No. 2528. *Algaria*. Above Koriabo, Barima River, September 11, 1934. A shrub 2 feet high, with yellow flowers. It is cultivated by the Warrau Indians for the seeds, which are used to make necklaces for the children.

106567. CLATHROTROPIS BRACHYPETALA (Tul.) Kleinh. (Diptotropis brachypetalum Tul.). Fabaceae.

No. 2548. Mabaruma Compound, Northwest District, September 8, 1934. A large tree with unequally pinnate leaves, the leaflets leathery, broadly elliptic oblong, 3 to 7 inches long; and small white or pinkish flowers in spreading racemes. Native to Surinam and British Guiana.

For previous introduction see 106488.

106568. CLEOME MICRANTHA Desv. Caprifoliaceae.

No. 2525. Barima River below Koriabo, September 12, 1934. An erect spiny herb with white flowers. Native to British Guiana.

106569. CLIBADIUM sp. Asteraceae.

No. 2533. Above Koriabo on the Barima River, September 11, 1934. A shrub cultivated by the Warrau Indians of British Guiana.

106570. CLITORIA ARBORESCENS Ait. Fabaceae.

No. 2547. Mabaruma Hill, Northwest District, September 18, 1934. Cuttings of plant with purple and white flowers.

106571. CRINUM GIGANTEUM Andr. Amaryllidaceae.

No. 2532. Mabaruma Compound, Northwest District, September 6, 1934. A tropical African crinum with 12 or more membranous lanceolate leaves over 2 feet long and an umbel of about six large white fragrant flowers.

¹ It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Plant Exploration and 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 seed samples or 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 identification, 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

106564 to 106581—Continued.

106572. CROTALARIA INCANA L. Fabaceae.

No. 2536. *Wurimaraka*. Wauna Sub-Experiment Station, Koriabo River, September 16, 1934. A tall shrub 15 to 20 feet high, with yellow flowers and red-woolly trifoliate leaves. Native to the West Indies.

For previous introduction see 98836.

106573. CUPANIA SCROBICULATA L. C. Rich. Sapindaceae.

No. 2538. *Kuleshiri*. Wauna Sub-Experiment Station, Koriabo River, September 16, 1934. A tree about 25 feet high, with alternate pinnate leaves and small white flowers in large panicles followed by reddish fruits. Native to French Guiana.

106574. MIMOSA POLYDACTYLA H. B. K. Mimosaceae.

No. 2546. *Shame bush*. Mabaruma Compound, Northwest District, September 18, 1934. A tropical shrub up to 2 feet high, with spiny branches, drooping, sensitive bipinnate leaves, and small pinkish flowers in ovoid heads. Native to tropical South America.

106575. BELLUCIA GROSSULARIOIDES (L.) Tr. Melastomaceae.

No. 2539. *Itara*. Wauna Sub-Experiment Station, Koriabo River, September 16, 1934. A tender evergreen tree with ovate-acuminate, denticulate, three-nerved leaves, and small axillary clusters of pinkish flowers. The bark is scraped and rubbed on paddles and wooden vessels to render the surface waterproof. Wood treated in this way appears to have been varnished.

106576. NICOTIANA TABACUM L. Solanaceae. Tobacco.

No. 2507. *Yure*. Arawak Indian name. "Buck tobacco." Dove's farm above Arakaka, on the Barima River, Northwest District, September 9, 1934. This pink-flowered tobacco, from 2 to 5 feet high, is cultivated by the Indians and gives a better crop than the American varieties.

106577 to 106579. PIPER spp. Piperaceae.

106577. PIPER sp.

No. 2540. Wauna Sub-Experiment Station, Koriabo River, September 16, 1934.

106578. PIPER sp.

No. 2541. Wauna Sub-Experiment Station, Koriabo River, September 16, 1934. A climbing shrub.

106579. PIPER sp.

No. 2535. Wauna Sub-Experiment Station, Koriabo River, September 16, 1934. A shrub 2 to 3 feet high or sometimes a small tree, native to tropical South America and the West Indies. The large, elliptical, somewhat leathery leaves are 6 to 16 inches long, and the flower spikes are obtuse, shorter than the leaves.

106580. POLYGONUM PUNCTATUM Elliott. Polygonaceae.

No. 2529. Barima River below Koriabo, September 12, 1934. A slender shrub, 2 to 3 feet high, with white flowers; growing on the moist river bank.

106564 to 106581—Continued.

106581. TRIPLARIS SURINAMENSIS Cham. Polygonaceae.

No. 2510. *Long John*. Near the Eclipse Falls, Barima River, September 9, 1934. A tree with pinkish flowers.

106582 to 106589.

From France. Plants purchased from V. Lemoine & Son, Nancy. Received October 12, 1934.

106582 to 106585. BUGINVILLEA spp. Nyctaginaceae.

106582. BUGINVILLEA GLABRA Choisy.

Formosa. A semiscandent, free-flowing variety with purplish-mauve bracts. Native to Brazil.

106583. BUGINVILLEA GLABRA Choisy.

Cypheri. Larger than the type with freely produced, large, deep-rose bracts.

106584. BUGINVILLEA sp.

Maud Chettleburg. Large, bright-rose bracts.

106585. BUGINVILLEA SPECTABILIS Willd.

A large strong-growing climber, rising by means of numerous stout hooked spines, with thick ovate, hairy leaves and large panicles of flowers with large bracts. This species is quite variable in the color of the bracts. Native to Brazil.

Mrs. Butt. A variety with delicate brick-red bracts.

For previous introduction see 99525.

106586 to 106589. HOYA spp. Asclepiadaceae.

106586. HOYA DALRYMPLIANA F. Muell.

A tropical evergreen twiner, with fleshy opposite leaves and umbels of showy flowers. Native to Australia.

106587. HOYA GLOBULOSA Hook. f. Waxplant.

A stout climber with orbicular leaves and dense globular umbels of cream-colored flowers. Native to the Sikkim Himalayas.

For previous introduction see 39687.

106588. HOYA LASIANTHA Korth.

A shrubby evergreen climber from the East Indies, with leathery, oblong-lanceolate leaves and small yellowish-green flowers in dense, long-stalked umbels. Native to the East Indies.

106589. HOYA MOTOSKEI Teijsm. and Binn.

An evergreen climber with fleshy opposite, ovate-orbicular leaves and globular, long-stalked umbels of flesh-colored flowers. Native to Japan.

106590 to 106597.

From British Guiana. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received October 5, 1934.

Nos. 106590 to 106595 were collected in the Botanic Garden, Georgetown, September 27, 1934.

106590 to 106597—Continued.

106590 and 106591. *CENTROSEMA PLUMIERI* (Turp.) Benth. Fabaceae.

A tropical ornamental vine, native to Brazil, with white and red flowers. It is of value as a green manure.

For previous introduction see 99807.

106590. No. 2552.

106591. No. 2565.

106592. *CASSIA MULTIJUGA* L. Rich. Caesalpinaceae.

No. 2553. A small tree 15 to 20 feet high, with compound leaves made up of linear leaflets about half an inch long and large yellow flowers followed by flat, glabrous pods 6 inches long and less than 1 inch wide. It is native to Mexico, South America, and the West Indies.

For previous introduction see 92195.

106593. *CLEOME GLABRA* Taub. Capparidaceae.

No. 2556. Collected in the Botanic Garden, Georgetown, September 27, 1934.

Introduced for Department specialists.

106594. *TEPHROSIA NOCTIFLORA* Bojer. Fabaceae.

No. 2557. A bushy, brown-hairy plant with compound leaves about 4 inches long and lax, terminal racemes of reddish flowers which open late in the afternoon. Native to tropical Africa.

For previous introduction see 67841.

106595. *LONCHOCARPUS SERICEUS* (Poir.) H. B. K. Fabaceae.

No. 2564. A large tropical American tree, sometimes 70 feet tall, with odd-pinnate leaves and racemes of purple flowers.

106596. *PHYLLANTHUS NIRURI* L. Euphorbiaceae.

No. 2531. Collected along the Barima River, Northwest District, September 12, 1934. A glabrous annual about a foot high, native to tropical Asia. Introduced for testing by Department specialists.

106597. *RANDIA FORMOSA* (Jacq.) Schum. Rubiaceae.

No. 2567. Collected September 27, 1934. An attractive flowering shrub with long white fragrant flowers. Each flower has a long slender tube and flat salver-shaped corolla. The small edible fruits are striped different tints of greenish yellow and are about the size of a gooseberry.

For previous introduction see 97940.

106598 and 106599.

From British Honduras. Seeds purchased from William A. Schipp, botanical collector. Received October 12, 1934.

106598. *ARECA* sp. Phoenicaceae. Palm.

Received as *Reinhardtia gracilior*, but the seeds do not agree with those of that genus.

106599. *SCHIFFIA CONCOLOR* Burret. Phoenicaceae. Palm.

An unarmed fan-leaved palm which is sometimes 30 feet high, native to British Honduras. The leaves are about 2 feet across, pale green, and semicircular in outline. The small dry roundish fruits are about an inch in diameter.

106600. *CRINUM* sp. Amaryllidaceae.

From British Guiana. Bulbs collected by W. A. Archer, Bureau of Plant Industry. Received October 6, 1934.

No. 2550. Mabaruma Compound, Northwest District, September 19, 1934. An ornamental with pink flowers, grown under the name "lily-of-the-valley."

106601. *ARUM PALAESTINUM* Boiss. Araceae.

From Palestine. Bulbs presented by Henry N. Sweet, Boston, Mass. Received September 24, 1930. Numbered in September 1934.

The black calla of Palestine has ovate to hastate-sagittate leaves about 6 inches wide at the base and a spathe about as long as the leaves, with a short green tube and an elongated narrow limb. This limb is greenish on the outside and black purple within.

106602. *TRECVLIA AFRICANA* Decaisne. Moraceae.

From Portuguese Guinea, Africa. Seeds presented by Dr. Leon Croizat, New York. Received October 9, 1934.

A tropical African tree related to the breadfruit, finally about 80 feet high, with coriaceous, ovate-elliptic leaves 8 inches long and 4 inches broad. The large yellowish fruit, a foot or more in diameter, is said to weigh up to 30 pounds. Each fruit contains more than a thousand seeds the size of kidney beans, which are ground and used as meal by the natives.

For previous introduction see 98902.

106603 to 106612.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received October 9, 1934.

106603. *ACACIA LAETA* R. Br. Mimosaceae.

Originally from the horticultural section, Giza, Egypt. A small tree armed with short, black, hooked prickles or sometimes unarmed. The small glaucous leaves, 2 to 3 inches long, consist of two to three pairs of oblique oblong leaflets, and the flowers are in small spikes. Native to Ethiopia.

For previous introduction see 105869.

106604. *BAUHINIA TOMENTOSA* L. Caesalpinaceae.

An erect shrub or small tree which has obtusely lobed leathery leaves, broader than long, and few-flowered clusters of pale-yellow flowers with the upper petals maroon spotted. Native to India.

For previous introduction see 98802.

106605. *BOMBACODENDRON VIDALIANUM* (Naves) Merr. and Rolfe. Malvaceae. Lanutan.

Originally from the Bureau of Forestry, Manila, Philippine Islands. A tropical tree valuable for its wood and also quite ornamental, with large white flowers with a red center, shaped like those of the tropical *Hibiscus rosa-sinensis*, and about 7 inches in diameter.

For previous introduction see 38486.

106603 to 106612—Continued.

106606. *DISTICTIS GNAPHALANTHA* (A. Rich.) Urban. Bignoniaceae.

A tropical woody vine with opposite trifoliate leaves and terminal panicles of white flowers. Native to Cuba.

106607. *INTSIA BIJUGA* (Colebr.) Kuntze. Caesalpinaceae.

A tall tree 100 feet or more in height, with fragrant white and reddish flowers borne in large conspicuous clusters. The wood is valued as building material.

For previous introduction see 105711.

106608. *JACARANDA SAGRAEANA* DC. Bignoniaceae.

A tropical tree with bipinnate leaves, the leaflets oval-rhomboid, and lax terminal panicles of bluish flowers. Native to Cuba.

106609. *JUGLANS INSULARIS* Griseb. Juglandaceae. Cuban walnut.

A comparatively rare Cuban tree found in the mountainous sections of the island up to 2,000 feet altitude, growing along small streams. It is erect, slender, about 40 feet high, with foliage somewhat finer than that of *Juglans nigra*. The nuts resemble those of *J. nigra* in size and appearance, but the septae being very thick and woody, the kernels are removed with difficulty.

For previous introduction see 90884.

106610. *PASSIFLORA MANICATA* Pers. Passifloraceae.

An ornamental vine, native to Colombia, with red flowers which are followed by green fruits about 3 inches long. The seeds are smaller, but the pulp is not so highly flavored as in some other varieties.

For previous introduction see 106451.

106611. *RUELLIA SPECTABILIS* (Nees) Britton. Acanthaceae.

A herbaceous perennial, native to southern South America, with opposite, linear-lanceolate leaves and beautiful deep-lavender flowers an inch across.

16612. *MAURANDYA ERUBESCENS* (D. Don) Gray. Scrophulariaceae.

Presented by M. J. Rivero, Colombia. A woody climber, with triangular serrate, alternate leaves and rosy pink trumpet-shaped flowers 3 inches long. Native to Mexico.

106613 to 106623.

From Algeria. Seeds presented by Frank A. Thackery, Bureau of Plant Industry, Indio, Calif. Received October 8, 1934.

Introduced for Department specialists.

106613. *ACACIA RADDIANA* Savi. Mimosaceae.

A tropical African tree, somewhat spiny, with bipinnate leaves and linear-oblong leaflets which are obtuse and one-fourth of an inch long.

106614. *ACACIA SEYAL* Delile. Mimosaceae.

A small and rather slender acacia with reddish-brown bark, ivory-white spines about 2 inches long, and heads of very fragrant flowers. The tree is common in tropical Africa north of the Equator and is one of the principal gum-yielding acacias of the Nile region.

For previous introduction see 59651.

106613 to 106623—Continued.

106615. *ATRIPLEX HALIMUS*. Chenopodiaceae.

A low-spreading north African shrub with gray foliage, used extensively in Morocco as a hedge plant close to the sea.

For previous introduction see 66773.

106616. *CALIGONUM COMOSUM* L'Her. Polygonoaceae.

A densely branched shrub 10 to 15 feet high, with minute subulate leaves and small ovate densely spiny nutlike fruits. Native to the eastern Mediterranean region.

For previous introduction see 105808.

106617. *CASSIA LANCEOLATA* Forsk. Caesalpinaceae.

A shrub with pinnate leaves composed of lanceolate leaflets 1 inch long and pale yellow flowers in long terminal racemes. Native to Arabia.

106618. *EUPHORBIA CALYPTRATA* Boiss. Euphorbiaceae.

An annual, or sometimes a perennial, 6 to 10 inches high with sessile entire narrow-linear leaves. Native to northern Africa.

106619. *GREWIA POPULIFOLIA* Vahl. Tiliaceae.

A shrub about 6 feet high, with stiff rounded-oblong leaves 1 to 2 inches long, cymes of small yellow flowers, and red fruits the size of small peas. Native to tropical Africa.

For previous introduction see 75399.

106620. *MAERUA CRASSIFOLIA* Forsk. Caprifoliaceae.

A shrub or small tree with small fleshy oval leaves less than one-half inch long and small white flowers. Native to Egypt.

106621. *NITRARIA SCHOBERI* L. Zygophyllaceae.

A hardy, densely branched shrub of spreading habit, with small bluish-green leaves and small berries which change from light green through red into a violet black. It is native to China, where it grows on strongly alkaline flats.

For previous introduction see 36800.

106622. *PULICARIA ALVEOLOSA* Batt. and Trab. Asteraceae.

A hairy, densely leafy herb with oblong irregularly dentate leaves and small yellow flower heads on slender stems. Native to Hoggar in the Sahara Desert.

106623. *STAFFIOLA BIPINNATA* (L.) Kuntze. Poaceae.

A perennial grass with a stout creeping rhizome, tufted erect stems 1 to 3 feet high, and long rigid leaves. Native to south-eastern Asia.

106624 to 106636.

From the Union of South Africa. Plants purchased from Dr. I. B. Pole Evans, Division of Plant Industry, Department of Agriculture, Pretoria. Received October 18, 1934.

Introduced for Department specialists.

106624 to 106635. *DIGITARIA* spp. Poaceae.

106624. *DIGITARIA DECUMBENS* Stent.

For previous introduction see 91767.

106624 to 106636—Continued.

106625. DIGITARIA sp.

Koster Strain.

106626. DIGITARIA sp.

Makarikari Strain.

106627. DIGITARIA sp.

Malmaniesoog Strain, Selection 1.

106628. DIGITARIA sp.

Malmaniesoog Strain, Selection 2.

106629. DIGITARIA sp.

Molopo Strain.

106630. DIGITARIA sp.

Pangola River Strain.

106631. DIGITARIA sp.

Port Elizabeth Strain, Selection 1.

106632. DIGITARIA sp.

Pretoria Small Strain.

106633. DIGITARIA sp.

Pretoria Strain "Irene."

106634. DIGITARIA SWAZILANDENSIS Stent.

For previous introduction see 91769.

106635. DIGITARIA sp.

Vakwe Camp Strain.

106636. PANICUM MEYERIANUM Nees. Poaceae.

A tall grass, 2 to 3 feet high, with rigid leaves about 8 inches long and large racemes 3 inches long and wide. Native to the Cape of Good Hope.

106637 to 106639.

From British Guiana. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received October 1, 1934.

Introduced for Department specialists.

106637. BANISTERIA RETICULATA (Poir.) C. B. Robins. Malpighiaceae.

No. 2503. Barima River, September 8, 1934. A tropical shrub with opposite oblong-ovate leaves 6 to 12 inches long and small yellow flowers in panicle cymes.

106638. CALOPOGONIUM MUCUNOIDES Desv. Fabaceae.

No. 2542. Mabaruma Compound, Northwest District, September 18, 1934. A stout twining vine with rhombic-ovate leaflets and long-stalked racemes of pale-blue flowers. It forms a mat of foliage 1 to 2 feet thick and is used as a cover crop as well as for forage. Native to tropical America.

For previous introduction see 94228.

106639. LONCHOCARPUS LATIFOLIUS (Willd.) H. B. K. (*Amerimnon latifolium* Willd.). Fabaceae.

No. 2506. Above Koriabo on the Barima River, September 8, 1934.

106640 to 106645.

From the Union of Soviet Socialist Republics. Seeds and bulbs collected by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received October 11, 1934.

106640 to 106645—Continued.

106640 to 106642. ALLIUM spp. Liliaceae.

106640. ALLIUM GIGANTEUM Regel.

No. 150-C. Kopet Dag, near Ashkhabad, June 1934. Bulbs. One of the largest members of the genus, with large bulbs and broad fleshy leaves about 18 inches long. The bright-lilac flower heads, 4 inches across, are on stalks about 4 feet high.

For previous introduction see 82387.

106641. ALLIUM sp.

150-D. Ashkhabad, June 20, 1934. Bulbs found in rolling wheatland near mountains.

106642. ALLIUM sp.

150-E. *Chrystophi*. Bulbs found in the mountains near Ashkhabad, June 20, 1934.

106643 and 106644. From Kopet Dag, south of Ashkhabad, near the Iranian (Persian) frontier, June 1934.

106643. GLADIOLUS sp. Iridaceae.

No. 148. Bulbs and seeds.

106644. HYACINTHUS sp. Liliaceae.

No. 149. Bulbs and seeds.

106645. TULIPA MICHELIANA Hoog. Liliaceae.

No. 150-A. Kopet Dag Mountains, near Ashkhabad, June 19, 1934. Bulbs and seeds of a tulip, native to the Caspian region, with a pubescent scape 12 inches high. The lanceolate to linear-lanceolate leaves, usually four, are striped with brown and have undulate margins. The large single flowers are lilac scarlet and vermilion scarlet inside, with black lanceolate blotches at the base.

For previous introduction see 100644.

106646 to 106648.

From Wales. Seeds presented by Dr. R. G. Stapledon, Welsh Plant Breeding Station, Aberystwyth. Received October 19, 1934.

Introduced for Department specialists.

106646. DACTYLIS GLOMERATA L. Poaceae.

Orchard grass.

S. 26.

106647. LOLIUM PERENNE L. Poaceae.

Perennial ryegrass.

S. 23.

106648. PHLEUM PRATENSE L. Poaceae.

Timothy.

S. 50.

106649. TARCHONANTHUS CAMPHORATUS L. Asteraceae.

From the Union of South Africa. Seeds presented by the McGregor Museum, Kimberley. Received October 20, 1934.

Vaalbos. An evergreen aromatic shrub 8 to 10 feet high, with lanceolate-oblong leaves 1 inch long and a terminal panicle of purple flower heads. The shrub is eaten by stock during droughts.

For previous introduction see 75401.

106650 to 106653.

From British Guiana. Cuttings collected by W. A. Archer, Bureau of Plant Industry. Received October 12, 1934.

Introduced for Department specialists.

106650 to 106653—Continued.

106650. *CLITORIA ARBORESCENS* Ait. Fabaceae.

No. 2537. Wauna Sub-Experiment Station, Koriabo River, September 16, 1934. A shrubby climber with trifoliolate leaves and purple flowers in long-stalked racemes. Native to Trinidad, British West Indies.

For previous introduction see 21327.

106651. *LONCHOCARPUS NICOU* (Aubl.) DC. Fabaceae.

No. 2520. Near Eclipse Falls, on the Barima River, September 10, 1934. *Red Haiari*. A strong-growing vine with three to five pinnate, papery leaves. The stems become reddish with age. Native to northern South America.

106652. *PHYLLANTHUS* sp. Euphorbiaceae.

No. 2521. Red Hill, on the Barima River, September 10, 1934. *Conuparu*.

106653. *PHYLLANTHUS ACUMINATUS* Vahl. Euphorbiaceae.

No. 2544. Mabaruma Compound, Northwest District, September 18, 1934. *White conuparu*. A bushy perennial 3 to 6 feet high with pinnate leaves. It is native to British and French Guiana.

106654. *COCCOTHRINAX CRINITA* Becc. Phoenicaceae.

From California. Seeds presented by David Barry, Jr., Los Angeles. Received October 16, 1934.

Palma petote, guano barbudo. A fan-leaved palm, native to Cuba, with a slender spineless trunk crowned by a large cluster of roundish leaves divided into narrow acute obliquely folded leaves. The juicy berrylike fruits are purplish black.

106655 to 106663. *DIGITARIA* spp. Poaceae. Grass.

From the Union of South Africa. Plants purchased from Dr. I. B. Pole Evans, Division of Plant Industry, Department of Agriculture, Pretoria. Received October 20, 1934.

Introduced for Department specialists.

106655. *DIGITARIA DIVERSINERVIS* (Nees) Stapf.

Unkomaas. A perennial grass with weak ascending stems up to 18 inches high and linear-lanceolate leaves 1 to 3 inches long. Native to the Cape of Good Hope.

106656. *DIGITARIA PENTZII MINOR* Stent.

A perennial, densely tufted grass, with numerous stolons and erect stems 2 to 3 feet high. Native to the Cape of Good Hope.

106657. *DIGITARIA SERIATA* Stapf.

Kuruman Strain. A perennial grass with a creeping branched rhizome. The erect culms are 4 feet or more high. Native to southwestern Africa.

106658. *DIGITARIA* sp.

Hamba Strain.

106659. *DIGITARIA* sp.

Inkinip Strain.

106660. *DIGITARIA* sp.

Port Elizabeth Strain, Selection No. 2.

106655 to 106663—Continued.

106661. *DIGITARIA* sp.

Steyn's Strain.

106662. *DIGITARIA* sp.

Theron's finger grass.

106663. *DIGITARIA* sp.

V 2.

106664. *STAPELIA CANTABRIGIENSIS* Berger. Asclepiadaceae.

From Pennsylvania. Plants presented by Mrs. J. Norman Henry, Gladwyne. Received October 25, 1934.

A hybrid stapelia of the *Stapeltonia* section. The four-angled, bright-green stems, covered with fine hairs, are about 6 inches high. The long-stalked flowers, nearly 5 inches across, are broadly campanulate, brownish red at the center, changing to red at the tips and greenish on the outside. These plants originated from seeds received from the Cambridge Botanic Garden in 1899 as *Stapelia hirsuta*.

106665. *CITRUS* sp. Rutaceae.

From French Indo-China. Seeds presented by M. Poilane, Institut des Recherches Agronomiques de Indochine, Division de Botanique. Received October 13, 1933. Numbered October 26, 1934.

A wild orange from dry, sandy, rocky soil, near the seashore, Nhatrang, Annam.

106666 to 106669. *ALLIUM SATIVUM* L. Liliaceae. Garlic.

From Bulgaria. Bulbs purchased through Cavendish W. Cannon, American vice consul, Sofia. Received October 27, 1934.

106666. *Radomir*, summer garlic. A very hot, strong garlic with 9 to 12 bulbils to each bulb.

106667. Ordinary summer garlic. A very hot, strong garlic with 12 to 14 bulbils to each bulb.

106668. *Devet Dishlia*, winter garlic. A mild-flavored garlic with 9 to 12 bulbils to each bulb.

106669. Ordinary winter garlic. A moderately hot garlic with 12 to 16 bulbils to each bulb.

106670. *PENNISSETUM NERVOSUM* (Nees) Trin. Poaceae.

From Ecuador. Seeds presented by Nelson Marquez, official agronomist, Subdirección de Agricultura del Litoral, Guayaquil. Received October 25, 1934.

A tropical American perennial grass 2 feet or more high, with rough, broadly linear leaves a foot long.

106671 and 106672.

From France. Seeds presented by A. Gérard, La Fosse, par Montoire sur Loir, Loir et Cher. Received October 25, 1934.

106671. *MAGNOLIA NICHOLSONIANA* Rehd. and Wils. Magnoliaceae.

A deciduous shrub or small tree, sometimes 20 feet high, closely allied to *Magnolia wilsonii*, from which it is distinguished by its vinous-red bark, shorter petioles, and oblong-obovate leaves with densely hairy under surfaces. The cup-shaped flowers, appearing before the

106671 and 106672—Continued.

leaves, are white with red pistils and about 6 inches across. This magnolia is native to western China.

For previous introduction see 66078.

106672. MAGNOLIA WILSONII (Finet and Gagn.) Rehd. Magnoliaceae.

A large shrub with pure white, deliciously fragrant flowers which are produced freely during late May and early June. It is native to western Szechwan, China.

For previous introduction see 62128.

106673 to 106723.

From Australia. Seeds presented by Albert Morris, Broken Hill, New South Wales. Received October 19, 1934.

Introduced for Department specialists.

106673 to 106693. ACACIA spp. Mimosaceae.**106673. ACACIA ANEURA** F. Muell.

Mulga or *Yarren*. A tall yellow-flowered shrub which, in times of drought, is considered a good forage for livestock. The wood is very hard and is valued as timber.

For previous introduction see 63698.

106674. ACACIA BRACHYBOTRYA Benth.

A handsome shrub several feet high, which is silvery white with a close silky pubescence. It bears a small number of axillary racemes of yellow flower heads and has very short leaves. Native to southeastern Australia.

For previous introduction see 75579.

106675. ACACIA CALAMIFOLIA Sweet.

A tall shrub or small tree with slender erect branches and filiform drooping phyllodes 1 to 2 inches long. The large yellow flower heads are in short erect racemes. It is said to be an excellent tannin species, containing 20 percent of tannin. Native to southeastern Australia.

For previous introduction see 48038.

106676. ACACIA DODONAEIFOLIA Willd.

A tall shrub, glabrous but very resinous, with oblong-linear phyllodes 2 to 4 inches long and numerous globular flower heads. Native to South Australia.

106677. ACACIA EXCELSA Benth.

A large forest tree with oblong-falcate phyllodes 2 to 3 inches long and small yellow flowers in dense globular heads. Native to Queensland, Australia.

106678. ACACIA FALCATA Willd.

An evergreen tree, 20 to 30 feet high, with few slender branches and small yellow flowers in dainty spherical clusters on racemes borne in the axils of the dark glossy green falcate leaves. The timber is hard, heavy, and tough.

For previous introduction see 80060.

106679. ACACIA GLADIIFORMIS A. Cunn.

A tall glabrous shrub with thick curved linear-lanceolate phyllodes 3 to 6 inches long and racemes of small dense flower heads. Native to New South Wales.

106673 to 106723—Continued.**106680. ACACIA HORRIDA** (L.) Willd.

Received as *A. karroo*, which is now referred to the above species. A spreading flat-topped spiny tree about 20 feet high, widely distributed throughout South Africa. The fragrant yellow flower heads are often visited by bees. It grows mostly in the open and seeds abundantly.

For previous introduction see 94236.

106681. ACACIA LONGIFOLIA SOPHORAE (Labill.) F. Muell.

A yellow-flowered, rapid-growing evergreen shrub or small tree, 15 to 20 feet high, excellent for preventing the encroachments of the sea along sandy coasts. It frequents the coast line of southeastern Australia and southern Queensland to South Australia, and also Tasmania.

For previous introduction see 91598.

106682. ACACIA MELANOXYLON R. Br.

An evergreen Australian tree up to 100 feet high, with lanceolate leathery phyllodes 4 inches long, heads of creamy flowers in short racemes, and reddish-brown twisted pods. The dark wood is very similar to black walnut and is used for the same purposes. The tree makes a rapid growth when young.

For previous introduction see 90841.

106683. ACACIA NOTABILIS F. Muell.

A tall handsome shrub native to the mountain slopes of southeastern Australia. The sword-shaped, almost linear phyllodes are 4 to 6 inches long, and the dense globular heads of about 50 flowers each are borne in short racemes.

For previous introduction see 47368.

106684. ACACIA OBLIQUA A. Cunn.

A much-branched shrub with small roundish or obovate phyllodes one-half inch or less long, and small flower heads on slender peduncles. Native to New South Wales.

106685. ACACIA PODALYRTAEFOLIA A. Cunn.

A gray pubescent shrub 4 to 6 feet high, with ovate phyllodes and numerous yellow flowers in long racemes at the ends of the branches. The pinkish wood is nicely marked. Native to Queensland.

For previous introduction see 104070.

106686. ACACIA PYCNANTHA Benth.

A small, rapid-growing tree up to 30 feet high, with coriaceous leaves and masses of fragrant bright-yellow flowers. The plant is useful as a sand binder.

For previous introduction see 54439.

106687. ACACIA RIGENS A. Cunn.

An Australian shrub 4 to 6 feet high, with threadlike compressed phyllodes 3 to 4 inches long and solitary yellow flower heads.

106688. ACACIA SALICINA Lindl.

A tall shrub or small tree, native to Australia, with pendulous branches and willowlike phyllodes up to 5 inches long. The yellow flowers are in short racemes of two or three globular heads.

For previous introduction see 90678.

106673 to 106723—Continued.

106689. ACACIA SALIGNA (Labill.) Wendl.

The *Weeping wattle*, an ornamental acacia found in Western Australia, is a tall shrub or small tree, 10 to 30 feet high, with long thick phyllodes and short clusters of rather large globular golden-yellow flower heads. This tree is said to be the principal source of tanbark in southwestern Australia.

For previous introduction see 56561.

106690. ACACIA SOWDENI Maiden.

A spreading shrub or small tree with handsome silvery foliage. The linear, slightly curved phyllodes are 3 inches long. Native to South Australia.

106691. ACACIA STENOPHYLLA A. Cunn.

An evergreen tree 40 to 60 feet high, with long narrow phyllodes 6 to 12 inches in length and small yellow flowers in globular heads. Native to New South Wales.

106692. ACACIA SUAVEOLENS (J. E. Smith) Willd.

An Australian shrub up to 6 feet high, with linear to lanceolate phyllodes and small heads of yellow flowers in axillary racemes.

For previous introduction see 90842.

106693. ACACIA WATTSIANA F. Muell.

A dense bushy shrub 4 to 5 feet high, with angular branches and leathery obovate-oblong, obtuse phyllodes up to 1 inch long. Native to South Australia.

106694. ALBIZZIA LOPHANTHA (Willd.) Benth. Mimosaceae. Plume albizzia.

A shrub or small tree up to 20 feet high, with compound leaves made up of 14 to 24 pairs of pinnae each bearing 60 pairs of small linear leaflets. The small yellow flowers are in spikes about 2 inches long. It is native to Australia.

For previous introduction see 92332.

106695 to 106699. ATRIPLEX spp. Chenopodiaceae. Saltbush.

106695. ATRIPLEX HALIMOIDES Tines.

Mealy or *gray saltbush*. A low-growing shrubby robust perennial about 1 foot high, with variable, ovate-lanceolate leaves which are covered with whitish, dustlike scales. It is native to the central desert regions of Australia where it affords excellent forage for both sheep and cattle.

For previous introduction see 46875.

106696. ATRIPLEX MORRISII Anderson.

A low annual, more or less farinose-hairy throughout, with small obovate dentate leaves. Native to Australia.

106697. ATRIPLEX NUMMULARIA Lindl.

A tall shrubby perennial sometimes reaching a height of 10 feet and covered all over with downy whitish scales. The leaves are mostly round, rather thick, and toothed along the margins. It is extensively planted and highly valued in central Australia for its remarkable drought-resisting qualities; livestock are very fond of it.

For previous introduction see 90735.

106698. ATRIPLEX SPONGIOSA F. Muell.

A low-growing plant less than a foot high, with numerous ascending stems,

106673 to 106723—Continued.

more or less farinose throughout. The rather thick orbicular leaves are less than an inch long. Native to Australia.

106699. ATRIPLEX VESICARIA Howard.

An erect bushy shrub, covered throughout with a scaly tomentum. The very small oblong-lanceolate leaves are less than an inch long. Native to southern Australia.

106700. BAUHINIA sp. Caesalpiniaceae.

106701. BRACHYCHITON sp. Sterculiaceae.

106702. CALLITRIS GLAUCA R. Br. Pinaceae.

A large tree sometimes 90 feet tall or sometimes a tall shrub with short crowded erect branchlets and very short glaucous green leaves. The brown heartwood and yellowish sapwood are easily worked and are suitable for building purposes. Native to Australia.

106703. CASUARINA HUMILIS Otto and Dietr. Casuarinaceae.

Received as *Casuarina lehmannii*, which is now referred to the above species. An erect shrub 2 to 6 feet high, with the branchlets usually in whorls of four and the angles of the internodes prominent but obtuse. Native to Western Australia.

For previous introduction see 105796.

106704. CASUARINA LEPIDOPHLOIA F. Muell. Casuarinaceae.

A small or moderately large tree with very slender, linear, faintly angled branchlets. The cones are depressed-globose and about 1 inch in diameter. This species had hitherto been confused with *Casuarina glauca*.

For previous introduction see 93792.

106705. CASSIA sp. Caesalpiniaceae.

106706. CHORIZEMA CORDATUM Lindl. Fabaceae.

A tall slender glabrous evergreen shrub, 7 to 10 feet high, with weak branches, more or less prickly leaves about 2 inches long, and numerous red flowers. It is propagated from cuttings and may be grown in the open in southern California and southern Florida, being excellent for training on pillars and trellises. In colder regions it is an attractive plant for the cool greenhouse. Native to Western Australia.

For previous introduction see 75552.

106707. CODONOCARPUS COTINIFOLIUS F. Muell. Phytolaccaceae.

A tall evergreen shrub or small tree 20 to 40 feet high, with rather thick, flat, roundish leaves up to 2 inches long and racemes of small inconspicuous flowers. Native to Victoria, Australia.

106708 to 106711. EUCALYPTUS spp. Myrtaceae.

106708. EUCALYPTUS CITRIODORA Hook.

A handsome fast-growing tree which in favorable situations becomes 60 to 100 feet high. The long narrow leaves, equally shiny on both sides, possess a pleasant odor closely resembling that of the lemon, giving the tree its specific name, *citriodora*. This eucalypt thrives in California in the frostless coast regions, but is not suited to the dry interior valleys.

For previous introduction see 38711.

106673 to 106723—Continued.

106709. EUCALYPTUS INCRASSATA PROTRUSA J. M. Black.

A shrub or small tree, up to 25 feet high, with smooth whitish bark and lanceolate, gray-green, thick, stiff leaves about 3 inches long. Native to dry regions in South Australia.

106710. EUCALYPTUS LEUCOXYLON MACROCARPA J. E. Brown.

A tall tree, native to South Australia, with rough bark on the trunk, but soft and white on the branches. The thick coriaceous leaves are lanceolate, falcate, and 3 to 6 inches long. The white or pink flowers are in long-stalked clusters of two to five, and the obovoid fruits are truncate.

For previous introduction see 75631.

106711. EUCALYPTUS TORQUATA Luehm.

A tree with lanceolate, oblique, leathery, dull, gray-green leaves 4 inches long and reddish-orange flowers in umbels of seven on a stalk 1 inch long. Native to Western Australia.

For previous introduction see 104168.

106712. ENCHYLAENA TOMENTOSA R. Br. Chenopodiaceae.

A procumbent or widely branched shrub up to 3 feet high, native to Australia. The branches are silvery woolly, the alternate linear leaves are about one-half inch long, and the small inconspicuous flowers develop into fleshy edible red or yellow berries about the size of a small pea.

For previous introduction see 99419.

106713. GREVILLEA HUGELII Meisn. Proteaceae.

A procumbent evergreen shrub with bipinnate leaves, the linear leaflets rigid, leathery, and 1 inch long. The reddish flowers are in small racemes. Native to Australia.

106714. HETERODENDRUM OLEAEFOLIUM Desf. Sapindaceae.

A gray-barked shrub with alternate, lanceolate, leathery leaves and very small flowers in axillary racemes. Native to Australia.

106715. INDIGOFERA AUSTRALIS Willd. Fabaceae.

An erect Australian shrub 2 to 4 feet high, with pinnately compound leaves and dense racemes of showy red flowers. It may be suitable for growing as an ornamental in the warmer parts of the United States.

For previous introduction see 98098.

106716 to 106718. KOCHIA spp. Chenopodiaceae.

106716. KOCHIA PYRAMIDATA Benth.

A rigid bushy shrub with cottony-pubescent twigs and leaves, the latter linear or terete, very short. Native to New South Wales.

106717. KOCHIA SEDIFOLIA F. Muell.

A bushy perennial, velvety-tomentose throughout, with short crowded leaves and small red solitary flowers. Native to dry situations in Australia.

106673 to 106723—Continued.

106718. KOCHIA TRIPTERA Benth.

A low, stout, spreading shrub with crowded linear semiterete leaves one-half inch long. Native to New South Wales.

106719. MELALEUCA HYPERICIFOLIA J. E. Smith. Myrtaceae.

A tall glabrous shrub with opposite lanceolate leaves 1 to 2 inches long, dotted beneath. The rich-red flowers are borne in dense spikes 2 inches long and nearly as wide. It is native to Australia.

For previous introduction see 95332.

106720. MELALEUCA PUBESCENS Schauer. Myrtaceae.

A tall shrub or small tree with small linear leaves, one-half inch long, crowded on the pubescent branches and small white flowers borne in loose cylindrical spikes. Native to Australia.

For previous introduction see 99439.

106721. MIDA ACUMINATA (R. Br.) Kuntze (*Fusanus acuminatus* R. Br.). Santalaceae. Quandong.

An Australian evergreen tree up to 30 feet high, with long narrow leaves which are eaten by sheep and cattle in times of drought. The inconspicuous flowers are in terminal clusters. The fleshy part of the fruit is used for jelly, and the kernel of the nut, besides being edible, contains an oil which may be used for illumination.

For previous introduction see 77021.

106722. STURTIA GOSSYPIOIDES R. Br. Malvaceae.

A large shrub closely related to cotton (*Gossypium* spp.), with broadly oval, stiff leaves up to 2 inches long and large purple flowers. Native to Australia.

For previous introduction see 106479.

106723. SWAINSONIA GREYANA Lindl. Fabaceae.

A bushy perennial, tomentose throughout, with dull-brownish pinnate leaves and large purple flowers in large axillary racemes. Native to Australia.

106724 to 106744.

From the Union of South Africa. Seeds presented by F. R. Long, Superintendent, St. George's Park, Port Elizabeth, Cape of Good Hope. Received October 24, 1934.

Introduced for Department specialists.

106724 to 106730. ALOE spp. Liliaceae.

A collection of aloes, native to the Cape of Good Hope.

106724. ALOE AFRICANA Mill.

A large plant with a simple trunk finally about 20 feet high. The few spreading or recurved leaves are triangular-oblong, up to 2 feet long, and the yellow flowers are borne on a stalk 2 feet high.

106725. ALOE ARBORESCENS Mill.

An arborescent succulent with a simple trunk 10 to 15 feet high, clothed at the top with dull-green, sinuately spreading, gradually narrowed leaves about 2 feet long, with prickly margins. The red flowers are in an elongated raceme.

For previous introduction see 79470.

106724 to 106744—Continued.

106726. *ALOE FEROX* Mill.

An aloe with a thick stem 10 to 15 feet high and a rosette of curved, glaucous lanceolate leaves 2 feet long by 5 inches wide and half an inch thick; both surfaces are prickly, and the purple margins are armed with large red-brown teeth. The flowering stem is 4 feet high, and the greenish-yellow flowers with smoky tipped segments are 1 to 2 inches long.

For previous introduction see 81118.

106727. *ALOE LINEATA* (Ait.) Haw.

A red-flowered aloe with lanceolate leaves a foot long in a dense rosette on a stem up to a foot high. The flowers, half an inch long, are in a dense raceme 6 inches long, on a simple peduncle about as long as the leaves.

106728. *ALOE MICROSTIGMA* Salm-Dyck.

A large aloe with an elongated stem bearing a rosette of 20 to 30 sword-shaped leaves 6 to 12 inches long and a dense raceme of greenish-yellow flowers on a scape a foot high.

106729. *ALOE SAPONARIA* (Ait.) Haw.

An aloe which grows in caespitose clusters, with ascending oblong-lanceolate acuminate leaves 7 inches long, often reddish with pale blotches and with long confluent brown marginal teeth. The red flowers are in a branched inflorescence 1 or 2 feet high.

For previous introduction see 81134.

106730. *ALOE STRIATA* Haw.

A low fleshy plant with a dense rosette of thick narrowly oblong leaves 1 to 2 feet long, obscurely spotted, and bright-red flowers, about an inch long, in 20 or more heads, borne on a stout branched peduncle.

For previous introduction see 88738.

106731. *ASTER FRUTICOSUS* L. Asteraceae.

A twiggy bush 2 to 3 feet high and across, with flat linear leaves and blue flower heads.

106732. *CAESALPINIA GILLIESII* (Hook.) Wall.

Bird of Paradise Tree. A tall shrub or small tree, native to Argentina, with pinnately compound leaves and terminal racemes of light-yellow flowers from which the brilliant red stamens protrude 3 to 5 inches.

For previous introduction see 76786.

106733. *CERATOTHECA TRILOBA* E. Mey. Pedaliaceae.

An erect annual plant up to 6 feet high. The obtusely quadrangular stems are hairy, and the coarsely crenate leaves, 1 to 6 inches long, vary from broadly cordate and 3-lobed near the base to lanceolate and sparingly crenate at the top of the plant. The solitary axillary flowers, 2 to 3 inches long, are lilac streaked with purple, and the loosely pubescent capsules, an inch long, have two horns at the tip.

For previous introduction see 106079.

106734. *ECHINUS* sp. Aizoaceae.

Received under the name "*echinatus*," for which a place of publication has not been found.

106724 to 106744—Continued.

106735. *ERYTHRINA CAFFRA* Thunb. Fabaceae.

A tree 30 to 40 feet high, with prickly branches, trifoliolate leaves with broadly ovate leaflets, and scarlet flowers borne in dense, many-flowered racemes. Native to southern Africa.

For previous introduction see 50151.

106736. *GLADIOLUS ALATUS* L. Iridaceae.

A very interesting plant with flowers of a delightful fragrance not unlike that of the sweet briar. The three upper petals are bright orange scarlet, and the three lower ones are yellowish tipped with orange scarlet. The bulbs are not larger than ordinary peas and cannot remain long out of the ground.

For previous introduction see 105284.

106737. *GLADIOLUS BLANDUS* Ait. Iridaceae.

A South African plant with sword-shaped leaves somewhat shorter than the stem, which is from 6 inches to 2 feet in height and bears 3 to 10 white or reddish-tinged scentless flowers.

For previous introduction see 105285.

106738. *GLOTTIPHYLLUM* sp. Aizoaceae.106739 to 106742. *MESEMBRYANTHEMUM* spp. Aizoaceae.106739. *MESEMBRYANTHEMUM AMOENUM* Salm-Dyck.

A low succulent plant with a woody branched stem, green somewhat triangular leaves, and reddish flowers. Native to the Cape of Good Hope.

106740 and 106741. *MESEMBRYANTHEMUM BLANDUM* Haw. Figmarigold.

An erect perennial succulent, 2 feet high, with numerous branches, compressed-triangular leaves 2 inches or less long, with minute dots, and pale-rose or white flowers 2 inches across. Native of South Africa.

106740. A form with pink flowers.

106741. A form with white flowers.

106742. *MESEMBRYANTHEMUM SPECIOSUM* Haw.

A fleshy shrub about 3 feet high, with distant, turgid-cylindric leaves one-half inch long and large deep-scarlet flowers nearly 2 inches across. Native to the Cape of Good Hope.

106743. *PROTEA* sp. Proteaceae.

A form with pink flowers.

106744. *SCHONLANDIA* sp. Aizoaceae.

Received under the name of "algoense," for which a place of publication has not been found.

106745. *SEMPERVIVUM KOSANINII* Praeger. Crassulaceae.

From Europe. Plant collected by Dr. Edgar Anderson, Arnold Arboretum Balkan expedition. Received November 1, 1934.

Peč, Yugoslavia, October 1934. A sempervivum, native to Macedonia, that forms open rosettes about 2 inches across, with oblanceolate, glandular-hairy, dark-green leaves, purple at the apex, and about 1 inch long. The red flowers, three-fourths of an inch wide, are produced on a leafy stem 6 to 8 inches high.

106746. MAACKIA AMURENSIS BUEGERI C. Schneid. Fabaceae.

From Washington, D. C. Seeds collected by O. M. Freeman, Bureau of Plant Industry, in the National Botanic Garden. Received November 2, 1934.

A deciduous tree about 15 feet high with odd-pinnate leaves; the 7 to 11 leaflets are pubescent and 2 to 3 inches long. The small white flowers are borne in dense upright racemes. Native to Japan.

For previous introduction see 77836.

106747 to 106801.

From the Union of Soviet Socialist Republics. Material collected in Turkistan by H. L. Westover and C. R. Enlow, agricultural explorers, Bureau of Plant Industry. Received October 30, 1934.

Introduced for Department specialists.

106747 to 106749. ALLIUM spp. Liliaceae.**106747. ALLIUM CAERULEUM** Pall. Onion.

No. 671. July 23, 1934. Bulbs and seeds collected in the mountains south of Alma Ata. A blue-flowered onion with slender grassy leaves and 14-inch stalks bearing close heads of small deep-blue flowers.

For previous introduction see 104627.

106748. ALLIUM sp.

No. 669. July 24, 1934. Bulbs from the foothills southeast of Alma Ata.

106749. ALLIUM sp.

No. 867. July 26, 1934. Bulbs from Issyk Kul, east of Alma Ata.

106750. AMARYLLIS sp. Amaryllidaceae.

No. 186. June 1934. Bulbs from south of Stalinabad, Tajikistan.

106751. AMARYLLIS sp. Amaryllidaceae.

No. 320. July 15, 1934. Bulbs from Chingan, east of Tashkent, Uzbekistan.

106752. ARISAEMA TRIPHYLLUM (L.) Torr. Araceae. Jack-in-the-pulpit.

No. 182. July 8, 1934. Bulbs from the Varsov River Canyon, Tajikistan.

106753. EREMURUS sp. Liliaceae.

No. 541. July 26, 1934. Roots collected at 6,800 feet altitude above Issyk Kul, near Alma Ata.

106754. FRITILLARIA sp. Liliaceae.

No. 191. July 8, 1934. Bulbs and seeds from the Varsov River Canyon, Tajikistan.

106755. HYACINTHUS ATROVIOLOACEUS (Regel) Macbride. Liliaceae. Hyacinth.

No. 524. July 1934. Bulbs from the Tashkent Botanic Garden. A hyacinth with four to six linear-ligulate leaves 4 to 8 inches long and a dense oblong raceme of dark-violet flowers on a scape about the same length as the leaves. Native to Bokhara.

106756 to 106766. IRIS spp. Iridaceae.**106756. IRIS ALBERTI** Regel.

No. 546. July 23, 1934. Roots from the mountains of Alma Ata, of a bearded iris with glaucous, sword-shaped leaves about as long as the stem and yellow or purplish flowers, yellow-

106747 to 106801—Continued.

ish toward the base, nearly 2 inches long. Native to Turkistan.

For previous introduction see 105474.

106757. IRIS BUCARICA Foster.

No. 244. July 1934. Bulbs and seeds from Tajikistan of one of the most vigorous of the Juno irises, this bears five to seven flowers on each of the stems. The stems are over a foot high, and the bright-green, narrow leaves are 8 to 12 inches long and about 2 inches broad. The bright-yellow, rounded-obovate falls are over 2 inches long, while the small standards are pure white. Native to eastern Bokhara.

106758. IRIS MAGNIFICA Vvedensky.

No. 525. July 1934. Bulbs from the Tashkent Botanic Garden. A stout iris of the Juno section, with light shining-green falcate leaves, 1 to 2 inches wide, and generally two, inodorous, pale-lilac flowers about 2 inches long, on a stem 10 to 16 inches high. Native to Turkistan.

106759. IRIS TENUIFOLIA Pallas.

No. 881. August 13, 1934. Bulbs from Chelkar. An iris of the Apogon section, usually with a very short stem and rigid narrow-linear leaves a foot long. The flowers are bluish purple. Native to eastern Asia.

106760. IRIS sp.

No. 179. July 1934. Bulbs collected at 5,500 feet altitude along the Varsov River, Tajikistan.

106761. IRIS sp.

No. 184. July 8, 1934. Bulbs from the Varsov River Canyon, 50 km north of Stalinabad, Tajikistan.

106762. IRIS sp.

No. 190. July 8, 1934. Bulbs from the Varsov River Canyon, 5,500 feet altitude, Stalinabad, Tajikistan.

106763. IRIS sp.

No. 315. July 16, 1934. Roots found in moist soil near Chingan, east of Tashkent, Uzbekistan.

106764. IRIS sp.

No. 317. July 15, 1934. Roots and seeds from Chingan, east of Tashkent, Uzbekistan.

106765. IRIS sp.

No. 396. July 15, 1934. Bulbs from the rocky slopes of Little Chingan, east of Tashkent.

106766. IRIS sp.

No. 700. August 4, 1934. Seeds and roots from the Karakol River, Issyk Kul.

106767 to 106769. IXIOLIRION spp. Amaryllidaceae.**106767. IXIOLIRION** sp.

No. 377. July 15, 1934. Seeds and bulbs from Chingan, east of Tashkent, Uzbekistan.

106768. IXIOLIRION sp.

No. 824. August 6, 1934. Seeds and bulbs from the Chu River Canyon, east of Tokmak.

106747 to 106801—Continued.

106769. *IXIOLIRION* sp.

No. 869. August 31, 1934. Bulbs from the foothills south of Frunze.

106770 to 106788. *TULIPA* spp. Liliaceae.
Tulip.106770. *TULIPA OSTROWSKIANA* Regel.

No. 544. July 23, 1934. Bulbs and seeds from Alma Ata. A tulip with a stem about 8 inches high, bearing three linear-lanceolate leaves and a solitary flower. The perianth segments are cinnamon purple and more or less spreading.

For previous introduction see 105476.

106771. *TULIPA* sp.

No. 539. July 25, 1934. Bulbs and seeds from the mountains south of Alma Ata. Received under the name "desifolia," for which a place of publication has not been found.

106772. *TULIPA POSTERIANA* Hoog.

No. 526. July 1934. Bulbs from the Tashkent Botanic Garden. A stout broadleaved tulip with large flowers, brilliant scarlet with yellow-black blotches. Native to Bokhara, central Asia.

106773. *TULIPA GREIGII* Regel.

No. 527. July 1934. Bulbs from the Tashkent Botanic Garden, of a handsome tulip native to Turkistan, with broadly campanulate, purplish-red flowers about 2 inches across, borne on a peduncle 3 to 8 inches high. The ovate-lanceolate green leaves are brown spotted.

106774. *TULIPA KAUFMANNIANA* Regel.

No. 528. July 1934. Bulbs from the Tashkent Botanic Garden of a tulip about 8 inches high, with yellowish-green, erect, narrowly oblong leaves and campanulate flowers. These vary in color from white tinged with pink to pale yellow blotched with carmine. Native to Turkistan.

106775. *TULIPA KOLPAKOWSKIANA* Regel.

No. 529. July 1934. Bulbs from the Tashkent Botanic Garden. A tulip with three erect-spreading, undulate, linear-lanceolate leaves and yellow flowers, the outer surface of which is sometimes reddish or purplish. Native to Turkistan and related to *Tulipa gesneriana*.

106776. *TULIPA KOROLKOVII* Regel.

No. 392. July 15, 1934. Bulbs and seeds from Chimgan, east of Tashkent, Uzbekistan. A low crimson-flowered tulip from Turkistan, 4 to 6 inches high, with narrowly lanceolate leaves exceeding the flowers.

106777. *TULIPA KUSCHKENSIS* B. Fedtsch.

No. 530. July 1934. Bulbs from the Tashkent Botanic Garden of a tulip about a foot high, with four to six undulate, sickle-shaped leaves with narrow white margins. The flower, yellow with the perianth segments black at the base, is about 2 inches long. Native to Turkistan.

106778. *TULIPA LANATA* Regel.

No. 531. July 1934. Bulbs from the Tashkent Botanic Garden of a rather large tulip with a stem over a foot high and three or four commonly fal-

106747 to 106801—Continued.

cate leaves exceeding the flower. The purple perianth segments are marked with large black spots on a yellow background. Native to Bokhara.

106779. *TULIPA LINIFOLIA* Regel.

No. 532. July 1934. Bulbs from the Tashkent Botanic Garden of a narrow-leaved tulip from Bokhara with a slender stem 2 to 5 inches high. The obovate perianth segments are purplish with dark blue-black blotches outlined with yellow.

106780. *TULIPA OSTROWSKIANA* Regel.

No. 533. July 1934. Bulbs from the Tashkent Botanic Garden.

For previous introduction and description see 106770.

106781. *TULIPA PRAESTANS* Hoog.

No. 534. July 1934. Bulbs from the Tashkent Botanic Garden of an attractive tulip native to Turkistan, with pale scarlet-vermillion flowers on peduncles up to a foot or more high. The peduncles as well as the light-green leaves are covered with minute white hairs.

106782. *TULIPA WILSONIANA* Hoog.

No. 535. July 1934. Bulbs from the Tashkent Botanic Garden of an alpine tulip from Turkistan with narrow purple-edged leaves and a deep-red flower on a stem 4 inches high.

106783. *TULIPA* sp.

No. 832. July 31, 1934. Bulbs and seeds from the foothills south of Frunze.

106784. *TULIPA* sp.

No. 193. July 1, 1934. Bulbs collected south of Stalinabad, Tajikistan.

106785. *TULIPA* sp.

No. 308. July 1934. Seeds from Tajikistan.

106786. *TULIPA* sp.

No. 399. July 19, 1934. The exact source of these bulbs is unknown; probably from near Stalinabad, Tajikistan.

106787. *TULIPA* sp.

No. 567. July 29, 1934. Bulbs and seeds from the mountain pass between Alma Ata and Frunze.

106788. *TULIPA* sp.

No. 584. July 26, 1934. Bulbs and seeds collected on the mountains near Issyk Kul, east of Alma Ata.

106789. *ALLIUM* sp. Liliaceae.

No. 607. July 26, 1934. Bulbs found at 6,500 feet altitude in the mountains above Issyk Kul, near Alma Ata.

106790 to 106795. *TULIPA* spp. Liliaceae.
Tulip.106790. *TULIPA* sp.

No. 607-A. July 26, 1934. Seeds collected at 6,500 feet altitude in the mountains above Issyk Kul, near Alma Ata.

106791. *TULIPA* sp.

No. 695. July 29, 1934. Bulbs and seeds collected on the river slopes between Alma Ata and Frunze.

106792. *TULIPA* sp.

No. 696. July 31, 1934. Bulbs and seeds from the foothills south of Frunze.

106747 to 106801—Continued.

106793. TULIPA sp.

No. 699. July 31, 1934. Bulbs from the foothills south of Frunze.

106794. TULIPA sp.

No. 769. August 4, 1934. Bulbs and seeds from the Karakol River, Issyk Kul.

106795. TULIPA sp.

No. 825. August 3, 1934. Bulbs and seeds from the Jetty August River Canyon, west of Issyk Kul.

106796. FRITILLARIA sp. Liliaceae.

No. 833. August 4, 1934. Bulbs and seeds from the Karakol River, Issyk Kul.

106797. TULIPA sp. Liliaceae.

No. 865. August 6, 1934. Bulbs from the Chu River, east of Tokmak.

106798. (Undetermined.)

No. 204. July 1, 1934. An unknown bulb from the mountains south of Stalinabad, Tajikistan.

106799. (Undetermined.)

No. 192. July 1, 1934. An unknown bulb from south of Stalinabad, Tajikistan.

106800. (Undetermined.)

No. 195. July 1, 1934. Seeds from the mountains near Stalinabad, Tajikistan.

106801. IRIS sp. Iridaceae.

No. 763. August 1934. Bulbs found in dry rocky soil near Frunze.

106802. ROSA ODORATA GIGANTEA (Collett) Rehd. and Wils. Rosaceae.

Giant tea rose.

From India. Seeds presented by F. H. Butcher, curator, Government Botanic Garden, Ootacamund. Received October 30, 1934.

A strong-climbing evergreen rose, native to Burma, with creamy-white, single flowers 4 to 6 inches across, followed by large yellowish hips. It resembles the Cherokee rose, but is hardy in the United States only in the South and on the Pacific coast.

For previous introduction see 91292.

106803. PRUNUS PROSTRATA Labill. Amygdalaceae. Mountain cherry.

From the Union of Soviet Socialist Republics. Seeds collected in Turkistan by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received October 29, 1934.

No. 236. July 1, 1934. From the mountains near Stalinabad, Tajikistan. A low, widespread, drought-resistant deciduous shrub up to 3 feet high, with sharply serrate, broadly ovate leaves, pubescent beneath and over an inch long. The rose-colored flowers, less than an inch across, are followed by small red, nearly sessile fruits.

For previous introduction see 101880.

106804. LITCHI PHILIPPINENSIS Radlk. Sapindaceae.

From the Philippine Islands. Seeds presented by Arthur F. Fischer, Director of Forestry, Department of Agriculture and Commerce, Manila. Received November 2, 1934.

106804—Continued.

A Philippine relative of the lychee (*Litchi chinensis*). The tree is about 50 feet high, with dark-green pinnate leaves similar to those of the lychee and roundish oblong fruits about an inch long, borne in loose terminal clusters. The tough leathery shell encloses scanty edible pulp in which is embedded a relatively large seed. This seed is roasted and eaten. The tree may have value as a stock for the lychee.

For previous introduction see 106144.

106805. PHOENIX sp. Phoenicaceae.

From Africa. Seeds collected by J. F. Ward and presented by J. K. Mayo, Agricultural Department, Samiru-Zaria, Nigeria. Received November 2, 1934.

The wild date occurs quite commonly in the northern districts of Nigeria. It is practically always confined to swamps and stream sides and is commonly found in swampy glades growing on old decomposed antihills. These hills are mostly of darkish clay and, being raised above the surrounding level, do not get flooded.

106806 to 106813.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received November 30, 1934.

106806. COFFEA ARABICA L. Rubiaceae. Arabian coffee.

Harrar variety.

106807. IKORA MACROTHYRSA Teijsm. and Binn. Rubiaceae.

A large shrub with linear-oblong leaves a foot long and attractive scarlet flowers in dense corymbs 8 inches across. Native to the East Indies where it thrives in regions of heavy rainfall.

For previous introduction see 70761.

106808. KOELREUTERIA FORMOSANA Hayata. Sapindaceae.

A large handsome tree with attractive, compound leaves and large terminal panicles of yellow flowers. Native to the island of Taiwan.

For previous introduction see 62345.

106809. LANGUAS SPECIOSA (Wendl.) Small. Zinziberaceae.

A herbaceous perennial 3 to 12 feet high, the stems clothed with the imbricated leaf bases. The large oblong-lanceolate leaves are 5 to 20 inches long, and the flowers, white tinged with red, are in terminal thyrsoid panicles. Native to the East Indies.

106810. PHYLLANTHUS GRANDIFOLIUS L. Euphorbiaceae.

A tall, symmetrical tree with thick alternate oblong-lanceolate leaves 4 inches long. Native to tropical America.

106811. PSIDIUM GUAJAVA L. Myrtaceae.

Peruviana. A Peruvian variety.

106812. PSIDIUM GUAJAVA L. Myrtaceae.

Pomiferum. A variety with round fruits. Presented by Carlos Jurgens, Pas-de-Manguera, Rio Pardo, Brazil.

106806 to 106813—Continued.

106813. RHUS LANCEA L. f. Anacardiaceae.

A small tree with gray bark and numerous slender branches. The leaves are long-stalked, and the lanceolate linear leaflets are 4 to 5 inches long. Native to the Cape of Good Hope.

106814 to 106827. TRITICUM AESTIVUM L. Poaceae. Common wheat.

From Italy. Seeds presented by the Director, Royal Experimental Station for Wheat-growing, Rieti. Received October 27, 1934.

Introduced for Department specialists.

106814. *Aziak 17-45*.106815. *Balilla*.106816. *Battisti*.106817. *Damiano*.106818. *Edda*.106819. *Fanfulla*.106820. *Fausto*.106821. *Fieramosca*.106822. *Filzi*.106823. *Mentana*.106824. *Mentana Mutico*.106825. *Oberdan*.106826. *Rismondo*.106827. *Villa Glori*.

106828 to 106838.

From the Union of Soviet Socialist Republics. Seeds presented by the Botanical Institute, Ashkhabad, Turkmenistan. Received October 26, 1934.

Introduced for Department specialists.

106828 to 106834. AGROPYRON spp. Poaceae.

106828. AGROPYRON BUONAPARTIS (Spreng.) Dur. and Schinz.

An annual grass, native to Asia Minor and central Asia, with erect culms and broadly linear leaves.

106829. AGROPYRON CRISTATUM (L.) Gaertn. Wheatgrass.

106830. AGROPYRON ORIENTALE (L.) Roem. and Schult.

An annual, much-branched grass, prostrate-ascending in habit, native to sandy places in Asia Minor and Turkistan.

For previous introduction see 101977.

106831. AGROPYRON POPOVII Drobov.

A perennial grass with erect stems. Native to Turkistan.

106832. AGROPYRON REPENS (L.) Beauv.

106833. AGROPYRON SIBIRICUM DESERTORUM Trautv.

A caespitose perennial grass with a fibrous root, slender erect leafy culms, and long rigid narrow-linear leaves. Native to central Asia.

106834. AGROPYRON TRITICEUM Gaertn.

An annual Siberian grass, much branched at the base, with stems up to 8 inches in length.

For previous introduction see 61391.

106829 to 106838—Continued.

106835. AGROSTIS TRANSCASPICA Litv. Poaceae.

A perennial grass 1 to 3 feet high, native to the Transcasian region.

106836. GASTRIDUM VENTRICOSUM (Gouan) Schinz. and Thell. (*Alopecurus ventricosus* Huds.). Poaceae. Grass.

An annual grass 8 to 16 inches tall, with scant rough foliage and dense, spike-like panicles. Native to France.

106837. AMYGDALUS BRAHUICA Boiss. Amygdalaceae.

A bushy shrub, armed with short spines, with small oblong-obtuse leaves and small flowers crowded toward the ends of the branchlets. Native to Asia Minor between 7,000 and 10,000 feet altitude.

106838. AMYGDALUS BUCHARICA Korsh. Amygdalaceae.

A small white-flowered tree from the hot dry regions of Turkistan. The fruits are about an inch long.

106839 and 106840. ZOYSIA JAPONICA Steud. Poaceae. Japanese lawngrass.

From Japan. Seeds purchased from the Chugai Shokubutsu Yen, Tamamoto, Kawabegun, near Kobe. Received November 20, 1934.

Introduced for the use of Department specialists.

106839. Korean strain.

106840. Japanese strain.

106841. ZENOBIA CASSINEFOLIA (Vent.) Pollard. Ericaceae.

From North Carolina. Seeds collected by G. M. Darrow, Bureau of Plant Industry. Received November 21, 1934.

A shrub 4 to 6 feet high, of irregular habit with ovate-oblong, dark shining-green leaves up to 2 inches long and white pendant bell-shaped flowers, less than an inch across, in axillary clusters. Native to the southeastern United States.

106842 to 106913.

From the Union of Soviet Socialist Republics. Seeds presented by the Botanical Institute, Ashkhabad, Turkmenistan. Received October 26, 1934.

Introduced for Department specialists.

106842 to 106844. ARISTIDA spp. Poaceae. Grass.

106842. ARISTIDA ARACHNOIDEA Litv.

A tufted grass about 10 inches high, with sharp, filiform leaves. Native to the Transcasian region.

106843. ARISTIDA PENNATA Trin.

A grass, native to Turkistan, where it is found in dry sandy places.

For previous introduction see 105804.

106844. ARISTIDA PENNATA KARELINI Trin. and Rupr.

A perennial grass of possible value as a forage crop. Native to the Caspian region.

For previous introduction see 98203.

106842 to 106913—Continued.

106845 to 106859. *ASTRAGALUS* spp. Fabaceae.

106845. *ASTRAGALUS ACKERBERGENSIS* Freyn.

A short-stemmed or stemless herbaceous perennial with a thick woody root and elliptic-obovate leaflets. Native to Asia Minor.

106846. *ASTRAGALUS ALOPECIAS* Pall.

A perennial with white-woolly ovate leaflets and pale-yellow flowers. Native to central Asia.

106847. *ASTRAGALUS BRACHYLOBUS* Fisch.

A shrub with linear-acute leaflets an inch long and small racemes much longer than the leaves. Native to Iran (Persia).

106848. *ASTRAGALUS COMMIXTUS* Bunge.

A dwarf annual with a very short stem, oblong-elliptic leaflets, and small white flowers. Native to Turkistan.

106849. *ASTRAGALUS CONFIRMANS* Freyn. and Bornm.

A shrub 3 to 5 feet high, with oblong-lanceolate, caducous leaves up to 2 inches long, and racemes of dark-violet flowers. Native to the Caspian region.

For previous introduction see 92967.

106850. *ASTRAGALUS FILICAULIS* Fisch. and Mey.

An erect annual leguminous plant 3 to 10 inches high, native to Asia Minor and Turkistan.

For previous introduction see 73182.

106851. *ASTRAGALUS GLOBICEPS* Bunge.

An erect perennial, native to Turkistan, with large compound leaves composed of 40 or more oblong leaflets about an inch long. The small flowers are in globular heads.

106852. *ASTRAGALUS LAGOCEPHALUS* Fisch. and Mey.

An erect perennial from semiarid regions in Turkistan. The leaflets are ovate elliptic, and the flowers are in short dense spikes.

106853. *ASTRAGALUS PAUCIJUGUS* Schrenk.

A much-branched shrub up to 6 feet high, with thick ovate-rounded leaflets half an inch long. Native to Turkistan.

106854. *ASTRAGALUS* sp.

Received under the name "piletocladus," for which a place of publication has not been found.

106855. *ASTRAGALUS RETAMOCARPUS* Boiss. and Hohen.

A hardy herbaceous perennial about 2 feet high, native to Asia Minor.

For previous introduction see 73183.

106856. *ASTRAGALUS SCHAHRUDENSIS* Bunge.

A hardy perennial, 2 feet high, with leaves 6 to 7 inches long. Native to northern and central Iran [Persia].

For previous introduction see 30553.

106842 to 106913—Continued.

106857. *ASTRAGALUS SIEVERSIIANUS* Pall.

A perennial herb with numerous ascending stems and pale-yellow flowers. Native to Turkistan.

106858. *ASTRAGALUS TURBINATUS* Bunge.

An erect hairy perennial with leaves often a foot long and rigid leaflets one-half inch in length. The yellowish flowers are in axillary clusters. Native to Turkistan.

106859. *ASTRAGALUS* sp.

Received as *Astragalus chinensis*, but the seeds are not of that species.

106860 to 106865. *BROMUS* spp. Poaceae. Grass.

106860. *BROMUS DANTHONIAE* Trin.

An annual grass, usually upright or ascending in habit. Native to southern Europe and central Asia.

For previous introduction see 61400.

106861. *BROMUS KOPETDAGHENSIS* Drobov.

A perennial grass with a creeping rootstalk and stems up to 2 feet high. Native to Turkistan.

106862. *BROMUS MACROSTACHYS* Desf.

An erect annual grass up to 2 feet high. The narrow compact panicle consists of a few large spikelets. It is native to Iran (Persia) and the Mediterranean region and is sometimes cultivated as an ornamental.

For previous introduction see 16041.

106863. *BROMUS PSEUDODANTHONIAE* Drobov.

An annual grass with a few slender stems 8 to 10 inches high. Native to Turkistan.

106864 and 106865. *BROMUS TECTORUM* L.
Downy chess.

A weedy annual grass with erect slender stems 1 to 2 feet tall and hairy narrow leaf blades. It will produce a good cover crop with very little rainfall. Native to Europe.

For previous introduction see 98287.

106866 to 106868. *CAREX* spp. Cyperaceae.

106866. *CAREX DIVISA* Huds.

A low sedge with a creeping, hard rootstock and short slender stems. Native to the seacoasts of southern Europe.

106867. *CAREX PACHYSTYLIS* Gay.

A low sedge with a creeping rootstock and flat narrow leaves. Native to western Asia.

106868. *CAREX PHYSODES* Bieb.

A perennial sedge, usually about 6 inches high, rarely more, with filiform leaves and panicles of brownish globose membranous perigynia, or sacs, half an inch long. Native to the sandy deserts of Turkistan.

For previous introduction see 98210.

106869. *CHONDRILLA PAUCIFLORA* Led. Cichoriaceae.

A biennial herb with a vertical root and numerous slender branches. The basal leaves are pinnatifid, and the yellow flower heads are solitary, terminating the branches. Native to Turkistan.

106842 to 106913—Continued.

106870. *COTINUS COGGYRIA* Scopoli (*Rhus cotinus* L.). Anacardiaceae.

Smoketree.

A spreading, rather dense shrub up to 15 feet high, with oval or obovate leaves over 3 inches long on slender petioles. The small flowers, usually purplish, are in a densely plumose panicle about 8 inches long. Native to central China and the Himalayas.

106871. *CRAMBE KOTSCHYANA* Boiss. Brassicaceae.

A perennial with cordate radical leaves about 8 inches long and rather large white flowers. Native to western Asia.

106872. *DELPHINIUM* spp. Ranunculaceae. **Larkspur.**

106872. *DELPHINIUM BITERNATUM* Huth.

A perennial herb with a thick root, erect hairy stem 3 to 4 feet high, biternate leaves, and dense racemes of yellow flowers. Native to Turkistan.

106873. *DELPHINIUM CAMPTOCARPUM* Fisch. and Mey.

A somewhat bushy annual 6 inches high, with biternate leaves and small, grayish-blue flowers. Native to sandy places in the southern part of the Union of Soviet Socialist Republics.

106874. *DELPHINIUM ORIENTALE* J. Gay.

An annual larkspur which closely resembles *Delphinium ajacis*, but differs in being from 12 to 18 inches high, with an upright branching stem bearing numerous dense racemes of violet, pink, or white flowers. Native to southern Europe.

For previous introduction see 81885.

106875. *DELPHINIUM PILOSULUM* (Trautv.) F. Fedtsch.

106876. *DELPHINIUM RUGULOSUM* Boiss.

An annual plant up to 5 inches high, often with several stems and with grayish-blue flowers.

For previous introduction see 61412.

106877. *DELPHINIUM SEMIBARBATUM* Bientert.

A low perennial about a foot high with fine-cut foliage and long lax racemes of small yellow flowers. Native to Iran (Persia).

106878. *ELYMUS GIGANTEUS* Vahl. Poaceae. **Siberian wild-rye.**

A tall erect perennial grass, native to Siberia.

For previous introduction see 61417.

106879. *ERAGROSTIS* sp. Poaceae.

106880. *HORDEUM VILBOSUM* L. Poaceae.

A perennial grass a foot or more high. Native to Asia Minor.

For previous introduction see 88926.

106881 and 106882. *KOELERIA PHLEOIDES* (Will.) Pers. Poaceae. **Grass.**

An annual grass with culms up to a foot high, narrow leaves, and dense spike-like panicles. Native to Europe.

106883. *LEPTALEUM FILIFOLIUM* (Willd.) DC. Brassicaceae.

A low annual 1 to 2 inches high, with subsessile linear leaves 1 inch long and

106842 to 106913—Continued.

small white flowers with linear petals. Native to Siberia.

106884. *LOLIUM PERSICUM* Boiss. and Hohen. Poaceae. **Grass.**

An annual grass, closely resembling *Lolium multiflorum*, which does well in a very hot dry region.

For previous introduction see 92234.

106885. *LOLIUM TEMULENTUM* LEPTOCHAR-
TON A. Br. Poaceae. **Grass.**

A tall annual grass about 3 feet high, with flat leaves and slender spikes. Native to Europe.

106886. *MEDICAGO MINIMA* (L.) Grufberg. Fabaceae. **Medick.**

A prostrate leguminous annual with stems about 2 feet long, native to dry situations in southern Europe.

For previous introduction see 69857.

106887 to 106890. *ONOBRYCHIS* spp. Fabaceae.

106887. *ONOBRYCHIS CHORASSANICA* Bunge.

An erect shrub with ovate-acute leaflets and purple flowers in long lax racemes. Native to Iran (Persia).

106888. *ONOBRYCHIS MICRANTHA* Schrenk.

An annual erect leguminous plant with very narrow acute leaflets, stems about 2 feet high, and dull-yellow flowers. Native to the Union of Soviet Socialist Republics.

For previous introduction see 73609.

106889. *ONOBRYCHIS PULCHELLA* Schrenk.

An annual less than a foot high with narrow leaflets and pink flowers. Native to the Union of Soviet Socialist Republics.

For previous introduction see 73611.

106890. *ONOBRYCHIS SINTENISII* Fr. and Sint.

106891. *PENNISETUM ORIENTALE* L. Rich. Poaceae.

A tall coarse species growing to a height of 6 feet and quite ornamental.

For previous introduction see 33613.

106892. *PHASEOLUS AUREUS* Roxb. Fabaceae. **Mung bean.**

106893. *PHASEOLUS CALCARATUS* Roxb. Fabaceae. **Rice bean.**

106894. *PHLEUM PANICULATUM* Huds. Poaceae. **Timothy.**

An erect or ascending annual grass 4 to 16 inches high. Native to the Mediterranean countries.

For previous introduction see 84475.

106895. *PISTACIA VERA* L. Anacardiaceae. **Pistache.**

106896. *PSORALEA DRUPACEA* Bunge. Fabaceae.

A woody perennial about a foot high, with roundish dentate leaflets nearly an inch long and small white flowers in dense axillary racemes. Native to Bokhara.

106897. *RHUS CORIARIA* L. Anacardiaceae. **Sumac.**

106842 to 106913—Continued.

A shrub up to 20 feet high, with greenish flowers and small crimson fruits. The leaves yield a commercial tannin. Native to southern Europe.

For previous introduction see 72634.

106898. RHUS SUCCEDANEA L. Anacardiaceae. Sumac.

A shrub or small tree up to 30 feet high, with grayish-green elliptic-oblong, long-pointed leaflets, and slender panicles of yellowish-green flowers. Native to eastern Asia.

For previous introduction see 48733.

106899. SACCHARUM SPONTANEUM L. Poaceae.

A grass closely related to sugarcane.

For previous introduction see 86174.

106900. SALSOLA ARBORESCENS RICHLERI Karel. Chenopodiaceae.

A much-branched shrub with semiterete leaves and small inconspicuous flowers. Native to the deserts of Siberia.

106901. SALSOLA RIGIDA Pall. Chenopodiaceae.

A small shrub, yellow hairy throughout, with prostrate or ascending branches and alternate linear leaves. Native to salty places in southwestern Asia.

106902 to 106905. STIPA spp. Poaceae. Grass.

106902. STIPA HOHENACKERIANA Trin. and Rupr.

A caespitose perennial grass with slender culms and long rigid leaves. Native to Transcaucasia and Iran (Persia).

106903. STIPA HOLOSERICEA Trin. and Rupr.

A tufted perennial grass with spreading stems and rigid leaves. Native to Asia Minor.

106904. STIPA SPLENDENS Trin. Feathergrass.

A coarse grass 6 feet high, native to the steppes of western Asia, with dense nodding panicles a foot long. The tough leaves and stalks are used to make brooms.

For previous introduction see 78482.

106905. STIPA SZOVITZIANA Trin.

A tufted perennial grass with fibrous roots and short rigid leaves. Native to Asia Minor, Arabia, and Iran (Persia).

106906. THALICTRUM MINUS L. Ranunculaceae. Low meadowrue.

A species 1 to 2 feet high, native to Europe, Asia, and northern Africa, with loose panicles of drooping yellow or greenish flowers.

For previous introduction see 95608.

106907. THALICTRUM SULTANABADENSE Stapf. Ranunculaceae.

A low herb about 6 inches high, with bifernate leaves and flowers in a leafy raceme. Native to Iran (Persia).

106908. TRIFOLIUM LAPPACEUM L. Fabaceae.

106842 to 106913—Continued.

This European clover has a somewhat reclining habit of growth; the rather soft and delicate stems are seldom more than 12 or 15 inches long.

For previous introduction see 97794.

106909 to 106913. TULIPA spp. Liliaceae. Tulip.

106909. TULIPA ANDROSSOWI Litv.

A wild tulip from central Asia, with a stem 4 to 10 inches high, bearing a single small white flower. The two linear-acute leaves are borne at about the middle of the stem.

106910. TULIPA BORSCHOWI Regel.

A Russian tulip with stems 12 to 18 inches high, bluish-green, narrowly ovate leaves up to 6 inches in length, and red flowers with black blotches at the base of the petals.

For previous introduction see 61447.

106911. TULIPA HOOGIANA B. Fedtsh.

A tulip of the section Eriobulbi, with a stem 6 to 18 inches high and four to six lanceolate-tapering leaves 8 to 10 inches long. The flower is scarlet, with a large black blotch bordered with orange on the inner side of each segment. Native to Bokhara.

106912. TULIPA KUSCHKENSIS B. Fedtsh.

For previous introduction and description see 106777.

106913. TULIPA MICHELIANA Hoog.

A tulip native to the Caspian region, with a pubescent scape 12 inches high. The lanceolate to linear-lanceolate leaves, usually four, are striped with brown and have undulate margins. The large single flowers are lilac scarlet and vermilion scarlet inside with black lanceolate blotches on the back.

For previous introduction see 100644.

106914 to 106932.

From British Guiana. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received October 19, 1934.

Introduced for Department specialists.

From the Georgetown Botanic Garden, September 27, 1934.

106914. BARRINGTONIA ASIATICA (L.) Kurz. Lecythidaceae.

No. 2571. A handsome tree 50 feet high, with thick leathery bright-green leaves a foot long and racemes of large showy flowers having white petals and crimson-tipped stamens resembling a brush. The smooth shining-black fruits are shaped like a four-sided pyramid and are 3 to 4 inches long on each side. It is native to the East Indies.

For previous introduction see 97975.

106915. BAUHINIA GALPINI N. E. Br. Caesalpinjiaceae.

No. 2561. A small tree 15 feet high. The leaves, two lobed at the apex, are up to 3 inches long, and the brick-red flowers are borne continuously from spring to late autumn.

For previous introduction see 76775.

106914 to 106932—Continued.

106916. *CENTROSEMA PUBESCENS* Benth. Fabaceae.

No. 2582. A leguminous vine, native to tropical America, with trifoliolate leaves and small yellowish flowers. Used as a cover crop.

For previous introduction see 98981.

106917. *CASSIA GRANDIS* L. f. Caesalpinia-ceae.

No. 2569. A leguminous tree, 40 to 50 feet high, that produces masses of pale-pink flowers in the early spring, before the leaves appear. Native to Panama.

For previous introduction see 101077.

106918. *CASSIA SURATTENSIS* Burm. f. Caesalpinia-ceae.

No. 2560. A tropical leguminous shrub or small tree up to 15 feet high, with pale-green compound leaves and clusters of pale-yellow flowers. Native to the East Indies.

For previous introduction see 99696.

106919 to 106922. *CROTALARIA* spp. Fabaceae.

106919. *CROTALARIA QUINQUEFOLIA* L.

No. 2584. An annual plant cultivated in British Guiana as a cover crop.

106920. *CROTALARIA RETUSA* L.

No. 2577. A bushy plant with sulphur-yellow flowers with brown markings. Cultivated as a cover crop.

For previous introduction see 102603.

106921. *CROTALARIA SPECTABILIS* Roth.

No. 2583. A handsome shrub 3 to 5 feet high, native to India and sometimes cultivated for the sake of its yellowish-purple flowers, produced in dense lax racemes often 20 inches long. It is also cultivated as a cover crop.

For previous introduction see 86706.

106922. *CROTALARIA USARAMOENSIS* Baker f.

No. 2579. A leguminous plant which forms a dense low growth and endures partial shade. Cultivated as a cover crop.

For previous introduction see 97875.

106923. *DOLICHOS LABLAB* L. Fabaceae. Hyacinth-bean.

No. 2580. Cultivated as a cover crop.

106924. *ERYTHRINA VARIEGATA* Stickm. Fabaceae.

No. 2574. A tree 20 to 30 feet high, native throughout India, with clusters of large bright-red flowers which appear before the leaves. The pods, 4 to 8 inches long, contain dark-carmine seeds.

For previous introduction see 104126.

106925. *ERYTHRINA* sp. Fabaceae.

No. 2575. A small tree 20 to 30 feet high, with white seeds.

106926. *GUSTAVIA* sp. Lecythidaceae.

No. 2551. A medium-sized tree 30 feet high, with yellow flowers which shatter easily.

106927. *HIPPOMANE MANCINELLA* L. Euphorbiaceae.

106914 to 106932—Continued.

No. 2570. A tropical evergreen tree, sometimes 60 feet or more tall, with thick, shining, oval leaves 2 to 4 inches long. The acrid milky sap is poisonous, and the hard, brown, fine-grained wood is used in making furniture. Native to tropical America.

106928. *INDIGOFERA HIRSUTA* L. Fabaceae. Indigo.

No. 2555. An annual 3 feet high, with crimson flowers. Cultivated as a cover crop.

For previous introduction see 42173.

106929. *INDIGOFERA SUFFRUTICOSA* Mill. Fabaceae. Indigo.

No. 2585. A slender yellow-flowered bushy legume 3 to 5 feet high, producing a rather scanty growth, which is not considered one of the best cover crops. Native to tropical America.

For previous introduction see 99780.

106930. *LONCHOCARPUS SERICEUS* (Poir.) H. B. K. Fabaceae.

No. 2564.

For previous introduction and description see 106595.

106931. *PHASEOLUS LATHYROIDES* L. Fabaceae.

No. 2558. A semierect annual legume which makes a good growth on poor land. The dark-red flowers are very ornamental. It is cultivated as a cover crop.

For previous introduction see 97893.

106932. *ANDIRA INERMIS* (Sw.) H. B. K. Fabaceae. Cabbage angelin.

No. 2563. A slow-growing leguminous tree called, in Jamaica, cabbage tree, on account of its disagreeable odor. The purple flowers are followed by fleshy pods each containing one seed. The wood, which is very hard and durable, varies in the same tree from reddish yellow to black and takes on a high polish. It is used for all sorts of carpenter work. The tree is native to tropical America.

For previous introduction see 48509.

106933. *SORGHUM VULGARE* Pers. Poaceae. Sorghum.

From Mexico. Seeds presented by P. E. Baffert, Nogales, Ariz., at the request of Walter Douglas, of the Southern Pacific Railroad Co. of Mexico. Received November 5, 1934.

A prolific sorghum which becomes 10 to 12 feet tall in the Barrancas region, Jalisco, Mexico.

106934 and 106935. *SACCHARUM OFFICINARUM* L. Poaceae. Sugarcane.

From Australia. Cuttings presented by the Bureau of Sugar Experiment Stations, Brisbane, Queensland. Received November 14, 1934.

Introduced for Department specialists.

106934. S. J. No. 4. 106935. S. J. No. 7.

106936. *PHYLLANTHUS ACUMINATUS* Vahl. Euphorbiaceae.

From British Guiana. Cuttings collected by W. A. Archer, Bureau of Plant Industry.

106936—Continued.

Received August 14, 1934. Numbered November 1934.

Introduced for the use of Department specialists.

No. 2355. *Dakanani*. From Wauna on the Koriabo River, July 20, 1934. A bushy perennial 4 to 6 feet high. It is native to British and French Guiana.

106937 and 106938. *TULIPA* spp. Liliaceae. Tulip.

From the Union of Soviet Socialist Republics. Bulbs collected in Turkistan by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received November 9, 1934.

Collected at Chelkar, August 13, 1934.

106937. No. 903. 106938. No. 901.

106939. *PINUS TORREYANA* Parry. Pinaceae. Soledad pine.

From California. Seeds purchased from John R. Fleming, La Jolla. Received November 19, 1934.

Obtained for Department specialists.

106940. *JATROPHA GOSSYPIFOLIA* L. Euphorbiaceae.

From British Guiana. Plants collected by W. A. Archer, Bureau of Plant Industry. Received November 6, 1934.

No. 2623. *Bellyache bush*. From near Georgetown, October 15, 1934. A woody perennial 2 to 6 feet high, with five-lobed leaves 4 to 6 inches across and dark-red flowers followed by globular warty fruits. Native to tropical America.

106941. *PERSEA AMERICANA* Mill. Lauraceae. Avocado.

From Florida. A tree, seedling "B" of the *Collinred* avocado, P. I. 62376, growing at the Plant Introduction Garden, Coconut Grove. Numbered November 28, 1934, for convenience in distribution.

106942 to 106945. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

From Czechoslovakia. Plants purchased from Dr. Joseph Blaha, Brno. Received November 17, 1934.

Introduced under the following varietal names for the use of Department specialists.

106942. *Joniska*.

106943. *Syrská*.

106944. *Velká raná*.

106945. *Velkopavlovická*.

106946 and 106947. *EUCHLAENA MEXICANA* Schrad. Poaceae. Teosinte.

From the Distrito Federal, Mexico. Seeds presented by Mrs. Walter Douglas, Mexico City. Received November 5, 1934.

Introduced for Department specialists.

A coarse annual grass, native to Mexico, where it was cultivated in prehistoric times. It resembles corn rather closely, and some botanists consider that corn is a hybrid of which teosinte is one of the parents.

For previous introduction see 95686.

106946. Seeds from plant No. 1.

106947. Seeds from plant No. 2.

106948. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.

From China. Seeds purchased through Peter Liu, Peiping. Received November 24, 1934.

Mao Tao (hairy peach); from the villages around Feicheng, where the seedlings are used as stocks for cultivated varieties of peaches.

106949 to 106960.

From British Guiana. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received November 5, 1934.

Introduced for Department specialists.

Nos. 106949 to 106957 were collected in the Botanic Garden, Georgetown, September 27, 1934.

106949. *BARRINGTONIA ASIATICA* (L.) Kurz. Lecythidaceae.

No. 2571.

For previous introduction and description see 106914.

106950. *CARICA PAPAYA* L. Papayaceae. Papaya.

No. 2598.

106951. *CERBERA THEVETIA* L. (*Thevetia nereifolia* Juss.). Apocynaceae. Yellow oleander.

No. 2600. An ornamental, willow-leaved, yellow-flowered evergreen tree or shrub 10 to 15 feet high. Native to tropical America.

For previous introduction see 60396.

106952. *COCCINEA CORDIFOLIA* Cogn. Curbitaceae.

No. 2597. A perennial tropical vine with small, broadly ovate-cordate, deep-green leaves, white flowers, and intensely scarlet, oval, edible fruits about 2 inches long, which taste like cucumbers. Native to eastern India.

106953. *COBROUPTA GUIANENSIS* Aubl. Lecythidaceae.

No. 2591. *Cannonball tree*. A tall tropical tree with oblong-ovate leaves and odd, showy, yellow and red-tinged flowers about 2 inches long, in long racemes. The globular reddish-brown fruits are 6 to 8 inches in diameter.

For previous introduction see 98550.

106954. *TEPHROSIA NOCTIFLORA* Bojer. Fabaceae.

For previous introduction and description see 106594.

106955. *CROTALARIA STRIATA* DC. Fabaceae.

No. 2599. A low-growing, shrubby, ornamental, leguminous plant, native to India, with rounded green branches and elongated terminal clusters of drooping yellow flowers, the petals striped with deep orange brown. Cultivated as a cover crop.

For previous introduction see 76772.

106956. *GUSTAVIA AUGUSTA* L. Lecythidaceae.

No. 2593. A slender evergreen tree 20 feet high, native to tropical America, which bears flowers 4 inches across, creamy white, tinged with rose inside, and externally rose-colored. The stamens form a circle in the center of the flower and are white at the base with rosy filaments and yellow anthers.

For previous introduction see 106354.

106949 to 106960—Continued.

106957. *HURA CREPITANS* L. Euphorbiaceae. Sandboxtree.

No. 2595. An ornamental tree, native to the American Tropics, up to 100 feet high, with broad-ovate, repand-dentate, poplarlike, long-stemmed leaves. The small reddish flowers are followed by deeply ribbed capsules 3 inches wide and over an inch thick, which explode with a loud noise when ripe and throw the seeds many feet.

For previous introduction see 94192.

106958. *NICOTIANA TABACUM* L. Solanaceae. Tobacco.

No. 2602. *Bush* tobacco. A native strain collected at Rupununi by Carib Indians.

Nos. 106959 and 106960 were collected in the Botanic Garden, Georgetown, September 27, 1934.

106959. *PAULLINIA PINNATA* L. Sapindaceae.

No. 2554. A strong-growing vine that climbs 30 to 40 feet to the tops of trees. The bright-red fruits, the size of cherries, are borne in racemes 6 inches or more in length.

For previous introduction see 99001.

106960. *PHYLLANTHUS ACIDUS* (L.) Skeels. Euphorbiaceae. Star-gooseberry.

No. 2576. A shrub or tree up to 50 feet high, with ovate acute leaflets; flowers on separate branches below the foliage; the edible, white, very acid fruits are used for pickles or made into preserves. Native to the East Indies.

For previous introduction see 76491.

106961 to 106969.

From Arizona. Seeds collected by Robert Burton, Bureau of Plant Industry. Received October 26, 1934.

Collected for Department specialists.

106961. *AMELANCHIER UTAHENSIS* Koehne. Malaceae.

A dwarf shrub with thick branches, small roundish leaves, and short racemes of small white flowers. Native to the western United States.

106962. *ARCTOSTAPHYLOS PUNGENS* H. B. K. Ericaceae.

A shrub 3 to 10 feet high, with smooth red-brown bark, lanceolate to rounded leaves about an inch long, and small edible brown fruits one-fourth inch in diameter. Native to Mexico and the southwestern United States.

106963. *ATRIPLEX CANESCENS* (Pursh) James. Chenopodiaceae.

A shrub up to 3 feet high, with grayish-white stems and narrow-oblong leaves. Native to the western United States.

106964. *CERCOCARPUS INTRICATUS* S. Wats. Rosaceae.

A low rigid evergreen shrub with short revolute leaves, inconspicuous flowers, and small feathery tailed fruits. Native to the western United States.

106965. *RHAMNUS BETULAEFOLIA* Greene. Rhamnaceae.

A deciduous shrub with oval or elliptical, finely serrulate leaves 2 to 3 inches long. Native to New Mexico and Arizona.

106961 to 106969—Continued.

106966. *COWANIA MEXICANA* D. Don. Rosaceae.

A shrub up to 6 feet high, with small crowded cuneate three- to seven-cleft leaves less than half an inch long and creamy-white flowers an inch across. It is native to Mexico and the southwestern United States.

For previous introduction see 99410.

106967. *ELYMUS GLAUCUS* Buckl. Poaceae. Blue wild-rye.

A perennial grass with a loose or dense tuft of erect culms 2 to 4 feet high and lax flat leaves. Native to the western United States.

106968. *RIBES LACESTRE* (Pers.) Poir. Grossulariaceae.

A deciduous shrub 3 to 5 feet high, thickly covered with slender prickles. The leaves, 1 to 2½ inches wide and long, are deeply three- to five-lobed, and the funnel-shaped flowers, brownish crimson inside and creamy white or pinkish outside, are borne in drooping racemes 2 to 3 inches long. The small round black fruits are edible. Native to the northern and western United States.

For previous introduction see 40593.

106969. *SYMPHORICARPOS ROTUNDFOLIUS* Gray. Caprifoliaceae.

An upright shrub about 4 feet high, with elliptic acute leaves and small pinkish flowers in axillary pairs or small terminal spikes. Native to the western United States.

106970 to 106981.

From the Territory of Ruanda and Urundi, Belgian Congo. Seeds presented by J. B. H. Lejeune, Director, Government Experimental Station, Kisozi. Received October 30, 1934.

Introduced for Department specialists.

106970. *ACACIA* sp. Mimosaceae.

106971 to 106973. *CROTALARIA* spp. Fabaceae.

106971. *CROTALARIA DIGITATA* Hook.

An erect annual 1 or 2 feet high, white woolly throughout. The five or seven leaflets are obovate, and the large yellow flowers are in terminal racemes. Native to southern India.

For previous introduction see 99820.

106972. *CROTALARIA* sp.

106973. *CROTALARIA* sp.

106974. *DOLICHOS* sp. Fabaceae.

106975 to 106978. *INDIGOFERA* spp. Fabaceae. Indigo.

106975. *INDIGOFERA* sp.

106976. *INDIGOFERA* sp.

106977. *INDIGOFERA* sp.

106978. *INDIGOFERA* sp.

106979. *PHASEOLUS* sp. Fabaceae.

106980. *SESBANIA* sp. Fabaceae.

106981. (Undetermined.)

An unidentified leguminous plant.

106982 to 107002.

From British Guiana. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received November 7, 1934.

Introduced for Department specialists.

106982. *ABELMOSCHUS ESCULENTUS* (L.) Moench. Malvaceae. Okra.

No. 2364. From near Georgetown, October 15, 1934. A cultivated variety with fruits $1\frac{1}{2}$ inches in diameter and $3\frac{1}{2}$ inches long.

Nos. 106983 to 106988 were collected in the Georgetown market, October 10, 1934.

106983. *ANNONA SQUAMOSA* L. Annonaceae. Sugar-apple.

No. 2604. The fruit is the size of an orange, with pale-green skin, the markings of which resemble dressed alligator hide.

For previous introduction see 100711.

106984. *CAPSICUM ANNUM* L. Solanaceae. Common redpepper.

No. 2610.

106985. *CARICA PAPAYA* L. Papayaceae. Papaya.

No. 2609.

106986. *CUCURBITA MOSCHATA* Duchesne. Cucurbitaceae. Cushaw.

No. 2605.

106987. *CUCURBITA PEPO* L. Cucurbitaceae. Pumpkin.

No. 2606.

106988. *DIOSPYROS DISCOLOR* Willd. Diospyraceae. Mabelo.

No. 2612. A medium-sized tree, native to the Philippine Islands, with shining green leaves 5 to 10 inches long, pubescent beneath. The velvety dull-reddish, thin-skinned fruits, 3 inches long and nearly 4 inches in diameter, have firm, rather dry flesh of a rather indefinite sweet flavor and four to eight large seeds.

For previous introduction see 101139.

106989. *RHYNCHOSIA MINIMA* (L.) DC. Fabaceae.

No. 2622. From near Georgetown, October 5, 1934. A leguminous vine 2 to 3 feet long, with pale-yellow flowers striped with lavender.

For previous introduction see 98990.

106990. *GLIRICIDIA SEPIUM* (Jacq.) Kunth. (*G. maculata* H. B. K.). Fabaceae.

No. 2603. Botanic Garden, Georgetown, October 10, 1934. A small tree up to 30 feet high with alternate compound leaves. The flowers resemble those of the black locust in size, but are pink.

For previous introduction see 80691.

106991. *GUSTAVIA* sp. Lecythidaceae.

No. 2613. Botanic Garden, Georgetown, October 11, 1934.

106992. *HURA CREPITANS* L. Euphorbiaceae. Sandboxtree.

No. 2595.

For previous introduction and description see 106957.

106982 to 107002—Continued.

106993. *JACQUINIA AURANTIACA* Ait. Theophrastaceae.

No. 2568. Botanic Garden, Georgetown, September 27, 1934. A shrub 15 feet high with orange-red flowers.

106994. *JATROPHA CURCAS* L. Euphorbiaceae.

No. 2630. From near Georgetown, October 15, 1934. A tropical American shrub or small tree 6 or 7 feet high. It is used as a hedge in the East Indies, and an oil obtained from the seeds is used in soap making. The leaves and sap are used medicinally.

For previous introduction see 74215.

106995. *JATROPHA PODAGRICA* Hook. Euphorbiaceae.

No. 2592. Botanic Garden, Georgetown, September 27, 1934. An ornamental shrub up to 4 feet high, with peltate, three- to five-lobed leaves 4 to 8 inches wide and orange flowers with scarlet petals. Native to tropical America.

For previous introduction see 103986.

106996. *LONCHOCARPUS SERICEUS* (Poir.) H. B. K. Fabaceae.

No. 2564. Botanic Garden, Georgetown, September 27, 1934.

For previous introduction and description see 106595.

106997. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

No. 2607. *Creole* tomato. Georgetown market, October 10, 1934. A cultivated variety.

106998. *NICOTIANA TABACUM* L. Solanaceae. Tobacco.

No. 2631. Near Georgetown, October 15, 1934. *Buck* tobacco. A variety grown in the dooryards of the natives. The leaves are used for smelling, and they are cured for smoking.

106999. *PASSIFLORA QUADRANGULARIS* L. Passifloraceae. Giant granadilla.

No. 2608. Georgetown market, October 10, 1934. An ornamental vine, native to Brazil, which is cultivated for its strongly perfumed fruits; these are yellow to orange and have flesh about an inch thick.

For previous introduction see 100499.

107000. *PHYLLANTHUS ACIDUS* (L.) Skeels. Euphorbiaceae. Star-gooseberry.

No. 2611. Georgetown market, October 10, 1934. *Otaheite* gooseberry.

For previous introduction and description see 106960.

107001. *QUASSIA AMARA* L. Simaroubaceae.

No. 2596. Botanic Garden, Georgetown, September 27, 1934. *Bitter wood*, *Indian cinchona*. A lofty tree native to northern South America, which resembles the ash, with large showy red flowers, followed by beautiful and decorative fruits arranged in fives around a fleshy peduncle. The wood of the tree is extremely bitter and is used by the natives as a substitute for quinine.

For previous introduction see 104261.

106982 to 107002—Continued.

107002. *SOPHORA TOMENTOSA* L. Fabaceae.

No. 2587. Botanic Garden, Georgetown, September 27, 1934. A shrub or small tree, native to India and Ceylon, with slender wandlike branches and pinnate leaves made up of 15 to 19 obovate leaflets, 1 to 2 inches long, densely gray hairy beneath. The yellow pea-shaped flowers, nearly an inch in length, are borne in racemes 6 inches long.

For previous introduction see 99700.

107003 and 107004.

From Africa. Seeds presented by the superintendent, Government Gardens, Khartoum, Anglo-Egyptian Sudan, through F. G. Walsingham, Atkins Institution, Arnold Arboretum, Soledad, Cienfuegos, Cuba. Received November 7, 1934.

107003. *ACACIA SEYAL* Delile. Mimosaceae.

For previous introduction and description see 106614.

107004. *BAUHINIA* sp. Caesalpiniaceae.

A red-flowered variety.

107005 to 107007.

From Brazil. Seeds collected by J. R. Swalson, Bureau of Plant Industry. Received November 6, 1934.

107005. *ANNONA SQUAMOSA* L. Annonaceae. Sugar-apple.

Piña, Azatas. From the mountains of Batarite, Ceará. A common fruit in this region.

107006. *PASSIFLORA EDULIS* Sims. Passifloraceae.

Maracuya. From Maranhao. The juice of this fruit has a pleasing flavor and is used for making cold drinks.

107007. *VITIS VINIFERA* L. Vitaceae. European grape.

Collected in the mountains of Beatrice, Ceará. Apparently everbearing.

107008 to 107134.

From the Union of Soviet Socialist Republics. Seeds collected in Turkistan by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received October 29, 1934.

107008 and 107009. *AEGILOPS* spp. Poaceae.

July 3, 1934. From heavy soil, in permanent mountain pastures, adjacent to the Sultanabad Valley, Tajikistan.

107008. No. 230. 107009. No. 207.

107010 to 107012. *AGROPYRON* spp. Poaceae.

107010. *AGROPYRON* sp.

No. 174. July 1934. From mountain slope, Gissar Valley, Tajikistan.

107011. *AGROPYRON* sp.

No. 156. July 1934. From dry rocky slopes, Gissar Valley, Tajikistan.

107012. *AGROPYRON* sp.

No. 153. July 1934. From dry rocky mountain slopes, Gissar Valley, north of Stalinabad, Tajikistan.

107013. *ALLIUM* sp. Liliaceae.

No. 229. July 1, 1934. Mountains of Stalinabad, Tajikistan.

107008 to 107134—Continued.

107014. *ARNEBIA* sp. Boraginaceae.

No. 267. July 9, 1934. From the hills near Stalinabad, Tajikistan. A plant with yellow flowers marked with black.

107015. *AMYGDALUS* sp. Amygdalaceae.

No. 183. July 1, 1934. Rocky mountains south of Stalinabad, Tajikistan.

107016. *AMYGDALUS* sp. Amygdalaceae.

No. 188. July 8, 1934. From the Varsov River Canyon, north of Stalinabad, Tajikistan.

107017. *ANDROPOGON* sp. Poaceae.

No. 260. July 3, 1934. A perennial grass from the mountain pastures near Stalinabad, Tajikistan.

107018. *ARNEBIA* sp. Boraginaceae.

No. 234. July 4, 1934. From the foothills adjacent to the Sultanabad Valley, near Stalinabad, Tajikistan. A plant with yellow flowers marked with black.

107019 to 107025. *ASTRAGALUS* spp. Fabaceae.

107019. *ASTRAGALUS SIEVERSIANUS* Pall.

No. 162. July 1934. From a mountain slope, Gissar Valley, Tajikistan.

For previous introduction and description see 106857.

107020. *ASTRAGALUS* sp.

No. 196. July 1, 1934. From the Gissar Mountains, south of Stalinabad, in rocky soil. Good forage.

107021. *ASTRAGALUS* sp.

No. 205. July 1, 1934. From the mountains south of Stalinabad, growing in rocky soil.

107022. *ASTRAGALUS* sp.

No. 289. July 8, 1934. Varsov Canyon, 20 km north of Stalinabad, Tajikistan.

107023. *ASTRAGALUS* sp.

No. 231. July 1934. From the Varsov River Canyon, Tajikistan.

107024. *ASTRAGALUS* sp.

No. 187. June 1934. From the Varsov Canyon, Tajikistan.

107025. *ASTRAGALUS* sp.

No. 277. July 7, 1934. Varsov Canyon, north of Stalinabad.

107026. *ATRAPHAXIS* sp. Polygonaceae.

No. 242. July 1, 1934. Stalinabad, Tajikistan. A shrub growing in rocky mountain soil.

107027. *AVENA FATUA* L. Poaceae. Oats.

No. 219. June 30, 1934. Near railroad, Denan, Tajikistan, near Stalinabad. A wild oat, native to Asia.

For previous introduction see 69126.

107028. *AVENA LUDOVICIANA* Durieu. Poaceae. Grass.

No. 281. July 1, 1934. Stalinabad, Tajikistan. Found on dry hillsides growing in clay soil. An annual or biennial grass, very similar to *Avena sterilis*, but smaller. Native to southern Europe.

For previous introduction see 64094.

107008 to 107134—Continued.

107029 to 107040. *BROMUS* spp. Poaceae.
Grass.

107029. *BROMUS DANTHONIAE* Trin.

No. 237. July 1934. Mountains of Tajikistan.

For previous introduction and description see 106860.

107030. *BROMUS INERMIS* Leyss.

No. 226. July 3, 1934. Adjacent to the Sultanabad Valley, Tajikistan. A perennial upright European grass which forms a thick mat with creeping rhizomes. The stems are 1 to 3 feet high. A permanent mountain-pasture grass.

For previous introduction see 101647.

107031. *BROMUS OXYDON* Schrenk.

No. 223. July 1, 1934. From the foothills south of Stalinabad, Tajikistan. A tall annual grass up to 2 feet high, with flat linear leaves. Native to Turkistan.

107032. *BROMUS TECTORUM* L.

No. 198. July 1, 1934. Found in the foothills near Stalinabad in clay soils. An annual grass.

For previous introduction and description see 106865.

107033. *BROMUS* sp.

No. 288. June 30, 1934. From Denan, Tajikistan, near the railroad.

107034. *BROMUS* sp.

No. 202. July 4, 1934. From the Yavan Valley, Tajikistan, growing in clay soil.

107035. *BROMUS* sp.

No. 210. July 3, 1934. Found in mountain pastures adjacent to the Sultanabad Valley, Stalinabad, Tajikistan.

107036. *BROMUS* sp.

No. 249. July 1, 1934. From the foothills near Stalinabad, growing in clay soil.

107037. *BROMUS* sp.

No. 228. June 30, 1934. Found in heavy soil in the desert along the railroad between Kelif and Termez, Uzbekistan.

107038. *BROMUS* sp.

No. 238. July 4, 1934. From the Yavan Valley, Stalinabad, Tajikistan.

107039. *BROMUS* sp.

No. 261. June 30, 1934. Found in heavy soil in the desert along the railway between Kelif and Termez, Uzbekistan.

107040. *BROMUS* sp.

No. 269. July 1, 1934. Found in clay soil in the foothills near Stalinabad, Tajikistan.

107041. *CALAMAGROSTIS PSEUDOPHRAGMITES* (Hall. f.) Koel. Poaceae. Grass.

No. 278. July 1, 1934. From a dry rocky hillside, Stalinabad, Tajikistan. A perennial grass about 3 feet tall with creeping rhizomes. Native to central Europe.

107042. *CICER* sp. Fabaceae.

No. 178. July 8, 1934. From the Varsov River Canyon, at 5,500 feet altitude.

107008 to 107134—Continued.

107043. *CICER* sp. Fabaceae.

No. 221. July 2, 1934. Experiment Station, Stalinabad, Tajikistan. Occurring as a weed in wheatfields.

107044. *COLUTEA* sp. Fabaceae.

No. 189. July 1, 1934. From the mountains south of Stalinabad, Tajikistan. Received under the name "bukharica," for which a place of publication has not been found.

107045 and 107046. *CYNODON DACTYLON* (L.) Pers. Poaceae. Bermuda grass.

107045. No. 172. July 1934. From mountain slope, Gissar Valley, Tajikistan.

107046. No. 240. July 9, 1934. From clay hills, east of Stalinabad, Tajikistan.

107047 to 107049. *DACTYLIS GLOMERATA* L. Poaceae. Orchard grass.

107047. No. 168. July 1934. Mountain slope, Gissar Valley, Tajikistan.

107048. No. 206. July 1, 1934. Found in clay soil on the mountains south of Stalinabad, Tajikistan.

107049. No. 241. July 1, 1934. From the foothills, Stalinabad, Tajikistan.

107050 and 107051. *ELYMUS CAPUT-MEDUSAE* L. Poaceae.

107050. No. 201. July 1, 1934. From clay hills near Stalinabad, Tajikistan.

107051. No. 194. June 30, 1934. Found in heavy soil near the railroad at Denan, Tajikistan.

107052 and 107053. *ERAGROSTIS CILIANENSIS* (All.) Link. Poaceae. Grass.

For previous introduction see 101657.

107052. No. 215. July 4, 1934. Found in clay soil in the Yavan Valley, Tajikistan.

107053. No. 275. July 5, 1934. Found in heavy soil in the Yavan Valley, Tajikistan.

107054. *EREMURUS* sp. Liliaceae.

No. 262. July 3, 1934. From the Varsov River Canyon, north of Tajikistan.

107055. *EREMURUS* sp. Liliaceae.

No. 272. July 8, 1934. From the Varsov River Canyon, Tajikistan, at 5,500 feet altitude.

107056 to 107058. *FESTUCA* spp. Poaceae. Grass.

107056. *FESTUCA ELATIOR* L. Meadow fescue.

No. 158. July 1934. From the Gissar Valley, Tajikistan.

107057. *FESTUCA MYUROS* L.

No. 200. July 1, 1934. From the foothills south of Stalinabad. An annual grass with culms a foot high and narrow leaf blades. Native to Europe.

107058. *FESTUCA* sp.

No. 197. July 4, 1934. Found in heavy soil in the Yavan Valley south of Stalinabad.

107008 to 107134—Continued.

107059. FRITILLARIA BUCARICA Regel.
Liliaceae.

No. 233. July 1, 1934. From the mountains south of Stalinabad, Tajikistan, in rocky soil. A bulbous plant with an erect stem 6 to 18 inches high, with alternate ovate or lanceolate leaves and white flowers in terminal racemes. Native to Bokhara, central Asia.

107060 to 107062. HORDEUM spp. Poaceae.

107060 and 107061. HORDEUM BULBOSUM L.

For previous introduction see 106880.

107060. No. 224. July 1, 1934. Found in clay soil near Stalinabad, Tajikistan.

107061. No. 270. June 30, 1934. Near railroad, Denan, Tajikistan.

107062. HORDEUM SPONTANEUM C. Koch.

No. 209. July 1, 1934. Stalinabad, Tajikistan, in clay soil.

For previous introduction see 94850.

107063. IXIOLIRION sp. Amaryllidaceae.

No. 257. July 1, 1934. Gissar Mountains, south of Stalinabad, Tajikistan.

107064. KOELERIA sp. Poaceae. Grass.

No. 203. July 1, 1934. Found in clay soil in the foothills near Stalinabad, Tajikistan.

107065. KOELERIA PHLEOIDES (Vill.) Pers.
Poaceae. Grass.

No. 235. July 4, 1934. From the Ringantau Mountains, near Stalinabad, Tajikistan.

For previous introduction and description see 106881.

107066 to 107070. LATHYRUS spp. Fabaceae.

107066. LATHYRUS ANNUUS Hoefer.

No. 170. July 1934. Mountain slope, Gissar Valley, Tajikistan.

107067. LATHYRUS HIRSATUS L.

No. 159. July 1934. Gissar Valley, Tajikistan. A biennial vine with linear oblong leaflets and pale blue purple flowers. Native to Europe.

For previous introduction see 16998.

107068. LATHYRUS SPHAERICUS Retz.

No. 169. July 1934. Mountain slope, Gissar Valley, Tajikistan.

107069. LATHYRUS sp.

No. 185. July 8, 1934. Varsov Canyon, north of Stalinabad, Tajikistan. A plant with beautiful red flowers.

107070. LATHYRUS sp.

No. 227. July 1934. Varsov River, Tajikistan, at 5,000 feet altitude.

107071 to 107073. LOLIUM spp. Poaceae.
Grass.

107071. LOLIUM RIGIDUM Gaud.

No. 218. July 3, 1934. From a permanent mountain pasture adjacent to the Sultanabad Valley, near Stalinabad, Tajikistan. An annual, gray-green, bushy grass, with ascending stems up to 2 feet long. Native to southern and central Europe.

For previous introduction see 64632.

107008 to 107134—Continued.

107072 and 107073. LOLIUM TEMULENTUM
L. Darnel.

An annual European grass.

For previous introduction see 99138.

107072. No. 246. July 3, 1934. From a mountain wheatfield adjoining the Sultanabad Valley.

107073. No. 284. July 3, 1934. Collected on a mountain slope 25 km southeast of Stalinabad, on the Government horse farm, adjacent to the Sultanabad Valley.

107074. LONICERA sp. Caprifoliaceae.

No. 273. July 8, 1934. Varsov Canyon, Tajikistan.

107075 to 107081. MEDICAGO spp. Fabaceae.
Medick.

107075. MEDICAGO SATIVA L. Alfalfa.

No. 173. July 1934. Tajikistan.

107076. MEDICAGO sp.

No. 250. July 9, 1934. Found in clay soil on the hills east of Stalinabad, Tajikistan.

107077. MEDICAGO HISPIDA APICULATA
(Willd.) Urban.

No. 264. July 4, 1934. From the Yavan Valley, southeast of Stalinabad, Tajikistan.

107078. MEDICAGO ORBICULARIS (L.) All.

No. 245. July 1, 1934. From hillside in foothills near Stalinabad, Tajikistan.

For previous introduction see 90023.

107079. MEDICAGO sp.

No. 256. July 1, 1934. From clay soil in foothills near Stalinabad, Tajikistan.

107080. MEDICAGO ORBICULARIS (L.) All.

No. 247. July 4, 1934. From the Yavan Valley, Tajikistan.

107081. MEDICAGO sp.

No. 258. July 4, 1934. From the mountains adjacent to the Sultanabad Valley, Stalinabad, Tajikistan.

107082. MELICA sp. Poaceae. Grass.

No. 263. July 1, 1934. Found on very dry rocky soil in the mountains south of Stalinabad, Tajikistan.

107083. MELICA sp. Poaceae. Grass.

No. 199. July 1934. Found among rocks at 5,000 feet altitude along the Varsov River, Tajikistan.

107084. MELILOTUS ALBA DEST. Fabaceae.
White sweetclover.

No. 154. July 1934. From dry rocky slopes in the Gissar Valley, north of Stalinabad, Tajikistan.

For previous introduction see 90031.

107085. MELILOTUS OFFICINALIS (L.) Lam.
Fabaceae. Sweetclover.

No. 155. From the Gissar Valley, Tajikistan.

107086 to 107090. ONOBRYCHIS spp. Fabaceae.

107008 to 107134—Continued.

107086. *ONOBRYCHIS AMOENA* M. Popov and Vved.
No. 161. July 1934. From a mountain slope in the Gissar Valley, Tajikistan. An erect herb with slender stems over a foot high, lanceolate-linear leaflets, and yellow purple-streaked flowers in slender racemes. Native to central Asia.
107087. *ONOBRYCHIS GRANDIS* Lipsky.
No. 163. July 1934. From a mountain slope, Tajikistan. An herb over 3 feet high, with elliptic-obovate leaflets 2 inches long and flowers in long racemes. Native to Bokhara, central Asia.
107088. *ONOBRYCHIS PULCHELLA* Schrenk.
For previous introduction and description see 106889.
107089. *ONOBRYCHIS* sp.
No. 212. July 9, 1934. Found in clay soil in the foothills back of Stalinabad, Tajikistan.
107090. *ONOBRYCHIS* sp.
No. 286. July 4, 1934. From the Ringantau Mountains between Stalinabad and Yavan Valley, Tajikistan.
- 107091 to 107095. *ORYZOPSIS* spp. Poaceae.
Grass.
107091. *ORYZOPSIS* sp.
No. 211. July 1, 1934. Mountains of Stalinabad, Tajikistan.
107092. *ORYZOPSIS* sp.
No. 280. July 8, 1934. From the Varsov River Canyon, north of Stalinabad, Tajikistan.
107093. *ORYZOPSIS* sp.
No. 266. July 7, 1934. From the Varsov River Canyon, in the mountains north of Stalinabad.
107094. *ORYZOPSIS* sp.
No. 279. July 1, 1934. Found in rocky soil in the mountains south of Stalinabad, Tajikistan.
107095. *ORYZOPSIS* sp.
No. 292. July 7, 1934. Found in rocky soil north of Stalinabad in the Varsov River Canyon.
107096. *PAPAVER* sp. Papaveraceae.
Poppy.
No. 276. July 3, 1934. From the Varsov River Canyon, north of Stalinabad, Tajikistan.
107097. *PAPAVER* sp. Papaveraceae.
Poppy.
No. 232. July 8, 1934. Varsov River Canyon, Tajikistan. A yellow poppy.
107098. *PHALARIS MINOR* Retz. Poaceae.
Grass.
No. 287. July 4, 1934. From the Yavan Valley, Tajikistan.
107099. *PHALARIS MINOR* Retz. Poaceae.
Grass.
No. 290. June 30, 1934. Near the railroad, Denan, Tajikistan.
- 107100 to 107102. *PHLEUM* spp. Poaceae.
Grass.

107008 to 107134—Continued.

107100. *PHLEUM* sp.
No. 151. June 1934. From a dry rocky slope, Gissar Valley, north of Stalinabad, Tajikistan.
107101. *PHLEUM* sp.
No. 243. July 1, 1934. From dry foothills, Stalinabad, Tajikistan.
107102. *PHLEUM* sp.
No. 239. June 30, 1934. Denan, Tajikistan.
107103. *PIPTANTHUS* sp. Fabaceae.
No. 176. July 8, 1934. From the Government rest house, 20 km from Stalinabad.
107104. *PISUM* sp. Fabaceae.
No. 253. July 3, 1934. From a mountain wheatfield, adjacent to Sultanabad Valley, southeast of Stalinabad, Tajikistan.
- 107105 to 107111. *POA* spp. Poaceae.
Grass.
107105. *POA BULBOSA* L.
No. 208. July 1, 1934. Found in clay soil in the foothills near Stalinabad, Tajikistan.
For previous introduction see 84477.
107106. *POA* sp.
No. 213. July 4, 1934. Found in clay soil in the Yavan Valley, Stalinabad, Tajikistan.
107107. *POA* sp.
No. 220. July 8, 1934. Varsov River Canyon, Tajikistan, at 5,500 feet altitude.
107108. *POA* sp.
No. 285. July 8, 1934. Varsov River Canyon, north of Stalinabad, Tajikistan.
107109. *POA* sp.
No. 216. July 3, 1934. From permanent mountain pastures, adjacent to the Sultanabad Valley, Tajikistan.
107110. *POA* sp.
No. 225. July 7, 1934. From the Varsov River Canyon, in the mountains north of Stalinabad.
107111. *POA* sp.
No. 282. July 8, 1934. From the Varsov River Canyon, north of Stalinabad, Tajikistan.
107112. *POLYGONUM BUCCHARICUM* Greig. Polygonaceae.
No. 181. July 1, 1934. A perennial vine 3 feet high, with ovate leaves and branched panicles of small blue flowers, found in the mountains south of Stalinabad. Native to Bokhara.
107113. *POLYPOGON MONSPELIENSIS* (L.) Desf. Poaceae.
Grass.
No. 248. July 4, 1934. Found in salty soil in the Yavan Valley, Stalinabad, Tajikistan. An annual grass with soft bristly green or yellowish spikes up to 6 inches long.
For previous introduction see 106440.

107008 to 107134—Continued.

- 107114.** *PRUNUS ARMENIACA* L. Amygdalaceae. **Apricot.**
No. 177. June 30, 1934. Purchased at the station of Amirabad, Tajikistan.
- 107115.** *PRUNUS ARMENIACA* L. Amygdalaceae. **Apricot.**
No. 291. June 30, 1934. Cultivated apricots purchased at Termez, Uzbekistan.
- 107116.** *PUCCINELLIA* sp. Poaceae. **Grass.**
No. 222. July 7, 1934. Yavan Valley, Stalinabad, Tajikistan. A grass 3 feet tall, found in salty soil.
- 107117.** *SANGUISORBA MINOR* Scop. Rosaceae. **Small burnet.**
No. 157. July 1934. Dry rocky slopes of the Gissar Valley, Tajikistan. An exceedingly hardy and long-lived perennial up to 2 feet high; the young leaves, resembling the cucumber in flavor, are used as a salad. Native to France.
For previous introduction see 53921.
- 107118.** *SCABIOSA* sp. Dipsacaceae.
No. 255. July 3, 1934. From mountain pastures adjacent to the Sultanabad Valley, Stalinabad, Tajikistan.
- 107119.** *SCABIOSA* sp. Dipsacaceae.
No. 274. July 8, 1934. From the mountains north of Stalinabad, Tajikistan. An herb with reddish-purple flowers.
- 107120 to 107123.** *TRIFOLIUM* spp. Fabaceae. **Clover.**
- 107120.** *TRIFOLIUM LAPPACEUM* L.
No. 164. July 1934. From a mountain slope, Gissar Valley, Tajikistan.
- 107121.** *TRIFOLIUM PRATENSE* L. **Red clover.**
No. 175. July 1934. From the Gissar Valley, Tajikistan.
- 107122.** *TRIFOLIUM PROCUMBENS* L.
No. 251. July 1, 1934. From the mountains south of Stalinabad, Tajikistan.
- 107123.** *TRIFOLIUM REPENS* L. **White clover.**
No. 252. July 1, 1934. From the mountains south of Stalinabad, Tajikistan.
- 107124.** *TRIGONELLA* sp. Fabaceae.
No. 265. July 1, 1934. Stalinabad, Tajikistan. An excellent fodder crop, found on a rocky hillside.
- 107125 to 107132.** *VICIA* spp. Fabaceae. **Vetch.**
- 107125.** *VICIA ANGUSTIFOLIA* Grufberg. Fabaceae.
No. 160. July 1934. From a mountain slope, Gissar Valley, Tajikistan.
For previous introduction see 81051.
- 107126.** *VICIA HYRCANICA* Fisch. and Mey.
No. 166. July 1934. From mountain slopes, Gissar Valley, Tajikistan. An annual yellow-flowered vetch, cultivated in northern Iran (Persia) and Armenia.
For previous introduction see 73619.

107008 to 107134—Continued.

- 107127.** *VICIA LUTEA* L.
No. 167. July 1934. From a mountain slope, Gissar Valley, Tajikistan. An annual vetch with ascending stems up to 2 feet long, small linear-lanceolate leaflets, and bright-yellow flowers. Native to central Europe.
For previous introduction see 6962.
- 107128 and 107129.** *VICIA TENUIFOLIA* Roth.
A deep-rooted perennial, cut for hay, which thrives in very dry situations.
For previous introduction see 88702.
- 107128.** No. 171. July 1934. From a mountain slope, Gissar Valley, Tajikistan.
- 107129.** No. 180. July 1, 1934. From the experiment station, Stalinabad, Tajikistan, where it occurs as a bad weed in their wheatfields.
- 107130.** *VICIA* sp.
No. 268. July 9, 1934. Found in dry clay soil in fields east of Stalinabad, Tajikistan.
- 107131.** *VICIA* sp.
No. 268-a. July 9, 1934. Seeds mixed with No. 268 [107130].
- 107132.** *VICIA* sp.
No. 293. July 11, 1934. Gissar Mountains, south of Stalinabad, Tajikistan.
- 107133.** (Undetermined.)
No. 217. July 8, 1934. Varsov River, north of Stalinabad, Tajikistan. An herb with yellow flowers.
- 107134.** (Undetermined.)
No. 259. July 3, 1934. Experiment station, Stalinabad, Tajikistan. A pretty flowering plant growing as a weed in fields at the station.
- 107135 and 107136.** *FICUS LAEVIGATA* Vahl. Moraceae. **Fig.**
From British Guiana. Seeds presented by the Botanic Garden, Georgetown, through W. A. Archer, Bureau of Plant Industry. Received November 17, 1934.
A shrub or small tree up to 15 feet high, with medium-sized, glossy, ovate leaves and an abundance of globular white fruits, less than an inch in diameter, which turn pink as they ripen. Native to tropical America.
For previous introduction see 98850.
- 107137 to 107143.**
From the Union of South Africa. Seeds presented by the School of Agriculture, Grootfontein, Middleburg, Cape Province. Received November 10, 1934.
- 107137.** *ASTER FILIFOLIUS* Vent. Astera-ceae.
A much-branched shrub 2 to 3 feet high, with filiform leaves and flower heads with yellow disk and blue rays. Native to the Cape of Good Hope.
- 107138.** *ATRIPLEX HALIMUS* L. Chenopodiaceae.
For previous introduction and description see 106615.

107137 to 107143—Continued.

107139. *EURYOPS MULTIFIDUS* (Thunb.) DC. Asteraceae.

A stout bush a foot or more high, with linear filiform leaves $\frac{1}{2}$ to $1\frac{1}{2}$ inches long and numerous small yellow flower heads on slender stems an inch long.

For previous introduction see 105937.

107140 and 107141. *PENTZIA SPHAEROCEPHALA* DC. Asteraceae.

A rigid twiggy shrub with long erect branches and trifid leaves an inch or more long, with linear lobes. The yellow flower heads are half an inch across.

For previous introduction see 105939.

107140. *Groot Berg Gansie*.

107141. Typical form.

107142. *TETRAGONIA ARBUSCULA* Fenzl. Aizoaceae.

A much-branched, semishrubby perennial, with fleshy leaves less than an inch long, varying from linear to ovate-oblong. The small inconspicuous flowers are borne in leafy racemes and are followed by three- to four-winged, nutlike fruits.

For previous introduction see 105942.

107143. (Undetermined.)

A composite received as *Tripteris pachypteris*, but the seeds are not of that genus.

107144 to 107148.

From Cuba. Bulbs presented by Ing. Gonzalo M. Fortun, Director, Estaciones Experimentales, Santiago de las Vegas. Received November 16, 1934.

107144. *STERNBERGIA LUTEA* (L.) Ker-Gawl. Amaryllidaceae.

Brujita amarilla. A low bulbous plant with six to eight strap-shaped leaves becoming a foot long and one to four small yellow flowers about an inch long. Native to the Mediterranean region.

107145 to 107148. *ZEPHYRANTHES* spp. Amaryllidaceae. Zephyrilly.

107145. *ZEPHYRANTHES CARINATA* Herbert.

A bulbous perennial with linear leaves and a scape about a foot high, bearing a single rosy flower 3 to 5 inches across and 3 inches long. It is said to be the largest and choicest of the rosy-flowered zephyrillies and blooms in the summer. Native to the West Indies.

For previous introduction see 81496.

107146 and 107147. *ZEPHYRANTHES ROSEA* Lindl. Pink zephyrilly.

A tender bulbous autumn-blooming plant, native to Cuba, with linear, bright-green leaves and rose-colored flowers an inch long, on a peduncle 4 to 6 inches long.

For previous introduction see 80017.

107146. *Atamasco rosea*.

107147. *Atamasco rosea*, from Camaguey.

107148. *ZEPHYRANTHES TUBISPATHA* (L'Herit.) Herb.

Brujita blanca. A plant with four or five narrow-linear leaves 5 to 12

107144 to 107148—Continued.

inches long and a slender scape 4 inches long, bearing a white flower about 2 inches in length. Native to the West Indies.

107149 to 107168.

From British Guiana. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received November 8, 1934.

Introduced for Department specialists.

107149. *HIPPOMANE MANCINELLA* L. Euphorbiaceae.

No. 2570. Botanic Garden, Georgetown, September 27, 1934.

For previous introduction and description see 106927.

107150. *ALBIZZIA LEBBECK* (L.) Benth. Mimosaceae.

No. 2645. Botanic Garden, Georgetown, October 17, 1934. A tropical Asiatic tree with doubly compound leaves made up of obliquely oval leaflets, axillary globular heads of greenish-yellow flowers, and long flat pods.

For previous introduction see 78330.

107151. *ALLIUM ASCALONICUM* L. Liliaceae. Shallot.

No. 2636. From the vicinity of Georgetown, October 15, 1934. A cultivated shallot.

For previous introduction see 66422.

107152 to 107155. *CAPSICUM ANNUUM* L. Solanaceae. Common redpepper.

Nos. 107152 to 107154 were collected near Georgetown, October 15, 1934.

107152. No. 2632. A bell-shaped, bright-red pepper.

107153. No. 2633. A yellow bell-shaped pepper.

107154. No. 2637. *Bird pepper*. The small fruits are orange red and less than an inch long.

107155. No. 2642. *Bukrumani*. Georgetown, October 17, 1934. A very hot pepper, used by the aborigines.

107156. *CASSIA HIRSUTA* L. Caesalpinjaceae.

No. 2619. Near Georgetown, October 15, 1934. An erect annual herb covered with long hairs. The compound leaves are made up of three to five pairs of ovate leaflets 2 to 3 inches long, and the orange flowers are borne in axillary racemes. Native to Brazil.

For previous introduction see 103607.

107157. *CLIBADIUM SURINAMENSE* L. Asteraceae.

No. 2620. Near Georgetown, October 15, 1934. A tropical shrub 4 to 10 feet high, with rigid, hairy, dark-green, ovate-cordate leaves and panicles of small, white, ovoid flower heads. Native to northern South America.

Nos. 107158 to 107160 were collected near Georgetown October 15, 1934.

107158. *CUCUMIS MELO* L. Cucurbitaceae. Muskmelon.

No. 2629. A muskmelon 8 inches long, with ribbed, pale-yellow surface and firm flesh.

107149 to 107168—Continued.

107159. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. Cushaw.

No. 2635. An oval cushaw about 18 inches long, with finely patterned green and white skin.

107160. CYCLANTHERA sp. Cucurbitaceae.

No. 2638. A vine cultivated for its yellow to orange-colored fruits which are used in curries or as a stewed vegetable. The bitter principle has to be removed first by boiling.

107161. DESMANTHUS VIRGATUS (L.) Willd. Mimosaceae.

No. 2643. Georgetown, October 17, 1934. A slender climbing shrub 5 to 6 feet high. The sensitive leaves are bipinnate, and the linear-compressed pods contain brown polished seeds which are used as beads.

For previous introduction see 93588.

107162. DREPANOCARPUS LUNATUS (L. f.) G. F. W. Meyer. Fabaceae.

No. 2616. Near Georgetown, British Guiana, October 15, 1934. A thorny shrub or small tree with three-foliolate leaves and bluish-white flowers in terminal racemes. Found growing near the sea, along creeks, and in drainage canals. Native to northern South America.

107163. FURCRAEA TUBEROSA (Mill.) Ait. Amaryllidaceae.

No. 2644. Georgetown, October 17, 1934. Bulbs of a fiber plant generally cultivated in northern South America; native country not known.

For previous introduction see 33668.

107164. JATROPHA GOSSYPIFOLIA L. Euphorbiaceae.

No. 2623. Near Georgetown, October 15, 1934.

For previous introduction and description see 106940.

107165. JATROPHA PODAGRICA Hook. Euphorbiaceae.

No. 2592. Botanic Garden, Georgetown, September 27, 1934.

For previous introduction and description see 106995.

107166. PAULLINIA PINNATA L. Sapindaceae.

No. 2554. Botanic Garden, Georgetown, September 27, 1934.

For previous introduction and description see 106959.

107167. QUASSIA AMARA L. Simaroubaceae.

No. 2615. Botanic Garden, Georgetown, October 11, 1934.

For previous introduction and description see 107001.

107168. SAPIUM HIPPOMANE G. F. W. Meyer. Euphorbiaceae.

No. 2581. Botanic Garden, Georgetown, September 27, 1934. A tropical tree 30 feet high, with lanceolate-oblong, leathery leaves about 6 inches long and blackish seeds. Native to tropical America.

107169 to 107181.

From England. Scions presented by the East Malling Research Station, Kent. Received April 13, 1933. Numbered November 22, 1934.

107169 to 107181—Continued.

Introduced under the following varietal names for the use of Department specialists.

107169 to 107179. MALUS SYLVESTRIS Mill. Malaceae. **Apple.**

107169. *Beauty of Bath.*

107170. *Blenheim Orange.*

107171. *Bramley's Seedling.*

107172. *Coz's Orange Pippin.*

107173. *Early Victoria.*

107174. *Grenadier.*

107175. *Lave's Prince Albert.*

107176. *Laxton's Superb.*

107177. *Lord Derby.*

107178. *Newton Wonder.*

107179. *Worcester Pearmain.*

107180 and 107181. PRUNUS DOMESTICA L. Amygdalaceae. **Common plum.**

107180. *Belle de Louvain.*

107181. *Cambridge Gage.*

107182 to 107186. PRUNUS DOMESTICA L. Amygdalaceae. **Common plum.**

From India. Plants purchased from the Saharanpur Botanic Garden. Received February 28, 1934. Numbered November 22, 1934.

Introduced under the following varietal names for the use of Department specialists.

107182. *Alucha purple.* **107185.** *Sumomo.*

107183. *Alucha red.* **107186.** *Sinka.*

107184. *Large yellow.*

107187 to 107190. PRUNUS spp. Amygdalaceae.

From Africa. Scions presented by Ernestine Fenzl, Tripoli. Received March 1, 1934. Numbered November 22, 1934.

107187. PRUNUS ARMENIACA L. **Apricot.**

Mesch-Mesch Amrah (red apricot). A rather small tree found in the Oasis of Tripoli, which bears apricots with a downy skin, having the color and fragrance of raspberries. The dark-green foliage is in vivid contrast with the red fruit which ripens the end of May.

For previous introduction see 93489.

107188. PRUNUS ARMENIACA L. **Apricot.**

A variety which matures the end of June. The tree is a more vigorous grower, the fruit is slightly larger than 107187, but it does not attain the uniform raspberry color, one side remaining a bright orange.

107189. PRUNUS CERASIFERA DIVARICATA (Ledeb.) C. Schneid. **Cherry plum.**

A good substitute where cherries cannot be grown.

107190. PRUNUS sp.

Early Castell.

107191. ASTREBLA ELYMOIDES Bailey and F. Muell. Poaceae. **Grass.**

From Australia. Seeds purchased from Arthur Yates & Co., Sydney, New South Wales. Received November 23, 1934.

Mitchell grass.

For previous introduction see 48977.

107192 to 107194. GOSYPIUM spp. Malvaceae. Cotton.

From British Guiana. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received in October and November 1934.

Introduced for Department specialists.

107192. GOSYPIUM sp.

No. 2504. September 8, 1934, from Koriabo, on the Barima River. Cultivated plants found growing in the dooryard of a deserted dwelling. A tree cotton with pale-yellow flowers, which grows from 6 to 20 feet high. It is probably a hybrid of *Gossypium peruvianum*.

107193. GOSYPIUM sp.

No. 2618. October 15, 1934. Near Georgetown. A slender tree-like shrub 15 feet high, with green foliage and pale greenish-yellow flowers, each petal with a slight marking of purple near the inner base. Probably a hybrid of *Gossypium hirsutum* and *G. peruvianum*.

107194. GOSYPIUM sp.

No. 2624. October 15, 1934. Near Georgetown. A hybrid of *Gossypium peruvianum*, which is a slender tree-like shrub about 20 feet high. The petals of the pale-yellow flowers are mottled with faint brown spots. The outside of the calyx is dark red, as are the veins on the lower side of the leaf, the petioles, and the stems.

107195 to 107255. MALUS SYLVESTRIS Mill. Malaceae. Apple.

From the Union of Soviet Socialist Republics. Scions presented by the Michurin Research Institute of Fruit Production, through the Institute of Plant Industry, Leningrad. Received November 15, 1934.

Received under the following varietal names for Department specialists.

- 107195. *Antonovka Monastirskaja*.
- 107196. *Antonovka 1½ pounds*.
- 107197. *Antonovka Shafran*.
- 107198. *Antonovka Zheltaia* (yellow).
- 107199. *Arkad Zimmii* (winter).
- 107200. *Belfer kitaika* (Chinese bellflower).
- 107201. *Bellflower Phoenix*.
- 107202. *Bessemianka* (seedless).
- 107203. *Borsdorf Kitaika*.
- 107204. *Cecmpa Belfer Kitaika* (sister of Chinese bellflower).
- 107205. *Chelbi Kitaika*.
- 107206. *Chinese Shampansen*.
- 107207. *Danzigskoe Rebristoe* (ribbed Danzig).
- 107208. *Diana*.
- 107209. *Dushistii Ledenez*.
- 107210. *Durogoe*.
- 107211. *Filia*.
- 107212. *Flava*.
- 107213. *Iamnoie*.
- 107214. *Izumrudnoie*.
- 107215. *Kalvil Anis*.
- 107215. *Kalvil Record*.

107195 to 107255—Continued.

- 107217. *Kandil Kitaika*.
- 107218. *Kistevoe*.
- 107219. *Kitaika Anisovaia*.
- 107220. *Kitaika Arkadovaia*.
- 107221. *Kitaika Dessertnaia*.
- 107222. *Kitaika Dessertnaia*.
- 107223. *Kitaika Zolotaia* (Chinese golden).
- 107224. *Komsomolets*.
- 107225. *Korichnevoie* (brown).
- 107226. *Krasnii Shtandart* (Red standard).
- 107227. *Krasnoznamennoie*.
- 107228. *Kren Kitaika* (Chinese cream).
- 107229. *Kulon Kitaika*.
- 107230. *Oleg*.
- 107231. *Paradox*.
- 107232. *Phoenix*.
- 107233. *Pippin Chernenko*.
- 107234. *Pippin Chetvertii*.
- 107235. *Pippin Kitaika* (Chinese pippin).
- 107236. *Pippin Shafran*.
- 107237. *Pomon Kitaika*.
- 107238. *Rebristoe*.
- 107239. *Renet Bergamotnii*.
- 107240. *Renet Reshatnikova*.
- 107241. *Renet Sakharnii*.
- 107242. *Repa Iubileinaia*.
- 107243. *Rosmarin Ukrainskii*.
- 107244. *Rubinovoie*.
- 107245. *Severnii Bujon*.
- 107246. *Severnii Bujon*.
- 107247. *Shampansen Kitaika* (Chinese Shafran).
- 107248. *Shafran Osennii*.
- 107249. *Sinap Michurina*.
- 107250. *Sinap Michurina*.
- 107251. *Slovianka*.
- 107252. *Sovetskoe*.
- 107253. *Tayeshnoe*.
- 107254. *Titfler*.
- 107255. *Zimnee Sladkoe* (winter sweet).

107256 and 107257.

From Arizona. Seeds presented by the Boyce Thompson Southwestern Arboretum, Superior, through F. J. Crider. Received April 9, 1932. Numbered in November 1934.

107256. ECHINOCEREUS RIGIDISSIMUS (Engelm.) Rose. Cactaceae.

A short stout cylindrical cactus, with 16 to 20 coarse stiff straight white to brown spines in each interlocking cluster. The spines form broad bands of cluster and white around the surface of the plant. The large purple flowers are 3 inches long and as wide when fully expanded. Native to Arizona and New Mexico.

107256 and 107257—Continued.

107257. *FEROCACTUS LECONTEI* (Engelm.) Britt. and Rose. Cactaceae.

A slender cylindrical cactus, about 15 feet high, sometimes taller with stout interlocking spines, 1 to 3 inches long, pink with yellow tips, and yellow flowers about 2 inches long and half as wide. Native to the southwestern United States and northwestern Mexico.

107253 to 107263. *NEOMAMMILLARIA* spp. Cactaceae.

From Mexico. Seeds collected by Paul Russell and Max Souviron, Bureau of Plant Industry, in the Botanic Garden, Mexico City. Received September 20, 1930. Numbered in November 1934.

107258. *NEOMAMMILLARIA DEALBATA* (Dietr.) Britt. and Rose.

A globose or short-cylindrical cactus, 2 to 3 inches high, with the surface densely covered by the clusters of white appressed spines. The small carmine flowers are followed by small club-shaped fruits. Native to central Mexico.

107259. *NEOMAMMILLARIA MAGNIMAMMA* (Haw.) Britt. and Rose.

A globular cactus 4 inches in diameter, with very milky juice, often in a colony of 25 or more. The conical tubercles, two-fifths of an inch high, are crowned by three to five unequal, stout, whitish, or colored spines, and the cream-colored flowers are borne in the axils of the tubercles near the top of the plant. Native to central Mexico.

For previous introduction see 81183.

107260. *NEOMAMMILLARIA MYSTAX* (Mart.) Britt. and Rose.

A globose or short-cylindrical cactus 3 to 6 inches high, flat-topped, with thick-set tubercles filled with milky juice, and small white spines. The abundant dark-red flowers, three-fourths of an inch across, appear in two or three rows, and the red fruits are about 1 inch long. Native to south-central Mexico.

107261. *NEOMAMMILLARIA WILDII* (Dietr.) Britt. and Rose.

A small cylindrical or globose cactus that grows in small colonies. From the slender elongated tubercles arise pinkish hairs and bristles, also short yellow or white spines. The white flowers, half an inch across, are succeeded by club-shaped red fruits. Native to Hidalgo, Mexico.

107262. *NEOMAMMILLARIA* sp.

A rather small cylindrical-globose cactus with numerous short tubercles which bear short reddish-brown spines.

107263. *NEOMAMMILLARIA* sp.

A globular cactus with long tubercles and long pale-brown spines.

107264 and 107265. *NICOTIANA TABACUM* L. Solanaceae. Tobacco.

From South America. Seeds presented by Mario del Rio, chief, Estación Agronómica, Piura, Peru. Received November 22, 1934.

Introduced for Department specialists.

107264. *Silvestre*. A wild tobacco grown at 2,750 m above sea level.

107265. Commercial tobacco.

107266 and 107267.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received November 11, 1934.

107266. *ARDISIA WALLICHII* A. DC. Myrsinaceae.

A low bushy perennial with thick obovate-acute leaves 4 to 5 inches long and white flowers in lax racemes. Native to Burma.

107267. *CINNAMOMUM CASSIA* Blume. Lauraceae. Chinese cinnamon.

A handsome evergreen tree with opposite leathery oblong-lanceolate leaves 3 to 6 inches long and very small yellowish flowers in terminal axillary panicles. Native to southern China.

For previous introduction see 6867.

107268 to 107271. *IRIS* spp. Iridaceae.

From Germany. Roots purchased from Karl Foerster, Bornim-Potsdam-Sanssouci. Received November 30, 1934.

107268. *Baron Gütz von Ococim*.

107269. *Jenny*.

107270. *Kazimir Missoua*.

107271. *Valery Germanis*.

107272. *ZOYSIA MATRELLA* (L.) Merr. Poaceae. Manila grass.

From South Manchuria. Seeds purchased from Manshu Nosan Shokai, Inc., Dairen. Received November 27, 1934.

A creeping grass, important for binding coast sands, which does well on alkali soils and also as a lawn grass. Said to be relished by stock.

107273 and 107274. *CITRUS NOBILIS DELICIOSA* (Ten.) Swingle. Rutaceae. Mandarin orange.

From Palestine. Budwood presented by S. H. Holzman, Rehovoth. Received December 1, 1934.

107273. *Denice*. A very early maturing orange, with about 12 seeds, of insipid flavor.

107274. *Pride of Ellendale*. Originally from Australia. This fruit has a fine flavor, the skin adheres well to the pulp, and it is a good shipper.

107275. *ALOE GLOBULIGEMMA* Pole Evans. Liliaceae.

From the Union of South Africa. Seeds presented by the McGregor Museum, Kimberley. Received November 26, 1934.

A stemless succulent with a rosette of erect-spreading, sword-shaped leaves 1 to 2 feet long, having cartilaginous, wavy-toothed margins. The flower stalk, 3 to 4 feet high, carries a dense raceme a foot long of tubular flowers which are globular and red in the bud, becoming elongated and sulphur-yellow tinged with red at the base. It is native to South Africa.

For previous introduction see 89992.

107276. *JUANIA AUSTRALIS* (Mart.) Drude. Phoenicaceae. Palm.

From Juan Fernandez Island. Seeds collected by Max Yunge and presented

107276—Continued.

through the American consul at Santiago, Chile. Received November 26, 1934.

A pinnate-leaved palm of moderate size, native to Juan Fernandez Island. The leaves are 4 to 5 feet long, with linear-acuminate pinnae, and the slender trunk is without spines.

For previous introduction see 91297.

107277. (Undetermined.)

From Ecuador. Roots presented by Mrs. Ynez Mexia, through the American consulate, Guayaquil. Received November 22, 1934.

107278 to 107284.

From Norway. Seeds presented by Prof. Olav Moen, horticultural division, Agricultural College, Aas. Received November 27, 1934.

Introduced under the following varietal names, for Department specialists.

107278 to 107280. BRASSICA OLERACEA CAPITATA L. Brassicaceae. Cabbage.

107278. No. 390. *Moens hvitkal*.

107279. No. 400. *Amager Faales Blatopp*.

107280. No. 426. *Tronder*.

107281. BRASSICA RAPA L. Brassicaceae. Turnip.

No. 516. *Trondhjensk*.

107282. DAUCUS CAROTA L. Apiaceae. Carrot.

No. 298. *Londoner torv*.

107283. PHASEOLUS VULGARIS L. Fabaceae. Common bean.

No. 151. *Erstling, Erikarud*.

107284. SPINACIA OLERACEA L. Chenopodiaceae. Common spinach.

No. 850. *Kongen av Danmark*.

107285 and 107286.

From the Isla de Pinos, Cuba. Bulbs presented by Charles F. Fetter, through G. L. Hoyt, Nueva Gerona. Received December 5, 1934.

107285. ZEPHYRANTHES sp. Amaryllidaceae.

A variety with pink flowers.

107286. ZEPHYRANTHES sp. Amaryllidaceae.

A variety with white flowers.

107287. PHELEUM PRATENSE L. Poaceae. Timothy.

From England. Seeds purchased from A. G. Leighton, Whitechurch, Shropshire, through R. C. Stapledon, Welsh Plant Breeding Station, Aberystwyth, Wales. Received December 1, 1934.

Strain *Timothy S. 48*; introduced for Department specialists.

107288. ACACIA BONARIENSIS Gillies. Mimosaceae.

From Argentina. Seeds presented by the Jardín Botánico, Buenos Aires, through the Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba. Received December 3, 1934.

An acacia with angular branches covered with scattered short recurved spines. The long bipinnate leaves and branches are gla-

107288—Continued.

brous; the youngest leaflets and the peduncles are silky hairy, as are also the short panicles of white flower spikes.

For previous introduction see 104103.

107289. PHOENIX RECLINATA Jacq. Phoenicaceae. Senegal date palm.

From Kenya Colony, Africa. Seeds collected by H. C. Sampson, economic botanist, Royal Botanic Gardens, Kew, England. Received July 26, 1934. Numbered in November 1934.

A date palm 20 to 30 feet high, but sometimes stemless, native to tropical and subtropical parts of Africa. The reclinate pinnate leaves are 6 to 9 feet long and have rigid green leaflets. The yellowish fruits with sweet edible pulp are half an inch long.

For previous introduction see 106104.

107290 to 107293.

From Argentina. Seeds presented by the Jardín Botánico, Buenos Aires, through the Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba. Received December 3, 1934.

107290. ALNUS JORULLENSIS H. B. K. Betulaceae.

A shrub or small tree 10 to 20 feet high, with smooth reddish-brown branches and oblong or obovate leaves 3 to 5 inches long. Native to southern Mexico.

107291. CEDRELA FISSILIS Vell. Meliaceae.

A tall ornamental tree, native to Brazil and Paraguay, with pinnate leaves 10 to 15 inches long and large panicles of small whitish flowers. Because of its handsome foliage it is suitable for growing as an avenue tree in the warmer parts of the United States.

For previous introduction see 65272.

107292. COMBRETUM FRUTICOSUM (Loefl.) Stuntz. Combretaceae.

Received as *C. micropetalum*, which is now referred to the above species. An ornamental climbing shrub, with opposite elliptic leaves and spikes of orange and green flowers. It is native to the temperate regions from Argentina to Brazil.

For previous introduction see 104111.

107293. ENTEROLOBIUM TIMBOUVA Mart. Mimosaceae. Timbo.

A large tree with bipinnate leaves made up of two to five pinnae, each bearing 10 to 20 pairs of falcate-oblong leaflets and large heads of greenish flowers followed by coriaceous kidney-shaped pods. It is native to Brazil.

For previous introduction see 88230.

107294 and 107295. SOLANUM MELONGENA L. Solanaceae. Eggplant.

From California. Seed presented by Claude D. Tribble, Elk Grove. Received December 5, 1934.

107294. Seeds from a native Syrian eggplant which grows 48 inches high and is well branched. The fruits are from 3½ to 8 inches long and 2 inches in diameter. The flavor is better than any of our domestic varieties.

107295. Seeds from California-grown plants from P. I. 107294.

107296. PISTACIA LENTISCUS L. Anacardiaceae. Lentisk.

From Palestine. Seeds presented by the Department of Agriculture and Forests, Jerusalem. Received November 30, 1934.

A wild shrub common in the Mediterranean regions where it grows on poor soil and withstands severe drought. It produces a gum used by the Arabs as a perfume; an edible oil known as shinia, used as a substitute for olive oil, is obtained from the berries.

For previous introduction see 99350.

107297 and 107298.

From Turkey. Plants collected by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received December 3, 1934.

Introduced for Department specialists.

107297. CAREX sp. Cyperaceae.

From the market at Istanbul. An excellent shade-enduring plant used in Turkey for lawns under shade trees and for flower-bed borders.

107298. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

Roots collected on dry mountain slopes north of Nallihan.

107299 to 107302. TRITICUM AESTIVUM L. Poaceae. Common wheat.

From Ireland. Seeds presented by M. Gaffrey, Albert Agricultural College, Glasnevin, Dublin. Received November 30, 1934.

A collection of wheat hybrids introduced for the use of Department specialists.

107299. *April Red* × *Ironmaster 7/1*. A spring type.

107300. *Ironmaster* × *Yeoman No. 8*. A winter type with stiff straw.

107301. *Ironmaster* × *Yeoman No. 14*. A winter type with very short stiff straw.

107302. Unselected; old land sort, spring wheat from Galway.

107303 and 107304. AVENA SATIVA L. Poaceae. Oats.

From Scotland. Seeds presented by the Scottish Society for Research in Plant Breeding, Corstorphine, Midlothian. Received November 30, 1934.

Introduced for the use of Department specialists.

107303. *Bell*.

107304. *Early Miller*.

107305. MEDICAGO SATIVA FAUREI Maire. Fabaceae. Alfalfa.

From Algeria. Seeds presented by Dr. R. Maire, University of Algiers, Algiers. Received December 11, 1934.

A variety with the habit of *Medicago falcata*. The yellow flowers are in short dense racemes. Native to the mountains of western Algeria.

107306 to 107308. SOLANUM TUBEROSUM L. Solanaceae. Potato.

From Germany. Tubers presented by Dr. A. Schlumberger, Berlin-Dahlem, Bio'ogi-

107306 to 107308—Continued.

sche Reichsanstalt, Institut für Kartoffelbau. Received December 17, 1934.

A collection of potato varieties, apparently scab-resistant, introduced for the use of Department specialists.

107306. *Ackersegen von Böhm*.

107307. *Gubel von Richter*.

107308. *Frühe Hornchen*.

107309 to 107325.

From the Union of Soviet Socialist Republics. Plants presented by the Mitchurin Research Institute of Fruit Production, Mitchurinsk, through the Institute of Plant Industry, Leningrad. Received December 13, 1934.

A collection of fruit trees introduced under the following varietal names, for the use of Department specialists.

107309 to 107324. MALUS SYLVESTRIS Mill. Malaceae. Apple.

107309. *Antonofka common*.

107310. *Antonofka She Haia* (yellow).

107311. *Autumn Shafran*.

107312. *Bellflower*.

107313. *Krem Kitaika* (Chinese cream).

107314. *Flava*.

107315. *Korichnoie*.

107316. *Oleg* (Ohleg).

107317. *Paradiska Mitchurin*.

107318. *Pippin Shafran*.

107319. *Renet Bergamotnii*.

107320. *Shafran-Kitaika* (Shafran-Chinese).

107321. *Winter Arcad Gold*.

107322. Unknown.

107323. Unknown.

107324. Unknown.

107325. PYRUS COMMUNIS L. Malaceae. Common pear.

Mitchurin Winter Pear.

107326 to 107423.

From the Union of Soviet Socialist Republics. Seeds collected in Turkistan by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received October 31, 1934.

Introduced for the use of Department specialists.

107326 to 107330. AGROPYRON TRICHOPHORUM (Link) Richt. Poaceae. Grass.

107326. No. 330. July 15, 1934. From Little Chingan Mountains, east of Tashkent, Uzbekistan, on dry slopes.

107327. No. 369. July 15, 1934. Chot Kol River, east of Tashkent.

107328. No. 373. July 15, 1934. Chot Kol River Canyon, east of Tashkent.

107329. No. 389. July 15, 1934. Chot Kol River Canyon, 50 km east of Tashkent.

107330. No. 376. July 15, 1934. Chingan, east of Tashkent in dry soil.

107326 to 107423—Continued.

107331. *AGROSTIS* sp. Poaceae. Grass.

No. 301. July 8, 1934. Varsov River Canyon, north of Stalinabad, Tajikistan.

107332. *AGROSTIS* sp. Poaceae. Grass.

No. 350. July 11, 1934. Roadside, near Tashkent, Uzbekistan.

107333. *ALLIUM* sp. Liliaceae.

No. 326. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan.

107334. *ALYSSUM* sp. Brassicaceae.

No. 351. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan. A small flowering plant found in rocky soils.

107335 to 107337. *AMYGDALUS* spp. Amygdalaceae.

107335. *AMYGDALUS PERSICA* NECTARINA Ait. Nectarine.

No. 347. July 16, 1934. Tashkent, Uzbekistan. A nectarine of delicious quality.

107336. *AMYGDALUS* sp.

No. 324. July 15, 1934. Rocky slopes of Little Chimgan, east of Tashkent, Uzbekistan.

107337. *AMYGDALUS* sp.

No. 335. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan. A small attractive shrub.

107338. *ANDROPOGON* sp. Poaceae. Grass.

No. 398. July 16, 1934. Chot Kol River, east of Tashkent.

107339 to 107346. *ASTRAGALUS* spp. Fabaceae.

107339. *ASTRAGALUS* sp.

No. 313. July 15, 1934. Rocky slopes of Little Chimgan, east of Tashkent, Uzbekistan.

107340. *ASTRAGALUS* sp.

No. 319. July 15, 1934. Little Chimgan, in the mountains east of Tashkent, Uzbekistan.

107341. *ASTRAGALUS* sp.

No. 329. July 15, 1934. Rocky slopes of Little Chimgan, east of Tashkent, Uzbekistan.

107342. *ASTRAGALUS* sp.

No. 339. July 15, 1934. Little Chimgan, in rocky soil, east of Tashkent, Uzbekistan.

107343. *ASTRAGALUS* sp.

No. 342. July 15, 1934. Little Chimgan, east of Tashkent.

107344. *ASTRAGALUS* sp.

No. 365. July 15, 1934. Little Chimgan, east of Tashkent.

107345. *ASTRAGALUS* sp.

No. 386. July 15, 1934. Little Chimgan, east of Tashkent.

107346. *ASTRAGALUS* sp.

No. 394. July 15, 1934. Rocky slopes of Little Chimgan, east of Tashkent.

107347. *BROMUS* sp. Poaceae. Grass.

No. 367. July 15, 1934. Mountain slope, Little Chimgan, east of Tashkent.

107326 to 107423—Continued.

107348. *BROMUS* sp. Poaceae. Grass.

No. 327. July 15, 1934. From dry slopes of Little Chimgan, east of Tashkent, Uzbekistan.

107349. *CICER* sp. Fabaceae.

No. 316. July 15, 1934.

107350. *DELPHINIUM* sp. Ranunculaceae.

No. 294. July 9, 1934. Stalinabad, Tajikistan. An annual flowering plant.

107351. *DELPHINIUM* sp. Ranunculaceae.

No. 302. July 3, 1934. Southeast of Stalinabad, adjacent to Sultanabad, in rocky pasture.

107352. *ELICHRYSUM* sp. Asteraceae.

No. 392-a. Chimgan, east of Tashkent, July 15, 1934. A beautiful yellow straw-flower.

107353. *ELYMUS CAPUT-MEDUSAE* L. Poaceae. Grass.

No. 343. July 16, 1934. Near the Chot Kol River, east of Tashkent. An erect annual grass.

For previous introduction see 53047.

107354. *EREMURUS SPECTABILIS* Bieb. Liliaceae.

No. 384. July 15, 1934. Chimgan, east of Tashkent. A handsome perennial 3 to 4 feet high, with light-green triangular leaves and yellow flowers in racemes often 6 inches long. Native to the Caucasus region.

107355. *ERODIUM* sp. Geraniaceae.

No. 307. July 7, 1934. Varsov River Canyon, north of Stalinabad, Tajikistan.

107356. *FERULA* sp. Apiaceae.

No. 328. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan.

107357 to 107359. *FESTUCA* spp. Poaceae. Grass.

107357. *FESTUCA* sp.

No. 321. July 11, 1934. Plant Breeding Station near Tashkent. A wild grass found along the irrigation ditches and roadsides.

107358. *FESTUCA* sp.

No. 371. July 15, 1934. Chot Kol River, east of Tashkent.

107359. *FESTUCA* sp.

No. 382. July 17, 1934. Chimgan, east of Tashkent. A grass 4 feet tall, found in moist soils.

107360. *FRITILLARIA* sp. Liliaceae.

No. 380. July 15, 1934. Chimgan, east of Tashkent.

107361. *HORDEUM BULBOSUM* L. Poaceae. Grass.

No. 336. July 15, 1934. Little Chimgan, east of Tashkent, on mountain slopes.

107362. *HYPERICUM* sp. Hypericaceae.

No. 300. July 3, 1934. Stalinabad, adjacent to Sultanabad Valley, Tajikistan. A flowering plant found in permanent mountain pastures.

107363 to 107365. *IXIOLIRION* spp. Amaryllidaceae.

107363. *IXIOLIRION* sp.

No. 360. July 15, 1934. Chimgan, east of Tashkent, Uzbekistan.

107326 to 107423—Continued.

107364. IXIOLIRION sp.
No. 363. July 15, 1934. Chimgan, east of Tashkent, Uzbekistan.
107365. IXIOLIRION sp.
No. 299. July 8, 1934. From hillside in the Varsov River Canyon, Tajikistan.
107366. LATHYRUS sp. Fabaceae.
No. 306. July 1, 1934. Foothills north of Stalinabad, Tajikistan.
- 107367 to 107371. MEDICAGO spp. Fabaceae.
107367. MEDICAGO LUPULINA L.
Black medick.
No. 356. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan.
- 107368 to 107370. MEDICAGO SATIVA L.
Alfalfa.
107368. No. 375. July 11, 1934. Middle Asia Plant Breeding Station. Wild alfalfa.
107369. No. 379. July 11, 1934. Collected in the mountains of Tajikistan by Mr. Kobeler, of the Middle Asia Plant Breeding Station. Wild alfalfa.
107370. No. 391. July 15, 1934. Collected in the mountains of Tajikistan by Mr. Kobeler, of the Middle Asia Plant Breeding Station. Wild alfalfa.
107371. MEDICAGO sp.
No. 310. July 3, 1934. From a mountain pasture adjacent to Sultana-bad Valley, southeast of Stalinabad, Tajikistan.
- 107372 to 107374. MELILOTUS spp. Fabaceae.
107372. MELILOTUS sp.
No. 338. July 11, 1934. Growing along an irrigation ditch at the Plant Breeding Station, Tashkent, Uzbekistan.
107373. MELILOTUS OFFICINALIS (L.) Lam. Sweetclover.
No. 355. July 16, 1934. Plant Breeding Station, Tashkent, on irrigation ditch banks.
107374. MELILOTUS sp.
No. 332. July 11, 1934. Roadside, near Tashkent, Uzbekistan, in clay soil.
107375. ONOBRYCHIS sp. Fabaceae.
No. 311. July 15, 1934. From the rocky slopes of Little Chimgan, east of Tashkent, Uzbekistan.
107376. ONOBRYCHIS sp. Fabaceae.
No. 323. July 15, 1934. On mountain slope, Little Chimgan, east of Tashkent, Uzbekistan.
- 107377 to 107380. ORYZOPSIS spp. Poaceae.
Grass.
107377. ORYZOPSIS sp.
No. 337. July 15, 1934. Found in rocky soil along the Little Chimgan, east of Tashkent, Uzbekistan.
107378. ORYZOPSIS sp.
No. 298. July 7, 1934. Found on the rocky slopes of the mountains in the Varsov River Canyon, north of Stalinabad, Tajikistan.

107326 to 107423—Continued.

107379. ORYZOPSIS sp.
No. 370. July 15, 1934. Chot Kol River, east of Tashkent.
107380. ORYZOPSIS sp.
No. 381. July 15, 1934. From gravelly slope on the Chimgan, east of Tashkent.
107381. OXYTROPIS sp. Fabaceae.
No. 333. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan.
107382. PAPAVER sp. Papaveraceae.
No. 297. July 8, 1934. Varsov Canyon, north of Stalinabad, Tajikistan. A yellow-flowered poppy.
107383. PARACARYUM sp. Boraginaceae.
No. 344. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan. A blue-flowered herb.
107384. PEDICULARIS sp. Scrophulariaceae.
No. 353. July 15, 1934. Little Chimgan, east of Tashkent. An annual flowering plant.
107385. PHALARIS sp. Poaceae. Grass.
No. 372. July 15, 1934. Chimgan, east of Tashkent.
- 107386 to 107394. POA spp. Poaceae. Grass.
107386. POA BULBOSA L.
No. 331. July 15, 1934. Found in clay loam soil on the Little Chimgan, east of Tashkent, Uzbekistan.
107387. POA sp.
No. 352. July 14, 1934. East of Tashkent, near the Chot Kol River.
107388. POA sp.
No. 340. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan.
107389. POA sp.
No. 374. July 15, 1934. From moist mountain slopes, Chimgan, east of Tashkent, Uzbekistan.
107390. POA sp.
No. 388. July 15, 1934. Moist soils, Chimgan, east of Tashkent, Uzbekistan.
107391. POA sp.
No. 346. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan.
107392. POA sp.
No. 296. July 7, 1934. Varsov River Canyon, north of Stalinabad.
107393. POA sp.
No. 361. July 15, 1934. Chimgan, east of Tashkent, in moist soil.
107394. POA sp.
No. 390. July 15, 1934. Chimgan, east of Tashkent, in fairly moist soil.
107395. POLYPOGON sp. Poaceae. Grass.
No. 362. July 11, 1934. From the roadside near Tashkent.
- 107396 to 107399. PRANGOS spp. Apiaceae.
107396. PRANGOS BUCCHARICA Fedtsch.
No. 378. July 1, 1934. From a mountain slope near Stalinabad, Tajikistan.

107326 to 107423—Continued.

kistan. A herbaceous perennial with branches somewhat whorled, narrow-oblong, deeply lacinate leaves, and dense umbels of small globular fruits. Native to Bokhara.

107397. PRANGOS TSCHINGANICA Fedtsch.

No. 397. July 15, 1934. Chimgan, east of Tashkent. A bushy herbaceous perennial, with deeply lacinate oblong leaves and dense umbels of small yellowish flowers. The plant is good forage in the fall when dry. Native to Tian Shan, central Asia.

107398. PRANGOS PABULARIA Lindl.

No. 393. July 15, 1934. Chimgan, east of Tashkent. A tall perennial, 4 to 5 feet high, with much-divided leaves a foot or more long and large umbels of small yellow flowers. Native to the Himalayas between 6,000 and 11,000 feet altitude. The plant is good fodder in the fall, when dry.

107399. PRANGOS sp.

No. 385. July 15, 1934. Mountain slope, Little Chimgan, east of Tashkent, Uzbekistan.

107400 to 107402. PRUNUS spp. Amygdalaceae.

107400 and 107401. PRUNUS ARMENIACA L. Apricot.

107400. No. 314. July 13, 1934. Tashkent, Uzbekistan. Cultivated apricots.

107401. No. 383. A cultivated apricot of excellent quality.

107402. PRUNUS sp.

No. 322. July 15, 1934. From the slopes of Little Chimgan, east of Tashkent, Uzbekistan. A semiprostrate shrub 10 to 12 inches high.

107403. PRUNUS sp.

No. 325. July 15, 1934. From the Little Chimgan, east of Tashkent, Uzbekistan.

107404. RHEUM sp. Polygonaceae.

No. 357. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan. Received under the name "chimganica," for which a place of publication has not been found.

107405. RHEUM sp. Polygonaceae.

No. 395. July 15, 1934. Chimgan, east of Tashkent, Uzbekistan.

107406. ROSA sp. Rosaceae. Rose.

No. 334. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan.

107407 to 107409. RUMEX spp. Polygonaceae.

107407. RUMEX sp.

No. 364. July 15, 1934. Chimgan, east of Tashkent. A flowering shrub.

107408. RUMEX sp.

No. 303. July 1, 1934. Varsov Canyon, north of Stalinabad, Tajikistan. A flowering shrub.

107409. RUMEX sp.

No. 304. July 7, 1934. Varsov Canyon, north of Stalinabad, Tajikistan. A flowering shrub.

107326 to 107423—Continued.

107410. SILENE sp. Silenaceae.

No. 345. July 15, 1934. Found growing among rocks on Little Chimgan, east of Tashkent, Uzbekistan.

107411. SILENE sp.

No. 295. July 7, 1934. Varsov Canyon, north of Stalinabad, Tajikistan. An annual flowering plant.

107412. STIPA PENNATA L. Poaceae. Feathergrass.

No. 366. June 1934. Source unknown.

107413 to 107416. TRIFOLIUM spp. Fabaceae.

107413 and 107414. TRIFOLIUM PRATENSE L. Red clover.

107413. No. 341. July 11, 1934. On the bank of an irrigation ditch, Cotton Breeding Station, Tashkent, Uzbekistan.

107414. No. 359. July 15, 1934. Chimgan, east of Tashkent, Uzbekistan. Near a stream.

107415 and 107416. TRIFOLIUM REPENS L. White clover.

107415. No. 305. July 8, 1934. Near the Varsov River, Tajikistan.

107416. No. 354. July 15, 1934. Chimgan Mountains, near Tashkent, near a stream.

107417 to 107419. TULIPA spp. Liliaceae. Tulip.

147417. TULIPA sp.

No. 368. July 15, 1934. On a rocky slope of Little Chimgan, east of Tashkent.

107418. TULIPA sp.

No. 318. July 15, 1934. Chimgan, east of Tashkent, Uzbekistan.

107419. TULIPA sp.

No. 348. July 15, 1934. Rocky soil on Little Chimgan, east of Tashkent, Uzbekistan.

107420. VICIA sp. Fabaceae. Vetch.

No. 309. July 8, 1934. From Varsov Canyon, north of Stalinabad, Tajikistan.

107421. VICIA sp. Fabaceae. Vetch.

No. 312. July 15, 1934. Rocky slopes of Little Chimgan, east of Tashkent, Uzbekistan.

107422. (Undetermined.)

No. 358. July 15, 1934. Chimgan, east of Tashkent, Uzbekistan. A beautiful flowering plant found in gravelly soil.

107423. GENTIANA sp. Gentianaceae. Gentian.

No. 214. July 3, 1934. From a mountain pasture, Tajikistan, adjacent to the Sultanabad Valley.

107424 and 107425.

From Ecuador. Seeds collected by Mrs. Ynes Mexia, in Santa Lucia, Canton Vinces, Province of Los Rios, and presented through the American Legation, Quito. Received November 22, 1934.

107424. PHYTELEPHAS sp. Phoenicaceae. Ivory nut palm.

No. 6586. Low pinnate-leaved palms.

107424 and 107425—Continued.

107425. SYAGRUS sp. Phoenicaceae. Palm.

No. 6580. *Palma mulatto*. A pinnate-leaved palm, related to the coconut.

107426. MALUS SYLVESTRIS Mill. Malaceae. Apple.

From Puerto Rico. Cuttings presented by J. A. B. Nolla, assistant commissioner, Department of Agriculture and Commerce, San Juan. Received December 26, 1934. Cuttings of an apple tree which originated in the highlands near Orocovis as a seedling from an imported American variety. The tree has borne two small crops.

107427 to 107431.

From the Union of Soviet Socialist Republics. Bulbs presented by the Botanical Institute, Ashkhabad, Turkmenistan, through H. L. Westover, Bureau of Plant Industry. Received December 22, 1934.

107427 to 107429. TULIPA spp. Liliaceae. Tulip.

107427. TULIPA KUSCHKENSIS B. Fedtsch.

For previous introduction and description, see 106777.

107428. TULIPA WILSONIANA Hoog.

For previous introduction and description see 106782.

107429. TULIPA sp.

107430. (Undetermined.)

107431. (Undetermined.)

107432. EORA SAPIDA (Soland.) Cook. Phoenicaceae. Nikau palm.

From California. Seeds presented by David Barry & Co., Los Angeles. Received December 19, 1934.

Seeds from a tree growing in Santa Barbara, Calif. A New Zealand palm 30 feet high, with a green ringed stem, pinnate leaves 14 feet long, and large clusters of pale-pink flowers.

For previous introduction see 101151.

107433 and 107434.

From the Union of South Africa. Seeds presented by the McGregor Museum, Kimberley. Received December 15, 1934.

107433. SALSOLA GLABRESCENS Burt-Davy. Chenopodiaceae.

A dwarf shrub up to 3 feet high, with very small, ovate, or triangular, spirally arranged leaves and inconspicuous flowers.

For previous introduction see 105941.

107434. TETRAGONIA ARBUSCULA Fenzl. Aizoaceae.

A much-branched, semishrubby perennial with fleshy leaves less than an inch long, varying from linear to ovate-oblong. The small inconspicuous flowers are borne in leafy racemes and are followed by three- to four-winged fruits. It is native to southern Africa.

For previous introduction and description see 107142.

107435. EUCHLAENA MEXICANA Schrad. Poaceae. Teosinte.

From Mexico. Seeds presented by the Government Experimental Station at Cha-

107435—Continued.

pingo, State of Mexico, through Walter Douglas, Mexico, D. F. Received December 19, 1934.

For previous introduction and description see 106947.

107436 to 107448. ILEX spp. Aquifoliaceae. Holly.

From New York. Seeds presented by J. B. Murray, Brooklyn. Received December 20, 1934.

107436 to 107445. ILEX AQUIFOLIUM L. English holly.

107436. Variety *Argentea marginata*.

107437. Variety *Argentea medico-picta*.

107438. Variety *Aurifodina*.

107439. Variety *Camelliaefolia*.

107440. Variety *Ciliata major*.

107441. Variety *Cookii*.

107442. Variety *Flavescens*.

107443. Variety *Fructu-luteo*.

107444. Variety *Integrifolia*.

107445. Variety *Rubicaulis aurea*.

107446. ILEX BEANII Rehder.

A hybrid (*Ilex aquifolium* × *dipyrena*) which is an evergreen tree with dull-green, elliptic, spine-tipped leaves 2 to 8 inches long and oval red berries.

107447. ILEX sp.

Received under the name "hendersonii," for which a place of publication has not been found.

107448. ILEX PLATYPHYLLA Web. and Berth.

An evergreen tree of pyramidal habit, 20 feet high, with leathery, broadly ovate leaves about 2 inches long and short cymes of white flowers. Native to the Canary Islands.

107449 to 107477.

From Surinam. Bulbs and seeds collected by W. A. Archer, Bureau of Plant Industry. Received December 1, 1934.

Unless otherwise noted, the introductions of this shipment were received as seeds. Introduced for Department specialists.

107449. ALLIUM CEPA L. Liliaceae. Onion.

No. 2696. November 6, 1934. Bulbs of a red onion from the market at Paramaribo. Said to have been imported from Madeira, Spain.

107450. ASCLEPIAS CURASSAVICA L. Asclepiadaceae. Bloodflower.

No. 2670. From Scotelweg, November 2, 1934. An ornamental herb 3 feet high with red and yellow flowers.

For previous introduction see 99772.

107451. DIOCLEA MACRANTHA Huber. Fabaceae.

No. 2659. November 2, 1934. From Scotelweg. *Kumatra*. A somewhat woody tropical climber with trifoliolate leaves, the leaflets broadly ovate and about 2 inches long. The small lavender flowers are in axillary racemes. Native to northern South America.

For previous introduction see 106540.

107449 to 107477—Continued.

107452. *DIOCLEA MACRANTHA* Huber. Fabaceae.

No. 2675. November 2, 1934. From Scotelweg. A legume with glabrous pods.

107453 and 107454. *CARICA PAPAYA* L. Papayaceae.

From Paramaribo, October 29, 1934.

107453. No. 2676, **107454.** No. 2677.

107455. *CERBERA THEVETIA* L. Apocynaceae.

Yellow oleander.

No. 2668. November 2, 1934. From near Scotelweg. *Jorro Jorro.*

For previous introduction and description see 106951.

107456. *LISIANTHUS ALATUS* Aubl. Gentianaceae.

No. 2653. Near Scotelweg, November 2, 1934. An annual, 1 to 3 feet high, with elliptical or elliptical-oblong, sessile leaves and terminal cymes of greenish-yellow flowers. Native to tropical America.

107457. *CLEOME PSORALEAEFOLIA* DC. Capriidaceae.

No. 2701. Near Paramaribo, November 9, 1934. An erect annual with digitate leaves of three leaflets and terminal corymbs of white flowers. Found growing as a weed in a cultivated field. Native to Brazil.

107458 and 107459. *CLIBADIUM SURINAMENSE* L. Asteraceae.

For previous introduction and description see 107157.

107458. No. 2647. November 2, 1934. Near Scotelweg.

107459. No. 2684. November 6, 1934. Collected 8 miles northwest of Paramaribo.

107460 to 107462. *TEPHROSIA* spp. Fabaceae.

107460. *TEPHROSIA TOXICARIA* Pers.

No. 2646. Georgetown, British Guiana, October 17, 1934. *Cure-for-all.* A shrub 6 feet high, with pale lavender-tinged flowers. The leaves of this plant are boiled and used as a cough and cold remedy.

107461. *TEPHROSIA CANDIDA* DC.

No. 2665. From near Scotelweg, November 2, 1934. A sparsely branched shrub 4 to 10 feet high, with white flowers.

For previous introduction see 98925.

107462. *TEPHROSIA TOXICARIA* Pers.

No. 2646-a. Near Scotelweg, November 2, 1934. A leguminous shrub 6 to 8 feet high, with leaves made up of nine or more leaflets and racemes of white and lavender flowers. It is used as a cover crop.

For previous introduction see 106352.

107463 to 107466. *CROTALARIA* spp. Fabaceae.

107463. *CROTALARIA RETUSA* L.

No. 2655. Near Scotelweg, November 2, 1934. *Gorro gorro.*

For previous introduction and description see 106920.

107449 to 107477—Continued.

107464. *CROTALARIA ANAGYROIDES* H. B. K.

No. 2666. Near Scotelweg, November 2, 1934. An open shrub over 6 feet high, with mucronate, pubescent, trifoliolate leaves and terminal racemes of brilliant yellow flowers.

For previous introduction see 98834.

107465 and 107466. *CROTALARIA STRIATA* DC.

November 6, 1934, 8 miles northwest of Paramaribo, on the highway. Leguminous plants 3 to 8 feet high, of possible use as a cover crop.

For previous introduction see 106955.

107465. No. 2686, **107466.** No. 2691.

107467. *EUPHORBIA GENICULATA* Ort. Euphorbiaceae.

No. 2664. Near Scotelweg, November 2, 1934. An annual with a stout stem and thin ovate leaves, native to the West Indies.

107468 to 107470. *GOSSYPIUM* spp. Malvaceae.

Cotton.

Near Scotelweg, November 2, 1934. Cotton cultivated by the Carib Indians.

107468. *GOSSYPIUM* sp.

No. 2671-A. A variety with green leaves.

107469. *GOSSYPIUM* sp.

No. 2671-B. A variety with red leaves.

107470. *GOSSYPIUM BARBADENSE* L.

No. 2667. A cotton which becomes 14 feet high, with yellow flowers which change to rose.

107471. *INDIGOPERA SUFFRUTICOSA* Mill. Fabaceae.

No. 2680. Eight miles northwest of Paramaribo on the highway, November 6, 1934. Plants from 2 to 5 feet high, with pale salmon-colored flowers.

For previous introduction see 99780.

107472 and 107473. *JATROPHA CURCAS* L. Euphorbiaceae.

107472. No. 2672. *Purgeernoot.* Near Scotelweg, November 2, 1934. A cultivated shrub.

107473. *Schijtnoot.* November 6, 1934. Found along the highway, northwest of Paramaribo. A shrub 10 to 15 feet high, with pale greenish flowers and frothy sap.

107474. *MUCUNA URENS* (L.) Medic. Fabaceae.

No. 2695. *Kowai.* November 6, 1934. Found along the highway northwest of Paramaribo. A wide-climbing woody vine with trifoliolate leaves of ovate-oblong, papery leaflets 3 to 5 inches long and dense heads of sulphur-yellow flowers 2 inches across followed by hispid pods, hanging down on long peduncles.

For previous introduction see 88160.

107475. *NICOTIANA TABACUM* L. Solanaceae.

Tobacco.

No. 2689. Near Scotelweg, November 2, 1934. A tobacco cultivated by the Javanese in Surinam. Source of seed unknown.

107449 to 107477—Continued.

107476. *PHYSALIS ORINOCENSIS* H. B. K.
Solanaceae.

No. 2663. Near Scotelweg, November 2, 1934. A perennial herb with ovate acute leaves about 2 inches long, native to northern South America.

107477. *ZEA MAYS* L. Poaceae. Corn.

No. 2698. Paramaribo, November 6, 1934. Native (?) corn, planted by all people, including Indians.

107478 to 107596.

From the Union of Soviet Socialist Republics. Seeds collected in Turkistan by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received November 1, 1934.

Introduced for Department specialists.

Collected in the Botanic Garden, Tashkent.

107478. *AEGILOPS TRIUNCIALIS* L. Poaceae.
Grass.

No. 400. A thickly branched annual grass with ascending stems and flat rough leaves. It is native to dry places in the Mediterranean region.

For previous introduction see 78752.

107479. *AEGILOPS CRASSA* Boiss. Poaceae.
Grass.

No. 401. A decumbent annual grass with flat leaves. Native to Asia Minor.

107480. *AGRIOPHYLLUM MINUS* Fisch. and Mey. Chenopodiaceae.

No. 403. An annual, native to sandy deserts in Turkistan, with sessile linear-subulate leaves and inconspicuous axillary flowers.

For previous introduction see 98200.

107481. *AGROPYRON INTERMEDIUM* (Host)
Beauv. Poaceae. Grass.

No. 404. A very good grass for dry soils, especially on slopes.

For previous introduction see 56502.

107482. *AGROPYRON TRICOPHORUM* (Link)
Richt. Poaceae. Grass.

No. 405.

For previous introduction and description see 107330.

107483. *AGROSTIS INTERRUPTA* L. Poaceae.
Grass.

No. 406. An annual bushy grass up to 2 feet high, native to sandy places in the Mediterranean countries.

For previous introduction see 74158.

107484 to 107487. *ALLIUM* spp. Liliaceae.

107484. *ALLIUM JESDIANUM* Boiss. and
Buhse. Onion.

No. 407. A pink-flowered onion about 2 feet high, with flat linear leaves and a many-flowered umbel. Native to the mountains of Caucasus.

For previous introduction see 73599.

107485. *ALLIUM SEWERZOWI* Regel.
Onion.

No. 408. An onion with a scape about 6 inches high and linear-lanceolate leaves slightly exceeding the scape. The

107478 to 107596—Continued.

rosy-lilac flowers are in a hemispherical umbel. Native to Turkistan.

107486. *ALLIUM STENOPHYLLUM* Schrenk.
Onion.

No. 410. An onion with narrow-linear leaves and a fastigate-globose head of pinkish flowers. Native to central Asia.

107487. *ALLIUM SUWOROWI* Regel.

No. 409. A hardy bulbous plant with very narrow flat leaves up to 16 inches long and hemispherical umbels of fragrant violet-rose flowers. Native to the Kirghis Desert, central Asia.

For previous introduction see 73601.

107488. *ALYSSUM STRICTUM* Willd. Brassicaceae.

No. 411. July 1934. An annual alyssum with numerous ascending branches 18 inches high, oblong-linear leaves, and cylindrical racemes of yellow flowers. Native to Asia Minor.

For previous introduction see 90614.

107489. *ALYSSUM SZOVITSIANUM* Fisch. and Mey. Brassicaceae.

No. 412. An annual yellow-flowered alyssum from southeastern Europe, about a foot high, with oblong-linear leaves and pods sometimes an inch long.

For previous introduction see 90615.

107490. *ANDROPOGON ISCHAEMUM* L.
Poaceae.

No. 413.

For previous introduction see 84274.

107491 to 107496. *ASTRAGALUS* spp. Fabaceae.

107491. *ASTRAGALUS CAMPYLORHYNCHUS*
Fisch. and Mey.

No. 414. A low slender annual with linear, truncate leaflets. Native to northeastern Asia.

107492. *ASTRAGALUS CAMPYLOTRICHUS*
Bunge.

No. 415. An erect annual with linear-oblong leaflets. Native to Turkistan.

107493. *ASTRAGALUS FILICAULIS* Fisch.
and Mey.

No. 416.

For previous introduction and description see 106850.

107494. *ASTRAGALUS RETAMOCARPUS* Boiss.
and Hohen.

No. 417.

For previous introduction and description see 106855.

107495. *ASTRAGALUS SCHMALHAUSENI*
Bunge.

No. 418.

107496. *ASTRAGALUS SIEVERSIANUS* Pall.

No. 419. For previous introduction and description see 106857.

107497. *ATRIPLEX FLABELLUM* Bunge.
Chenopodiaceae.

No. 420. An annual about a foot high, with small cordate-dentate or five- to seven-lobed leaves. Native to Turkistan.

107478 to 107596—Continued.

107498. *BASSIA* sp. Chenopodiaceae.
No. 477.
107499. *BOISSIERA BROMOIDES* Hochst. Poaceae. Grass.
No. 421. A dwarf annual grass 6 inches or less high, with erect or ascending culms. Native to Asia Minor.
- 107500 to 107506. *BROMUS* spp. Poaceae. Grass.
107500. *BROMUS DANTHONIAE* Trin.
No. 422.
For previous introduction and description see 107029.
107501. *BROMUS INERMIS* Leyss. Common bromegrass.
No. 423.
For previous introduction and description see 107030.
107502. *BROMUS JAPONICUS* Thunb. Bromegrass.
No. 424. A biennial upright or ascending grass of wide distribution in Europe and Asia. It is commonly from 1 to 2 feet high.
For previous introduction see 98285.
107503. *BROMUS MACROSTACHYS* Desf.
For previous introduction and description see 106862.
107504. *BROMUS POPOVII* Drobov.
No. 426. An annual grass with erect or ascending culms 1 to 2 feet high. Native to Bokhara.
107505. *BROMUS SCOPARIUS* L.
No. 427. An annual grass with culms about a foot high and erect panicles 1 to 3 inches long. Native to Spain.
107506. *BROMUS SEVERTZOWI* Regel.
No. 428. An annual grass with erect culms up to 16 inches high. Native to Turkistan.
- 107507 to 107515. *CALLIGONUM* spp. Polygonaceae.
107507. *CALLIGONUM ARBORESCENS* Litv.
No. 430.
For previous introduction see 94927.
107508. *CALLIGONUM CAPUT-MEDUSAE* Schrenk.
No. 431.
For previous introduction see 105807.
107509. *CALLIGONUM COMOSUM TURKESTANICUM* Eug. Kor.
No. 432.
107510. *CALLIGONUM ELATUM* Litv.
No. 433.
107511. *CALLIGONUM ERIOPODUM* Bunge.
No. 434.
For previous introduction see 105809.
107512. *CALLIGONUM MEMBRANACEUM* Litv.
No. 435.

107478 to 107596—Continued.

107513. *CALLIGONUM SETOSUM* Litv.
No. 436.
For previous introduction see 105810.
107514. *CALLIGONUM TRISTE* Litv.
No. 437.
107515. *CALLIGONUM* sp.
No. 429.
107516. *CAREX PACHYSTYLIS* J. Gay. Cyperaceae.
No. 438.
For previous introduction see 106867.
107517. *CAREX PHYSODES* Bieb. Cyperaceae.
No. 439.
For previous introduction and description see 106868.
107518. *CONVOLVULUS LINEATUS* L. Convolvulaceae.
No. 442. A perennial vine with long-stalked oblong to linear leaves and pink flowers. Native to southern Europe and Asia Minor.
107519. *COUSINIA RADIANS* Bunge. Asteraceae.
No. 443. An herb a foot or more high, with pinnatifid clasping leaves and small dense heads of straw-colored flowers. Native to central Asia.
107520. *CRAMBE KOTSCHYANA* Boiss. Brassicaceae.
No. 444. For previous introduction and description see 106871.
107521. *DACTYLIS GLOMERATA* L. Poaceae. Orchard grass.
No. 445.
107522. *DELPHINIUM LONGIPEDUNCULATUM* Regel and Schmalh. Ranunculaceae.
No. 447. A perennial larkspur with rounded-cordate, palmately lobed leaves and long-stalked azure-blue flowers in lax racemes. Native to the mountains of Turkistan.
107523. *DELPHINIUM SEMIBARBATUM* Bien. Ranunculaceae.
No. 446. A low perennial a foot high, with palmately incised leaves and very small yellow flowers in long lax racemes. Native of Iran (Persia).
107524. *DIANTHUS CRINITUS* J. E. Smith. Silenaceae. Pink.
No. 448. A dwarf plant with very short linear leaves and a smooth stem bearing two to four erect purplish flowers. Native to Armenia.
For previous introduction see 101927.
- 107525 to 107528. *EREMURUS* spp. Liliaceae. Desertcandle.
107525. *EREMURUS HILARIAE* M. Popov and Vved.
No. 449. A perennial 1 to 3 feet high, with broadly linear leaves 8 to 16 inches long and a dense raceme of white flowers, yellow at the base of the perianth segments. Native to Turkistan.
107526. *EREMURUS INDERIENSIS* Regel.
No. 450. A hardy herbaceous perennial with a rosette of narrow-linear

107478 to 107596—Continued.

leaves and a raceme of purplish flowers on a scape up to 18 inches high. Native to Turkistan.

107527. EREMURUS OLGAE Regel.

No. 451. A hardy herbaceous perennial with white flowers produced in a dense raceme. Native to Turkistan.

For previous introduction see 73189.

107528. EREMURUS ROBUSTUS Regel.

Giant desertcandle.

No. 452. A tall hardy herbaceous perennial with pale-pink flowers on a stalk 5 to 8 feet high. Native to Turkistan.

For previous introduction see 91627.

107529. ERIANTHUS PURPURASCENS Anders. Poaceae. Grass.

No. 453. A tall stout grass several feet high, related to *Saccharum*, with leaves about an inch wide. Native to southern Asia.

107530 to 107539. FERULA spp. Apiaceae.

107530. FERULA ANGRENI Eug. Korovin.

No. 454.

107531. FERULA ASSA-FOETIDA L.

No. 455. A large herbaceous perennial, 6 to 12 feet high, with yellow flowers. The plant, which has a bad odor, is one source of *asafoetida*.

For previous introduction see 73192.

107532. FERULA CERATOPHYLLA Regel and Schmalh.

No. 456. A low herbaceous perennial 2 to 3 feet high, with the lower leaves rigid and trisect, the upper leaves smaller and incised. The small yellowish flowers are in umbels about an inch across. Native to Turkistan.

107533. FERULA DIVERSIVITTATA Regel and Schmalh.

No. 457. A perennial herb, native to Turkistan, with the lobes of the biternate leaves entire.

107534. FERULA FOETIDISSIMA Regel and Schmalh.

No. 458. A stout perennial herb with biternate, crenate-serrate leaves. Native to Turkistan.

107535. FERULA FOLIOSA Lipsky.

No. 459.

107536. FERULA KARATAVICA Regel and Schmalh.

No. 460. A perennial herb 3 to 4 feet high, with broad biternate leaves and umbels of small flat, ovate fruits. Native to Turkistan.

107537. FERULA OVINA Boiss.

No. 461. A tall coarse perennial 5 to 8 feet high, with finely divided leaves a foot or more in length. Native to Iran (Persia).

107538. FERULA PRANGIFOLIA Eug. Kor. No. 462.

107539. FERULA UGAMICA Eug. Kor.

No. 463.

107478 to 107596—Continued.

107540. FESTUCA ELATIOR ARUNDINACEA (Schreb.) Celak. Poaceae.

Fescue grass.

No. 464.

For previous introduction see 99119.

107541. FESTUCA ELATIOR L. Poaceae.

Meadow fescue.

No. 465.

107542 to 107544. FRITILLARIA spp. Liliaceae.

107542. FRITILLARIA BUCARICA Regel.

No. 466. A fritillaria from the mountains of eastern Bokhara.

For previous introduction and description see 107059.

107543. FRITILLARIA SEWERZOWI Regel.

No. 467. A bulbous plant with numerous ovate to lanceolate leaves up to 4 inches long and a terminal raceme of 5 to 12 purplish-green flowers. Native to central Asia.

107544. FRITILLARIA STENANTHERA Regel.

No. 468. A low bulbous plant about 3 inches high, with opposite, ovate oblong leaves. The small, lilac, violet-spotted flowers are one-half inch long. Native to Turkistan.

107545. GLADIOLUS SEGETUM Ker. Iridaceae.

No. 469. A European gladiolus of free habit, fond of warm dry soil and a sunny situation, with rather small rose-purple flowers.

For previous introduction see 69854.

107546. HEDYSARUM SEMENOWII Regel and Herd. Fabaceae.

No. 470. An erect hardy herbaceous perennial with purplish flowers. Native to Turkistan.

For previous introduction see 73975.

107547. HORDEUM BULBOSUM L. Poaceae. Grass.

No. 471.

For previous introduction and description see 107361.

107548. HYACINTHUS ATROVIOLEACEUS (Regel) Machbride. Liliaceae. Hyacinth.

No. 472.

For previous introduction and description see 106755.

107549. IMPERATA CYLINDRICA (L.) Beauv. Poaceae. Blady grass.

No. 473. A perennial grass native to the plains and hills of central and western India. The blades of this grass become 4 to 5 feet long. It resembles very closely the *esparto* of Spain and north Africa, and, when dried before making it into pulp, it yields as high as 68 percent of first-class paper-making pulp. In Queensland, Australia, this grass grows abundantly and three crops a year may be harvested.

For previous introduction see 49637.

107550. INCARVILLEA OLGAE Regel. Bigoniaceae.

No. 474. An erect biennial 3 to 4 feet high, with opposite pinnate leaves, the

107478 to 107596—Continued.

leaflets linear, oblong, and acute. The bell-shaped purple flowers are about an inch long. Native to central Asia.

107551. *INULA GRANDIS* Schrenk. Asteraceae.

No. 475. A bushy perennial with oblong leathery dentate-serrate leaves 6 to 8 inches long and yellow-rayed flowers. Native to Manchuria.

107552. *IXIOLIRION TATARICUM* (Pall.) Herbert. Amaryllidaceae.

No. 476. A bulbous herbaceous perennial which is native from the Caucasus through central Asia.

For previous introduction see 30817.

107553. *LACHNOPHYLLUM GOSSYPINUM* Bunge. Asteraceae.

No. 478. An annual composite related to erigeron, with slender stems, oblong leaves about one-half inch long, and small blue flower heads. Native to central Asia.

107554. *MALCOMIA AFRICANA* (Willd.) Ait. Brassicaceae.

No. 479. An annual about 9 inches high, with lanceolate dentate leaves and small purple flowers. Native to tropical Africa.

107555. *MALCOMIA TURKESTANICA* Litv. Brassicaceae.

No. 480. An annual with rigid stems about a foot high, with narrow-lanceolate, acute leaves about an inch long and small violet-rose flowers in elongated racemes. Native to Turkistan.

107556 to 107560. *MEDICAGO* spp. Fabaceae. Medick.

107556. *MEDICAGO FALCATA* L.

No. 481.

107557. *MEDICAGO LUPULINA* L.

Black medick.

No. 482.

107558. *MEDICAGO MINIMA* (L.) Grufberg.

No. 483.

For previous introduction and description see 106886.

107559. *MEDICAGO ORBICULARIS* (L.) All.

No. 484.

107560. *MEDICAGO SATIVA* L. Alfalfa.

No. 485.

107561 to 107563. *MELILOTUS* spp. Fabaceae. Sweetclover.

107561. *MELILOTUS ALBA* Desr.

No. 486.

White sweetclover.

107562. *MELILOTUS INDICA* (L.) All.

No. 487.

107563. *MELILOTUS OFFICINALIS* (L.) Lam.

No. 488.

107564 to 107568. *ONOBRYCHIS* spp. Fabaceae.

107564. *ONOBRYCHIS GRANDIS* Lipsky.

No. 489.

For previous introduction and description see 107087.

107478 to 107596—Continued.

107565. *ONOBRYCHIS CHORASSANICA* Bunge.

No. 490.

For previous introduction and description see 106887.

107566. *ONOBRYCHIS MICRANTHA* Schrenk.

No. 506.

For previous introduction and description see 106888.

107567. *ONOBRYCHIS PULCHELLA* Schrenk.

No. 491.

For previous introduction and description see 107088.

107568. *ONOBRYCHIS VULGARIS* Hill. Sanfoin.

No. 492.

107569. *PHLEUM PANICULATUM* Huds. Poaceae. Timothy.

No. 494.

107570. *PHLEUM* sp. Poaceae.

No. 493.

107571. *POA BULBOSA* L. Poaceae. Grass. No. 495. Wild alfalfa.

For previous introduction and description see 107386.

107572. *POA* sp. Poaceae. Grass.

No. 496.

107573. *POLYGONUM BALDSCHUANICUM* Regel.

No. 498. A large perennial 10 to 15 feet high, with a woody stem, cordate-hastate leaves, and terminal and axillary panicles of small reddish flowers. Native to Bokhara.

For previous introduction see 13599.

107574. *PROSOPIS STEPHANIANA* (Bieb.) Kunth. Mimosaceae.

No. 499. A deep-rooted shrubby legume which grows abundantly on dry lands in the island of Cyprus. Sheep and cattle browse on it and the bees make good honey from its abundant flowers.

For previous introduction see 105816.

107575. *SALSOLA ARBORESCENS* RICHLERI Karel. Chenopodiaceae.

No. 500.

For previous introduction and description see 106900.

107576. *SALSOLA SUBAPHYLLA* Meyer. Chenopodiaceae.

No. 501. A leafless, much-branched shrub about a foot high, native to desert places on the shores of the Caspian Sea.

For previous introduction see 105818.

107577. *SCALIGERIA ALLOIDES* Boiss. Apiaceae.

No. 504. A low herbaceous perennial 1 to 2 feet high, with pinnately incised leaves and white or pinkish flowers in umbels nearly 2 inches across. Native to Iran (Persia).

107478 to 107596—Continued.

107578. SCALIGERIA HIRTULA Lipsky. Apiaceae.

No. 505. A herb 1 to 3 feet high, with bisect or trisect leaves, the segments lanceolate and white margined. Native to central Asia.

107579 to 107583. TRIFOLIUM spp. Fabaceae. Clover.

107579. TRIFOLIUM FRAGIFERUM L.

No. 507.

107580. TRIFOLIUM PRATENSE L.

Red clover.

No. 508.

107581. TRIFOLIUM REPENS L.

White clover.

No. 509.

107582. TRIFOLIUM RESUPINATUM L.

Strawberry clover.

No. 510.

107583. TRIFOLIUM SQUARROSUM L.

No. 511.

107584. TRIGONELLA NOEANA Boiss. Fabaceae.

No. 512. A bushy annual with erect stems about 6 inches high, oblong-spatulate leaflets, and small solitary axillary yellow flowers. Native to Asia Minor.

107585 to 107592. TULIPA spp. Liliaceae. Tulip.

107585. TULIPA FOSTERIANA Hoog.

No. 513.

For the introduction of bulbs and the description see 106772.

107586. TULIPA GREIGII Regel.

No. 514.

For the introduction of bulbs and the description see 106773.

107587. TULIPA KAUFMANNIANA Regel.

No. 515.

For the introduction of bulbs and the description see 106774.

107588. TULIPA KOLPAKOWSKIANA Regel.

No. 516.

For the introduction of bulbs and the description see 106775.

107589. TULIPA LANATA Regel.

No. 517.

For the introduction of bulbs and the description see 106778.

107590. TULIPA LINIFOLIA Regel.

No. 518.

For the introduction of bulbs and the description see 106779.

107591. TULIPA PRAESTANS Hoog.

No. 519.

For the introduction of bulbs and the description see 106781.

107592. TULIPA TURKESTANICA Regel.

No. 520. A tulip with two or rarely three linear-lanceolate leaves and with yellow flowers, violet within, on a scape 3 to 12 inches high. Native to Turkistan.

107478 to 107596—Continued.

107593. UNGERNIA TADSHIKORUM Vved. Amaryllidaceae.

No. 521. A bulbous plant from central Asia, with 8 to 12 linear bluish two-ranked leaves and pinkish or yellowish flowers borne on a stem about a foot high.

107594 to 107596. VICIA spp. Fabaceae.

107594. VICIA ERVILIA (L.) Willd.

Vetch.

No. 522.

For previous introduction see 98861.

107595. VICIA HYRCANICA Fisch. and Mey.

No. 523.

For previous introduction and description see 107126.

107596. VICIA sp.

No. 523-A. Oval-flattened seeds which were mixed with No. 523 (107595).

107597 to 107599. ALLIUM SATIVUM L. Liliaceae. Garlic.

From Germany. Bulbs presented by Dr. O. Knapp, Eisleben. Received December 29, 1934.

Wild garlic, said to be from the following localities:

107597. Thuringen.

107598. Spreewald, south of Berlin.

107599. Spreewald, south of Berlin.

107600 and 107601. HELIANTHUS TUBEROSUS L. Asteraceae.

Jerusalem-artichoke.

From France. Seeds presented by the experimental department of Vilmorin-Andrieux & Cie., Verrieres le Buisson. Received December 18, 1934.

Seeds grown in Algeria; introduced for the use of Department specialists.

107600. No. 2.

107601. No. 1.

107602. ZOYSIA MATRELLA (L.) Merr. Poaceae. Manila grass.

From Manchuria. Seeds purchased from Manshu Nosan Shokai, Inc., Dairen. Received December 20, 1934.

Introduced for Department specialists.

For previous introduction and description see 107272.

107603 to 107613. TRITICUM AESTIVUM L. Poaceae. Common wheat.

From Australia. Seeds presented by Dr. H. Wenholz, Wagga Experiment Farm, Department of Agriculture, Sydney, New South Wales. Received December 14, 1934.

Introduced for Department specialists.

107603. Apollo.

107604. Baroota Wonder.

107605. Bundar.

107606. Cadia.

107607. Exquisite.

107608. Firwhill.

107603 to 107613—Continued.

107609. *Ford*.107610. *Genoa*.107611. *Gluford*.107612. *Maharajah*.107613. *Nabawa*.

107614 to 107618.

From Algeria. Seeds and bulbs presented by Dr. René Maire, director of botanical service, University of Algiers, Algiers. Received December 27, 1934.

Introduced for Department specialists.

107614 to 107616. *ALLIUM* spp. Liliaceae.107614 and 107615. *ALLIUM CEPA* L. Onion.

107614. Seeds of a red onion, cultivated for centuries by the natives.

107615. Seeds of a white onion now grown in Algeria.

107616. *ALLIUM SATIVUM* L. Garlic.

Bulbs of a form cultivated by the natives.

107617 and 107618. *DAUCUS CAROTA* L. Apiaceae. Carrot.

107617. Seeds of a yellow carrot with a violet top.

107618. Seeds of a red carrot.

107619. *ALSEODAPHNE SEMECARPIFOLIA* Nees. Lauraceae.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received December 26, 1934.

A small evergreen tree with oblong or obovate leaves 2 to 7 inches long and spreading panicles of very small flowers. Native to southern India.

107620 and 107621.

From India. Seeds presented by Partap Singh, deputy conservator of forests, Research Forest Division, Lahore, Punjab. Received December 24, 1934.

107620. *EPHEDRA GERARDIANA* Wall. Gnetaceae.

A stiff erect leafless shrub 2 to 4 feet high, native to India, with green branches, inconspicuous flowers, and bright red fruits.

For previous introduction see 77607.

107621. *PISTACIA INTEGERRIMA* Stewart. Anacardiaceae. Pistache.

A large tree up to 40 feet high, native to the warm slopes of the Himalayas in northern India. The aromatic pinnate leaves are made up of four to five pairs of lanceolate leaflets with an oblique base. The small inconspicuous flowers are in racemose clusters and are followed by the bright-green drupes which are about a fourth of an inch across. This tree yields the famous zebra-wood of India.

For previous introduction see 80035.

107622 to 107644.

From the Balkans. Seeds collected by Dr. Edgar Anderson, Arnold Arboretum Bal-

107622 to 107644—Continued.

kan expedition. Received December 19, 1934.

Seeds from plants growing in unusually dry, cold situations.

107622. *ACER TATARICUM* L. Aceraceae. Tatarian maple.

For previous introduction see 32422.

107623 and 107624. *CORNUS MAS* L. Cornaceae. Cornelian cherry.

For previous introduction see 28205.

107623. Environs of Sofia, Bulgaria.

107624. Bulgaria.

107625. *COTONEASTER INTEGERRIMA* Medic. Malaceae. European cotoneaster.

Bulgaria.

For previous introduction see 33156.

107626. *ILEX AQUIFOLIUM* L. Aquifoliaceae. English holly.

Sarajevo, Bosnia (Yugoslavia).

For previous introduction and description see 107445.

107627. *JUGLANS REGIA* L. Juglandaceae. Persian walnut.

Collected at 2,600 feet altitude, at Gabrovo, Bulgaria.

For previous introduction see 103653.

107628. *JUNIPERUS COMMUNIS* L. Pinaceae. Common juniper.

No. 58. Var. *Intermedia*. A dwarf alpine form.

107629. *JUNIPERUS EXCELSA* Willd. Pinaceae. Greek juniper.

No. 137.

107630 and 107631. *LIGUSTRUM VULGARE* L. Oleaceae. European privet.

107630. Sarajevo, Bosnia (Yugoslavia).

107631. No. 62. Cluj (Bratea), Rumania.

107632. *LONICERA NIGRA* L. Caprifoliaceae. Honeysuckle.

Bulgaria.

107633 to 107635. *MALUS* spp. Malaceae. Apple.107633 and 107634. *MALUS PUMILA* Mill. Paradise apple.

107633. Drenovo, Bulgaria.

107634. From the mountains near the Kamtchia River, Bulgaria.

107635. *MALUS SYLVESTRIS* Mill.

Vicinity of Trewna, Bulgaria.

107636. *PRUNUS LAUROCERASUS* L. Amygdalaceae. English cherry-laurel.

Sofia, Bulgaria.

For previous introduction see 103598.

107637 to 107639. *PYRUS COMMUNIS* L. Malaceae. Common pear.

107637. No. 2. Trewna, Bulgaria.

107638. No. 6. Drenovo, Bulgaria.

107639. No. 10. Gabrovo, Bulgaria.

107622 to 107644—Continued.

107640. RHAMNUS RUPESTRIS Scop.
Rhamnaceae. Buckthorn.

A low spreading shrub 2 to 3 feet high, with hairy branchlets, ovate to orbicular dull green leaves 1 to 2 inches long, and umbels of inconspicuous flowers followed by top-shaped fruits a quarter of an inch across, first red, then black. Native to the mountains of southeastern Europe.

For previous introduction see 89677.

107641. RHAMNUS SAXATILIS Jacq. Rhamnaceae. Buckthorn.

Bulgaria.

107642. SPIRAEA CHAMAEDRYFOLIA ULMIFOLIA Maxim. Rosaceae.

Bulgaria. An erect shrub up to 6 feet high with ovate, coarsely incised serrate leaves and white flowers one-half inch across, larger than those of the typical form. Native to southeastern Europe and eastern Asia.

107643. TAXUS BACCATA L. Taxaceae.
English yew.

Sarajevo, Bosnia (Yugoslavia).

107644. VIBURNUM LANTANA L. Caprifoliaceae. Wayfaring-tree.

107645 to 107717.

From Manchuria. Seeds and plants collected by H. G. MacMillan and J. L. Stephens, Bureau of Plant Industry. Received November 23, 1934.

Introduced for Department specialists.

Unless otherwise specified, these introductions are seeds.

107645 to 107648. AGROPYRON spp. Poaceae. Grass.

107645. AGROPYRON CANINUM (L.) Beauv. Awned wheatgrass.

No. 16. August 13, 1934. Hailar. A grass from 2 to 4½ feet high, found along sand ridges in shaded places, growing in scattered bunches.

107646. AGROPYRON CRISTATUM (L.) Gaertn. Wheatgrass.

Plants.

107647. AGROPYRON CRISTATUM PUBERULUM Boiss.

No. 2. August 11, 1934. Hailar. A tall plant with a well-developed root system.

107648. AGROPYRON sp.

No. 29. August 24, 1934. Hailar. A grass between 3 and 4 feet tall, found on fairly dry ground. Similar in growing habit to *Elymus excelsus*.

107649. AGROSTIS PERENNANS (Walt.) Tuck. Poaceae. Grass.

No. 5. August 11, 1934. Hailar. An erect perennial grass 1 to 3 feet high.

107650. AGROSTIS sp. Poaceae.

No. 21. August 20, 1934. Hailar. A grass up to 2 feet tall, with abundant seed; found in a delta.

107651. AMORPHA FRUTICOSA L. Fabaceae.

No. 14. July 9, 1934. Dairen.

107645 to 107717—Continued.

107652. ASPARAGUS sp. Convallariaceae.

No. 60. September 12, 1934. Hailar. Hardy plants, 1 to 2 feet tall, found on high sand ridges.

107653 to 107655. ASTRAGALUS spp. Fabaceae.

107653. ASTRAGALUS ADSURGENS Pall.

No. 39. September 3, 1934. Hailar. A bushy sprawling plant which blooms profusely. Found in alluvial soil, also in patches on sand ridges.

For previous introduction see 89723.

107654. ASTRAGALUS CHINENSIS L. f.

No. 53. September 12, 1934. Hailar. Found in exposed places along sandy ridges. A woody plant 2 to 5 feet tall, with small pendulous racemes of yellow flowers and extremely long, fibrous roots. Native to China.

For previous introduction see 89399.

107655. ASTRAGALUS sp.

No. 45. September 3, 1934. Hailar. A plant 6 to 12 inches high found growing in bunches on a high dry sand ridge east of Hailar.

107656. AVENA SATIVA L. Poaceae. Oats.

No. 15. July 31, 1934. Harbin, at the North Manchurian Railroad Experiment Station. A very hardy variety.

107657. BECKMANNIA SYZIGACHNE (Steud.) Fern. Poaceae.

No. 7. August 9, 1934. Hailar. A plant found in scattered small colonies in wet places in the river delta.

107658. BETULA sp. Betulaceae.

No. 63. September 15, 1934. Hailar. A very hardy ornamental shade tree, common in this region.

107659. BROMUS INERMIS Leyss. Poaceae. Common bromegrass.

No. 6. August 7, 1934. Hailar.

For previous introduction and description see 107501.

107660 to 107662. CALAMAGROSTIS EPIGEIOS (L.) Roth. Poaceae.

A stout perennial grass, native to Manchuria, where it grows on rather poor soil.

For previous introduction see 101648.

107660. No. 25. August 20, 1934. Hailar.

107661. No. 31. August 24, 1934. Hailar.

107662. No. 50. September 12, 1934. Hailar.

107663. CARAGANA MICROPHYLLA MANDSHURICA Kom. Fabaceae.

No. 11. July 31, 1934. Harbin Botanical Garden. A yellow-flowered bush grown as an ornamental. This variety is larger than the typical form, with elliptic leaflets.

107664. CARAGANA sp. Fabaceae.

No. 35. August 30, 1934. Hailar. A spiny shrub up to 4 feet tall, found in shifting sand and on the plains. Cattle graze the plant before the spines are mature.

107645 to 107717—Continued.

107665. *CRATAEGUS SANGUINEA* Pall. Malaceae.

No. 18. August 11, 1934. Hailar. An ornamental shrub 4 to 10 feet high, with small bright-orange to red globose fruits one-third of an inch in diameter, in rather dense corymbs.

For previous introduction see 82072.

107666 to 107672. *ELYMUS* spp. Poaceae. Grass.

107666 and 107667. *ELYMUS DAHURICUS* Turcz.

A grass 1 to 3 feet tall which spreads by means of rhizomes. It is found both on plains and sand ridges and is one of the common grazing grasses.

For previous introduction see 101656.

107666. No. 20. August 12, 1934. Hailar.

107667. No. 34. August 23, 1934. Hailar.

107668. *ELYMUS EXCELSUS* Turcz.

No. 30. August 24, 1934. Hailar. An upright grass 2 to 4 feet high, which somewhat resembles rye; found in the delta along the drainage ditches.

For previous introduction see 64626.

107669 to 107672. *ELYMUS PSEUDO-AGROPYRON* Trin.

A perennial grass with a creeping rhizome and flat leaves, found in sandy places where it is grazed closely. Native to Siberia.

107669. Plants.

107670. No. 4. August 4, 1934. Hailar.

107671. No. 41. August 30, 1934. Hailar.

107672. No. 37. August 30, 1934. Hailar.

107673. *ERAGROSTIS PILOSA* (L.) Beauv. Poaceae. Grass.

No. 23. August 20, 1934. A grass over 2 feet tall, found in the river delta.

107674. *EUONYMUS* sp. Celastraceae.

No. 57. September 12, 1934. Hailar. An ornamental shrub 2 to 4 feet tall, with light-pink to red fruits in clusters. Found on high sand ridges.

107675 and 107676. *FESTUCA OVINA* L. Poaceae. Sheep fescue.

107675. Plants.

107676. No. 1. August 7, 1934. Hailar.

107677. *GLYCERIA REMOTA* Fries. Poaceae. Grass.

No. 10. August 7, 1934. Hailar. A perennial grass 3 to 6 feet tall, with a creeping rhizome and simple culms. Native to northwestern Europe.

107678. *IRIS ENSATA* Thunb. Iridaceae.

No. 42. August 28, 1937. Hailar. Variety *Chinesis*. A very hardy form, 1 to 2 feet tall, found in moist plains around Hailar.

107645 to 107717—Continued.

107679. *LEPTOCHLOA* sp. Poaceae. Grass.

No. 64. September 12, 1934. Hailar. A bunch grass up to 12 inches high which resembles Bermuda grass but does not spread by taking root at the nodes. Appears to afford a considerable amount of grazing.

107680 to 107682. *LESPEDEZA* spp. Fabaceae.

Collected in the vicinity of Hailar.

107680. *LESPEDEZA CYSTOIDES* Nakai.

No. 49. September 12, 1934. A Siberian bushclover with cream-colored, purple-spotted flowers.

107681. *LESPEDEZA* sp.

No. 44. September 3, 1934. A perennial *lespedeza* 1½ to 2½ feet tall, found in dry sandy soil. The plants seed abundantly.

107682. *LESPEDEZA* sp.

No. 51. September 12, 1934. A perennial *lespedeza*, found in dry sandy soil, which is over 2 feet high and seeds abundantly.

107683. *MALUS* sp. Malaceae.

No. 54. September 12, 1934. Hailar. A hardy shrub up to 6 feet high, found on high sand ridges. The hard, moderately sour fruits the size of cherries are borne in clusters and are usually red.

107684 to 107688. *MEDICAGO* spp. Fabaceae. Medick.

107684 and 107685. *MEDICAGO FALCATA* L.

A sprawling plant 1 to 2 feet high, found in patches in the delta and low places on the plains. Heavily grazed by cattle.

107684. No. 46. September 3, 1934. Hailar.

107685. No. 55. September 12, 1934. Hailar.

107686. *MEDICAGO LUPULINA* L. Black medick.

No. 58. September 12, 1934. Hailar. Plants 10 to 18 inches high, found on the river plain. Very few seeds.

107687. *MEDICAGO RUTHENICA* (L.) Trautv.

No. 48. September 10, 1934. Hailar. A wild alfalfa found on the river delta and on sand ridges. It resembles common alfalfa in its habit of growth, and the main stem is sometimes 4 feet high.

For previous introduction see 90365.

107688. *MEDICAGO SATIVA* L. Alfalfa.

Presented by the North Manchurian Railroad Experiment Station, Harbin, September 21, 1934.

107689. *OXYTROPIS OXYPHYLLA* (Pall.) DC. Fabaceae.

No. 47. September 10, 1934. Hailar. Plants 6 to 12 inches high, but with roots 5 to 6 feet long. Found on sand ridges where vegetation is scant.

For previous introduction see 64767.

107690. *PANICUM* sp. Poaceae. Grass.

No. 59. September 12, 1934. Hailar. Found on the river delta, near a Chinese

107645 to 107717—Continued.

garden; apparently a domesticated plant. It is reported that the Chinese eat it.

107691. PAPAVER sp. Papaveraceae. Poppy.

No. 62. September 12, 1934. Hailar. A hardy, everblooming poppy found on high sand ridges. The lemon-yellow flowers are 1½ to 2 inches across.

107692. PHRAGMITES sp. Poaceae. Grass.

No. 56. September 12, 1934. Hailar. A wet-land grass, 4 to 6 feet tall, found occasionally on low ground on the river plain.

107693 to 107695. POA SPHONDYLODES Trin. Poaceae. Bluegrass.

Found along the edges of sand dunes and in depressions on the plains in the vicinity of Hailar. A good grazing grass.

For previous introduction see 64786.

107693. No. 3. August 5, 1934.

107694. Plants.

107695. No. 19. August 15, 1934.

107696. ROSA sp. Rosaceae. Rose.

No. 61. September 12, 1934. Hailar. Hardy plants, 1 to 3 feet tall, densely covered with small spines, found in wind-blown sand, and usually growing in clumps. The large red hips are abundantly produced.

107697. SALIX sp. Salicaceae. Willow. Plants.

107698. SETARIA ITALICA (L.) Beauv. Poaceae. Millet.

September 21, 1934. From the North Manchurian Railroad Experiment Station, Harbin.

107699. SETARIA VIRIDIS (L.) Beauv. Poaceae. Grass.

No. 40. August 30, 1934. A common grazing grass around Hailar, especially in the river delta.

107700 to 107704. STIPA spp. Poaceae. Grass.

107700. STIPA CAPILLATA L. Feathergrass.

No. 33. August 24, 1934. Hailar. A slender grass, up to 4 feet high, found in small bunches on both the sand ridges and plains. The abundant seeds are scattered by the wind as soon as mature.

107701 to 107703. STIPA SIBIRICA Lam.

An upright perennial grass, native to Siberia, up to 4 feet tall, with well-developed roots. It is found commonly in scattered bunches on the sand ridges and on the plains near Hailar.

107701. No. 17. August 13, 1934.

107702. No. 24. August 20, 1934.

107703. No. 38. August 30, 1934.

107704. STIPA SPLENDENS Trin. Feathergrass.

No. 22. August 20, 1934. Hailar. Erect, slender, dark-green plants over 4 feet tall, found in the sand. The abundant seed heads shatter as soon as the seed is ripe.

107645 to 107717—Continued.

107705. THERMOPSIS LANCEOLATA R. Br. Fabaceae.

No. 8. August 10, 1934. Hailar. A perennial herb up to 2 feet high, with oblong-lanceolate leaflets and bright-yellow flowers in terminal racemes. Native to Siberia and Alaska, where it is found in moist sandy places.

107706 and 107707. TRIFOLIUM LUPINASTER L. Fabaceae. Clover.

A wild clover, scantily furnished with foliage, that can withstand severe drought and is able to grow on very poor soil.

107706. No. 43. September 3, 1934. Hailar.

107707. No. 52. September 12, 1934. Hailar.

107708 to 107715. VICIA spp. Fabaceae. Vetch.

107708. VICIA AMOENA Fisch.

No. 28. August 24, 1934. Hailar, on a sandy ridge. A perennial hairy vetch, native to Siberia, with stems up to 2 feet high and purplish flowers.

107709 and 107710. VICIA AMOENA OBLONGIFOLIA Regel.

A variety with climbing, multiple-branched stems 6 to 8 feet long and elongate-oblong leaflets. The seed pods open as soon as the seed is mature. Native to eastern Siberia.

107709. No. 9. August 11, 1934. Hailar.

107710. No. 27. August 20, 1934. Hailar.

107711 and 107712. VICIA PSEUDO-OROBUS Fisch. and Mey.

Received as *Vicia tanakae*, now considered to be identical with the above species. A giant vetch, probably perennial, with many-branched stems 6 to 8 feet long, large leaflets, the basal ones over 2 inches long, and abundant flowers. Found growing in sand and climbing over shrubs.

107711. No. 26. August 20, 1934. Hailar.

107712. No. 32. August 24, 1934. Hailar.

107713. VICIA sp.

No. 36. September 3, 1934. Hailar.

107714. VICIA sp.

No. 12. June 6, 1934. Tokyo, Japan. A small feathery-leaved vetch resembling *Vicia monantha*, but smaller. Found growing among grasses as a volunteer in the Imperial Palace grounds.

107715. VICIA sp.

No. 13. June 6, 1934. Tokyo, Japan. A vetch which resembles *Vicia villosa* except that the young stems are glabrous. Found among grasses as a volunteer in the Imperial Palace grounds.

107716. (Undetermined.)

Plants of an undetermined grass.

107717. (Undetermined.)

Plants of an undetermined grass.

107718. POA BULBOSA L. Poaceae.

Grass.

From the Union of Soviet Socialist Republics. Seeds presented by the Botanical Garden, Academy of Science, Alma-Ata, Kazakstan. Received December 21, 1934.

Introduced for Department specialists.

For previous introduction see 78803.

107719. STIPA CALAMAGROSTIS (L.)

Wahlenb. Poaceae. Grass.

From France. Seeds presented by the Forest Service, at the request of J. Dufrenoy. Station Pathologie Vegetale, La Grande Ferrade, Pont-de-la-Maye. Received December 22, 1934.

Bauche grass. A grass valuable as a soil binder in the Pyrenees Mountains, up to about 4,000 feet altitude.

For previous introduction see 89955.

107720 to 107729.

From the Balkan region. Seeds collected by Dr. Edgar Anderson, Arnold Arboretum Balkan expedition. Received December 21, 1934.

Collected in unusually cold, dry regions; introduced for the use of Department specialists.

107720. ACTAEA SPICATA L. Ranunculaceae.

Black baneberry.

No. 33. Rila Mountains, Bulgaria. A low herbaceous perennial 1 to 2 feet high, with racemes of deep-blue fruits in autumn.

For previous introduction see 106520.

107721. CAMPANULA sp. Campanulaceae.

From Yugoslavia.

107722. CONVULVULUS sp. Convolvulaceae.

No. 107. From Cagan Pass, Rumania.

107723. FORSYTHIA EUROPAEA Degen. and Bald. Oleaceae.

No. 143. Peč, Yugoslavia. An upright shrub 3 to 6 feet high, with stiff, ovate-lanceolate, long-acuminate leaves about 2 inches long and golden-yellow flowers about an inch long. Native to Albania.

107724. HESPERIS DINARICA G. Beck. Brassicaceae.

No. 152. Ravna Mountains, Yugoslavia. An erect herbaceous perennial 2 to 3 feet high, with broadly lanceolate, denticulate, or sinuate-dentate leaves, and fragrant white flowers in dense terminal racemes. Native to Bosnia.

107725. ILEX OPACA Ait. Aquifoliaceae.

American holly.

107726. LIGUSTRUM VULGARE L. Oleaceae.

European privet.

Babadg, Dobrogea, Rumania. October 20, 1934. A shrub found on a steep slope in a half-shaded situation.

107727. LUNARIA sp. Brassicaceae.

From Cagan Pass, Rumania.

107728. PEDICULARIS COMOSUS L. Scrophulariaceae.

From Rumania. An alpine perennial with pinnatifid leaves, the lobes terminated by white spines. The yellowish-white flowers are in spikes. Native to Switzerland.

107720 to 107729—Continued.**107729. SYMPHYANDRA WANNERI Heuff. Campanulaceae.**

No. 26. Rila, Bulgaria. A low herbaceous perennial, native to the European Alps, up to 6 inches high, with oblong-ovate leaves and blue bell-shaped flowers about 1 inch long.

107730. ADENIUM OBESUM (Forsk.) Roem. and Schult. Apocynaceae.

From Jamaica. Seeds presented by M. S. Goodman, Department of Science and Agriculture, Hope, Kingston P. O. Received December 28, 1934.

A slow-growing shrub, not over 3 feet high, native to the dry regions of Arabia, and named after the desert port of Aden. The gorgeous rose-pink to white flowers are 3 inches across and remind one of enormous oleander blossoms. The flowers are borne so abundantly that they cover the entire shrub.

For previous introduction see 105731.

107731 to 107742.

From Surinam. Material collected by W. A. Archer, Bureau of Plant Industry. Received December 17, 1934.

Introduced for Department specialists.

107731. ANANAS COMOSUS (L.) Merr. Bromeliaceae.

Pineapple.

No. 2845. November 19, 1934. Sandrij 1. Suckers from a wild pineapple.

107732. ASPIDOSPERMA NITIDUM Benth. Apocynaceae.

No. 2775. November 17, 1934. Sandrij 1. Roots of Apukuita (Carib name), Par-elhout tree, from the jungle.

107733 to 107736. STIGMAPHYLLON spp. Malpighiaceae.**107733. STIGMAPHYLLON sp.**

No. 2770. November 17, 1934. Sandrij 1. Root cuttings.

107734. STIGMAPHYLLON FULGENS (Lam.) A. Juss.

No. 2776. November 12, 1934. Sandrij 1. Root cuttings of a climbing shrub with rounded-cordate leaves, silvery beneath. Native to northern South America.

107735. STIGMAPHYLLON sp.

No. 2715. November 12, 1934. Near Scotelweg. Roots.

107736. STIGMAPHYLLON FULGENS (Lam.) A. Juss.

No. 2658. November 2, 1934. Near Scotelweg. Root cuttings.

For previous introduction and description see 107734.

107737. CISSAMPELOS sp. Menispermaceae.

No. 2729. November 14, 1934. Eight miles northwest of Paramaribo. *Bocsi njamsie*. Roots.

107738. DIOSCOREA ALATA L. Dioscoreaceae.

Winged yam.

No. 2697. November 6, 1934. Paramaribo. *Njamsie*. Tubers from the market, said to be imported from the island of Madeira, Portugal.

For previous introductions see 105462.

107731 to 107742—Continued.

107739. *DIOSCOREA TRIFIDA* L. f. Dioscoreaceae. Yampie.

No. 2702. November 9, 1934. Paramaribo. *Napi*. Tubers from the market. A purple-fleshed variety.

For previous introduction see 102663.

107740. *FURCRAEA* sp. Amaryllidaceae.

No. 2740. November 17, 1934. Sandrij 1. *Mura* (Carib name). Found growing in white sand.

107741. *DIOCLEA* sp. Fabaceae.

No. 2713. November 12, 1934. Near Scotelweg. Roots of a vine which climbs to the tops of trees and has white and purple flowers.

107742. *LONCHOCARPUS NICOU* (Aubl.) DC. Fabaceae.

No. 2784. November 21, 1934. Sandrij 1. *Oeman nekoe*. Root cuttings of a plant cultivated in the forestry plots.

107743 to 107746. *GOSSYPIUM* spp. Malvaceae. Cotton.

From Africa. Seeds collected by Dr. and Mrs. Thomas Barbour, Cambridge, Mass.

107743 to 107746—Continued.

Received September 23, 1934. Numbered in December 1934.

107743. *GOSSYPIUM* sp.

March 8, 1934. Wild cotton from rocky kopjes north of the Letaba River, eastern Transvaal, near the Mozambique line.

107744. *GOSSYPIUM* sp.

March 8, 1934. Wild cotton from the bush near the Lower Sabi River on the low veldt, eastern Transvaal.

107745. *GOSSYPIUM* sp.

August 14, 1934. Wild cotton from a native dooryard at Bububu, Zanzibar.

107746. *GOSSYPIUM* sp.

August 11, 1934. Wild cotton, 7 miles inland from Majunga, Madagascar.

107747. *GOSSYPIUM* sp. Malvaceae. Cotton.

From British West Indies. Seeds presented by Dr. S. C. Harland, Trinidad. Received September 24, 1934. Numbered in December 1934.

Sea Island × (Contorta, G 2525) T.18 × T. 251.

Introduced for Department specialists.

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 Zephyrilly. See *Zephyranthes* spp.
 pink. See *Z. rosea*.
Zoysia japonica, 106839, 106840.
matrella, 107272, 107602.

UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 122



Washington, D. C.

Issued October 1939

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, JANUARY 1 TO MARCH 31, 1935 (Nos. 107748-110197)

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INTRODUCTORY STATEMENT

The present inventory, No. 122, is a record of the plant material (Nos. 107748-110197) received by the Division of Plant Exploration and Introduction during the period from January 1 to March 31, 1935.

Nearly one-half of the plant material recorded for this period was received from H. L. Westover and C. R. Enlow, of the Bureau of Plant Industry, who were still in the field, and whose expedition to the cold semiarid regions of Turkistan has resulted in the introduction of plant material of particular value for the Soil Conservation Service of this Department. This material will be tested in our Western and Southwestern States.

As a result of agricultural explorations carried on by W. A. Archer in Surinam and Venezuela during the early part of 1935, about 150 lots of seeds were sent in from those countries. The material collected by Dr. Archer included a number of leguminous plants of probable value as cover crops, local varieties of vegetables and tropical fruits, and several ornamental shrubs and trees destined for testing in southern Florida.

Large areas of eastern Ecuador are practically unknown, from a botanical point of view, and it is, therefore, with considerable interest that mention is made of five shipments of seeds collected in this area by the late Mrs. Ynes Mexia. Among the various items received were seeds of several species of *Juglans*, *Diospyros*, and *Datura*.

Further additions to chestnut material intended for the use of forest pathologists are recorded in three shipments of scions and seeds of *Castanea* spp., from eastern China, collected by Peter Liu, from whom, during the past decade, much Chinese plant material has been received. Mr. Liu also sent in scions of a number of new or little-known varieties of *Diospyros kaki* (Nos. 107775-107778; 108311, 108312).

A collection of walnut varieties, *Juglans* spp. (Nos. 110021-110051), obtained from Islington, Ontario, Canada, is for testing in the colder parts of the United States. Noteworthy also is a shipment of nearly 100 lots of tubers of frost-resistant potato varieties (Nos. 108120-108215), presented by the Union of Soviet Socialist Republics.

The botanical determinations of seeds introduced have been made and the nomenclature determined by Paul Russell, who has had general supervision of this inventory.

B. Y. MORRISON,
Principal Horticulturist, in Charge.

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D. C., October 24, 1938.

INVENTORY¹

107748 and 107749. ALLIUM SATIVUM L.
Liliaceae. Garlic.

From Germany. Bulbs presented by Rudolf Neumüller. Frankenthal. Received January 10, 1935.

Locally grown varieties introduced for the use of Department specialists.

107748. From Furth.

107749. From Schweinfurt.

107750 to 107754.

From Surinam. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received December 1, 1934.

107750. CALOPOGONIUM MUCUNOIDES Desv.
Fabaceae.

No. 2651. From near Scotelweg, November 2, 1934. A stout twining vine with rhombic-ovate leaflets and long-stalked racemes of pale-blue flowers. It forms a mat of foliage 1 to 2 feet thick and is used as a cover crop. Native to tropical America.

For previous introduction see 106638.

107751 to 107753. PHASEOLUS spp. Fabaceae.

107751. PHASEOLUS CAMPESTRIS Mart.

No. 2690. About 8 miles northwest of Paramaribo along the highway, November 6, 1934. A herbaceous climber with hairy trifoliolate leaves, the leaflets rhombic-ovate, and small flowers, which vary in color from red to yellow shading to green. Native to tropical South America.

107752. PHASEOLUS PANDURATUS Mart.

No. 2661. Near Scotelweg, November 2, 1934. A tropical vine with small, ovate-rounded, pubescent leaflets less than 1 inch long and white, purple-tinged flowers. Native to tropical South America.

107750 to 107754—Continued.

107753. PHASEOLUS sp.

No. 2703. About 8 miles northwest of Paramaribo along the highway, November 6, 1934.

107754. SESBANIA GRANDIFLORA Poir. Fabaceae.

No. 2693. About 8 miles northwest of Paramaribo along the highway, November 6, 1934. A small, rapid-growing, soft-wooded tree, 15 to 20 feet high, with pinnate leaves and large pendulous white flowers, followed by sickle-shaped pods. The leaves and young shoots are sometimes used as fodder.

For previous introduction see 69143.

107755. LESPEDEZA UEKII Nakai. Fabaceae.

From Japan. Seeds presented by Dr. T. Kaburaki, Director, Forest Experiment Station, Government General of Chosen, Keijo, Chosen. Received January 2, 1935.

Introduced for Department specialists.

A shrub with a creeping rhizome, broadly oblong, acute leaflets over an inch long, and reddish flowers in axillary racemes. Collected in Chinkai, Shogen-Gun, and Keisho-Nan-Do, Chosen, where it is native.

107756. GOSSYPIUM TRANSVAALENSE
Watt. Malvaceae.

From the Union of South Africa. Seeds presented by Dr. R. A. Dyer, Department of Agriculture, Pretoria. Received January 11, 1935.

A small bush with three- to five-lobed, reniform, velvety leaves 1 inch long and over an inch wide. The seeds are clothed with harsh, gray-white, greasy floss. Native to the Transvaal.

¹ It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Plant Exploration and 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 seed samples or 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

107757. NANNORRHOPS RITCHIEANA
(Griffith) Wendl. Phoenicaceae.

Mazri palm.

From India. Seeds presented by R. R. Stewart, Gordon College, American United Presbyterian Mission, Rawalpindi. Received January 4, 1935.

A small rare cluster palm, native to the mountains of Afghanistan and western India. The rigid, fan-shaped leaves are very glaucous both above and below and are about 3 feet long. In its native habitat this palm is often covered with snow in winter.

For previous introduction see 99604.

107758. RUBUS HAWAIIENSIS A. Gray.
Rosaceae. Akala.

From Hawaii. Seeds presented by W. T. Pope, senior horticulturist, Agricultural Experiment Station, Honolulu. Received January 11, 1935.

A wild raspberry native to Hawaii between 3,500 and 5,000 feet altitude, which grows over 15 feet high. The large fruits, $1\frac{1}{2}$ inches long and about 1 inch in diameter, have a rather sharp but pleasant acid flavor.

For previous introduction see 101344.

107759. POLYTRIAS AMAURA (Buchse)
Kuntze. Poaceae. Java grass.

From Puerto Rico. Seeds presented by Atherton Lee, Agricultural Experiment Station, Mayaguez. Received January 5, 1935.

A common lawn and pasture grass, native to low altitudes in Java.

For previous introduction see 77489.

107760 to 107769.

From Surinam. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received January 9, 1935.

107760. CASSIA UNDULATA Benth. **Caesalpinaceae.**

No. 2707. Near Scotelweg, November 12, 1934. A shrub 10 to 12 feet high, with falcate-oblong leaflets 2 to 3 inches long and golden-yellow flowers in short dense panicles. Native to British Guiana.

107761. CESTRUM LATIFOLIUM TENUIFLORUM
(H. B. K.) O. E. Schulz. **Solanaceae.**

No. 2705. Near Scotelweg, November 12, 1934. A low bush with ovate acuminate leaves less than 4 inches long and axillary spikes of white flowers. Native to Venezuela.

107762. CLEOME ACULEATA L. **Capparidaceae.**

No. 2700. About 8 miles northeast of Paramaribo, along the highway, November 6, 1934. A tall annual up to 3 feet high, with digitately three-foliolate leaves and small solitary white flowers. Native to tropical America.

107763 to 107765. CLIBADIUM SURINAMENSE
L. **Asteraceae.**

Kunami-ran. Near Scotelweg, November 12, 1934. A large bushy perennial up to 10 feet high, with broadly ovate leaves and small white flower heads in dense clusters.

For previous introduction see 106539.

107763. No. 2716. A form with small leaves.

107760 to 107769—Continued.

107764. No. 2717. A form with large leaves.

107765. No. 2725. Typical form.

107766. EUPHORBIA BRASILIENSIS Lam. **Euphorbiaceae.**

No. 2719. Near Scotelweg, November 12, 1934. A herbaceous perennial, native to Brazil, with reddish stems 8 to 10 inches high, elliptic-oblong leaves, and small brownish and white flowers.

107767. POTHOMORPHE PELTATA (L.) Miq.
Piperaceae.

No. 2727. Near Scotelweg, November 12, 1934. An erect shrub with rounded-cordate, peltate leaves; closely allied to Piper. Native to western India.

107768. SOLANUM MELONGENA L. **Solanaceae. Eggplant.**

No. 2699. About 8 miles northwest of Paramaribo along the highway. A cultivated eggplant with small greenish-white fruits, $2\frac{1}{2}$ by 2 inches, shaped like a tomato.

107769. VISMIA CAYENNENSIS (Jacq.) Pers.
Hypericaceae.

No. 2706. About 8 miles northeast of Paramaribo on the highway, November 6, 1934. A shrub or small tree with small yellow flowers, whitish fuzzy on the inside and waxen on the outside.

107770 to 107778.

From China. Scions collected in Shantung Province by Peter Liu. Received January 4, 1935.

107770 to 107774. CASTANEA spp. **Fagaceae. Chestnut.**

107770. No. 1. Chia Lee (home chestnut). From the foothills of Sun Chia Tzu J'ang, near Nanking. The most common variety of this region; ripens about the middle of September.

107771. No. 2. Yu Lee. From the foothills of Sun Chia Tzu J'ang, near Nanking. Larger than the Chia Lee [107770], with a bright shining skin.

107772. No. 3. Kuei Hua Lee Tzu (cassia flower chestnut). Collected between Nanking and Shanghai in the foothills of Heui Shan, near Wush. One of the best in this region; ripens early in September.

107773. No. 4. Ta Ming Lee Tzu (large bright chestnut). From the village of Ta Ching Kou, northeast of Taian. The most common variety in Shantung and the best of all; ripens about the third week in September.

107774. No. 5. Hsiao Ming Lee Tzu (small bright chestnut). Smaller than *Ta Ming Lee Tzu* [107773]; ripens at the same time.

107775 to 107778. DIOSPYROS KAKI L. f.
Diospyraceae. Kaki.

107775. No. 6. Ho Shih (box persimmon) from near Ta Ching Kou, Shantung. Fruit 3 inches wide and over 2 inches high.

107776. No. 7. Tung Shih (freezing persimmon) from Ta Ching Kou, northeast of Taian, Shantung. Fruit $2\frac{1}{2}$ to 3 inches high and 2 inches wide; not good to eat until it has thawed after being frozen.

107770 to 107778—Continued.

107777. No. 8. *Shui Shih* (water persimmon) from Ta Ching Kou, north-east of Taian, Shantung. Fruit large, 2½ to 3 inches high and 2 inches wide; very sweet and moist and used for drying.

107778. No. 9. *Ssu Hung Shih* (four square red persimmon) from Ta Ching Kou near Taian, Shantung. Fruit small, red, 1 to 2 inches wide, shaped like a box.

107779 to 107782.

From Egypt. Seeds presented by Alfred Bircher, Middle Egypt Botanic Station, El Saff. Received January 7, 1935.

A collection of native vegetable varieties introduced for Department specialists.

107779. *ALLIUM CEPA* L. Liliaceae. Onion.

107780. *ALLIUM SATIVUM* L. Liliaceae. Garlic.

107781. *APIUM GRAVEOLENS* L. Apiaceae. Celery.

107782. *DAUCUS CAROTA* L. Apiaceae. Carrot.

107783. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.

From Yugoslavia. Scions presented by Ivo Volarie, State Agronomist, Samobov, Croatia. Received January 11, 1935.

Scions of a seedling peach from the Croatian shore of Lake Veglia.

107784 to 107786.

From India. Seeds presented by M. P. Sharma, Harrai, Sihora, Narsinghpur, Central Provinces. Received January 9, 1935.

A collection of native vegetable varieties introduced for Department specialists.

107784. *ALLIUM CEPA* L. Liliaceae. Onion.

107785. *ALLIUM SATIVUM* L. Liliaceae. Garlic.

107786. *DAUCUS CAROTA* L. Apiaceae. Carrot.

107787 to 107807.

From Surinam. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received December 17, 1934.

Nos. 107787 to 107806 were collected at Sandrij No. 1 in November 1934.

107787. *ANTONIA OVATA* Pohl. Loganiaceae.

No. 2795. *Paloelipio*. A tropical shrub or sometimes a tall timber tree found in the jungle, with thick, leathery, oval-elliptic, dark-green leaves and small white flowers in large terminal cymes. It is native to Brazil.

For previous introduction see 106510.

107788. *BANISTERIOPSIS* sp. Malpighiaceae. No. 2761.

107789. *STIGMAPHYLLON FULGENS* (Lam.) A. Juss. Malpighiaceae.

No. 2798. Found at the edge of a savanna.

For previous introduction see 107736.

107787 to 107807—Continued.

107790 to 107792. *CENTROSEMA* spp. Fabaceae.

107790. *CENTROSEMA PUBESCENS* Benth. No. 2757. A leguminous vine, native to tropical America, with trifoliolate leaves and small yellowish flowers. Cultivated as a cover crop.

For previous introduction see 106916.

107791 and 107792. *CENTROSEMA BRASILIANA* (L.) Benth.

A slender leguminous vine 10 to 15 feet long. Native to the Provinces of Para and Bahia, Brazil.

For previous introduction see 33929.

107791. No. 2800. A form with lavender and white flowers.

107792. No. 2774. A form with flowers varying from blue to light blue.

107793. *BYRSONIMA CRASSIFOLIA* (L.) H. B. K. Malpighiaceae.

No. 2732. A loose semiprostrate shrub 2 feet high with yellow flowers. Found on the open savanna in pure-white sand.

For previous introduction see 52530.

107794. *CALOPOGONIUM MUCUNOIDES* Desv. Fabaceae.

No. 2787. A cultivated cover crop with pale-blue flowers. Found on the open savanna in pure-white sand.

For previous introduction and description see 107750.

107795. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. Watermelon.

No. 2802. Seed purchased originally from a Javanese, but now growing at the experiment station on the open savanna in pure-white sand. The melon is of a good color and the flesh is sweet.

107796 to 107798. *CLIBADIUM* spp. Astera-ceae.

From the open savanna in pure-white sand.

107796 and 107797. *CLIBADIUM SURINAMENSE* L.

For previous introduction and description see 107765.

107796. No. 2771. 107797. No. 2756.

107798. *CLIBADIUM SYLVESTRE* (Aubl.) Bail.

No. 2767. An herb 5 feet tall with dark-red stems.

107799. *TEPHROSIA TOXICARIA* (Sw.) Pers. (*Cracca toxicaria* (Pers.) Kuntze). Fabaceae.

No. 2768. A scanty shrub 2 to 3 feet high, with leaves made up of nine or more leaflets and racemes of greenish-white flowers with a purple spot at the base of the wings. It is used as a cover crop.

For previous introduction see 107462.

107800. *CROTALARIA VITELLINA* Ker. Fabaceae.

No. 2758. A slender shrub 8 to 10 feet high, found at the edge of the clearing, growing in pure-white sand.

107787 to 107807—Continued.

107801. *CUPANIA DIPHYLLO* Vahl. Sapindaceae.

No. 2741. A tree 30 feet high, found in the jungle.

107802. *GOSSYPIUM* sp. Malvaceae. Cotton.

No. 2769. A hybrid cotton 6 to 10 feet high with yellow flowers, found on the open savanna in pure-white sand.

107803. *INDIGOFERA HIRSUTA* L. Fabaceae. Indigo.

No. 2744. An annual 3 feet high with crimson flowers. Used as a cultivated cover crop at the Sandrij Experiment Station.

For previous introduction see 106928.

107804. *PASSIFLORA AURICULATA* H. B. K. Passifloraceae.

No. 2785. A shrubby climber found in the jungle, with ovate, obtuse, entire, shining leaves and whitish flowers. Native to northern South America.

107805. *PHASEOLUS PEDUNCULARIS* H. B. K. Fabaceae.

No. 2773. A tropical annual vine with narrowly ovate, acuminate leaflets and axillary racemes of small pinkish flowers. Native to Colombia.

107806. *PLUMERIA* sp. Apocynaceae.

No. 2793. A tree 20 feet high with reddish wood, milky latex, and cream-colored flowers. Found in white sand.

107807. *ZEA MAYS* L. Poaceae. Corn.

No. 2777. From a cooperative field of Carib Indians.

107808 to 107811.

From China. Seeds presented by Dr. Wang Tai Yih, the Sun Yat-Sen Tomb and Memorial Park Commission, Nanking. Received January 10, 1935.

A collection of native vegetables introduced for Department specialists.

107808. *ALLIUM CEPA* L. Liliaceae. Onion. White globe.

107809. *ALLIUM CEPA* L. Liliaceae. Onion. Yellow globe.

107810. *DAUCUS CAROTA* L. Apiaceae. Carrot.

107811. *DAUCUS CAROTA* L. Apiaceae. Carrot. Scarlet tong.

107812 to 107814.

From Siam. Bulbs presented by Dr. H. M. Smith, Department of Fisheries, Bangkok. Received January 5, 1935.

Locally grown bulbs.

107812. *CRINUM* sp. Amaryllidaceae.

107813. *HIPPEASTRUM EQUESTRE* (L. f.) Herb. Amaryllidaceae.

107814. (Undetermined.)

107815. *LICANIA* sp. Rosaceae.

From Guatemala, Central America. Seeds presented by Sr. Julio E. Castaneda de Ranero, Puebla Nuevo, through J. L.

107815—Continued.

Colom, Pan American Union, Washington, D. C. Received January 9, 1935.

The *Licanias* are tropical American shrubs or trees, some of which bear edible fruits.

107816 to 107818.

From Ecuador. Seeds and bulbs collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received January 18, 1935.

107816. *MAXIMILIANA* sp. Phoenicaceae. Palma real.

No. 6736-A. Canton Pujili, Province of Leon, November 24, 1934. A tree over 90 feet high, found in dense virgin forest. The orange fruits fall as they ripen.

107817. *EUCHARIS GRANDIFLORA* Planch. and Linden. Amaryllidaceae.

No. 6644. Bulbs of a Colombian *eucharis*, with two to four ovate-acuminate leaves about 4 inches long and three to five white flowers on a scape over a foot high. It resembles *Eucharis candida*, but the flowers are about twice as large.

107818. (Undetermined.)

Bulbs and seeds.

107819. *ERYTHRINA HERBACEA* L. Fabaceae. Coraltree.

From Texas. Seeds presented by W. L. Gillespy, Taylor. Received January 19, 1935.

A shrubby perennial with a very thick root and stems 2 to 4 feet high. The three leaflets are ovate to hastate, and the deep-scarlet flowers, 2 inches long, are in long loose racemes. Native to the West Indies and the Gulf States.

107820 to 107837.

From Ecuador. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received January 7, 1935.

107820. *ROLLINIA* sp. Annonaceae.

No. 6736. Guayas Province. Tropical American shrubs or trees, closely related to *Annona*.

107821. *BANISTERIOPSIS QUITENSIS* Morton. Malpighiaceae.

No. 6636. Los Rios Province. A woody climber with ovate-lanceolate leaves 2 to 4 inches long and small yellow flowers in terminal clusters. Native to Ecuador.

107822. *BROWALLIA AMERICANA* L. Solanaceae.

No. 6565. Los Rios Province. A slender annual about 2 feet high, with smooth ovate leaves up to 2 inches long and solitary flowers less than an inch long. Native to tropical America.

107823. *CLIBADIUM SURINAMENSE* L. Asteraceae.

No. 6595. Los Rios Province. A shrub up to 8 feet high, with broadly ovate leaves and small white flowers in dense clusters.

For previous introduction see 106539.

107824. *CLIBADIUM SYLVESTRIS* (Aubl.) Baill. Asteraceae.

No. 6678. Los Rios Province.

For previous introduction and description see 107798.

107820 to 107837—Continued.

107825. *TEPHROSIA TOXICARIA* (Sw.) Pers. Fabaceae.

No. 6563. Los Rios Province.

For previous introduction and description see 107799.

107826. *DATURA CANDIDA* (Pers.) Safford. Solanaceae.

No. 6601-A. Canton Vinces, Los Rios Province, along the trail from Santa Lucia to Moraché. A shrub up to 15 feet high, with broadly ovate to oblong-ovate leaves about 20 inches long and large white flowers. Known only in cultivation; this is the large white flower *floripondio* of tropical America.

107827. *ERYTHRINA* sp. Fabaceae.

No. 6686-A. An ornamental from Los Rios Province.

107828. *ERYTHRINA* sp. Fabaceae.

No. 6586-A. November 17, 1934. Canton Vinces, Los Rios Province, along the trail from Heda to Santa Lucia at 180 feet altitude. A small tree, commonly found in the open woods, with red flowers which appear before the leaves.

107829. *GLIRICIDIA* sp. Fabaceae.

No. 6590-A. October 28, 1934. Quevedo, Canton Vinces, Los Rios Province. Presented by Gustavo Buchwald.

107830. *HIBISCUS* sp. Malvaceae.

No. 6656-A. November 1934. Quevedo, Canton Vinces, Los Rios Province. Presented by Dr. Frederico von Buchwald, who exports the seed to Germany where it is used as the base for perfumery and as a remedy for whooping cough.

107831. *PISCIDIA CARTHAGINENSIS* Jacq. Fabaceae.

No. 6760. Guayas Province. A low tree with unevenly pinnate leaves and lateral panicles of pink to purplish flowers, followed by winged fruits. Native to northern South America.

107832. *JACQUINIA SPRUCEI* Mez. Theophrastaceae.

No. 6766. Guayas Province. A tropical shrub with leathery elliptic, mucronate leaves nearly 2 inches long and terminal racemes of small yellowish flowers. Native to Ecuador.

107833. *PHYLLANTHUS BRASILIENSIS* (Aubl.) Muell. Arg. Euphorbiaceae.

No. 6689. Los Rios Province. A shrub 5 to 8 feet high, with alternate, roundish, pale-green leaves and inconspicuous flowers. Native to tropical Brazil.

107834. *SAPINDUS* sp. Sapindaceae.

No. 6553. Los Rios Province.

107835. *SOLANUM CONFERTISERIATUM* Bitter. Solanaceae.

No. 6568. Los Rios Province. A shrub or small tree 10 to 15 feet high, with broadly elliptic or obovate, grayish-green leaves about 7 inches long and white flowers one-half inch across. Native to Ecuador.

107836. *TECOMA GAUDICHAUDII* DC. Bignoniaceae.

No. 6742. Guayas Province. An arborescent shrub with opposite or alternate,

107820 to 107837—Continued.

elliptic-oblong, simple, coarsely serrate leaves and large yellow flowers in terminal panicles. Native to Colombia.

107837. *SWARTZIA* sp. Caesalpiniaceae.

No. 6570-A. *Arbol de Murcielago*. An ornamental leguminous tree with yellow flowers, from Los Rios Province.

107838. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.

From China. Seeds presented by Peter Liu, Peiping. Received January 17, 1935.

Mao Tao (hairy peach). Collected in the vicinity of Feicheng by Wen Ying Tang.

107839. *DIOSPYROS KAKI* L. f. Diospyraceae. Kaki.

From Virginia. Scions collected by K. A. Ryerson and W. E. Whitehouse, Bureau of Plant Industry, at the home of a Mr. Conklin, Smithfield. Received January 16, 1935.

107840. *SACCHARUM OFFICINARUM* L. Poaceae. Sugar cane.

From Spain. Cuttings presented by Arsenio Rueda y Maria, Granada, at the request of Julius Matz, through Señor Miguel de Echegaray, agricultural attaché of the Spanish Embassy, Washington, D. C. Received January 22, 1935.

Algarobena. The oldest variety grown in Spain.

Introduced for Department specialists.

107841. *CASSIA VIMINEA* L. Caesalpiniaceae.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received January 16, 1935.

A trailing shrub, native to Jamaica, with compound leaves composed of two pairs of obliquely ovate leaflets and showy yellow flowers in terminal panicles.

107842. *PASSIFLORA* sp. Passifloraceae.

From Colombia. Seeds presented by Carlos Palacio, Pasto (Nariño). Received January 24, 1935.

Quijo. A vine bearing an orange-yellow, plum-shaped fruit the size of a small orange, with numerous seeds embedded in very sweet pulp of delicate flavor. It grows at 5,000 feet above sea level and begins bearing 2 years after planting. The fruit ships well and keeps in good condition for some time if stored in a cool place.

107843. *TEPHROSIA VOGELII* Hook. f. Fabaceae.

From Africa. Seeds presented by Miss Margaret Haines, Bangassou, French Equatorial Africa. Received January 24, 1935.

Introduced for Department specialists.

A shrubby legume native to tropical Africa.

For previous introduction see 98926.

107844 to 107849.

From Ecuador. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received January 10, 1935.

107844 to 107849—Continued.

107844. *ACACIA PELLACANTHA* Vogel. Mimosaaceae.

No. 6763. Province of Guayas, October 1934. A spiny tree tomentose throughout, with bipinnate leaves and small flowers in dense axillary heads. Native to Peru at altitudes of 2,000 to 3,000 feet.

107845. *CERBERA THEVETIA* L. Apocynaceae. Yellow oleander.

No. 6748. Province of Guayas, December 10, 1934. An ornamental, willow-leaved, yellow-flowered tree or shrub 10 to 15 feet high. Native to tropical America.

For previous introduction see 106951.

107846. *DIOSPYROS PSIDIOIDES* H. B. K. Diospyraceae.

No. 6749. Province of Guayas, December 10, 1934. A low tree with alternate obovate-oblong entire leathery leaves 4 inches long and solitary small yellow edible fruits 1 inch in diameter. Native to Peru.

Nos. 107847 to 107849 were collected in the Province of Los Rios, October 1934.

Nos. 107847 to 107849 were collected in

No. 6660. A vine with large pods.

107848. *OCHROMA GRANDIFLORA* Rowlee. Bombacaceae.

No. 6637. A tall tree with mottled gray bark, entire orbicular leaves 8 inches wide, and large showy flowers 6 inches long. This tree is a source of kapok. Native to Ecuador.

107849. *SMILAX OFFICINALIS* H. B. K. Smilacaceae. Sarsaparilla.

No. 6638. A climbing shrub with square stems armed along the angles with small prickles. The glabrous leaves, often a foot long, are variable in form, often triangular or oblong-acute, cordate or somewhat auriculate at the base. The greenish-yellow flowers are in stalked umbels, and the cinnamon-brown roots are one of the principal sources of sarsaparilla.

For previous introduction see 45731.

107850. *SERJANIA* sp. Sapindaceae.

From Texas. Seeds presented by Peter Heinz, Brownsville. Received January 2, 1935.

A woody vine from the eastern, rainy side of the mountains below Taxco, Mexico. The vine is a vigorous grower; it climbs to the tops of trees and bears conspicuous reddish winged fruits.

107851 and 107852.

From the Union of South Africa. Bulbs purchased from E. G. Bryant, Prieska. Received January 5, 1935.

107851. *AMMOCHARIS FALCATA* Herb. Amaryllidaceae.

A tender bulbous plant from the Cape of Good Hope, with strap-shaped leaves up to 2 feet long and an umbel of 20 to 40 fragrant red flowers.

107852. *NERINE DUPARQUETIANA* (Baill.) Baker. Amaryllidaceae.

A nerine with strap-shaped leaves 8 to 12 inches long, contemporary with the flowers; the latter are funnel-shaped, white

107851 and 107852—Continued.

with a carmine keel, in umbels of 20. Native to the Kalahari region, South Africa.

107853 to 107864.

From the Union of Soviet Socialist Republics. Bulbs presented by the Botanical Institute, Turcomania, Ashkhabad, through H. L. Westover, Bureau of Plant Industry. Received January 3, 1935.

107853. *ALLIUM GIGANTEUM* Regel. Liliaceae.

One of the largest members of the genus, with large bulbs and broad fleshy leaves about 18 inches long. The bright-lilac flower heads, 4 inches across, are on stalks about 4 feet high.

For previous introduction see 106640.

107854. *IXIOLIRION TATARICUM* (Pall.) Herbert. Amaryllidaceae.

A bulbous herbaceous perennial, native from the Caucasus through central Asia, with awl-shaped leaves and terminal umbels of deep-blue or violet six-lobed flowers, which are borne in the spring.

For previous introduction see 107552.

107855 and 107856. *MUSCARI RACEMOSUM* (L.) Mill. Liliaceae.

A grape-hyacinth with five to six thick, almost cylindrical leaves about 5 inches long and dark-blue, fragrant flowers. Native to the Caucasus.

107857 to 107864. *TULIPA* spp. Liliaceae. Tulip.

107857. *TULIPA KUSCHKENSIS* B. Fedtsch.

A tulip about a foot high which has four to six undulate, sickle-shaped leaves with narrow white margins. The yellow flower, black at the base of the perianth segments, is about 2 inches long. Native to Turkistan.

For previous introduction see 107427.

107858. *TULIPA MICHELIANA* Hoog.

A tulip native to the Caspian region, with a pubescent scape 12 inches high. The lanceolate to linear-lanceolate leaves, usually four, are striped with brown and have undulate margins. The large single flowers are lilac scarlet and vermilion scarlet inside with black lanceolate blotches on the back.

For previous introduction see 106913.

107859. *TULIPA WILSONIANA* Hoog.

A dwarf tulip with narrow, purple-edged leaves and a deep-red flower on a stem 4 inches high. Native to Turkistan.

For previous introduction see 107428.

107860 to 107864.

The following numbers were received without labels.

107860. *TULIPA* sp.

107861. *TULIPA* sp.

107862. *TULIPA* sp.

107863. *TULIPA* sp.

107864. *TULIPA* sp.

107865 to 108014.

From the Union of Soviet Socialist Republics. Seeds collected in Turkistan by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received November 2, 1934. Numbered in January 1935.

107865. *ACONITUM EXCELSUM* Reichb. Ranunculaceae.

No. 573. Alma Ata, foothills, July 23, 1934. A tall stout perennial with broadly palmate leaves and purple-lilac flowers nearly 1 inch long in an elongated raceme. Native to Siberia.

107866. *AEGILOPS SQUARROSA* L. Poaceae.

No. 656. Northeast of Alma Ata, July 25, 1934.

107867 to 107874. *AGROPYRON* spp. Poaceae. Wheatgrass.

107867. *AGROPYRON* sp.

No. 689. From the mountains surrounding Lake Issyk, July 26, 1934. Received under the name "brevisubulatum," for which a place of publication has not been found.

107868 and 107869. *AGROPYRON CANINUM* (L.) Beauv.

107868. No. 575. Mountains south of Alma Ata, July 23, 1934.

107869. No. 628. Mountains east of Alma Ata, July 24, 1934.

107870. *AGROPYRON CRISTATUM* (L.) Gaertn. Crested wheatgrass.

No. 557. On the steppe 40 miles west of Alma Ata.

107871. *AGROPYRON* sp.

No. 690. Near Lake Issyk, east of Alma Ata, July 25, 1934.

107872. *AGROPYRON SEMICOSTATUM* Nees.

No. 637. Lake Issyk Canyon in rocky soil, July 25, 1934.

107873. *AGROPYRON* sp.

No. 554. Alkali steppe 95 miles west of Alma Ata, July 29, 1934.

107874. *AGROPYRON* sp.

No. 560. Alkali steppe 95 miles west of Alma Ata, July 29, 1934.

107875 to 107877. *ALLIUM* spp. Liliaceae.

107875. *ALLIUM* sp.

No. 656. Alkali soil 100 miles west of Alma Ata, July 29, 1934. En route to Frunze.

107876. *ALLIUM* sp.

No. 595. Lake Issyk, east of Alma Ata, July 26, 1934.

107877. *ALLIUM* sp.

No. 688. Foothills southeast of Alma Ata, July 24, 1934.

107878. *ALTHAEA* sp. Malvaceae.

No. 648. From the roadside east of Alma Ata, July 24, 1934.

107879. *ALTHAEA NUDIFLORA* Lindl. Malvaceae.

No. 678. Alma Ata, July 26, 1934. A biennial 6 feet high, with large roundish cordate, three-lobed, rough-hairy leaves and white flowers. Native to central Asia.

For previous introduction see 105472.

107865 to 108014—Continued.

107880 and 107881. *ANDROPOGON ISCHAEMUM* L. Poaceae. Grass.

From the steppe northeast of Alma Ata, July 25, 1934. A leafy wild grass, 3 to 4 feet high, producing a large quantity of coarse feed.

For previous introduction see 81810.

107880. No. 621. 107881. No. 630.

107882. *ANDROSACE* sp. Primulaceae.

No. 598. Near Lake Issyk, east of Alma Ata, July 26, 1934.

107883. *ANDROSACE* sp. Primulaceae.

No. 603. Near Lake Issyk, east of Alma Ata, July 26, 1934.

107884. *ANEMONE NARCISSIFOLIA* L. Ranunculaceae.

No. 599. Near Lake Issyk, east of Alma Ata, July 26, 1934. A stout herbaceous perennial with stalked three- to five-parted, deeply cut basal leaves, sessile involucre leaves, and white flowers 1 inch across, with yellow anthers, in a small umbel. Native to Europe and Asia.

For previous introduction see 103175.

107885. *ANEMONE* sp. Ranunculaceae.

No. 605. Mountains of Lake Issyk, east of Alma Ata, July 26, 1934. A beautiful flowering plant.

107886 and 107887. *ANTHOXANTHUM ODORATUM* L. Poaceae. Sweet vernal grass.

107886. No. 601. Lake Issyk, east of Alma Ata, July 26, 1934.

107887. No. 661. Foothills southeast of Alma Ata, July 26, 1934.

107888 to 107890. *AQUILEGIA* spp. Ranunculaceae.

107888 and 107889. *AQUILEGIA KARELINI* Baker.

A perennial up to 2 feet high, with membranous, deeply lobed leaves and bright-blue or claret-purple flowers. Native to the Ala Tau Mountains.

107888. No. 643. Mountains south of Alma Ata, July 23, 1934.

107889. No. 681. Foothills southeast of Alma Ata, July 24, 1934.

107890. *AQUILEGIA* sp.

No. 600. Lake Issyk, east of Alma Ata, July 26, 1934.

107891. *ASTER ALPINUS* L. Asteraceae.

No. 597. Lake Issyk, east of Alma Ata, July 26, 1934. A perennial alpine, native to central Europe, with lanceolate, obtuse, hairy leaves and large sky-blue flowers.

107892. *ASTRAGALUS* sp.

No. 536. From a rocky slope of the Little Chimgan, July 15, 1934.

107893 to 107895. *AVENA* spp. Poaceae. Oats.

107893. *AVENA FATUA* L.

No. 617. Alma Ata Experiment Station, July 22, 1934.

107894 and 107895. *AVENA PUBESCENS* Huds.

From the mountains east of Alma Ata, July 24, 1934.

107865 to 108014—Continued.

107894. No. 655. 107895. No. 672.

107896. BERBERIS HETEROPODA Schrenk.
Berberidaceae. Turkistan barberry.

No. 674. Mountains south of Alma Ata, July 23, 1934. A handsome spreading shrub up to 6 feet high, with spines, when present, often 2 inches long; and broadly oval, pale blue-green, entire leaves an inch or two in length. The fragrant orange flowers are in five- to seven-flowered racemes, and the dark-blue berries are covered with a glaucous bloom. Native to Turkistan.

For previous introduction see 65238.

107897. BRACHYPODIUM PINNAEFUM (L.)
Beauv. Poaceae.

No. 627. From the foothills near Alma Ata, July 23, 1934. A perennial grass used for grazing.

For previous introduction see 106020.

107898 to 107901. BROMUS spp. Poaceae.
Brome grass.

107898. BROMUS INERMIS Leyss.

No. 618. From the steppe northeast of Alma Ata, July 25, 1934. Variety *sibiricus*.

107899. BROMUS sp.

No. 642. From the foothills near Alma Ata, July 23, 1934.

107900. BROMUS sp.

No. 562. From the alkali steppe 95 miles west of Alma Ata, July 29, 1934.

107901. BROMUS ARVENSIS L.

No. 610. From the mountains south of Alma Ata, July 23, 1934.

107902. CICER sp. Fabaceae.

No. 543. From the mountains near Alma Ata, July 27, 1934. Received under the name "Zangonicum," for which a place of publication has not been found.

107903 to 107905. CODONOPSIS OVATA Benth.
Campanulaceae.

A decumbent perennial up to 12 inches high, with small, ovate, acute or obtuse, hairy leaves less than an inch long. The bell-shaped flowers, about an inch long, white or pale blue speckled inside, are on long terminal peduncles. Native to the Himalayas.

107903. No. 548. Mountains above Lake
Issyk, near Alma Ata, July 26, 1934.107904. No. 647. Mountains near Alma
Ata, July 23, 1934. A form with
beautiful white bell-shaped flowers.107905. No. 659. Mountains east of
Alma Ata, July 24, 1934. A form
with blue-tinged white flowers.107906. CYNODON DACTYLON (L.) Pers.
Poaceae. Bermuda grass.

No. 556. Collected en route from Alma Ata to Frunze, July 29, 1934.

107907. DACTYLIS GLOMERATA L. Poaceae.
Orchard grass.

No. 654. From foothills en route from Alma Ata to Frunze, July 29, 1934.

107865 to 108014—Continued.

107908. DELPHINIUM sp. Ranunculaceae.
Larkspur.

No. 633. From the mountains south of Alma Ata, July 23, 1934. A form with blue flowers.

107909. DELPHINIUM sp. Ranunculaceae.
Larkspur.

No. 653. En route to Alma Ata, July 21, 1934. A form with yellow flowers.

107910 to 107912. ELYMUS spp. Poaceae.
Wild-rye.

107910 and 107911. ELYMUS SIBIRICUS L.

A tall grass with heavy overhanging heads; a promising grass for forage.

For previous introduction see 90139.

107910. No. 616. From the rocky
shore of Issyk Lake Canyon at 4,500
feet altitude, July 25, 1934.107911. No. 665. Issyk, east of Alma
Ata, July 25, 1934.107912. ELYMUS GIGANTEUS Vahl.
Siberian wild-rye.

No. 561. From the steppe 115 miles west of Alma Ata in alkali soil, July 29, 1934.

107913. EREMURUS ALTAIACUS (Pall.) Stev.
Liliaceae.

No. 682. Alma Ata, July 23, 1934. An ornamental desert plant with long linear leaves forming a rosette from which rises a columnar spike of star-shaped rosy-purple flowers.

107914. EREMURUS sp. Liliaceae.

No. 622. From foothills southeast of Alma Ata, July 24, 1934.

107915. ERYSIMUM sp. Brassicaceae.

No. 676. Near Lake Issyk, July 26, 1934. A plant with bright-orange flowers.

107916 to 107927. FESTUCA spp. Poaceae.
Fescue.107916. FESTUCA ELATIOR L.
Meadow fescue.

No. 641. Alma Ata Experiment Station, July 22, 1934.

107917. FESTUCA GIGANTEA (L.) Vill.
Great fescue.

No. 685. Foothills southeast of Alma Ata, July 24, 1934. A shady grass up to 3 feet high.

For previous introduction see 99125.

107918. FESTUCA ELATIOR L.
Meadow fescue.

No. 686. Alma Ata Experiment Station, July 22, 1934. A loosely tufted perennial grass with short creeping root-stalks and erect stems up to 4 feet high.

For previous introduction see 107056.

107919. FESTUCA sp.

No. 547. Mountains southeast of Alma Ata, July 24, 1934.

107920. FESTUCA OVINA DURIUSCULA (L.)
Koch.

No. 588. Foothills southeast of Alma Ata, July 24, 1934.

107865 to 108014—Continued.

107921. *FESTUCA OVINA* L.
No. 646. From the steppe northeast of Alma Ata, July 25, 1934.
107922. *FESTUCA RUBRA* L.
No. 619. Mountains east of Alma Ata, July 24, 1934.
107923. *FESTUCA* sp.
No. 582. Mountains southeast of Alma Ata, July 24, 1934.
107924. *FESTUCA ELATIOR* L.
No. 632. Issyk Lake Canyon at 4,500 feet altitude, July 25, 1934. Found among gravel and rocks.
107925. *FESTUCA OVINA* L.
No. 651. From a dry slope of the Little Alma Ata River, July 23, 1934.
107926. *FESTUCA* sp.
No. 559. From the steppe region 35 miles west of Alma Ata, July 29, 1934.
107927. *FESTUCA OVINA* L.
No. 580. Mountains east of Alma Ata, July 24, 1934.
107928. *AVENA* sp. Poaceae.
No. 594. July 26, 1934. Near Lake Issyk, east of Alma Ata, at 7,100 feet altitude.
107929. *FESTUCA* sp. Poaceae.
No. 649. Near Lake Issyk, east of Alma Ata, at 6,000 feet altitude, July 26, 1934.
107930. *FESTUCA ELATIOR* L. Poaceae.
No. 620. En route from Tashkent to Alma Ata, July 21, 1934. A bunch grass.
107931. *GERANIUM* sp. Geraniaceae.
No. 687. From Alma Ata, July 23, 1934.
107932. *HORDEUM BREVISUBULATUM* (Trin.) Link. Poaceae.
No. 698. Found in moist soil along the Karakol River in the mountains near Frunze, August 4, 1934.
107933. *IRIS ALBERTI* Regel. Iridaceae.
No. 606. Mountains south of Alma Ata, July 23, 1934. A bearded iris with glaucous, sword-shaped leaves about as long as the stem and purplish flowers, yellowish toward the base, nearly 2 inches long. Native to Turkistan.
107934. *ISOPYRUM ANEMONOIDES* Kar. and Kir. Ranunculaceae.
No. 593. Rocks of Lake Issyk, east of Alma Ata, July 26, 1934. A subalpine perennial with triternately incised leaves and small panicles of white flowers resembling those of anemone. Native to central Asia.
- 107935 to 107937. *IXIOLIRION* spp. Amarillidaceae.
107935. *IXIOLIRION TATARICUM* (Pall.) Herbert.
No. 623. East of Alma Ata, July 26, 1934.
For previous introduction and description see 107854.
107936. *IXIOLIRION* sp.
No. 609. Alma Ata, July 23, 1934.

107865 to 108014—Continued.

107937. *IXIOLIRION* sp.
No. 693. From Alma Ata, July 23, 1934.
107938. *JUNIPERUS* sp. Pinaceae.
No. 645. Near Lake Issyk at 7,000 feet altitude, July 26, 1934. A semiprostrate species.
107939. *KOELERIA CRISTATA* (L.) Pers. Poaceae. Grass.
No. 587. Mountains south of Alma Ata, July 24, 1934.
For previous introduction see 101660.
- 107940 to 107944. *LATHYRUS* spp. Fabaceae.
107940. *LATHYRUS GMELINI* (Fisch.) Fritsch.
No. 540. Foothills near Alma Ata, July 23, 1934. An excellent fodder plant. In protected situations, as among shrubs, this plant becomes 8 feet high, but it is usually between 3 and 4 feet.
For previous introduction see 32190.
107941. *LATHYRUS TUBEROSUS* L.
No. 612. Foothills near Alma Ata, July 23, 1934. A tuberous rooted lathyrus, native to northern Europe, which resembles the flat pea, *Lathyrus sylvestris*, but has red flowers.
For previous introduction see 91433.
107942. *LATHYRUS* sp.
No. 660. Alma Ata Experiment Station, July 22, 1934.
107943. *LATHYRUS PRATENSIS* L.
No. 635. Mountains south of Alma Ata, July 23, 1934. A form with yellow flowers.
107944. *LATHYRUS* sp.
No. 675. Mountains southeast of Alma Ata, July 24, 1934.
107945. *LIGULARIA MACROPHYLLA* DC. Asteraceae.
No. 625. South of Alma Ata, July 13, 1934. A hardy perennial 4 to 6 feet high, with large elliptic, dentate leaves a foot long and long panicles of yellow flowers. Used as a silage plant. Native to central Asia.
107946. *LONICERA HISPIDA* Pall. Caprifoliaceae. Honeysuckle.
No. 683. Alma Ata, July 23, 1934. A western Chinese shrub 3 to 5 feet high, with oblong leaves, yellowish flowers over an inch long subtended by whitish bracts nearly an inch long, and followed by oblong, bright-red berries.
For previous introduction see 76260.
107947. *MEDICAGO FALCATA* L. Fabaceae. Yellow-flowered alfalfa.
No. 650. East of Alma Ata, July 25, 1934.
107948. *MEDICAGO LUPULINA* L. Fabaceae. Black medick.
No. 664. Near the Little Alma Ata River, July 23, 1934.

107865 to 108014—Continued.

- 107949 to 107951. *MELICA* spp. Poaceae.
Grass.
107949. *MELICA* *ALTISSIMA* L.
No. 572. From foothills south of Alma Ata, July 23, 1934.
For previous introduction see 84455.
107950. *MELICA* *CILIATA* L.
No. 629. From dry slopes of mountains along the Little Alma Ata River, July 23, 1934.
For previous introduction see 84456.
107951. *MELICA* *CUPANI* Guss.
No. 591. From the mountains surrounding Lake Issyk, east of Alma Ata, July 26, 1934. A tall-growing species which seems to thrive in poor dry soil.
For previous introduction see 64954.
107952. *MELILOTUS* *OFFICINALIS* (L.) Lam. Fabaceae. Sweetclover.
No. 626. Alma Ata Experiment Station, July 22, 1934.
- 107953 and 107954. *MILIUM* *EFFUSUM* L. Poaceae. Millet grass.
For previous introduction see 84462.
107953. No. 611. From the mountains along the Little Alma Ata River, July 23, 1934.
107954. No. 673. Near Lake Issyk, east of Alma Ata, July 26, 1934.
107955. *MYRICARIA* *ALOPECUROIDES* Schrenk. Tamaricaceae.
No. 542. Near Lake Issyk, east of Alma Ata, July 26, 1934. A shrub with linear-lanceolate leaves and dense spikes of small pink flowers. Native to central Asia.
107956. *XYTROPIS* *ONYPHYLLA* (Pall.) DC. Fabaceae.
No. 574. From the foothills southeast of Alma Ata, July 24, 1934. Plants 6 to 12 inches high with roots 5 to 6 feet long, which thrive on poor dry soil.
For previous introduction see 107689.
107957. *PAEONIA* sp. Ranunculaceae.
No. 668. From the foothills south of Alma Ata, July 24, 1934. A hybrid of unknown parentage.
- 107958 to 107960. *PAPAVER* spp. Papaveraceae. Poppy.
107958. *PAPAVER* *CROCEUM* Ledeb.
No. 608. Near Lake Issyk, south of Alma Ata, July 26, 1934. A perennial poppy, native to rocky situations in central Asia. The leaves are pinnately divided, and the flowers are orange yellow.
107959. *PAPAVER* sp.
No. 666. Forty miles west of Alma Ata on very dry hills, July 24, 1934.
107960. *PAPAVER* *PAVONINUM* Schrenk.
No. 578. Stalinabad, Tajikistan, July 1, 1934. An annual poppy with hairy pinnately parted, oblong leaves and rather large, deep-pink flowers on long stems. Native to the region around Ala Kul, Siberia.

107865 to 108014—Continued.

107961. *PHALARIS* *ARUNDINACEA* L. Poaceae. Reed canary grass.
No. 570. From the mountains south of Alma Ata, July 23, 1934. A tall rough grass which is a good forage plant.
For previous introduction see 75349.
107962. *PHALARIS* sp. Poaceae. Grass.
No. 613. From the foothills near Alma Ata, July 23, 1934.
- 107963 to 107965. *PHLEUM* spp. Poaceae. Timothy.
107963. *PHLEUM* *ALPINUM* L.
No. 596. Near Lake Issyk, east of Alma Ata, July 26, 1935.
107964. *PHLEUM* *PHLEOIDES* (L.) Karst.
No. 590. From the mountains east of Alma Ata, July 24, 1934.
107965. *PHLEUM* sp.
No. 624. From the dry plains east of Alma Ata, July 25, 1934.
- 107966 to 107980. *POA* spp. Poaceae. Bluegrass.
107966. *POA* *ALPINA* L.
No. 652. From mountains surrounding Lake Issyk, July 26, 1934.
- 107967 and 107968. *POA* *BULBOSA* L.
107967. No. 553. From dry foothills 135 miles west of Alma Ata, July 29, 1934.
107968. No. 663. From the steppe northeast of Alma Ata, July 25, 1934.
- 107969 to 107971. *POA* *PRATENSIS* L. Kentucky bluegrass.
107969. No. 640. From mountains near Alma Ata at 4,000 feet altitude, July 24, 1934.
107970. No. 662. From foothills near Alma Ata, July 23, 1934.
107971. No. 657. Mountains south of Alma Ata, July 23, 1934.
107972. *POA* sp.
No. 604. Near Lake Issyk, east of Alma Ata, July 26, 1934.
107973. *POA* sp.
No. 667. Near Alma Ata, July 1934.
107974. *POA* sp.
No. 636. Mountains east of Alma Ata, July 24, 1934.
107975. *POA* sp.
No. 571. Mountains south of Alma Ata, July 23, 1934.
107976. *POA* sp.
No. 679. From a rocky slope in Lake Issyk Canyon at 4,500 feet altitude, July 25, 1934.
107977. *POA* sp.
No. 614. Lake Issyk region at 4,500 feet altitude, in rocky soil, July 25, 1934.
107978. *POA* *COMPRESSA* L.
No. 602. Lake Issyk, east of Alma Ata, July 26, 1934.

107865 to 108014—Continued.

107979. POA sp.
 No. 592. From the mountains near Lake Issyk, east of Alma Ata, July 26, 1934.
107980. POA sp.
 [No W. and E. number.] This seed was in a package with *Amygdalus* sp., which was collected July 15, 1934, on the Little Chingan, east of Uzbekistan.
107981. POLYGONUM SONGARICUM Schrenk. Polygonaceae.
 No. 639. Mountains of Alma Ata, July 23, 1934. A perennial over a foot high, with a thick rootstock, membranous ovate leaves about 3 inches long, and sessile racemes of purplish flowers. Native to central Asia.
107982. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.
 No. 585. Tolgar, east of Alma Ata, July 26, 1934. Wild apricots.
- 107983 to 107985. PUCCINELLIA spp. Poaceae.
107983. PUCCINELLIA sp.
 No. 552. From the steppe region, 35 miles west of Alma Ata, July 29, 1934.
107984. PUCCINELLIA sp.
 No. 558. West of Alma Ata, 100 miles, in somewhat salty soil, July 29, 1934.
107985. PUCCINELLIA sp.
 No. 550. West of Alma Ata 100 miles, on somewhat salty soil, July 29, 1934.
107986. ROSA sp. Rosaceae. Rose.
 No. 586. Mountains of Lake Issyk, east of Alma Ata, July 26, 1934. A wild rose.
107987. ROSA sp. Rosaceae. Rose.
 No. 658. From near the Little Alma Ata River, July 23, 1934. A wild rose.
107988. RUMEX SONGARICUS Fisch. and Mey. Polygonaceae.
 No. 583. From the mountains near Lake Issyk, east of Alma Ata, July 26, 1934. An annual with oblong-ovate leaves, native to mountainous regions of central Asia.
107989. (Undetermined.)
 No. 563. From rocky mountain slopes, en route from Alma Ata to Frunze, July 29, 1934.
107990. SCABIOSA sp. Dipsacaceae.
 No. 654. East of Alma Ata, July 25, 1934.
107991. SILENE sp. Silenaceae.
 No. 564. En route from Alma Ata to Frunze, July 29, 1934. A rock flower.
- 107992 to 108001. STIPA spp. Poaceae. Feathergrass.
107992. STIPA CAPILLATA L.
 No. 577. From the steppe and foothills northeast of Alma Ata, July 25, 1934.
107993. STIPA CAPILLATA L.
 No. 576. From the foothills south-east of Alma Ata, July 24, 1934.

107865 to 108014—Continued.

107994. STIPA sp.
 No. 697. About 40 miles west of Alma Ata, July 29, 1934. A large bunch grass.
107995. STIPA sp.
 No. 579. From the mountains east of Alma Ata at 7,000 feet altitude, July 24, 1934.
107996. STIPA sp.
 No. 568. Along the railroad, east of Tulkibas, en route from Tashkent to Alma Ata, July 21, 1934.
107997. STIPA sp.
 No. 551. From dry foothills bordering the steppe, 135 miles west of Alma Ata, July 29, 1934.
107998. STIPA sp.
 No. 549. From the steppe, 38 miles west of Alma Ata, July 29, 1934.
107999. STIPA sp.
 No. 545. Along the railroad east of Samarakand, Uzbekistan, July 18, 1934.
108000. STIPA REDOWSKII Trin.
 No. 566. En route from Alma Ata to Frunze, July 29, 1934. A perennial bunch grass 1 to 3 feet high, from dry hills and plains. Native to central Asia.
108001. STIPA sp.
 No. 694. Along the railroad east of Tulkibas, en route from Tashkent to Alma Ata, July 21, 1934.
108002. THALICTRUM MINUS L. Ranunculaceae. Low meadowrue.
 No. 581. From the foothills near Alma Ata, July 23, 1934. A species 1 to 2 feet high, native to Europe, Asia, and northern Africa, with loose panicles of drooping yellow or greenish flowers.
 For previous introduction see 106906.
108003. THALICTRUM sp. Ranunculaceae.
 No. 634. Near Lake Issyk, July 26, 1934. Received under the name "setedum," for which a place of publication and description have not been found.
- 108004 to 108007. TRIFOLIUM spp. Fabaceae. Clover.
108004. TRIFOLIUM REPENS L. White clover.
 No. 631. Along the Little Alma Ata River, July 23, 1934.
108005. TRIFOLIUM PRATENSE L. Red clover.
 No. 569. Foothills near Alma Ata, July 23, 1934.
108006. TRIFOLIUM REPENS L. White clover.
 No. 677. Foothills near Alma Ata, July 23, 1934.
108007. TRIFOLIUM REPENS L. White clover.
 No. 692. Near Lake Issyk, east of Alma Ata, July 26, 1934.
108008. TRisetum sp. Poaceae. Grass.
 No. 639. Above Lake Issyk at 7,000 feet altitude, July 26, 1934.

107865 to 108014—Continued.

108009 to 108014. *VICIA* spp. Fabaceae.
Vetch.

108009. *VICIA SEPIUM* L.

No. 589. *Bush* vetch. From the foothills near Alma Ata, July 23, 1934. A perennial vetch native to Europe and Asia. It is semiupright or bushy in habit and is eaten by stock of all kinds.

For previous introduction see 52278.

108010 and 108011. *VICIA TENUIFOLIA* Roth.

A deep-rooted perennial, cut for hay, which thrives in very dry situations.

For previous introduction see 107129.

108010. No. 615. Foothills near Alma Ata, July 23, 1934.

108011. No. 537. Mountains south of Alma Ata, July 25, 1934.

108012. *VICIA* sp.

No. 538. Mountains south of Alma Ata, July 23, 1934.

108013. *VICIA* sp.

No. 644. Experiment station at Alma Ata, July 22, 1934.

108014. *VICIA* sp.

No. 670. Experiment station at Alma Ata, July 22, 1934.

108015. *LICANIA RIGIDA* Benth. Rosaceae.

From Ceará, Brazil. Seeds presented by H. A. Gardner, Institute of Paint and Varnish Research, Washington, D. C., through the Bureau of Chemistry and Soils. Received March 28, 1935.

A large tropical tree of the Brazilian forests, with rigid leathery oblong leaves, 3 to 5 inches long, and shining green above. The greenish, ovoid-cylindrical fruits, about 2 inches long, yield an oil known as oiticica oil, that is used in the paint and varnish industry.

For previous introduction see 106500.

108016. *AECHMEA MEXICANA* Baker. Bromeliaceae.

From Mexico. Plants purchased from Dr. C. A. Purpus, Zacuanam, Huatusco. Numbered in January 1935.

A tropical epiphyte, allied to the billbergias, with a basal rosette of large, long, fine-toothed leaves and a lax panicle of crimson flowers borne on a long stalk arising from the center of the plant. Native to Mexico.

108017. *CASTANEA* sp. Fagaceae.

From Indo-China. Seeds presented by M. Poilane, Annam, Institut des Recherches Agronomiques de l'Indochine, Division de Botanique. Numbered in January 1935.

108018. *EUPHORBIA* sp. Euphorbiaceae.

From Madagascar. Seeds presented by Miss Bargyla Rateaver, Fort Dauphin. Received March 22, 1935.

Introduced for Department specialists.

108019. *EUPHORBIA* sp.

From Mexico. Seeds presented by the V. D. Anderson Co., Cleveland, Ohio. Received April 9, 1935.

Introduced for Department specialists.

108020. *LIVISTONA ROTUNDFOLIA* (Lam.) Mart. Phoenicaceae. Java fan palm.

From Cuba. Plants presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received October 29, 1934. Numbered in January 1935.

Seedlings from seeds grown in Cuba. An erect fan-leaved palm, with a trunk ultimately about 50 feet high and 18 inches in diameter. The roundish leaves, with 60 to 80 segments, are 3 to 5 feet across.

For previous introduction see 104696.

108021. *SABAL MAURITIAEFORMIS* (Karst.) Griseb. and Wendl. Phoenicaceae.

From Cuba. Seedlings presented by the Department of Agriculture, British Guiana, through Robert M. Grey, Superintendent of the Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received October 9, 1934.

A handsome West Indian fan-leaved palm with a trunk 60 to 80 feet in height and over a foot in diameter and large roundish leaves multifold to the middle, up to 12 feet in diameter. The black fruits are about the size of peas.

For previous introduction see 104703.

108022. *MANGIFERA INDICA* L. Anacardiaceae. Mango.

From Trinidad, British West Indies. Seeds presented by Dr. Doris M. Cochran, assistant curator of reptiles, United States National Museum. Numbered in January 1935.

Introduced for Department specialists.

108023. *EULOPHIA ANDAMENSIS* Reichb. Orchidaceae.

From Siam. Bulbs presented by Dr. H. M. Smith, Ministry of Lands and Agriculture, Bureau of Fisheries, Bangkok. Received January 5, 1935.

A terrestrial orchid, native to the Andaman Islands, with oblong-lanceolate acuminate leaves.

108024. *PHYLLOSTACHYS* sp. Poaceae.

From China. Plants presented by the Lingnan University, Canton. Numbered in January 1935.

No. 7484.

108025 to 108119.

From the Union of Soviet Socialist Republics. Seeds collected in Turkistan by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received November 5, 1934. Numbered in January 1935.

Introduced for Department specialists.

108025. *ACONITUM* sp. Ranunculaceae.

No. 791. On the mountains along the Karakol River near Lake Issyk, August 4, 1934.

108026 to 108037. *AGROPYRON* spp. Poaceae. Wheatgrass.

108026 to 108032. *AGROPYRON CRISTATUM* (L.) Gaertn. Crested wheatgrass.

108026. No. 713. From dry clay foothills south of Frunze, July 31, 1934.

108025 to 108119—Continued.

108027. No. 726. Dry flat slope, Jetty Augus near Lake Issyk, August 3, 1934.
108028. No. 735. From dry clay hills near the head of Lake Issyk, August 2, 1934. This is either a dwarf form or the plants have become stunted from lack of moisture.
108029. No. 751. Kurdi Plateau, 30 miles northeast of Frunze, July 29, 1934.
108030. No. 752. From the mountains near Lake Issyk, August 3, 1934.
108031. No. 733. Dry land near Lake Issyk, August 5, 1934.
108032. No. 760. Near the Government horse farm at Lake Issyk, August 6, 1934. A dwarf form.
108033. *AGROPYRON REPENS* (L.) Beauv. Quackgrass.
No. 746. Chu River Canyon near Lake Issyk, August 6, 1934.
108034. *AGROPYRON* sp.
No. 749. From foothills, Kurdi Plateau, 30 miles northeast of Frunze, July 29, 1934.
108035. *AGROPYRON INERME* (Scribn. and Smith) Rydb. Beardless wheatgrass.
No. 705. Chu River Canyon, east of Tokmak, on a dry hillside, August 5, 1934. A perennial bunch grass related to *Agropyron spicatum*. Native to the northwestern United States and Canada.
108036. *AGROPYRON* sp.
No. 767. Near the Government horse farm at Lake Issyk, August 5, 1934.
108037. *AGROPYRON STRIATUM* Nees.
No. 706. Along the Karakol River, near Lake Issyk, in moist soil, August 4, 1934.
- 108038 and 108039. *ANDROPOGON ISCHAEMUM* L. Poaceae.
108038. No. 729. From dry stony mountainside near Lake Issyk, August 5, 1934.
108039. No. 737. Dry land near Lake Issyk, August 5, 1934.
108040. *ASTER* sp. Asteraceae.
No. 715. Karakol Mountains, near Lake Issyk, August 4, 1934. A purple aster with yellow center.
- 108041 to 108044. *ASTRAGALUS* spp. Fabaceae.
- 108041 and 108042. Collected along the Karakol River near Lake Issyk, August 4, 1934.
108041. *ASTRAGALUS* sp.
No. 789.
108042. *ASTRAGALUS* sp.
No. 758.
108043. *ASTRAGALUS* sp.
No. 702. Dry clay foothills south of Frunze, July 31, 1934.
108044. *ASTRAGALUS* sp.
No. 730. From the sandy rocky shore of Lake Issyk, August 5, 1934.

108025 to 108119—Continued.

- 108045 and 108046. From a dry mountain-side near Lake Issyk, August 3, 1934.
108045. *AVENA* sp. Poaceae. Oats.
No. 794.
108046. *AVENA* sp. Poaceae. Oats.
No. 796.
108047. *BERBERIS* sp. Berberidaceae.
No. 728. From a mountain slope along the Karakol River near Lake Issyk, August 4, 1934.
108048. *BROMUS* sp. Poaceae. Bromegrass.
No. 748. From dry hillside near Frunze, July 31, 1934.
108049. *BROMUS INERMIS* Leyss. Poaceae. Bromegrass.
No. 725. From a dry gully near Lake Issyk, August 3, 1934.
108050. *CALAMAGROSTIS* sp. Poaceae. Grass.
No. 755. Near the river at Frunze, July 31, 1934.
108051. *CARAGANA* sp. Fabaceae.
No. 756. Along the Jetty Augus River, August 3, 1934.
108052. *CODONOPSIS OVATA* Benth. Campanulaceae.
No. 719. From mountains along the Karakol River, August 4, 1934. A decumbent perennial with stems 6 to 12 inches long, ovate-cordate leaves three-fourths of an inch long, and pale-blue, bell-shaped axillary and terminal flowers over an inch in length. Native to the Himalayas.
108053. *DELPHINIUM* sp. Ranunculaceae. Larkspur.
No. 731. From dry adobe soil in the foothills near Frunze, July 31, 1934. A larkspur with yellow flowers.
108054. *DESCHAMPSIA* sp. Poaceae. Grass.
No. 708. Collected in mountains near the Karakol River, August 4, 1934.
108055. *DIANTHUS* sp. Silenaceae. Pink.
No. 703. Near Lake Issyk, August 5, 1934. Rock pink.
108056. *EPHEDRA* sp. Gnetaceae.
No. 780. Foothills south of Frunze, July 31, 1934.
- 108057 to 108061. *FESTUCA* spp. Poaceae. Fescue.
108057. *FESTUCA OVINA* L.
No. 750. From a dry plateau 25 miles northeast of Frunze, July 29, 1934.
108058. *FESTUCA ELATIOR* ARUNDINACEA (Schreb.) Wimm.
No. 742. Foothills of Kurdi Plateau by a stream, 25 miles northeast of Frunze, July 29, 1934.
108059. *FESTUCA RUBRA* L.
No. 714. From rocks on the bank of the Karakol River, August 4, 1934.
108060. *FESTUCA* sp.
No. 710. From a dry hillside near Frunze, July 31, 1934.

108025 to 108119—Continued.

108061. *FESTUCA OVINA* L.

No. 754. From a dry ridge near Lake Issyk, August 3, 1934.

108062. *HEDYSARUM* sp. Fabaceae.

No. 734. Along the Jetty Augus River, August 3, 1934.

108063. *HIPPOPHAE RHAMNOIDES* L. Elaeagnaceae. Common sea-buckthorn.

No. 778. From a rocky river bottom near Frunze, July 31, 1934. A hardy spiny deciduous shrub with white branches, olive-green leaves, and yellow berries.

For previous introduction see 105886.

108064. *HORDEUM* sp. Poaceae.

No. 723. Kergyra, on the Chu River, 35 miles below Lake Issyk, August 1, 1934.

108065. *ELYMUS JUNCEUS* Fisch. Poaceae.

No. 736. Vigorous bunch grass on dry rocky slopes of the Chu River Canyon, east of Tokmak, August 6, 1934.

108066 to 108068. *KOELERIA* spp. Poaceae.108066. *KOELERIA* sp.

No. 739. From dry adobe hillside in the foothills near Frunze, July 21, 1934.

108067. *KOELERIA* sp.

No. 782. From dry land beside Lake Issyk, August 5, 1934.

108068. *KOELERIA CRISTATA* (L.) Pers.

No. 717. Along the Karakol River, August 4, 1934.

108069. *LATHYRUS TUBEROSUS* L. Fabaceae.

No. 732. From dry land, near an irrigation ditch in the region of Lake Issyk, August 5, 1934.

For previous introduction and description see 107941.

108070. *LATHYRUS* sp. Fabaceae.

No. 764. From the village of Jetty Augus on Lake Issyk, August 3, 1934.

108071. *LOTUS* sp. Fabaceae.

No. 722. Beside a river near Frunze, July 31, 1934.

108072 to 108075. *MEDICAGO* spp. Fabaceae.108072. *MEDICAGO FALCATA* L. Yellow-flowered alfalfa.

No. 761. From Jetty Augus on Lake Issyk, August 3, 1934.

108073. *MEDICAGO FALCATA* L. Yellow-flowered alfalfa.

No. 776. From the foothills south of Frunze, July 31, 1934.

108074. *MEDICAGO LUPULINA* L. Black medick.

No. 798. Near the city of Karakol, August 4, 1934.

108075. *MEDICAGO SATIVA* L. Alfalfa.

No. 747. From the dry hillside, Chu River Canyon, east of Tokmak, August 6, 1934.

108076. *MELICA* sp. Poaceae.

No. 783. From dry mountain slopes near Lake Issyk, August 3, 1934.

108025 to 108119—Continued.

108077. *MILIMUM EFFUSUM* L. Poaceae. Millet grass.

No. 774. From fir woods along the Karakol River, August 4, 1934.

108078. *ONOBRYCHIS* sp. Fabaceae.

No. 704. From a very steep dry stony hillside near Frunze, July 31, 1934.

108079. *ORYZOPSIS* sp. Poaceae.

No. 781. From a dry slaty hillside in the foothills of the Kurdi Plateau, about 30 miles northeast of Frunze, July 29, 1934.

108080. *ORYZOPSIS* sp. Poaceae.

No. 766. From dry rocky slopes of Lake Issyk, August 5, 1934.

108081. *OXYTROPIS* sp. Fabaceae.

No. 721. Along the Jetty Augus River, August 3, 1934.

108082. *PAPAVER* sp. Papaveraceae.

No. 701. Along the Karakol River, August 4, 1934. A plant with yellow flowers.

108083. *PHLEUM GRAECUM* Boiss. and Heldr. Timothy.

No. 775. From the village of Jetty Augus, August 3, 1934.

108084. *PHLEUM* sp. Poaceae. Timothy.

No. 740. From dry hillsides in the foothills near Frunze, July 31, 1934. An annual grass.

108085. *POA* sp. Poaceae. Bluegrass.

No. 799. Found on a rocky precipice in the mountains along the Karakol River near Lake Issyk, August 4, 1934.

108086. *POA PRATENSIS* L. Poaceae. Kentucky bluegrass.

No. 724. Along the Karakol River near Lake Issyk, August 4, 1934.

108087. *POLYPOGON* sp. Poaceae.

No. 762. Foothills about 30 miles northeast of Frunze, July 29, 1934.

108088. *PRUNUS* sp. Amygdalaceae.

No. 777. Chu River Canyon, east of Tokmak, August 6, 1934.

108089. *PRUNUS* sp. Amygdalaceae.

No. 772. From a dry rocky slope in the foothills near Frunze, July 31, 1934.

108090 to 108092. *ROSA* spp. Rosaceae. Rose.108090. *ROSA* sp.

No. 795. Along the Karakol River, August 4, 1934. A wild rose.

108091. *ROSA* sp.

No. 727. Along the Jetty Augus River, west of Karakol, August 3, 1934.

108092. *ROSA* sp.

No. 745. Rocky flats near Frunze, July 31, 1934.

108093. *SALVIA SYLVESTRIS* L. Menthaceae.

No. 712. In the mountains near Karakol, Lake Issyk region, August 4, 1934. A salvia with blue flowers.

108025 to 108119—Continued.

- 108094 to 108103. STIPA spp. Poaceae.
Feathergrass.
108094. STIPA sp.
No. 768. Near Lake Issyk, August 5, 1934.
108095. STIPA sp.
No. 716. From dry land near Lake Issyk, August 5, 1934.
108096. STIPA sp.
No. 743. From dry land near Lake Issyk, August 5, 1934.
108097. STIPA sp.
No. 757. From a clay hillside in the foothills near Frunze, July 31, 1934.
108098. STIPA sp.
No. 771. Along the Karakol River near Lake Issyk, August 4, 1934.
108099. STIPA sp.
No. 784. From dry mountains near Lake Issyk, August 3, 1934.
108100. STIPA sp.
No. 785. From dry mountains near Lake Issyk, August 3, 1934.
- 108101 and 108102. Collected near Lake Issyk, August 2, 1934.
108101. STIPA sp.
No. 792.
108102. STIPA sp.
No. 787.
108103. STIPA sp.
No. 744. From a dry adobe hillside in the foothills near Frunze, July 31, 1934. Bunch grass.
- 108104 to 108106. THALICTRUM spp. Ranunculaceae.
- 108104 and 108105. Collected along the Karakol River near Lake Issyk, August 4, 1934.
108104. THALICTRUM sp.
No. 738.
108105. THALICTRUM sp.
No. 797.
108106. THALICTRUM sp.
No. 788. From dry land along an irrigating ditch near Lake Issyk, August 5, 1934.
- 108107 to 108109. TRIFOLIUM spp. Fabaceae.
Clover.
108107. TRIFOLIUM REPENS L.
White clover.
No. 793. Along the Jetty Augus River near Lake Issyk, August 3, 1934.
108108. TRIFOLIUM PRATENSE L.
Red clover.
No. 720. Near the town of Karakol, August 4, 1934.
108109. TRIFOLIUM sp.
No. 733. Near a stream at Frunze, July 31, 1934.

108025 to 108119—Continued.

108110. TRIGONELLA ARCUATA Meyer. Fabaceae.
No. 790. From dry mountain side near Lake Issyk, August 3, 1934. An annual leguminous plant native to dry situations in Asia Minor.
For previous introduction see 61446.
108111. TRISETUM sp. Poaceae.
No. 718. From mountains near the Karakol River, August 8, 1934.
- 108112 to 108114. VICIA spp. Fabaceae.
Vetch.
108112. VICIA sp.
No. 765. Jetty Augus, near Lake Issyk, August 5, 1934.
108113. VICIA sp.
No. 770. Along the Karakol River near Lake Issyk, August 4, 1934.
108114. VICIA sp.
No. 773. From dry gravelly soil near Lake Issyk, August 6, 1934.
108115. (Undetermined.)
No. 711. Karakol River near Lake Issyk, August 4, 1934. A pernicious weed, with rootstalks and very attractive blue flowers.
108116. (Undetermined.)
No. 759. Along the Karakol River near Lake Issyk, August 4, 1934.
108117. (Undetermined.)
No. 786. A dry rocky slope near Lake Issyk, August 1, 1934. A leguminous spiny shrub.
108118. (Undetermined.)
No. 741. Rabatsky, near Lake Issyk, August 6, 1934. A prostrate shrub found in dry rocky soil.
108119. (Undetermined.)
No. 707. Along the Karakol River, August 4, 1934. Flowering rock plants found in the mountains.
- 108120 to 108216. SOLANUM spp. Solanaceae.
- From the Union of Soviet Socialist Republics. Tubers presented by the Institute of Plant Industry, Leningrad. Received January 23, 1935.
- A collection of potatoes said to be frost resistant; introduced for Department specialists. Unless otherwise stated these tubers are all hybrids.
- 108120 to 108215. SOLANUM TUBEROSUM L.
Potato.
108120. No. 2.
108121. No. 3.
108122. No. 12.
108123. No. 21.
108124. No. 26.
108125. No. 26-a.
108126. No. 31.
108127. No. 35.
108128. No. 43.
108129. No. 52.

108120 to 108216—Continued.

108130. No. 96.
 108131. No. 112.
 108132. No. 158.
 108133. No. 165.
 108134. No. 198.
 108135. No. 213.
 108136. No. 225.
 108137. No. 231.
 108138. No. 232.
 108139. No. 236.
 108140. No. 465.
 108141. No. 485.
 108142. No. 492.
 108143. No. 497.
 108144. No. 528.
 108145. No. 560.
 108146. No. 597.
 108147. No. 652.
 108148. No. 688.
 108149. No. 712.
 108150. No. 722.
 108151. No. 749.
 108152. No. 797.
 108153. No. 811.
 108154. No. 815.
 108155. No. 832.
 108156. No. 837.
 108157. No. 838.
 108158. No. 857.
 108159. No. 870.
 108160. No. 871.
 108161. No. 880.
 108162. No. 882.
 108163. No. 884.
 108164. No. 886.
 108165. No. 888.
 108166. No. 901.
 108167. No. 906.
 108168. No. 909.
 108169. No. 912.
 108170. No. 920.
 108171. No. 986.
 108172. No. 987.
 108173. No. 999.
 108174. No. 1003.
 108175. No. 1004.
 108176. No. 1006.
 108177. No. 1012.
 108178. No. 1013.
 108179. No. 1019.
 108180. No. 1055.
 108181. No. 1060.

108120 to 108216—Continued.

108182. No. 3086.
 108183. No. 3091.
 108184. No. 3094.
 108185. No. 8080. A
 new variety.
 108186. No. 8018. A
 new variety.
 108187. No. 8023. A
 new species.
 108188. No. 80205. A
 wild potato.
 108189. No. 02113.
 A wild potato.
 108190. No. 2/S-6.
 108191. No. 2/178.
 108192. No. 2/184.
 108193. No. 3/184.
 108194. No. 4/184.
 108195. No. 4/238.
 108196. No. 5/107.
 108197. No. 11/108.
 108198. No. 13/107.
 108199. No. 18/108.
 108200. No. 26/108.
 108201. No. 44/107.
 108202. No. 160/74.
 108203. No. 314/80.
 108204. No. 316/81.
 108205. No. 413/89.
 108206. No. 478/99.
 108207. No. 482/101.
 108208. No. 891/88.
 108209. No. 1803/19.
 108210. No. 1805/18.
 108211. No. 1805/17.
 108212. No. 1805/2.
 108213. No. 2009/109.
 108214. No. 2/53. A
 wild potato.
 108215. No. 889.

108216. SOLANUM SP.

A wild potato received under the name "vavilovii," for which a place of publication has not been found.

108217 to 108228.

From Surinam. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received January 11, 1935.

Collected at the Experiment Station, Sandrij No. 1, in November 1934.

108217. DIOCLEA LASIOCARPA Mart. Fabaceae.

No. 2743. A small vine clambering over low shrubs. The lavender and white flowers are in terminal racemes.

108218. TEPHROSIA SESSILIFLORA (Poir.) Hassl. Fabaceae.

No. 2829. An herb 2 to 3 feet high, with compound leaves, with oblong-obtuse

108217 to 108228—Continued.

leaflets, whitish beneath, and pale yellow-green flowers. Native to the Mediterranean countries.

108219. *EUGENIA* sp. Myrtaceae.

No. 2789. A low shrub 2 to 3 feet high, with white flowers and red berries.

108220. *GALACTIA VELUTINA* Benth. Fabaceae.

No. 2848. A perennial climber, soft-hairy throughout, with oval-obtuse leaflets. Native to British Guiana.

108221. *INDIGOFERA SUFFRUTICOSA* Mill. Fabaceae. Indigo.

No. 2819. A low shrub up to 3 feet high, with rose to salmon-colored flowers.

108222. *JACARANDA COPAIA* (Aubl.) D. Don. Bignoniaceae.

No. 2801. A large handsome tree 60 to 80 feet high, with opposite bipinnate leaves 1 to 2 feet long and sky-blue flowers in large terminal panicles. Native to British Guiana.

For previous introduction see 106374.

108223. *MANIHOT ESCULENTA* Crantz. Euphorbiaceae. Cassava.

No. 2762. Cultivated at the station.

108224. *MESOSETUM LOLIIFORME* (Hochst.) Chase. Poaceae.

No. 2730. A grass found on slopes and open places where it acts as a sand binder.

For previous introduction see 47027.

108225. *MONNIERIA TRIFOLIA* L. Rutaceae.

No. 2778. *Oriri*. An annual herb up to 2 feet high, with white flowers. Native to coastal regions of northern South America.

108226. *PAULLINIA ACUMINATA* Uittien. Sapindaceae.

No. 2749. A vine from the edge of the clearing, with white flowers and orange-colored fruits.

108227. *VISMIA CAYENNENSIS* (Jacq.) Pers. Hypericaceae.

No. 2706. Scotelweg, November 12, 1934. A shrub or small tree about 18 feet high, with ovate leaves and waxy, green flowers, white-fuzzy within.

108228. (Undetermined.)

No. 2817. Near Sandrij No. 1, November 25, 1934. A scanty shrub with pale, minute flowers.

108229 to 108231. *LESPEDEZA* spp. Fabaceae.

From South Manchuria. Seeds presented by the Manshu Nosan Shokai, Inc., Dairen. Received January 18, 1935.

Introduced for Department specialists.

108229. *LESPEDEZA ROBUSTA* Nakai.

A shrub about 10 feet high, with ovate-oblong leaflets and small purple flowers in short racemes. Native to the mountains of Chosen.

108230. *LESPEDEZA DAURICA* (Laxm.) Schindler.

A tall annual, up to 3 feet high, with small white flowers.

For previous introduction see 91256.

108229 to 108231—Continued.

108231. *LESPEDEZA UKI* Nakai.

For previous introduction and description see 107755.

108232 to 108247.

From Germany. Seeds presented by the Director, Tabak-Forschungsinstitut für das Deutsche Reich, Forchheim-Karlsruhe-Baden. Received January 21, 1935.

Introduced for Department specialists.

108232 to 108243. *NICOTIANA* spp. Solanaceae. Tobacco.

108232. *NICOTIANA CHINENSIS* Forsch.

An annual relative of common tobacco, *Nicotiana tabacum*, which grows to a height of 6 feet, with pink flowers. Native to China.

For previous introduction see 72692.

108233. *NICOTIANA LONGIFLORA* Cav.

An erect annual or perennial, 2 to 3 feet tall, with slender scabrous bristly stems and somewhat clasping, spatulate to lanceolate leaves. The night-opening, fragrant flowers, 4 inches long, in loose terminal racemes, are pale violet to yellowish violet without and white within with yellowish-violet anthers. Native from Texas to Chile and Argentina.

For previous introduction see 42338.

108234. *NICOTIANA TABACUM MACROPHYLLA* Dunal.

A large-leaved variety with large red flowers, of which there are several horticultural forms.

For previous introduction see 42353.

108235. *NICOTIANA NUDICAULIS* S. Wats.

A viscid-pubescent herb 1 to 2 feet high, with entire, oblanceolate leaves up to 18 inches long. Native to Nuevo Leon, Mexico.

108236. *NICOTIANA PETIOLARIS* Schlecht.

A tall annual tobacco, closely related to the common type.

108237. *NICOTIANA PLUMBAGINIFOLIA* Viv.

An annual species, 2 feet high, with white flowers which appear in May. Native to tropical America.

For previous introduction see 42340.

108238 and 108239. *NICOTIANA RUSTICA* L.

108238. Variety *Brasilia*.

108239. Variety *Ovata*.

108240. × *NICOTIANA SANDBRAE* W. Wats.

A hybrid of *Nicotiana alata* and *N. forgetiana*. The plant is about 3 feet high with rich-green foliage. Each of the six to nine branches bears 6 to 10 large rosy red flowers, the largest over 2 inches across.

108241 and 108242. *NICOTIANA TABACUM* L.

108241. Variety *Calycina*.

108242. Variety *Lacerata*.

108243. *NICOTIANA TEXANA* Maxim.

A coarse annual, closely allied to *Nicotiana rustica*, differing in its more

108232 to 108247—Continued.

slender stems, shorter leaves, and smaller flowers.

108244 to 108246. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

108244. Variety *baccis luteis*.

108245. Variety *cerasiforme*.

108246. Variety *pyriforme*.

108247. *SOLANUM CITRULLIFOLIUM* A. Br. Solanaceae.

A prickly annual with pinnatifid leaves and large violet flowers over an inch across. Native to Texas and Arizona.

For previous introduction see 93094.

108248 and 108249.

From India. Seeds presented by W. Head, Acting Deputy Director of the Botanic Gardens, Saharanpur. Received January 23, 1935.

Introduced for Department specialists.

108248. *APIUM GRAVEOLENS* L. Apiaceae. Celery.

108249. *DAUCUS CAROTA* L. Apiaceae. Carrot.

108250 to 108265.

From Surinam. Seeds and bulbs collected by W. A. Archer, Bureau of Plant Industry. Received January 15, 1935.

Received as seeds unless otherwise stated.

Introduced for Department specialists.

108250. *AMARYLLIS* sp. Amaryllidaceae.

No. 2945. Bulbs collected at Paramaribo, December 26, 1934. A cultivated ornamental with salmon-colored blossoms.

108251. *AMARYLLIS* sp. Amaryllidaceae.

No. 2946. Bulbs collected at Paramaribo, December 26, 1934. A cultivated ornamental with white blossoms marked with green.

108252. *AMASONIA CAMPESTRIS* (Aubl.) Moldenke. Verbenaceae.

No. 2772. Sandrij No. 1, November 17, 1934. A herbaceous perennial 2 to 3 feet high, with alternate, ovate, acute leaves and solitary, axillary, yellow flowers. Native to French Guiana.

108253. *AVERRHOA BILIMBI* L. Oxalidaceae. Bilimbi.

No. 2940. Paramaribo, December 26, 1934. A tree 20 to 60 feet high, cultivated in parts of South America and the West Indies for the sake of its greenish-yellow, cucumber-shaped, acid fruits which are pickled or used as a relish with meat. It is tropical in its requirements.

For previous introduction see 64905.

108254. *BANISTERIOPSIS* sp. Malpighiaceae.

No. 2943. Paramaribo, December 26, 1934.

108255. *CALOPOCONIUM MUCUNOIDES* Desv. Fabaceae.

No. 2874. Vredenburg Weg, December 7, 1934.

For previous introduction and description see 107794.

108250 to 108265—Continued.

108256. *CLEOME PSORALIAEFOLIA* DC. Caprifoliaceae.

No. 2872. Vredenburg Weg, December 7, 1934. A swamp herb 2 to 3 feet high, with sticky leaves and pale-cream flowers.

108257. *CLIBADIUM SURINAMENSE* L. Asteraceae.

No. 2857. Vredenburg Weg, December 5, 1934. A plant 4 to 7 feet high, occurring in thick stands.

For previous introduction and description see 107797.

108258. *TEPHROSIA TOXICARIA* (Sw.) Pers. Fabaceae.

No. 2880. Along the railway about 15 miles south of Paramaribo, February 8, 1934.

For previous introduction and description see 107799.

108259. *GALACTIA JUSSIAEANA* Kunth. Fabaceae.

No. 2825. Near Sandrij No. 1, November 25, 1934. A woody climber with ternate leaves; the leaflets elliptic rounded, sticky on the upper surface and hairy beneath; and small pink flowers. Native to Venezuela.

108260. *JACARANDA* sp. Bignoniaceae.

No. 2935. Marshall Creek near the Surinam River, December 16, 1934.

108261. *PHYSALIS LAGASCAE* Roem. and Schult. Solanaceae. Groundcherry.

No. 2865. Vredenburg Weg, December 7, 1934. An herb 2 feet high, with a rank fetid odor, leaves sticky on the upper surface, and pale greenish-cream flowers.

108262. *QUASSIA AMARA* L. Simaroubaceae.

No. 2942. Paramaribo, December 26, 1934. *Indian cinchona*. A lofty tree, native to Surinam, with dark-green pinnate leaves and racemes of large showy crimson flowers, followed by beautiful and decorative fruits arranged in fives around a fleshy peduncle. The wood of this tree is extremely bitter and is used as a remedy for certain fevers.

For previous introduction see 107167.

108263. *TRIPALARIS SURINAMENSIS* Cham. Polygonaceae.

No. 2868. Vredenburg Weg, December 7, 1934. A small tropical tree with ovate acuminate alternate leaves and small cream-white flowers in pilose spikes. The young stems are hollow and are usually occupied by ants. Native to Surinam.

For previous introduction see 102619.

108264. *VIGNA SESQUIPEDALIS* (L.) Fruwirth. Fabaceae. Asparagus-bean.

No. 2881. Paramaribo market, October 10, 1934.

108265. *WEDELIA TRILOBATA* (L.) Hitchc. Asteraceae.

No. 2786. Sandrij No. 1, November 21, 1934. A prostrate perennial with opposite three-lobed leaves and bright yellow flowers. Native to tropical America.

108266. *SORBUS* sp. Malaceae.

From the Union of Soviet Socialist Republics. Seeds presented by the Insti-

108266—Continued.

tute of Plant Industry, Leningrad. Received January 24, 1935.

Nevezhenskaya Rjabina. A mountain-ash tree from Vladimir, central Russia, with edible seeds.

108267 to 108290.

From Turkey. Bulbs and rhizomes collected by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received January 7, 1935.

Received as bulbs unless otherwise stated. Introduced for Department specialists.

108267. *ALLIUM CEPA* L. Liliaceae. Onion.
A red onion.

108268. *ALLIUM* sp. Liliaceae.
No. T-553.

108269. *ARUM* sp. Araceae.
No. T-425. Adana, October 17, 1934.

108270 to 108274. *COLCHICUM* spp. Melanthiaceae.

108270. *COLCHICUM* sp.
No. T-167. En route from Shebinkarasibar to Giresun, October 17, 1934.

108271. *COLCHICUM* sp.
No. T-318. About 30 miles south of Kastamonu, October 8, 1934.

108272. *COLCHICUM* sp.
No. T-423. About 18 miles east of Adana, October 18, 1934.

108273. *COLCHICUM* sp.
No. T-434. About 50 miles northwest of Adana, October 18, 1934.

108274. *COLCHICUM* sp.
No. T-420. About 25 miles northeast of Adana, October 17, 1934.

108275 to 108279. *CROCUS* spp. Iridaceae.

108275. *CROCUS* sp.
No. T-516. Southeast of Bandirma, en route to Bursa, October 26, 1934.

108276. *CROCUS* sp.
No. T-516-a. Konya, about 2 miles southeast of Bandirma, October 26, 1934.

108277. *CROCUS* sp.
No. T-84. About 70 miles northeast of Sivas, September 26, 1934.

108278. *CROCUS* sp.
No. T-99. About 26 miles west of Susheeri, September 26, 1934.

108279. *CROCUS* sp.
No. T-231. Near Iskilip, en route to Tosya. Collected in the mountains, October 3, 1934.

108280. *CYCLAMEN* sp. Primulaceae.
No. T-349. Near Bolu, October 9, 1934.

108281. *CYCLAMEN* sp. Primulaceae.
No. T-451. About 50 miles northwest of Adana, October 18, 1934.

108282 to 108284. *EREMURUS* spp. Liliaceae.

108267 to 108290—Continued.

108282. *EREMURUS* sp.
No. T-427. Adana. Roots collected October 18, 1934.

108283. *EREMURUS* sp.
No. T-428. East of Adana. Roots collected October 18, 1934.

108284. *EREMURUS* sp.
No. T-518. Near Bandirma. Roots collected October 26, 1934.

108285. *GLADIOLUS* sp. Iridaceae.
No. T-493. About 55 miles northeast of Izmir.

108286 to 108289. *IRIS* spp. Iridaceae.
A collection of rhizomes.

108286. *IRIS* sp.
No. T-75. North of Kayseri 100 miles, September 25, 1934.

108287. *IRIS* sp.
No. T-168. Giresun, September 27, 1934.

108288. *IRIS* sp.
No. T-517. About 40 miles southeast of Bandirma, October 26, 1934.

108289. *IRIS* sp.
No. T-207. About 80 miles west of Samsun, October 2, 1934.

108290. *STERNBERGIA* sp. Amaryllidaceae.
No. T-410. About 15 miles east of Adana, October 17, 1934. A variety with yellow flowers which appear in the autumn.

108291. *SOJA MAX* (L.) Piper. Fabaceae. Soybean.

From Japan. Seeds presented by Yamato Shuhyo Nobu Kaisha, Sapporo, Hokkaido. Received January 18, 1935.

Hasho Mame. Introduced for Department specialists.

108292. *BUPHANE DISTICHA* (L. f.) Herbert. Amaryllidaceae.

From the Union of South Africa. Bulbs purchased from E. G. Bryant, Prieska. Received January 28, 1934.

Gif-bol. A South African plant with a very large bulb up to 1 foot in diameter which grows half out of the ground, protected by a multitude of papery coats. The stout scape, 6 inches to 1 foot high, bears a dense umbel of red flowers, and the thick distichous leaves which appear late are strap-shaped and 1 to 2 feet long.

For previous introduction see 61213.

108293 to 108297.

From Ecuador. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received January 18, 1935.

108293. *PHAEDRANASSA CHLORACRA* Herb. Amaryllidaceae.

No. 6766-a. Near Riobamba, December 19, 1934. Collected in an open field by Auguste Rimbach. A bulbous plant from the mountains of Peru, with strap-shaped leaves less than a foot high and an umbel of about six tubular flowers, reddish with yellowish-green bases and tips, on a peduncle 2 feet high.

108293 to 108297—Continued.

108294. *DATURA SANGUINEA* Ruiz and Pav. Solanaceae.

No. 6768—A. Riobamba, December 19, 1934. From a garden at over 9,000 feet altitude. A small tree or spreading shrub over 15 feet high, with pubescent, ovate-acuminate leaves and brilliant brick-red, pendulous flowers 8 inches long.

For previous introduction see 77055.

108295. *DELOSTOMA INTEGRIFOLIA* D. Don. Bignoniaceae.

No. 6769—A. From the Agricultural College garden at Ambato, at over 9,000 feet altitude, December 20, 1934. *Chalan*. A shapely spreading tree about 30 feet high, with pink flowers, growing in an arid situation where the annual rainfall is about 20 inches and there are light frosts.

108296. *JUGLANS* sp. Juglandaceae.

No. 6765—A. From the market at Riobamba, December 19, 1934.

108297. *TECOMA STANS VELUTINA* DC. Bignoniaceae.

No. 6767—A. Riobamba, December 19, 1934. A small tree or shrub 25 feet high, native to the Andes of Ecuador, at over 9,000 feet altitude, with compound leaves composed of oblong, serrate, acuminate leaflets 7 or 8 inches long and yellow flowers in terminal panicles.

108298. *ARBUTUS ANDRACHNE* L. Ericaceae.

From Greece. Seeds collected by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received December 12, 1934.

Athens, November 9, 1934. An ornamental evergreen tree 10 to 30 feet high, native to Asia Minor. The oval, dark-green glossy leaves are up to 4 inches long, and the terminal panicles of small white flowers are succeeded by edible orange-red fruits one-half inch in diameter.

For previous introduction see 27187.

108299 and 108300.

From Siam. Seeds presented by Dr. H. M. Smith, Ministry of Lands and Agriculture, Bureau of Fisheries, Bangkok. Received January 21, 1935.

108299. *AFGEKIA SERICEA* Craib. Fabaceae.

A woody vine resembling the wistaria, with compound leaves and racemes of dark-purple flowers marked with yellow. Native to Siam.

108300. *NELUMBO NUCIFERA* Gaertn. Nymphaeaceae. Hindu lotus.

108301 and 108302.

From China. Seeds presented by Andrew Tse, Hong Kong. Received January 25, 1935.

Chinese vegetables introduced for Department specialists.

108301. *ALLIUM CEPA* L. Liliaceae. Onion.

Kau Tsai.

108302. *APIUM GRAVEOLENS* L. Apiaceae. Celery.

108303. *TSUGA DUMOSA* (D. Don.) Eichler. Pinaceae. Hemlock.

From India. Seeds presented by the divisional forest officer, Darjeeling, Bengal. Received January 25, 1935.

A tall pyramidal hemlock, sometimes 120 feet high, with gracefully drooping branches, native to northeastern India at altitudes of 8,000 to 10,000 feet. A few have become established in southwestern England, but there is no record of any in America.

108304. *DELPHINIUM ZALIL* Aitch. and Hemsl. Ranunculaceae.

Yellow larkspur.

From India. Seeds presented by the Curator, Royal Botanic Garden, Sibpur, near Calcutta, through the Economic Botanist, Lucknow, United Provinces. Received January 25, 1935.

An erect perennial, 1 to 2 feet high, with slender, ternately divided or trifernate leaves 3 to 4 inches across and yellow flowers about 1 inch in diameter in a lax raceme. Native to Khorasan, Asia.

For previous introduction see 105441.

108305 to 108312.

From China. Scions collected by Peter Liu, Peiping. Received February 1, 1935.

108305. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.

No. 13. *Shui Mi Tao*, water honey peach. From Ping Chia Ton, near Hong Chow. This is the most famous peach in the Chekiang Province. It is a white peach from 2 to over 3 inches in diameter and ripens in July.

108306 to 108310. *CASTANEA* spp. Fagaceae. Chestnut.

108306 to 108309. *CASTANEA MOLLISSIMA* Blume. Hairy chestnut.

108306. No. 11. *Huei Hua Lee Tzu*, cassia flower chestnut. This chestnut is knocked off the tree before it is ripe, and the spines cut off the bur before it is taken to market, where it is sold to be eaten fresh.

108307. No. 12. *K'uei Lee*, large chestnut. From Chiu Lee Sung village, near Hong Chow. A very common variety which is used for cooking with meat, chicken, and vegetables.

108308. No. 17. *K'uei Lee*, large chestnut. Secured near the village of Shang Yeo Tsun, near Hsin Teng.

108309. No. 15. *Sha Lee*, sand chestnut. From the village of Chin Sung Tsun, near Yu Hong, northeast of Hong Chow. Said to be a wild chestnut with white hairs at the bottom.

108310. *CASTANEA SEGUINII* Dode.

No. 10. *Ya Lee Tzu*, wild chestnut. From the mountainside of Pei Kao Feng, North High Mountain, near Hong Chow. Only bushes 2 to 5 feet high seen, apparently having been chopped back for fuel.

108305 to 108312—Continued.

108311. DIOSPYROS KAKI L. f. Diospyraceae. Kaki.

No. 16. *Huo Shih Tzu*, fire persimmon. From a hillside at Chin Sung Tsun, near Yu Hong. A small bright-red persimmon about 2 inches wide and 1 inch high.

108312. DIOSPYROS KAKI L. f. Diospyraceae. Kaki.

No. 14. *Ya Shih Tzu*, wild persimmon. From a hillside of Pei Kao Feng Mountain, near Hong Chow. A wild persimmon which grows to be a bush 5 or 6 feet high. The small fruits are about 1 inch in diameter and three-fourths of an inch high, all with seeds.

108313. PASSIFLORA QUADRANGULARIS L. Passifloraceae. Giant granadilla.

From Puerto Rico. Seeds presented by Atherton Lee, Director, Puerto Rico Agricultural Experiment Station, Mayaguez. Received January 30, 1935.

For previous introduction see 106999.

108314. EPHEDRA ALATA Decaisne. Gnetales.

From Algeria. Seeds presented by Dr. R. Maire, University of Algiers, Algiers. Received January 26, 1935.

A tall, freely-branching shrub with rough, green equisetumlike branches, small scale-like leaves, and inconspicuous flowers. Native to Arabia and northern Africa. Received under the varietal name "alenda," not different botanically from the typical form.

For previous introduction see 104316.

108315 to 108404.

From the Union of Soviet Socialist Republics. Seeds collected in Turkistan by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received November 7, 1934.

Introduced for Department specialists.

108315. AELUROPIUS LITTORALIS (Gouan) Parl. Poaceae.

No. 891. Kazilinsk, August 9, 1934. A flat alkaline desert.

108316 to 108319. AGROPYRON spp. Poaceae. Wheatgrass.

108316. AGROPYRON CRISTATUM (L.) Gaertn. Crested wheatgrass.

No. 829. A dwarf type from Lake Issyk, August 5, 1934.

108317 to 108319. Collected from the flat sandy desert at Chelkar, August 11 and 13, 1934.

108317. AGROPYRON INTERMEDIUM (Host) Beauv.

No. 883.

108318. AGROPYRON DESERTORUM (Fisch.) Schult.

No. 884.

108319. AGROPYRON DESERTORUM (Fisch.) Schult.

No. 897. A pubescent form.

108320. AGROSTIS ALBA L. Poaceae. Redtop.

No. 827. Tokmak, August 3, 1934.

108315 to 108404—Continued.

108321 and 108322. Collected along the Karakol River, near Lake Issyk, August 4, 1934.

108321. AQUILEGIA sp. Ranunculaceae. No. 830.

108322. AQUILEGIA sp. Ranunculaceae. No. 849.

108323. ARISTIDA PENNATA Trin. Poaceae.

No. 873. From moving sands at Chelkar, August 11, 1934. A grass native to Turkistan where it is found in dry sandy places.

For previous introduction see 106843.

108324. ASTRAGALUS sp. Fabaceae.

No. 854. From dry rocky soil near Lake Issyk, August 5, 1934.

108325. ASTRAGALUS sp. Fabaceae.

No. 823. Near Lake Issyk, August 3, 1934. A spiny shrub.

108326. AVENA FATUA L. Poaceae. Oats.

No. 806. Near the town of Karakol on Lake Issyk, August 4, 1934.

For previous introduction see 107893.

108327. BERBERIS sp. Berberidaceae.

No. 802. From a dry mountain slope near Lake Issyk, August 3, 1934.

108328. CALAMAGROSTIS EPIGIEIOS (L.) Roth. Poaceae.

No. 886. From low depressions in the sandy desert near Chelkar, August 11, 1934.

108329 to 108331. CALLIGONUM spp. Polygonaceae.

From the sand desert near Chelkar, August 11, 1934.

108329. CALLIGONUM sp.

No. 875.

108330. CALLIGONUM sp.

No. 874.

108331. CALLIGONUM sp.

No. 894.

108332. CARAGANA sp. Fabaceae.

No. 836. Karakol, on Lake Issyk, August 4, 1934.

108333. CAREX sp. Cyperaceae.

No. 857. Along the Karakol River, near Lake Issyk, August 4, 1934.

108334. CHONDRIILA PAUCIFLORA Led. Cichoriaceae.

No. 893. Chelkar, August 14, 1934. A biennial herb with a vertical root and numerous slender branches. The basal leaves are pinnatifid, and the yellow flower heads are solitary, terminating the branches. Native to Turkistan.

For previous introduction see 106869.

108335. CLEMATIS sp. Ranunculaceae.

No. 826. Near Lake Issyk, August 4, 1934. A form with small yellow flowers.

108336. CLEMATIS sp. Ranunculaceae.

No. 838. En route to Lake Issyk, August 2, 1934.

108315 to 108404—Continued.

108337 to 108340. *ELYMUS* spp. Poaceae.

Collected from the alkali area around Chelkar, August 11 to 13, 1934.

108337. *ELYMUS* sp.

No. 890. A bunch type.

108338. *ELYMUS* sp.

No. 878.

108339. *ELYMUS GIGANTEUS* Vahl.

No. 872.

108340. *ELYMUS* sp.

No. 887.

108341 and 108342. *EPHEDRA* spp. Gneta-
ceae.

Collected east of Tokmak in the Chu River Canyon, August 6, 1934.

108341. *EPHEDRA* sp.

No. 862.

108342. *EPHEDRA* sp.

No. 863.

108343. *ERAGROSTIS* sp. Poaceae.

No. 892. Chelkar, August 11, 1934. Found in lime soil.

108344. *EREMURUS* sp. Liliaceae.

No. 861. Frunze, August 1, 1934.

108345. *EREMURUS* sp. Liliaceae.

No. 866. Little Chingan, east of Tashkent, July 15, 1934.

108346 to 108348. *FESTUCA* spp. Poaceae.
Fescue.108346. *FESTUCA OVINA* L.

No. 899. Chelkar, August 14, 1934. Found growing on sand dunes. This is the first grass in the depressions of moving sand.

108347 and 108348. Collected August 3, 1934, near Lake Issyk, on the dry slope of a mountain.

108347. *FESTUCA* sp.

No. 815.

108348. *FESTUCA OVINA* L.

No. 809.

108349. *HALIMODENDRON HALODENDRON* (Pall.) Voss. Fabaceae. Salt tree.

No. 839. Near Rabatsky, August 6, 1934. A spiny shrub found on dry, rocky, and sometimes salty soils, along the Chu River.

108350. *HEDYSARUM* sp. Fabaceae.

No. 868. Near Lake Issyk on stony hills, August 5, 1934.

108351. *IRIS* sp. Iridaceae.

No. 837. Along the Jetty Augus River, west of Karakol, August 3, 1934.

108352. *JUNIPERUS* sp. Pinaceae.

No. 814. A prostrate plant found in the dry mountains near Lake Issyk, August 3, 1934.

108353 to 108355. *KOELERIA* spp. Poaceae.
Grass.

108315 to 108404—Continued.

108353. *KOELERIA GLAUCA* DC.

No. 895. Chelkar, in a flat sand desert, August 13, 1934. A tall perennial grass about 2 feet high, native to sandy places in central Europe.

108354. *KOELERIA* sp.

No. 813. From mountains along the Karakol River near Lake Issyk, August 4, 1934.

108355. *KOELERIA CRISTATA* (L.) Pers.

No. 812. From the dry slope of the mountains near Lake Issyk, August 3, 1934.

108356 and 108357. From dry foothills near Frunze, July 31, 1934.

108356. *LAPPULA* sp. Boraginaceae.

No. 840. A plant which resembles the forget-me-not.

108357. *LATHYRUS* sp. Fabaceae.

No. 851.

108358. *LATHYRUS* sp. Fabaceae.

No. 810. Along the Jetty Augus River near Lake Issyk, August 3, 1934. A yellow-flowered form.

108359 and 108360. Collected along the Karakol River near Lake Issyk, August 4, 1934.

108359. *LONICERA CAERULEA* L. Capri-
foliaceae. Sweetberry honeysuckle.

No. 848.

108360. *LONICERA* sp.

No. 850.

108361 to 108364. *MEDICAGO FALCATA* L. Fabaceae. Yellow-flowered alfalfa.

108361. No. 822. From Jetty Augus, on Lake Issyk, August 3, 1934.

108362. No. 831. From Lake Issyk, August 5, 1934.

108363. No. 852. From the Chu River gorge, east of Tokmak, August 6, 1934.

108364. No. 816. From Lake Issyk, August 5, 1934.

108365. *MELILOTUS* sp. Fabaceae.

No. 843. From Frunze, July 30, 1934.

108366 and 108367. From dry clay foothills south of Frunze, July 31, 1934.

108366. *ONOBRYCHIS MICRANTHA* Schrenk. Fabaceae.

No. 846.

108367. *PAPAVER* sp. Papaveraceae.

No. 841.

108368. *PAPAVER* sp. Papaveraceae.

No. 845. From rocky soil near Lake Issyk, August 5, 1934.

108369. *PAPPOPHORUM* sp. Poaceae.

No. 800. From a dry flat near Rabatsky on Lake Issyk, August 6, 1934.

108370. *PHLEUM* sp. Poaceae.

No. 855. From the Animal Husbandry Experiment Station, Frunze, July 30, 1934.

108315 to 108404—Continued.

108371. *PHLEUM* sp. Poaceae.
No. 860. Along the Karakol River near Lake Issyk, August 4, 1934.
108372. *PHRAGMITES COMMUNIS* Trin. Poaceae.
No. 879. From a low alkali area near a salt pond at Chelkar, August 13, 1934. A very abundant grass which grows over 4 feet high.
For previous introduction see 90201.
108373. *PICEA TIANSHANICA* Rupr. Pinaceae. Spruce.
No. 834. Along the Karakol River near Lake Issyk, August 4, 1934. A large tree, sometimes 100 feet high under favorable conditions, with dark shining-green leaves. Native to central Asia and closely allied to *Picea schrenkiana*.
108374. *PUCCINELLIA DISTANS* (L.) Parl. Poaceae.
No. 876. From an alkali flat near Chelkar, August 13, 1934.
- 108375 to 108378. *POA* spp. Poaceae. Bluegrass.
108375. *POA* sp.
No. 817. From rocky soil in the foothills south of Frunze, August 3, 1934.
108376. *POA* sp.
No. 858. From moist areas in the mountains along the Karakol River near Lake Issyk, August 4, 1934.
108377. *POA* sp.
No. 803. From a dry gravelly clay flat along the Jetty Augus River near Lake Issyk, August 3, 1934.
108378. *POA* sp.
No. 811. From a dry mountain slope near Lake Issyk, August 3, 1934.
108379. *POTENTILLA* sp. Rosaceae.
No. 844. Foothills near Frunze, July 31, 1934. A low-growing plant found in hard clay soil.
108380. *PUCCINELLIA* sp. Poaceae.
No. 898. Found in the alkali area around Chelkar, August 17, 1934.
108381. *PUCCINELLIA DISTANS* (L.) Parl. Poaceae.
No. 882. From alkali flats near Lugovaya, August 8, 1934.
- 108382 and 108383. Collected in dry rocky soil along the Chu River, east of Tokmak, August 6, 1934.
108382. *ROSA* sp. Rosaceae. Rose.
No. 864.
108383. *SCHISMUS BARBATUS* (L.) Chase. Poaceae. Grass.
No. 853. An annual grass.
108384. *SCHISMUS BARBATUS* (L.) Chase. Poaceae. Grass.
No. 808. Along the Chu River in very dry soil, about 30 miles from Lake Issyk, August 1, 1934.
108385. *SCUTELLARIA* sp. Menthaceae.
No. 859. From foothills south of Frunze, July 31, 1934. An attractive low-growing labiate.

108315 to 108404—Continued.

108386. *SILENE* sp. Silenaceae.
No. 847. About 40 miles west of Alma Ata, July 29, 1934. An annual flowering plant.
108387. *LIMONIUM* sp. Plumbaginaceae.
No. 888. From alkali flats near Chelkar, August 14, 1934.
- 108388 to 108395. *STIPA* spp. Poaceae. Feathergrass.
108388 and 108389. *STIPA CAPILLATA* L.
From the flat sand desert a few miles north of Chelkar, August 12 and 13, 1934.
For previous introduction see 107700.
108388. No. 877. 108389. No. 896.
108390. *STIPA* sp.
No. 807. From a dry mountain side near Lake Issyk, August 13, 1934.
108391 to 108393. Collected in dry rocky soil at Jetty Augus, near Lake Issyk, August 3, 1934.
108391. *STIPA* sp.
No. 819.
108392. *STIPA* sp.
No. 820.
108393. *STIPA* sp.
No. 821.
108394. *STIPA* sp.
No. 880. From the clay desert near Chelkar, August 12, 1934.
108395. *STIPA* sp.
No. 801. Near Lake Issyk, August 2, 1934.
108396. *DIGITARIA* sp. Poaceae. Grass.
No. 885. Chelkar Experiment Station, August 10, 1934. A very tall, erect type.
108397. *THALICTRUM* sp. Ranunculaceae.
No. 818. Jetty Augus, near Lake Issyk, August 3, 1934.
- 108398 to 108400. Collected along the Karakol River near Lake Issyk, August 4 and 5, 1934.
108398. *TRIFOLIUM PRATENSE* L. Fabaceae. Red clover.
No. 805. A large hairy type.
108399. *VICIA* sp. Fabaceae.
No. 804.
108400. *VICIA* sp. Fabaceae.
No. 835.
108401. *NITRARIA SCHOBERI* L. Zygophyllaceae.
No. 871. From the sand desert near Chelkar, August 11, 1934.
108402. (Undetermined.)
No. 828. Along the Chu River about 15 miles below Lake Issyk, August 1, 1934. A thick-leaved herbaceous plant.
108403. (Undetermined.)
No. 870. From the foothills south of Frunze, July 31, 1934. A small annual spring flower.

108315 to 108404—Continued.

108404. ZIZIPHORA CLINOPODIOIDES SERPYLLACEA (Bieb.) Boiss. Menthaceae.

No. 856. Lake Issyk, August 6, 1934. A much-branched perennial, shrubby at the base and about a foot high, with terminal heads of small flowers which vary in color from white to magenta. Native to Georgia.

108405 to 108414. TULIPA spp. Liliaceae. Tulip.

From the Union of Soviet Socialist Republics. Bulbs presented by Dr. A. Popov, Department of New Cultures and Introduction, Leningrad. Received February 1, 1935.

Introduced for Department specialists.

108405. TULIPA BORSZCZOWI Regel.

No. 598. A Siberian tulip with stems 10 to 18 inches high, bluish-green, narrowly ovate leaves up to 6 inches in length, and red flowers with black blotches at the base of the petals.

For previous introduction see 61447.

108406. TULIPA FOSTERIANA Hoog.

No. 589.

For previous introduction see 107585.

108407. TULIPA sp.

No. 587.

108408. TULIPA KAUFMANNIANA Regel.

No. 596.

For previous introduction see 106774.

108409. TULIPA KOLPAKOWSKIANA Regel.

No. 595.

For previous introduction see 107588.

108410. TULIPA KUSCHKENSIS B. Fedtsch.

No. 593.

For previous introduction and description see 107857.

108411. TULIPA LINIFOLIA Regel.

No. 588.

For previous introduction see 107590.

108412. TULIPA OSTROWSKIANA Regel.

No. 592.

For previous introduction see 106780.

108413. TULIPA PRAESTANS Hoog.

No. 597.

For previous introduction see 107591.

108414. TULIPA WILSONIANA Hoog.

No. 591.

For previous introduction and description see 107859.

108415 to 108548.

From the Union of Soviet Socialist Republics. Seeds collected by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received November 9, 1934.

108415 to 108437. AGROPYRON spp. Poaceae. Wheatgrass.

108415 to 108422. AGROPYRON CRISTATUM (L.) Gaertn. Crested wheatgrass.

108415 to 108548—Continued.

108415. No. 918. Along the railroad near Orenburg, August 15, 1934.

108416. No. 972. From the lower Volga.

108417. No. 973. From the Altai.

108418 to 108422. From the middle Volga region.

108418. No. 975. 108421. No. 985.

108419. No. 978. 108422. No. 986.

108420. No. 984.

108423. AGROPYRON TRITICEUM Gaertn. No. 981. From Armenia. An annual Siberian grass, much branched at the base, with stems up to 8 inches in length.

For previous introduction see 106834.

108424 and 108425. AGROPYRON RAMOSUM (Trin.) Richt.

From the middle Volga region.

108424. No. 979. 108425. No. 987.

108426 to 108428. AGROPYRON REPENS (L.) Beauv.

108426. No. 974. From western Siberia.

108427. No. 976. From eastern Kazakhstan.

108428. No. 988. From the middle Volga region.

108429 to 108435. AGROPYRON SIBIRICUM (Willd.) Beauv.

108429 to 108431. From Chelkar.

108429. No. 906.

108430. No. 907.

108431. No. 908.

108432. No. 917. Near Orenburg, along the railroad, August 15, 1934.

108433. No. 980. From Altai-Zaisakin.

108434. No. 982. From Kazakhstan.

108435. No. 983. From Alma Ata.

108436. AGROPYRON sp.

No. 977. Collected at Katta-Kurgan. Received under the name "orientali," for which a place of publication has not been found.

108437. AGROPYRON sp.

No. 915. Collected June 13, 1934, along the railroad near the Aral Sea.

108438 to 108450. AGROSTIS ALBA L. Poaceae. Redtop.

108438 and 108439. From southern Kazakhstan.

108438. No. 923. 108439. No. 924.

108440 and 108441. From Omsk, Siberia.

108440. No. 925. 108441. No. 926.

108442 to 108444. From the Ukraine.

108442. No. 927. 108444. No. 929.

108443. No. 928.

108445. No. 931. From Ural Province.

108446 to 108449. From western Siberia.

108446. No. 932. 108448. No. 934.

108447. No. 933. 108449. No. 936.

108415 to 108548—Continued.

108450. No. 937. From eastern Kazakstan.
108451. *POA NEMORALIS* L. Poaceae.
Wood bluegrass.
No. 938. From the Ukraine.
108452. *AGROSTIS ALBA* L. Poaceae.
Redtop.
No. 939. From eastern Kazakstan.
108453. *POA* sp. Poaceae. Bluegrass.
No. 940. From eastern Kazakstan.
- 108454 to 108456. *AGROSTIS ALBA* L. Poaceae.
Redtop.
108454 and 108455. From eastern Kazakstan.
108454. No. 941. 108455. No. 942.
108456. No. 943. From Ural Province.
108457. *AGROSTIS* sp. Poaceae.
No. 930. From Altai.
108458. *ASTRAGALUS* sp. Fabaceae.
No. 902. August 11, 1934. From the sand desert, Chelkar.
- 108459 to 108477. *BROMUS* spp. Poaceae.
Brome-grass.
- 108459 to 108468. *BROMUS INERMIS* Leyss.
Common brome-grass.
108459. No. 1014. From Armenia.
108460. No. 1006. From the Altai-Zaisansk Experiment Station.
- 108461 and 108462. From eastern Kazakstan.
108461. No. 1007. 108462. No. 1008.
- 108463 and 108464. From the Altai Tchujsk Experiment Station.
108463. No. 1009. 108464. No. 1010.
108465. No. 1011. From the Altai-Zaisansk Experiment Station.
- 108466 and 108467. From Omsk, Siberia.
108466. No. 1012. 108467. No. 1021.
108468. No. 1023. From the Altai-Zaisansk Experiment Station.
- 108469 to 108471. *BROMUS SQUARROSUS* L.
108469. No. 1015. From the Ukraine.
108470. No. 1016. From the lower Volga.
108471. No. 1022. From the Ukraine.
108472. *BROMUS ARVENSIS* L.
No. 1017. From Armenia.
108473. *BROMUS ERECTUS* Huds.
No. 1013. From Armenia.
108474. *BROMUS* sp.
No. 1018. From Armenia.
108475. *BROMUS ERECTUS* Huds.
No. 913. From near Kelif, Tajikistan Province.
108476. *BROMUS SQUARROSUS* L.
No. 1019. From southern Kazakstan.

108415 to 108548—Continued.

108477. *BROMUS* sp.
No. 1020. From Alma-Ata.
- 108478 to 108496. *ELYMUS* spp. Poaceae.
Grass.
- 108478 and 108479. *ELYMUS ANGUSTUS* Trin.
An erect perennial grass about 2 feet high, with flat rigid leaves. Native to central Asia.
108478. No. 998. From the Altai region.
108479. No. 999. From the lower Volga region.
- 108480 to 108482. *ELYMUS ARENARIUS* L.
From the Altai region.
European dunegrass.
108480. No. 997.
108481. No. 996.
108482. No. 1003.
- 108483 to 108486. *ELYMUS DAHURICUS* Turcz.
108483. No. 994. From the Altai region.
108484. No. 993. From the Altai region.
108485. No. 992. From western Siberia.
108486. No. 995. From eastern Kazakstan.
- 108487 to 108491. *ELYMUS GIGANTEUS* Vahl.
Siberian wild-rye.
108487. No. 910. From Chelkar.
108488. No. 909. From Chelkar.
108489. No. 905. From Chelkar.
108490. No. 1001. From eastern Kazakstan.
108491. No. 1000. From the lower Volga region.
- 108492 to 108494. *ELYMUS JUNCEUS* Fisch.
An erect perennial grass, with terminal spikes resembling rye. Native to Russia.
For previous introduction see 75737.
108492. No. 989. From eastern Kazakstan.
108493. No. 990. From eastern Kazakstan.
108494. No. 991. From the middle Volga region.
108495. *ELYMUS SIBIRICUS* L.
No. 1002. From the Altai region.
108496. *ELYMUS JUNCEUS* Fisch.
No. 1004. From the Altai region.
108497. *EREMURUS* sp. Liliaceae.
No. 911. Collected July 8, 1934, along the Varsov River, north of Stalinabad, Tajikistan Province, at 5,500 feet altitude.
- 108498 to 108528. *FESTUCA* spp. Poaceae.
Fescue.
- 108498 to 108501. *FESTUCA ELATIOR* ARUNDINACEA (Schreb.) Wimm.

108415 to 108548—Continued.

108498. No. 959. From the middle Volga region.
108499. No. 960. From the middle Volga region.
108500. No. 972-A. From the Ural Province.
108501. No. 1005. From northern Kazakstan.
- 108502 to 108513. *FESTUCA ELATIOR* L.
Meadow fescue.
108502. No. 944. From eastern Kazakstan.
108503. No. 945. From western Siberia.
108504. No. 946. From Armenia.
108505. No. 947. From Armenia.
108506. No. 948. From eastern Kazakstan.
108507. No. 949. From Armenia.
108508. No. 950. From Armenia.
108509. No. 951. From Armenia.
108510. No. 952. From the Altai region.
108511. No. 953. From the Union of Soviet Socialist Republics.
108512. No. 954. From Armenia.
108513. No. 955. From western Siberia.
108514. *FESTUCA OVINA* L. Sheep fescue.
No. 967. From the middle Volga region.
108515. *FESTUCA ELATIOR* L.
Meadow fescue.
No. 968. From Armenia.
108516. *FESTUCA OVINA* L. Sheep fescue.
No. 969. From Armenia.
108517. *FESTUCA ELATIOR* L.
Meadow fescue.
No. 970. From Armenia.
108518. *FESTUCA OVINA* L.
Sheep fescue.
No. 971. From Armenia.
- 108519 to 108525. *FESTUCA OVINA* SULTANATA Hack.
Fescue.
108519. No. 904. From Chelkar.
108520. No. 961. From the Ural Province.
108521. No. 962. From the Ukraine.
108522. No. 963. From Crimea.
108523. No. 964. From the Ukraine.
108524. No. 965. From the lower Volga region.
108525. No. 966. From Kalmyk Province.
- 108526 to 108528. *FESTUCA RUBRA* L.
Red fescue.
108526. No. 956. From Moscow Province.
108527. No. 957. From Armenia.
108528. No. 958. From Moscow Province.

108415 to 108548—Continued.

108529. *HORDEUM BULBOSUM* L. Poaceae.
No. 919. From the Kopet Dag, Ashkhabad.
- 108530 to 108543. *POA* spp. Poaceae.
Bluegrass.
108530. *POA BULBOSA* L.
No. 1031. From Azerbaijan.
108531. *POA LONGIFOLIA* Trin.
No. 1032. From Armenia. A perennial grass with a creeping rhizome and very narrow leaves. Native to the Caucasus.
108532. *POA PRATENSIS* L.
Kentucky bluegrass.
No. 1026. From the Ural district.
- 108533 to 108536. From the Altai region.
- 108533 and 108534. *POA TIBETICA* Munro.
A tall stout grass 1 to 2 feet high, with firm, linear, acute leaves about 8 inches long. Native to northwestern India at altitudes of 9,000 to 16,000 feet.
108533. No. 1030. 108534. No. 1033.
- 108535 and 108536. *POA ATTENUATA* Trin.
108535. No. 1028. 108536. No. 1034.
108537. *POA* sp.
No. 1029. From the Crimea.
108538. *POA* sp.
No. 1024. From Ivanoosk Province.
- 108539 to 108541. *POA PRATENSIS* L.
Kentucky bluegrass.
108539. No. 1025. From the middle Volga region.
108540. No. 1035. From northern Kazakstan.
108541. No. 1036. From the Ukraine.
108542. *POA* sp.
No. 1037. From western Siberia.
108543. *POA PRATENSIS* L.
Kentucky bluegrass.
No. 1027. From the Altai region.
108544. *SALVIA SPINOSA* L. Menthaceae.
No. 922. From the Botanic Garden, Tashkent. A perennial mint about a foot high, with pale-green, viscid-pubescent, rounded-ovate leaves and whorls of small white flowers. Native to Arabia.
108545. *SCALIGERA UGAMICA* Korovin.
Apiaceae.
No. 921. A perennial about 3 feet high, with oblong-ovate, bipinnately divided leaves up to 10 inches long and numerous umbels of small white flowers. Native to Turkistan.
108546. *SCHISMUS* sp. Poaceae.
No. 912. Collected June 20, 1934, along the railroad between Kelif and Termez, Tajikistan Province.
108547. *SILENE* sp. Silenaceae.
No. 900. Collected August 13, 1934, in Chelkar.

108415 to 108548—Continued.

108548. (Undetermined.)

No. 914. July 3, 1934. A leguminous shrub found in rocky soil near the Government rest house on the Varsov River, north of Stalinabad, Tajikistan Province.

108549. MAHONIA TENUIFOLIA (Lindl.) Loud. Berberidaceae.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received January 28, 1935.

A large evergreen shrub about 10 feet high, with alternate pinnate bright-green leaves and long racemes of yellow flowers. Native to Vera Cruz, Mexico.

108550 to 108555. CASTANEA spp. Faba-ceae. Chestnut.

From China. Seeds collected by Peter Liu and sent through Owen L. Dawson, American agricultural commissioner, Shanghai. Received February 1, 1935.

108550 and 108551. CASTANEA HENRYI (Skan.) Rehd. and Wils.

108550. *Feng Chiao Chu Lee*, Pearl chestnut of Feng Chiao, Chekiang Province.

108551. Pearl chestnut of Hsiao Feng, Anhwei Province.

108552 to 108554. CASTANEA MOLLISSIMA Blume. Hairy chestnut.

Kuei Lee, large chestnut. Collected in Chekiang Province.

108552. From Hang Chow.

108553. From Hsin Teng.

108554. From Feng Chiao.

108555. CASTANEA SEGUINII Dode.

Ya Lee Tzu, wild chestnut. From the mountains near Hang Chow.

108556 to 108558.

From Shilka, Siberia. Plants and cuttings collected by Prof. N. E. Hansen, South Dakota State College of Agriculture and Mechanic Arts, Brookings, S. Dak. Received November 27, 1934. Numbered in January 1935.

108556. RIBES sp. Grossulariaceae.

Siberian black currant.

108557. SALIX sp. Salicaceae.

108558. ULMUS PUMILA L. Ulmaceae. Chinese elm.

Collected in the northern part of Siberia where it appears to be immune from the Dutch elm disease.

108559. CHENOPodium QUINOA Willd. Chenopodiaceae. Quinoa.

From Peru. Seeds presented through J. L. Colom, Chief, agricultural cooperation, Pan American Union, Washington, D. C. Received February 4, 1935.

Introduced for Department specialists.

108560 to 108562. PHASEOLUS COCCINEUS L. Fabaceae. Scarlet Runner bean.

From Mexico. Seeds presented by Mrs. Walter Douglas, Chauncey, N. Y. Re-

108560 to 108562—Continued.

ceived December 6, 1934. Numbered in January 1935.

108560. A wild form with white seeds.

108561. A very hardy and prolific variety, said to be a cross between the Spanish white bean and the wild Mexican perennial bean.

108562. A variety with purple seeds.

108563 to 108592.

From Surinam, South America. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received January 26, 1935.

Introduced for Department specialists.

108563. BANISTERIOPSIS sp. Malpighiaceae.

No. 2921. *Koni Koni bita*, December 16, 1934. From the Djuka lumber camp on Marshall Creek, Surinam River, 20 miles above Carolina.

108564. CENTROSEMA DASYANTHUM Benth. Fabaceae.

No. 2931. From the Surinam River banks, above Carolina, December 17, 1934. A vine with white flowers, the standard marked in the center with purple stripes.

108565. BYRSONIMA sp. Malpighiaceae.

No. 2901. *Hulia*. From the Simon Creek, Surinam River, above Carolina, December 14, 1934. Found in white sand.

108566. CACOUCIA COCCINEA Aubl. Com-bretaceae.

No. 2902. *Freinousoe notto*, bat nut. From the Simon Creek, Surinam River, above Carolina, December 14, 1934. A woody vine with crimson flowers and flat ribbed fruits 3 by 2 inches.

108567. CALOPOGONIUM CAERULEUM (Benth.) Hemsl. Fabaceae.

No. 2913. *Atéi*. Near the Surinam River above Carolina, December 15, 1934. A twining vine with blue flowers.

108568. CASSIA MULTIJUGA L. C. Rich. Caesalpinaceae.

No. 2906. *Krekre*. From the Surinam River bank near Carolina, December 15, 1934. A small tree with compound leaves made up of linear leaves about one-half inch long and large yellow flowers followed by flat glabrous pods 6 inches long and less than an inch wide. It is native to tropical America.

For previous introduction see 92195.

108569. CLEOME PSORALIAEFOLIA DC. Cap-paridaceae.

No. 2872-A. *Makka*. Vredenburg Weg, December 7, 1934. A swamp herb 2 to 3 feet high, with sticky leaves and pale-cream flowers.

108570 and 108571. CLIBADIUM SYLVESTRE (Aubl.) Baill. Asteraceae.

An herb to 4 to 10 feet high with white flowers.

108570. No. 2893. *Koenami*. From Carolina on the Surinam River, December 13, 1934.

108571. No. 2919. *Windiku*. From the Djuka lumber camp on Marshall Creek, Surinam River, above Carolina, December 16, 1934.

108563 to 108592—Continued.

108572. *CLITORIA ARBOREA* Benth. Fabaceae.

No. 2854. *Haiariballi*. Near Scotelweg, December 1, 1934. A shrubby vine climbing on bushes and small trees in open places. The flowers are purple on the margins, shading to white in the center where reddish lines appear.

108573 and 108574. *TEPHROSIA TOXICARIA* (Sw.) Pers. Fabaceae.

108573. No. 2880-A. *Asikuna*. Collected along the railway about 70 miles south of Paramaribo, February 8, 1934. An herb 4 to 5 feet high; the flowers have grayish-green standards with pure-green spot at center and greenish-white wings with purple spot at the base.

108574. No. 2883. *Asikuna*. From Carolina, Surinam River, December 13, 1934. An herb 2 to 4 feet high with enlarged carrotlike roots. The inside of the flowers is lavender and the outside is greenish gray.

108575. *DALBERGIA* sp. Fabaceae.

No. 2933. *Motosilan*. Carolina, Surinam River, December 18, 1934. Seeds of a vine found on the beach in the flotsam of the river.

108576. *DALBERGIA MONETARIA* L. f. Fabaceae.

No. 2885. *Motosilan*. Carolina, Surinam River, December 18, 1934. A tropical shrub with ternate leaves and small white flowers in axillary spikes. Native to Surinam.

108577. *DERRIS PTEROCARPUS* (DC.) Killip. Fabaceae.

No. 2930. From Marshall Creek, Surinam River, 20 miles above Carolina at the Djuka lumber camp, December 16, 1934. A climbing shrub, native to French Guiana, with trifoliolate leaves and racemes of rather large white flowers.

108578. *DIODCLEA LASIOCARPA* Mart. Fabaceae.

No. 2912. Above Carolina, on the Surinam River, December 15, 1934. A shrubby vine twining over tall trees, with sparsely pubescent trifoliolate leaves, the somewhat-pointed leaflets 2 to 5 inches long. The purple-violet flowers, with fringed keel and papery deciduous branchlets, are on peduncles 1 to 1½ feet long. Native to tropical American forests.

For previous introduction see 107217.

108579. *DIODCLEA* sp. Fabaceae.

No. 2909. Received without notes.

108580. *INGA ACUMINATA* Benth. Mimosaceae.

No. 2907. Near Carolina, Surinam River, December 15, 1934. A tropical American shrub with pinnate leaves; the 4 to 6 leaflets are ovate-lanceolate and 4 to 5 inches long. The white flowers are in small spikes.

108581. *MONNIERIA TRIFOLIA* L. Rutaceae.

No. 2910. *Koffie messa*. Near Carolina, Surinam River, December 15, 1934.

For previous introduction and description see 108225.

108563 to 108592—Continued.

108582. *MUCUNA* sp. Fabaceae.

No. 2934. *Kowai*. Carolina, Surinam River, December 18, 1934. From flotsam on the beach.

108583. *MUCUNA* sp. Fabaceae.

No. 2905. Near Carolina, Surinam River, December 15, 1934. Flowers from ground, said to belong to *Kowai*.

108584. *PENTACLETHRA MACROLOBA* (Willd.) Kuntze. Mimosaceae.

No. 2896. *Koroballi* and *Kroebara*. From Simon Creek, above Carolina, Surinam River, December 14, 1934. A large tree, common in this region, which quickly sprouts from the stump if cut back. The flowers have red sepals and white stamens.

108585. *PHASEOLUS HIRSUTUS* L. Fabaceae.

No. 2891. *Krumata*. From Carolina, Surinam River, December 13, 1934. A cultivated bean used by the Caribs as a vegetable. Said to have been cultivated before the advent of the white man.

108586. *PHYSALIS LAGASCAE* Roem. and Schult. Solanaceae.

No. 2865-A. *Sibeero beemi* and *Batoto Bita*. From Vredenburg Weg, December 7, 1934. An herb 2 feet high with a rank fetid odor. The leaves are sticky on the upper surface and the flowers are pale greenish yellow. Native to tropical America.

For previous introduction see 108261.

108587. *SOLANUM MAMMOSUM* L. Solanaceae. Nightshade.

No. 2903. *Njoe Wintje Bobbie*. Outskirts of Paramaribo, December 13, 1934. A spiny shrub with indigo flowers and yellow fruits 2 to 2½ inches wide and 2 to 3 inches long, which have the odor of tomato.

For previous introduction see 101801.

108588. *SOLANUM* sp. Solanaceae.

No. 2904. Outskirts of Paramaribo, December 13, 1934. A plant with white flowers and bright orange-red spherical fruit 1 inch in diameter.

108589. *SPIGELIA ANTHELMIA* L. Loganiaceae.

No. 2911. *Droegoeman*. Near Carolina, Surinam River, December 15, 1934. An annual 1 to 2 feet high, with lanceolate leaves and spikes of pink-tinged white flowers, followed by green fruits. It grows by preference near water, but is also found on dry ground. The stems have the rank odor of *Nekoe* (*Lonchocarpus chrysophyllus*). Native to the West Indies.

108590. *TETRAPTERIS* sp. Malpighiaceae.

No. 2929. From Marshall Creek, Surinam River, 20 miles above Carolina at the Djuka lumber camp, December 16, 1934. A vine.

108591. *VIGNA SESQUIPEDALIS* (L.) Fruwirth. Fabaceae. Asparagus-bean.

No. 2875. *Jare pesi*, yard bean. From Vredenburg Weg, December 7, 1934. A local variety.

108592. (Undetermined.)

No. 2932. *Batie batie*. From Marshall Creek, Surinam River, December 16, 1934.

108563 to 108592—Continued.

An introduced tree with edible fruit shaped like cacao; the flavor is like that of *Spondias* sp. (Pomme de Cythere).

108593 to 108748.

From the Union of Soviet Socialist Republics. Seeds collected by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received November 10, 1934.

Introduced for Department specialists.

108593 to 108601. *ALOPECURUS PRATENSIS* L. Poaceae. Meadow foxtail.

108593. No. 1038. From the Ukraine.

108594. No. 1040. From the Ukraine.

108595. No. 1043. From Ivanovsk Province.

108596. No. 1046. From the Ukraine.

108597. No. 1051. From western Siberia.

108598. No. 1052. From the lower Volga region.

108599. No. 1053. From the Moscow region.

108600. No. 1055. From the middle Volga region.

108601. No. 1056. From the Moscow region.

108602 to 108604. *GASTRIDIDIUM VENTRICOSUM* (Gouan) Schinz and Thell. Poaceae.

108602. No. 1041. From northern Kazakhstan.

108603. No. 1042. From the middle Volga region.

108604. No. 1044. From Omsk, Siberia.

108605. *ALOPECURUS ARUNDINACEUS* Poir. Poaceae.

No. 1045. From Omsk, Siberia.

108606 to 108609. *GASTRIDIDIUM VENTRICOSUM* (Gouan) Schinz and Thell. Poaceae.

108606. No. 1047. From the Altai region.

108607. No. 1049. From Buriato, Mongolia.

108608. No. 1050. From the Ural district.

108609. No. 1054. From western Siberia.

108610. *ALOPECURUS* sp. Poaceae.

No. 1048. From the Ukraine.

108611. *ASTRAGALUS TESTICULATUS* Pall. Fabaceae.

No. 1191. From western Siberia. A perennial, caespitose, densely hairy astragalus, native to Siberia.

For previous introduction see 61397.

108612. *ASTRAGALUS* sp. Fabaceae.

No. 1190. From southern Kazakhstan.

108613 to 108618. *BECKMANNIA* spp. Poaceae.

108613 to 108616. *BECKMANNIA ERUCAEFORMIS* (L.) Host. Sloughgrass.

108593 to 108748—Continued.

108613. No. 1057. From White Russia; central region of the Dnieper River.

108614. No. 1059. From Moscow Province.

108615. No. 1060. From Yakut Province.

108616. No. 1058. From the Ukraine.

108617 and 108618. *BECKMANNIA SYZYGACHNE* (Steud.) Fern.

108617. No. 1061. Eastern Kazakhstan region, Irtish district.

108618. No. 1071. From Buriato, Mongolia.

108619. *CAREX* sp. Cyperaceae.

No. 916. Collected near Tashkent, Turkistan, June 14, 1934.

108620 to 108628. *DACTYLIS GLOMERATA* L. Poaceae. Orchard grass.

108620. No. 1062. From the northern Caucasus.

108621. No. 1063. From Azerbaijan, Turkistan.

108622. No. 1064. From the Altai region.

108623. No. 1065. From the Altai region.

108624. No. 1066. From eastern Kazakhstan.

108625. No. 1067. From Armenia.

108626. No. 1068. From western Siberia.

108627. No. 1069. From western Siberia.

108628. No. 1070. From eastern Kazakhstan.

108629. *GALEGA ORIENTALIS* Lam. Fabaceae.

No. 1193. From Armenia. A leguminous shrub with ovate-acute leaflets and racemes of blue flowers. Native to the Caucasus.

108630 to 108632. *LATHYRUS* spp. Fabaceae.

108630. *LATHYRUS ERECTUS* Lag.

No. 1187. From Kazakhstan. A slender-stemmed annual about 6 inches high, with linear-lanceolate leaflets and very small lilac flowers. Native to southeastern Europe.

108631 and 108632. *LATHYRUS PRATENSIS* L. Yellow vetchling.

108631. No. 1186. From the Ural district, western Siberia.

108632. No. 1189. From southern Kazakhstan.

108633. *VICIA SATIVA* L. Fabaceae.

No. 1188. From southern Kazakhstan.

108634. *LOTUS CORNICULATUS CILIATUS* (Tenore) C. Koch. Fabaceae.

No. 1192. From Armenia.

108635 to 108657. *MELILOTUS* spp. Fabaceae. Sweetclover.

108635 to 108646. *MELILOTUS ALBA* Desf. White sweetclover.

108593 to 108748—Continued.

108635. No. 1166. From the middle Volga region.
108636. No. 1171. From western Siberia.
108637. No. 1150. From Semipalatinsk.
108638. No. 1152. From western Siberia.
108639. No. 1153. From Omsk, Siberia.
108640. No. 1154. From the Ukraine.
108641. No. 1158. From western Siberia.
108642. No. 1159. From the Ukraine.
108643. No. 1160. From eastern Kazakhstan.
108644. No. 1168. From the lower Volga region.
108645. No. 1169. From the Ural district.
108646. No. 1172. From Moscow Province.
108647. *MELILOTUS CASPIA* Gruner.
No. 1162. From the lower Volga region. A biennial sweetclover with an upright stem 20 to 30 inches high, somewhat sparse foliage, and bright-yellow flowers in short racemes. Native to southern Soviet Union.
- 108648 to 108655. *MELILOTUS OFFICINALIS* (L.) Lam.
108648. No. 1151. From the lower Volga region.
108649. No. 1155. From the Ukraine.
108650. No. 1157. From the lower Volga region.
108651. No. 1161. From the Ukraine.
108652. No. 1163. From the lower Volga region.
108653. No. 1165. From the Ukraine.
108654. No. 1167. From Don Province.
108655. No. 1170. From the lower Volga region.
108656. *MELILOTUS* sp.
No. 1164. From Armenia.
108657. *MELILOTUS* sp.
No. 1166-A. From the Ural district.
- 108658 to 108670. *ONOBRYCHIS* spp. Fabaceae.
108658. *ONOBRYCHIS ARENARIA* DC.
No. 1178. From western Siberia. A forage plant of much promise, which is said to make a more rapid growth the first year than the ordinary sort.
For previous introduction see 84463.
- 108659 and 108660. *ONOBRYCHIS MICHALXII* DC.
From Azerbaijan.
108659. No. 1175. 108660. No. 1177.
- 108661 and 108662. *ONOBRYCHIS OXYTRIPOIDES* Bunge.
From Armenia. A stemless herbaceous perennial with a woody spreading

108593 to 108748—Continued.

- rhizome and compound leaves 2 to 3 inches long. Native to Asia Minor.
108661. No. 1180. 108662. No. 1183.
108663. *ONOBRYCHIS PETRAEA* Desv.
No. 1176. From eastern Kazakhstan. An erect perennial with pinnate leaves, the leaflets oblong-lanceolate. Native to the Caucasus region.
108664. *ONOBRYCHIS SUBCAULIS* Boiss.
No. 1173. From Armenia. A low annual 1 or 2 inches high, native to arid places in Asia Minor.
- 108665 to 108669. *ONOBRYCHIS TRANSCASICA* Grossh.
From Armenia. An erect herbaceous perennial 1 to 2 feet high, with a thick rhizome, pinnate leaves, and small pink flowers. Native to the Caucasus region.
108665. No. 1174. From the Akhtinsk district.
108666. No. 1179. From the Katinskii district.
108667. No. 1182. From Privolokoe Village.
108668. No. 1184. From the Akhtinsk district.
108669. No. 1185. From the Stepnsi district.
108670. *ONOBRYCHIS* sp.
No. 1181. From Armenia, Badar-zehersk district.
- 108671 to 108694. *PHLEUM* spp. Poaceae. Timothy.
108671. *PHLEUM ALPINUM* L.
No. 1094. From Armenia.
- 108672 to 108681. *PHLEUM PHLEOIDES* (L.) Karst.
108672. No. 1080. From Armenia.
108673. No. 1082. From Kazakhstan
108674. No. 1083. From eastern Kazakhstan.
108675. No. 1084. From eastern Kazakhstan.
108676. No. 1085. From the middle Volga region.
108677. No. 1086. From eastern Kazakhstan.
108678. No. 1089. From Stone Steppe.
108679. No. 1091. From Kazakhstan.
108680. No. 1092. From eastern Kazakhstan.
108681. No. 1093. From eastern Kazakhstan.
- 108682 to 108689. *PHLEUM PRATENSE* L.
108682. No. 1072. From western Siberia.
108683. No. 1073. From Armenia.
108684. No. 1074. From western Siberia.
108685. No. 1075. From eastern Kazakhstan.
108686. No. 1076. From eastern Kazakhstan.

108593 to 108748—Continued.

108687. No. 1078. From the Ural district.
108688. No. 1079. From eastern Kazakstan.
108689. No. 1095. From western Siberia.
108690. *PHLEUM GRAECUM* Boiss. and Heldr.
No. 1081. From eastern Kazakstan.
108691. *PHLEUM* sp.
No. 1087. From the Ural Province.
108692. *PHLEUM* sp.
No. 1088. From eastern Kazakstan.
- 108693 and 108694. *PHLEUM GRAECUM* Boiss. and Heldr.
From Armenia.
108693. No. 1090. 108694. No. 1077.
- 108695 to 108722. *TRIFOLIUM* spp. Fabaceae. Clover.
- 108695 and 108696. *TRIFOLIUM AGRARIUM* L.
From the Ukraine.
108695. No. 1140. 108696. No. 1141.
- 108697 and 108698. *TRIFOLIUM ALPESTRE* L.
From Armenia.
108697. No. 1148. 108698. No. 1149.
108699. *TRIFOLIUM AMBIGUUM* Bieb.
No. 1143. From the Crimea.
108700. *TRIFOLIUM CANESCENS* Willd.
No. 1136. From Armenia. A perennial clover about 6 inches high, with obovate villous leaflets and grayish-white flower heads. Native to Asia Minor.
- 108701 to 108703. *TRIFOLIUM FRAGIFERUM* L.
For previous introduction see 107579.
108701. No. 1137. From the Ukraine.
108702. No. 1138. From Armenia.
108703. No. 1139. From Armenia.
108704. *TRIFOLIUM HYBRIDUM* L.
Alsike clover.
No. 1135. From eastern Kazakstan.
- 108705 to 108707. *TRIFOLIUM LUPINASTER* L.
No. 1075. No. 1144. From western Siberia.
108706. No. 1145. From western Kazakstan.
108707. No. 1143. From western Siberia.
108708. *TRIFOLIUM MEDIUM* Huds.
Mammoth clover
No. 1142. From Armenia.
108709. *TRIFOLIUM MONTANUM* L.
No. 1147. From Ivanovsk Province.
- 108710 to 108719. *TRIFOLIUM PRATENSE* L.
Red clover.
108710. No. 1122. From the Altai region.

108593 to 108748—Continued.

108711. No. 1123. From the Ural district.
108712. No. 1124. From southern Kazakstan.
108713. No. 1125. From eastern Kazakstan.
108714. No. 1126. From the Ural Province.
108715. No. 1127. From the Ural Province.
108716. No. 1128. From Ivanovsk Province.
108717. No. 1129. From the Ural Province.
108718. No. 1130. From eastern Kazakstan.
108719. No. 1131. From the Altai region.
- 108720 to 108722. *TRIFOLIUM REPENS* L.
White clover.
108720. No. 1132. From western Siberia.
108721. No. 1133. From the Ural district.
108722. No. 1134. From eastern Kazakstan.
- 108723 to 108725. *VICIA AMOENA* Fisch.
A perennial hairy vetch, native to Siberia, with stems up to 2 feet high and purplish flowers.
For previous introduction see 107709.
108723. No. 1104. From Buriato, Mongolia.
108724. No. 1105. From western Siberia.
108725. No. 1106. From Buriato, Mongolia.
108726. *VICIA TENUIFOLIA* Roth.
No. 1107. From the Altai region.
- 108727 to 108732. *VICIA CRACCA* L.
Cow vetch.
108727. No. 1108. From the Westoblast Province.
108728. No. 1109. From the Altai region.
108729. No. 1110. From the Ivanovsk Province.
108730. No. 1111. From the Moscow Province.
108731. No. 1112. From the White Russian Republic.
108732. No. 1113. From western Siberia.
108733. *VICIA HIRSUTA* (L.) S. F. Gray.
No. 1101. From the Ukraine. A small vetch.
For previous introduction see 81050.
108734. *VICIA MICHAUXII* Spreng.
No. 1121. From southern Kazakstan. A creeping or climbing annual vetch, native to Syria.
For previous introduction see 67066.
108735. *VICIA SATIVA* L. Common vetch.
No. 1116. From Armenia.

108593 to 108748—Continued.

108736. *VICIA SEPIUM* L.
No. 1096. *Bush vetch*. From western Siberia.
For previous introduction and description see 108009.
- 108737 and 108738. *VICIA SYLVATICA* L.
For previous introduction see 52279.
108737. No. 1102. From Siberia.
108738. No. 1103. From western Siberia.
108739. *VICIA VILLOSA* Roth. *Hairy vetch*.
No. 1097. From the northern Caucasus.
108740. *VICIA TENUIFOLIA* Roth.
No. 1098. From western Siberia.
For previous introduction and description see 108011.
- 108741 and 108742. *VICIA UNIJUGA* A. Br.
For previous introduction see 90585.
108741. No. 1114. From Buriato, Mongolia.
108742. No. 1115. From western Siberia.
108743. *VICIA VARIABILIS* Freyn and Sint.
No. 1100. From the northern Caucasus. A herbaceous perennial with ascending stems, linear-lanceolate leaflets, and blue or purplish flowers in a dense raceme. Native to Armenia.
108744. *VICIA VILLOSA* Roth. *Hairy vetch*.
No. 1099. From the Ukraine.
108745. *VICIA* sp.
No. 1117. From western Siberia.
- 108746 to 108748. *VICIA* spp.
From Armenia.
108746. *VICIA* sp.
No. 1118.
108747. *VICIA* sp.
No. 1119.
108748. *VICIA* sp.
No. 1120.
108749. *DAUCUS CAROTA* L. *Apiaceae*.
Carrot.
From Morocco. Seeds presented by H. Brayard, Directeur de la Station Experimentale de Marrakech. Received January 29, 1935.
A carrot cultivated by the natives. Introduced for Department specialists.
- 108750 to 108753. *TRITICUM AESTIVUM* L. *Poaceae*. *Common wheat*.
From Australia. Seeds presented by H. Wenzholz, Director of Plant Breeding, Department of Agriculture, New South Wales, through R. C. May, Experiment Farm, Bathurst, New South Wales. Received February 6, 1935.
Wheat crosses made at the Experiment Farm, Bathurst, New South Wales. Introduced for Department specialists.
108750. (*Galgalos* × *Bena*) × *Federation*.
5/1-1-1.

108750 to 108753—Continued.

108751. (*Galgalos* × *Bena*) × *Federation*.
6/1-1-1-1.
108752. (*Galgalos* × *Bena*) × *Federation*.
6/3-2-1-1.
108753. (*Galgalos* × *Federation*) × *Federation*.
5/1-1-1.
- 108754 and 108755. *PRUNUS* spp. *Amygdalaceae*.
From California. Scions presented by W. B. Clarke & Co., San Jose. Received February 7, 1935.
For use by Department specialists.
108754. *PRUNUS SERRULATA* Lindl.
Oriental cherry.
Daikoku.
108755. *PRUNUS SUBHIRTELLA* Miq.
Higan cherry.
Beni-hoshi.
108756. *SCHAEFFLERA ACTINOPHYLLA* (Endl.) Harms (*Brassaia actinophylla* Endl.). *Araliaceae*.
From Coconut Grove, Fla. Seeds originally from Brisbane, Australia, collected by F. G. Walsingham at Woodlawn Cemetery and brought to the Plant Introduction Garden January 8, 1929. Numbered for convenience in distribution, February 1935.
An evergreen tree up to 40 feet high, native to Queensland, Australia, with compound leaves made up of 6 to 16 oblong leathery leaflets a foot long. The racemes, several feet long, of fragrant flowers, are followed by small heads of angled dry fruits. This is a very good honey tree and does best in moist situations.
For previous introduction see 98137.
108757. *CROCUS ALATAVICUS* Regel. *Iridaceae*.
From the Union of Soviet Socialist Republics. Seeds presented by the Botanic Garden, Alma Ata, through Dr. A. Popov, Department of New Cultures and Introduction, Leningrad. Received February 7, 1935.
A spring-blooming crocus from central Asia, with linear, white-striped leaves and white flowers.
108758. *STYLOMA THURSTONI* (Muell. and Drude) O. F. Cook (*Pritchardia thurstoni* Muell. and Drude). *Phoenicaceae*.
From Puerto Rico. Seeds presented by David Barry, Jr., Los Angeles, Calif. Received February 2, 1935.
A tall palm with a slender, ringed trunk crowned by a cluster of spreading, fan-shaped leaves 3 to 6 feet in diameter. The clusters of small greenish flowers are borne on long stalks resembling fishing poles. It is native to the Fiji Islands.
For previous introduction see 86695.
- 108759 to 108778.
From Europe. Seeds collected by Dr. Edgar Anderson, of the Arnold Arboretum Balkan expedition. Received January 26, 1935.

108759 to 108778—Continued.

The following were collected in regions unusually cold and high for these particular species.

108759. CLEMATIS VITALBA L. Ranunculaceae. Travelers-joy.

From the Balkan Mountains, Bulgaria. A handsome strong-growing vine with pinnate, ovate leaflets and axillary and terminal panicles of slightly fragrant white flowers. Native to the Mediterranean region.

For previous introduction see 76326.

108760. FORSYTHIA EUROPAEA Degen and Bald. Oleaceae.

No. 143-A. From Peč, Yugoslavia. A bushy shrub with firm opposite, ovate-lanceolate leaves about 2 inches long and yellow flowers about 1 inch across. Native to Albania.

108761. ILEX AQUIFOLIUM L. Aquifoliaceae. English holly.

From above Sarajevo, Yugoslavia. A variety with duller leaves and more winter hardy than the type. It thrives in rather shady places.

108762 to 108764. LIGUSTRUM VULGARE L. Oleaceae. European privet.

Collected on the edge of the steppe in situations where practically no other shrubs can survive.

108762. From Fanata, Cluj, Rumania.

108763. From Sarajevo, Yugoslavia.

108764. From Babadag, Rumania.

108765. LINUM sp. Linaceae.

No. 153. From the Ravna Mountains, Yugoslavia.

108766. LUNARIA REDIVIVA L. Brassicaceae.

No. 39-A. From the Rila Mountains, Bulgaria. A herbaceous perennial with large broadly-cordate leaves, terminal racemes of gray-purple flowers, and large flat, disk-shaped, translucent fruits. Native to southern Europe.

For previous introduction see 106526.

108767. PRUNUS LAUROCERASUS L. Amygdalaceae. English cherry-laurel.

From Ljutljana, Yugoslavia. Variety *schipkaensis*. A shrubby form with nearly entire leaves 2 to 5 inches long.

For previous introduction see 103598.

108768. PRUNUS WEBBII (Spach) Vierhapper. Amygdalaceae.

No. 151. From the Botanical Museum, Sarajevo, Yugoslavia. A much-branched shrub, native to Asia Minor, with light-green, lanceolate-oblong leaves and small fruits less than 1 inch long.

108769. PYRUS ELAEOGRIFOLIA Pail. Malaceae.

From Niculital, Rumania. An ornamental wild pear, native to Asia Minor, which becomes a large bush or small tree. The small white flowers appear in May, and the small globose fruits are crowned with a prominent calyx. The leaves are lanceolate, oblong-lanceolate, or linear lanceolate and covered with a whitish silky pubescence.

108759 to 108778—Continued.

108770. SAMBUCUS NIGRA L. Caprifoliaceae. European elder.

No. 68. From Tarda-Schlecht, Rumania.

108771. SAMBUCUS RACEMOSA L. Caprifoliaceae. European red elder.

No. 23. From the Rila Monastery, Bulgaria.

For previous introduction see 92061.

108772. SILENE ROEMERI Friv. Silenaceae.

No. 19. From Mount Vitoska, above Sofia, Bulgaria. A perennial alpine, native to southeastern Europe, with hairy, narrow-spulate leaves and small whitish flowers in headlike racemes.

108773. SYRINGA VULGARIS L. Oleaceae. Lilac.

No. 114. From Mount Domogled, Rumania. A dwarf form.

108774. SYRINGA VULGARIS L. Oleaceae. Lilac.

No. 106. From the Cazan Pass, Rumania.

108775. VACCINIUM MYRTILLUS L. Vacciniaceae. European whortleberry.

No. 22. From the Rila Mountains, Bulgaria. A low deciduous shrub about 1 foot high, native to northern and central Europe, with bright-green, ovate leaves. The globose black berries, one-third of an inch in diameter, are sometimes sold in the markets, but the plant is not generally cultivated.

For previous introduction see 42640.

108776. VACCINIUM VITIS-IDAEA L. Vacciniaceae. Cowberry.

No. 57. From the Bihor Mountains, Rumania, in a rather dry situation. A small evergreen bush, 6 to 10 inches high, with racemes of small pinkish flowers, which grows wild in the northern regions of Europe, Asia, and North America. The deep-red berries have a tart taste and are used in northern regions as a substitute for cranberries.

For previous introduction see 95437.

108777. VERBASCUM LYCHNITIS L. Scrophulariaceae.

No. 25. From the Rila Monastery, Bulgaria, at 4,200 feet altitude, August 13, 1934. A tomentose biennial, found in turf in full sun, with oblong-elliptic, crenate leaves and panicles of small yellow flowers. Native to Europe and the Caucasus.

For previous introduction see 106534.

108778. VERBASCUM SPECIOSUM Schrad. Scrophulariaceae.

No. 113. From Mount Domogled, Rumania. A tall biennial mullein with pale-green, oblong-lanceolate leaves more than a foot long at the base of the stem, becoming much smaller toward the top. The yellow flowers are in a long panicle raceme. Native to eastern Europe.

108779 to 108802.

From the Union of Soviet Socialist Republics. Seeds presented by the Director, Botanic Garden, Tiflis, Caucasus. Received January 29, 1935.

108779 to 108802—Continued.

108779. *ALLIUM VICTORIALIS* L. Liliaceae.
Onion.

One of the most distinctive species of European onions, with stems about 2 feet high, leaves resembling those of the lily-of-the-valley, and white to greenish-white flowers.

For previous introduction see 97582.

108780. *ANTHEMIS IBERICA* Bieb. Asteraceae.

An alpine perennial, native to Spain, with ascending stems 1 foot high, hairy pinnate leaves, and small flower heads with white rays.

108781. *ANTHEMIS MARSCHALLIANA* Willd. Asteraceae.

A perennial, native to the Caucasus region, with ascending stems, bipinnate leaves with linear pinnae, and yellow flower heads.

108782 to 108785. *BELLEVALIA* spp. Liliaceae.

108782. *BELLEVALIA FOMINII* Voronov.

A bulbous plant with three to five narrow basal leaves 8 inches long and about one-half inch wide, and small pinkish flowers in a lax cylindrical raceme. Native to the Transcaucasian region.

108783. *BELLEVALIA LONGISTYLA* (Misc.) Grossh.

A bulbous plant with lanceolate leaves about a foot high and one-half inch wide and a panicle of 15 to 25 small, rusty-purple, campanulate flowers. Native to the Caucasus.

108784. *BELLEVALIA MAKUENSIS* Voronov.

A bulbous plant, native to dry places in the Caucasus, with leaves 8 to 12 inches high and one-half inch wide and a broad panicle of small brown-violet flowers.

108785. *BELLEVALIA SPECIOSA* Voronov.

A bulbous plant, native to Armenia and Transcaucasia, with four to five lobate, narrow leaves about 6 inches long with narrow cartilaginous margins and small yellow flowers in a dense raceme about 7 inches long.

108786. *DELPHINIUM FLEXUOSUM* Bieb. Ranunculaceae.

A hardy herbaceous perennial with violet flowers. Native to the mountains of Armenia.

For previous introduction see 104849.

108787. *DELPHINIUM LINEARILOBUM* Busch. Ranunculaceae.

A herbaceous perennial with deeply palmately lobed leaves, the segments linear, and blue flowers in lax racemes. Native to the Transcaucasian region.

108788. *DIGITALIS FERRUGINEA* L. Scrophulariaceae.
Foxglove.

A biennial or perennial, 5 to 6 feet high, densely leafy, with long dense racemes of rusty-red flowers. Native to southern Europe.

For previous introduction see 104574.

108779 to 108802—Continued.

108789 to 108791. *GAGEA* spp. Liliaceae.

108789. *GAGEA ALEXEENKOANA* Miscz.

A plant about 5 inches high, with narrow-linear leaves slightly exceeding the scape. The small flowers, yellow inside and green without, are borne in small clusters. Native to the Caucasus.

108790. *GAGEA CHLORANTHA* (Bieb.) Schult. f.

A bulbous plant with filiform or narrow-lanceolate leaves and corymbs of greenish-yellow flowers. Native to dry stony places in the Caucasus.

For previous introduction see 92984.

108791. *GAGEA TENUIFOLIA* (Boiss.) Fomin.

A tufted, bulbous plant with narrow linear, recurved leaves and small flowers, yellow within, in small clusters. Native to dry slopes in the Caucasus region.

108792. *HEDERA COLCHICA* Koch. Araliaceae.
Colechis ivy.

A high-climbing vine with the young growth covered by golden-yellow scales, broadly cordate, almost entire bright-green leaves of firm texture, and small umbels of greenish-yellow flowers in paniculate clusters, followed by black fruits. It is native to the Caucasus region.

For previous introduction see 81345.

108793 to 108798. *IRIS* spp. Iridaceae.

108793 to 108796. *IRIS PUMILA* L.

108793. *Albidis*. A form with white flowers.

108794. *Luteis*. A form with light-yellow flowers.

108795. *Pallidis*. A form with pale-violet flowers, rarely white.

108796. *Violaceis*. A form with violet flowers.

108797. *IRIS SULPHUREA* Koch.

A dwarf hardy iris of the Pogoniris section, with linear leaves 2 to 4 inches long and sulphur-yellow flowers. Native to southern Russia.

108798. *IRIS IMBRICATA* Lindl.

A Pogoniris with about six pale-green, broadly ensiform leaves 6 to 8 inches long at flowering time and a stem 12 to 20 inches long, bearing clusters of greenish-yellow flowers about 2 inches in length. Native to northern Iran and Transcaucasia.

For previous introduction see 81349.

108799. *PAEONIA ABCHASICA* Misch. Ranunculaceae.

A herbaceous perennial with deep-green leaves, paler beneath, and yellow flowers about 3 inches across. Native to the Caucasus region.

108800. *RHODODENDRON CAUCASICUM* Pall. Ericaceae. Caucasian rhododendron.

For previous introduction see 103392.

108801. *RHODODENDRON FLAVUM* G. Don. Ericaceae.

A shrub 4 to 6 feet high, with ovate-oblong, pilose, ciliated shining-green leaves and handsome yellow flowers. Native to Asia Minor.

108779 to 108802—Continued.

108802. VIOLA SIEHEANA W. Beck. Viola-ceae.

A perennial about 5 inches high, with reniform-cordate basal leaves and broadly ovate stem leaves, and pale-blue or white flowers. Native to Asia Minor.

108803 and 108804.

From Rumania. Seeds collected by Dr. Edgar Anderson, of the Arnold Arboretum Balkan expedition. Received February 2, 1935.

108803. QUERCUS sp. Fagaceae.

No. 1.

108804. QUERCUS sp. Fagaceae.

No. 2.

108805 to 108813.

From Australia. Seeds presented by H. Wenholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received February 2, 1935.

A collection of local vegetable varieties introduced for Department specialists.

108805 to 108812. ALLIUM CEPA L. Liliaceae. Onion.

108805. *Brown Spanish.*

108806. *Early White Globe.*

108807. *Hunter River Brown.*

108808. *Hunter River White.*

108809. *Late White Globe.*

108810. *Odourless.*

108811. *Silver King.*

108812. *White Queen.*

108813. DAUCUS CAROTA L. Apiaceae. Carrot.

Red Top Colonial carrot.

108814. ALLIUM SATIVUM L. Liliaceae. Garlic.

From Yugoslavia. Seeds presented by Prof. Ivo. Volarić, State Agronomist, Samobor, Croatia. Received February 8, 1935.

Introduced for Department specialists.

108815. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. Japanese chestnut.

From Japan. Seeds purchased from the Yokohama Nursery Co., Yokohama. Received December 28, 1934. Numbered in January 1935.

Introduced for Department specialists.

108816 to 108819.

From China. Seeds purchased through Albert N. Steward, College of Agriculture and Forestry, University of Nanking, Nanking. Received February 6, 1935.

Locally grown seeds introduced for Department specialists; obtained from farmers in the vicinity of Nanking.

108816. ALLIUM CEPA L. Liliaceae. Onion.

Yang Ts'ong.

108817. ALLIUM SATIVUM L. Liliaceae. Garlic.

Chui Ts'ai.

108816 to 108819—Continued.

108818. APIUM GRAVEOLENS L. Apiaceae. Celery.

Peh Ch'ing.

108819. DAUCUS CAROTA L. Apiaceae. Carrot.

Hu Lo Po.

108820 to 108823.

From Ecuador. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received January 31, 1935.

108820. BOMAREA sp. Amaryllidaceae.

No. 6800-A. Collected on the lower slopes of the volcano of Pichincho, Province of Pichincho, December 29, 1934, between 9,000 and 12,000 feet altitude. A climbing shrub about 6 feet high, the flowers are crimson without and orange flecked with black on the inside. The shrub is quite common in this region and is seen also in the valley of Quito south of Chillo.

108821. DIOSPYROS sp. Diospyraceae.

No. 6749.

108822. JUGLANS HONOREI Dode. Juglandaceae.

No. 6781-B. Purchased January 12, 1935, at Quito, Pichincho Province, altitude about 10,500 feet. A wild walnut, native to the highlands of northern South America, which resembles closely the black walnut of the United States. The thick-shelled nut contains a kernel of mild pleasant flavor.

For previous introduction see 106450.

108823. JUGLANS PERUVIANA Dode. Juglandaceae.

No. 6782. The *nogal*, or native black walnut tree, occasionally seen in cultivation, but more commonly wild. It is a shapely tree up to 50 feet high, and the nuts are much like those of *Juglans nigra*, but with a thicker shell. The wood is considered valuable.

For previous introduction see 49375.

108824. DAUCUS CAROTA L. Apiaceae. Carrot.

From India. Seeds presented by Ralph Stewart, systematic botanist, Gordon College, Rawal, Pindi. Received February 7, 1935.

Locally grown seeds introduced for Department specialists.

108825 to 108827.

From Algeria. Seeds presented by Julian Briche, Chef du Service de L'Arboriculture a la Direction de l'Agriculture, Algiers. Received February 8, 1935.

Introduced for Department specialists.

108825. ALLIUM CEPA L. Liliaceae. Onion.

108826. APIUM GRAVEOLENS L. Apiaceae. Celery.

108827. PIMPINELLA ANISUM L. Apiaceae. Anise.

108828 to 108831.

From Venezuela. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received February 2, 1935.

Introduced for Department specialists.

108828 to 108831—Continued.

108828. PAULLINIA LEOCARPA Griseb. Sapindaceae.

No. 2950. Antimano, near Caracas, January 12, 1935. A climbing shrub with pinnate leaves having ovate-oblong leaflets 3 to 4 inches long, racemes of small white flowers, and purple-black seeds. Native to the West Indies.

108829. PASSIFLORA LIGULARIS Juss. Passifloraceae. Sweet granadilla.

No. 2947. Caracas, January 8, 1935. *Parche amarilla*. This is said to be the best of the genus and is sold in the market. The light-yellow or green-yellow fruit is egg-shaped and has a rather thin rind. The seed is surrounded by an edible translucent arillus which is very refreshing.

For previous introduction see 102612.

108830. POLYGONUM sp. Polygonaceae.

No. 2949. From near Caracas, January 12, 1935. Found in shaded places near the stream. A plant with reddish stems.

108831. POLYGONUM HYDROPIFEROIDES Michx. Polygonaceae.

No. 2948. *Barbasco blanco*. From Antimano, near Caracas, January 12, 1935. Native to the southeastern United States.

108832. PORLIERIA ANGUSTIFOLIA (Engelm.) A. Gray. Zygophyllaceae.

From Texas. Seeds presented by H. B. Parks, San Antonio, through F. J. Crider, Tucson, Ariz. Received February 11, 1935.

A shrub or small tree, native to northern Mexico, with compound leaves, the 8 to 12 linear leaflets about one-half inch long and the small sweet-scented purple flowers about one-half inch across.

108833. PRUNUS SALASII Standl. Amygdalaceae.

From Guatemala. Seeds presented by the Director, Department of Agriculture, Guatemala City. Received February 11, 1935.

Carreto. A tropical evergreen cherry which is native to the highlands of Antigua, Guatemala. The light-green, leathery, narrow, oblong leaves are 3 to 5 inches long, and the small white flowers are in racemes about 6 inches long.

For previous introduction see 98929.

108834. TRIFOLIUM sp. Fabaceae.

From Africa. Seeds presented by Raymond Hook, Nanyuki, Kenya. Received February 11, 1935.

A locally grown variety of medium purple clover.

108835 to 108977.

From the Union of Soviet Socialist Republics. Seeds collected in Turkistan by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received December 7, 1934.

Introduced for Department specialists.

108835 to 108840. AEGILOPS spp. Poaceae. Grass.

108835 to 108977—Continued.

108835. AEGILOPS CRASSA Boiss.

No. 99. Near Tashkent, June 13, 1934. A decumbent annual grass with flat leaves. Native to Asia Minor.

For previous introduction see 107479.

108836 to 108838. AEGILOPS CYLINDRICA Host.

For previous introduction see 94301.

108836. No. 93. Between Milibash and Tashkent, Uzbekistan, June 14, 1934.

108837. No. 102. Near Arice, Uzbekistan, June 13, 1934.

108838. No. 108. Between Milibash and Tashkent, June 14, 1934.

108839 and 108840. AEGILOPS TRIUNCIALIS L.

Collected June 19, 1934, on clay flats west of Ashkhabad, Turkmenistan. A thickly branched annual grass with ascending stems and flat rough leaves. Native to dry places in the Mediterranean region.

For previous introduction see 107478.

108839. No. 96. 108840. No. 97.

108841 to 108843. AELUROPOUS LITTORALIS (Gouan) Parl. Poaceae.

From the Karakum Desert near Ashkhabad, June 18, 1934.

A good grazing plant found in moist places, as well as in very dry situations.

For previous introduction see 108315.

108841. No. 90. 108842. No. 95.

108843. No. 15. Collected from plants growing along the railroad near the Syr Darya and Milibash, Uzbekistan, June 13, 1934.

108844. AGRIOPHYLLUM LATIFOLIUM Fisch. and Mey. Chenopodiaceae.

No. 114. From the Repetek Sand Desert Station, Turkmenistan. A much-branched annual with ovate or subcordate, long-cuspidate leaves and small inconspicuous flowers in globular axillary clusters. Native to sandy deserts in Turkistan.

For previous introduction see 101976.

108845 to 108849. AGROPYRON spp. Poaceae. Grass.

108845. AGROPYRON ORIENTALE (L.) Roem. and Schult.

No. 110. June 18, 1934. From the edge of the desert near Ashkhabad. An annual much-branched grass, prostrate-ascending in habit, native to sandy places in Asia Minor and Turkistan.

For previous introduction see 106830.

108846. AGROPYRON ORIENTALE LASTANTHUM Boiss.

No. 126. June 26, 1934. From the Repetek Sand Desert Station, Turkmenistan. An annual grass thickly branched at the base, with numerous mostly prostrate stems scarcely 8 inches high. Native to Asia Minor and northern Africa.

For previous introduction see 98528.

108835 to 108977—Continued.

108847. *AGROPYRON SIBIRICUM* (Willd.) Beauv.
No. 122. June 13, 1934. At Mili-bash on the Syr Darya.
For previous introduction see 108435.
- 108848 and 108849. *AGROPYRON SQUARROSUM* (Roth) Link.
A perennial grass of possible use as forage.
For previous introduction see 92961.
108848. No. 92. June 18, 1934. Ashkhabad, at the edge of the desert.
108849. No. 118. June 28, 1934. Repetek Sand Desert Station, Turkmenistan.
108850. *ALLIUM SABULOSUM* Stev. Liliaceae.
No. 112. June 28, 1934. From the Repetek Sand Desert Station, Turkmenistan. A yellow-flowered allium, from sandy places in eastern Turkistan, with terete, filiform leaves. The flowers are in lax globose heads.
- 108851 and 108852. *AMMODENDRON CONOLYI* Bunge. Fabaceae.
An evergreen, silky-leaved shrub, native to Siberia, and used as a sand binder. Collected at the Repetek Sand Desert Experiment Station, Turkmenistan, June 28, 1934.
For previous introduction see 101978.
108851. No. 98. 108852. No. 124.
- 108853 and 108854. *AMMOTHAMNUS LEHMANNI* Bunge. Fabaceae.
A much-branched shrub up to 2 feet high, with compound pinnate leaves, the leaflets cuneate obovate and one-half inch long. The small white flowers are in long, lax racemes. Native to Turkistan. Collected near the edge of the Karakum Desert, June 18, 1934.
108853. No. 106. 108854. No. 73.
108855. *AMYGDALUS SPINOSISSIMA* Bunge. Amygdalaceae.
No. 89. From Kopet Dagh, south of Ashkhabad, near the Persian border, June 19, 1934. A wild almond.
For previous introduction see 86302.
108856. *AMYGDALUS* sp. Amygdalaceae.
No. 88. From Kopet Dagh, near Ashkhabad, June 21, 1934. A wild almond.
- 108857 to 108865. *ARISTIDA* spp. Poaceae. Grass.
- 108857 to 108860. *ARISTIDA PENNATA* KARELINI Trin. and Rupr.
A perennial grass of possible value as a forage crop.
For previous introduction see 106844.
- 108857 to 108859. Collected at the Repetek Sand Desert Experiment Station where they were growing in moving sand.
108857. No. 128. 108859. No. 85.
108858. No. 113.
108860. No. 125. Collected June 27, 1934, 15 miles west of Repetek, at Behl Kaduk Wells in the Karakum Desert, Turkmenistan.

108835 to 108977—Continued.

- 108861 to 108865. *ARISTIDA PENNATA* MINOR Litv.
A perennial grass, of possible value as a forage crop.
For previous introduction see 98204.
108861. No. 87. June 27, 1934. From Behl Kaduk Wells in the Karakum Desert, west of Repetek, Turkmenistan.
108862. No. 109. June 18, 1934. Collected north of Ashkhabad at the edge of sand hills, Turkmenistan.
- 108863 to 108865. June 28, 1934; from the sands at Repetek, Turkmenistan.
108863. No. 127. 108865. No. 94.
108864. No. 86.
- 108866 to 108877. *ASTRAGALUS* spp. Fabaceae.
- 108866 and 108867. *ASTRAGALUS ALOPECIAS* Pall.
June 18, 1934. From the Karakum Desert north of Ashkhabad. A perennial with white-woolly ovate leaflets and pale-yellow flowers. Native to central Asia.
For previous introduction see 106846.
108866. No. 116. 108867. No. 119.
- 108868 and 108869. *ASTRAGALUS AMMODENDRON* Bunge.
June 18, 1934. From the Karakum Desert, north of Ashkhabad. A large shrub native to sandy places near the Caspian Sea. The pinnate leaves have three leaflets, and the small purplish flowers are in short racemes.
Received under the varietal name "confirans," for which a place of publication has not been found.
For previous introduction see 94925.
108868. No. 103. 108869. No. 115.
- 108870 and 108871. *ASTRAGALUS CHIWENSIS* Bunge.
June 18, 1934. From the Karakum Desert, north of Ashkhabad. An erect, densely villous herb with pinnate leaves, the leaflets roundish and retuse. The light-yellowish flowers are in lax racemes. Native to Turkistan.
108870. No. 104. 108871. No. 120.
108872. *ASTRAGALUS* sp.
No. 105. June 18, 1934. From the Karakum Desert. Received under the name "drobowii," for which a place of publication has not been found.
108873. *ASTRAGALUS MAXIMOWICZII* Trautv.
No. 117. Collected near Ashkhabad. A yellow-flowered herb with long white-hairy compound leaves, the leaflets broadly elliptic, obtuse. The flowers are in dense axillary spikes. Native to Turkistan.
108874. *ASTRAGALUS PAUCIJUGUS* Schrenk.
No. 111. June 23, 1934. Found on moving sands at Repetek.

108835 to 108977—Continued.

108875. *ASTRAGALUS* sp.

No. 101. June 13, 1934. From Milibash on the Syr Darya.

108876. *ASTRAGALUS* sp.

No. 91. June 18, 1934. From the Karakum Desert, north of Ashkhabad.

108877. *ASTRAGALUS* sp.

No. 121. June 21, 1934. From the Ashkhabad Mountains. Excellent fodder for both grazing and hay.

108878 and 108879. *ATRIplex DIMORPHOS-TEGIA* Kar. and Kir. *Chenopodiaceae*.

An annual 18 inches high, with alternate membranous ovate leaves and terminal or axillary inconspicuous flowers. Native to dry places in Arabia and Iran.

For previous introduction see 98205.

108878. No. 123. June 30, 1934. From the Repetek Sand Desert Experiment Station, Turkmenistan.

108879. No. 107. June 18, 1934. From the Karakum Desert near Ashkhabad.

108880 to 108885. *BROMUS* spp. *Poaceae*.
Bromegrass.108880 to 108883. *BROMUS DANTHONIAE* Trin.

108880. No. 131. June 19, 1934. From Kopet Dagh, Ashkhabad.

108881. No. 132. June 18, 1934. From the foothills west of Ashkhabad. Found in rocky soil.

108882. No. 133. June 14, 1934. From Montifash, near Ashkhabad, Turkmenistan.

108883. No. 134. June 14, 1934. Arice, Uzbekistan.

108884. *BROMUS SCOPARIUS* L.

No. 13. June 14, 1934. From Montifash, between Ashkhabad and Tashkent. An annual grass with erect culms up to 16 inches high. Native to Turkistan.

108885. *BROMUS TECTORUM* L.

No. 129. Collected in June 1934 at the Repetek Sand Desert Station, Turkmenistan. A weedy annual grass with erect slender stems 1 to 2 feet tall and hairy narrow leaf blades. It will produce a good cover crop with very little rainfall. Native to Europe.

For previous introduction see 107032.

108886 to 108894. *CALLIGONUM* spp. *Polygonaceae*.

108886 to 108891. Collected in June 1934 at the Repetek Sand Desert Experiment Station, Turkmenistan.

108886 and 108887. *CALLIGONUM ARBORESCENS* Litv.

A drought-resistant shrub 10 feet high.

For previous introduction see 107507.

108886. No. 5. 108887. No. 2.

108888 and 108889. *CALLIGONUM CAPUT-MEDUSAE* Schrenk.

Native to northern and central Asia, where it is used as a sand binder.

108835 to 108977—Continued.

For previous introduction see 107508.

108888. No. 4. 108889. No. 145.

108890. *CALLIGONUM COMOSUM* L'Her.

No. 7. A densely branched shrub 10 to 15 feet high, with minute subulate leaves and small, ovate, densely spiny, nutlike fruits. Native to the eastern Mediterranean region.

For previous introduction see 106616.

108891. *CALLIGONUM ERIPODUM* Bunge.

No. 8. A slender-branched shrub with whitish branchlets and linear-subulate minute leaves which are nearly deciduous. Native to Turkistan. Used as a sand binder.

For previous introduction see 107511.

108892 to 108894. *CALLIGONUM SETOSUM* Litv.

A leafless shrub, native to the Caspian region, where it is used as a sand binder.

For previous introduction see 107513.

108892. No. 136. June 18, 1934. From the Karakum Desert, north of Ashkhabad.

108893 and 108894. From the Repetek Sand Desert Experiment Station, Turkmenistan, June 28, 1934.

108893. No. 6. 108894. No. 3.

108895 to 108897. *CAREX* spp. *Cyperaceae*.108895. *CAREX DESERTORUM* Litv.

No. 140. June 19, 1934. From west of Ashkhabad on a clay flat. A desert-loving sedge from Turkistan with a creeping rhizome, a solitary stem 2 to 8 inches high, and flat rigid leaves half as long as the stem.

108896. *CAREX PHYSDODES* Bieb.

No. 146. June 1934. From the Repetek Sand Desert Experiment Station, Turkmenistan. A perennial sedge, usually about 6 inches high, with filiform leaves. Native to sandy deserts in Turkistan.

For previous introduction see 107517.

108897. *CAREX* sp.

No. 135. June 13, 1934. From Milibash on the Syr Darya.

108898. *CONVOLVULUS DIVARICATUS* Regel and Schmalh. *Convolvulaceae*.

No. 137. June 1934. From the Repetek Sand Desert Experiment Station, Turkmenistan. A densely hairy, erect or ascending plant with small ovate, acute, sessile leaves two-fifths of an inch long and very small terminal or axillary flowers. Native to sandy places near Chiva, central Asia.

For previous introductions see 98211.

108899. *CORISPERMUM PAPPILOSUM* (Kuntze) Iljin. *Chenopodiaceae*.

No. 143. June 18, 1934. From the Karakum Desert near Ashkhabad. A low bushy plant up to a foot high, with slender, arched branches. The lower leaves

108835 to 108977—Continued.

are oblanceolate, the upper ones almost linear. Native to Turkistan.

For previous introduction see 92977.

108900. CRAMBE KOTOCHYANA Boiss. Brassicaceae.

No. 130. Collected June 18, 1934, about 10 miles west of Ashkhabad in rocky soil. An erect herb with rounded-ovate dentate leaves 7 to 9 inches long and large white flowers. Native to Iran (Persia).

For previous introduction see 107520.

108901 to 108905. CUCUMIS MELO L. Cucurbitaceae. Muskmelon.

Presented by Director Frezi, Peoples Commissioner of Agriculture, Chardjui, Turkmenistan, June 24, 1934.

108901. No. 67. *Orange gulabe.* From Kerke; their best selection.

108902. No. 68. *Persian gulabe.*

108903. No. 69. *Green Chardjui gulabe.*

108904. No. 70. *Black Chiva gulabe.*

108905. No. 71. *Brown Chardjui gulabe.* Large meat, but not so sweet.

108906. CUTANDA MEMPHITICA (Spreng.) Richter. Poaceae. Grass.

No. 1. June 28, 1934. From the Repetek Sand Desert Experiment Station, Turkmenistan. A perennial grass of possible value as forage.

For previous introduction see 92978.

108907. DACTYLIS GLOMERATA L. Poaceae. Orchard grass.

No. 11. Collected June 20, 1934, in the Ashkhabad Mountains.

108908. DANTHONIA FORSKALII Trin. Poaceae. Grass.

No. 9. June 27, 1934. From the Repetek Sand Desert Experiment Station, Turkmenistan. A tufted perennial grass about 16 inches tall, with broad linear leaves over 2 inches long. Native to sandy places in Egypt.

108909 and 108910. DELPHINIUM CAMPTOCARPUM Fisch. and Mey. Ranunculaceae.

A somewhat bushy annual 6 inches high, with biternate leaves and small grayish-blue flowers. Native to sandy places in southeastern Europe.

For previous introduction see 106873.

108909. No. 10. From the Repetek Sand Desert Experiment Station, Turkmenistan.

108910. No. 111. Collected June 18, 1934, in the Karakum Desert.

108911. DIANTHUS sp. Silenaceae.

No. 144. June 21, 1934. From the Kopet Dag, near Ashkhabad.

108912 and 108913. ELYMUS CAPUT-MEDUSAE L. Poaceae.

108912. No. 26. June 13, 1934. From Arice, Uzbekistan.

108913. No. 24. June 14, 1934. From the foothills west of Ashkhabad in dry rocky soil.

108835 to 108977—Continued.

108914. EPHEDRA STROBILACEA Bunge. Gnetaeaceae.

No. 12. June 23, 1934. Repetek Sand Desert Experiment Station, Turkmenistan. A large bushy shrub about 6 feet high, with irregularly whorled, terete, yellowish branches and minute triangular leaves. Native to central Asia.

108915. EREMOSPARTON FLACCIDUM Litv. Fabaceae.

No. 17. June 23, 1934. Repetek. A bushy tree about 15 feet high, native to sandy places in the Transcasian region. The branches are threadlike and limp, and the small flowers are dark violet.

For previous introduction see 98213.

108916. EREMOSTACHYS sp. Menthaceae.

No. 75. Collected June 14, 1934, between Milibash and Tashkent. An erect perennial with large dentate leaves, mostly radical. The yellowish flowers are in dense whorls.

108917. FERULA BADRAKEMA K.-Pol. Apiaceae.

No. 150-G. June 17, 1934. From the Repetek Sand Desert Experiment Station, Turkmenistan. A large coarse perennial, 4 to 5 feet high, with pinnatisect leaves and whitish flowers in dense terminal umbels. Native to the Transcasian region.

108918. FRITILLARIA KARELINI (Fisch.) Baker. Liliaceae.

No. 47. June 18, 1934. From the Kopet Dag near Ashkhabad. A dwarf compact species, with flowers which vary from pink to lilac, in 3- to 12-flowered racemes.

For previous introduction see 61423.

108919. HEDYSARUM WIGHTIANUM Aitch. and Baker.

No. 20. June 21, 1934. From the mountains near Ashkhabad. A low shrub up to a foot high, with compound leaves 2 to 4 inches long and small reddish-yellow flowers in racemes. Native to Afghanistan.

108920 to 108923. HORDEUM spp. Poaceae.

108920 and 108921. HORDEUM BULBOSUM L. Grass.

108920. No. 22. June 20, 1934. From the Kopet Dag, south of Ashkhabad.

108921. No. 25. June 20, 1934. From the Ashkhabad Mountains.

108922. HORDEUM MURINUM L. Grass.

No. 21. June 1934. From Montitash near Arice, Uzbekistan.

For previous introduction see 99130.

108923. HORDEUM SPONTANEUM C. Koch. Barley.

No. 23. June 1934. From the Kopet Dag, south of Ashkhabad.

For previous introduction see 107062.

108924. IRIS FILIFOLIA Boiss. Iridaceae.

No. 58. June 1934. From the Repetek Sand Desert Experiment Station, Turkmenistan. An iris with pale-green filiform leaves 2 feet or more long and violet-purple flowers about 1 inch long on a scape 2 feet high. Native to Spain.

108835 to 108977—Continued.

108925. IRIS sp.

No. 27. June 1934. Collected north of Ashkhabad.

108926 to 108928. ISATIS spp. Brassicaceae.

108926 and 108927. ISATIS MINIMA Bunge.

A low annual with oblong sinuate radical leaves, linear-lanceolate stem leaves, and yellow flowers.

For previous introduction see 92985.

108926. No. 138. June 14, 1934. Between Milibash and Tashkent.

108927. No. 59. June 1934. From the Repetek Sand Desert Experiment Station, Turkmenistan.

108928. ISATIS VIOLASCENS Bunge.

No. 28. May 28, 1934. From the Repetek Sand Desert Experiment Station, Turkmenistan. A slender annual about a foot high, with oblong-lanceolate, entire leaves and yellow flowers. Native to Iran (Persia).

For previous introduction see 92986.

108929. ECHINOSPERMUM SEMIGLABRUM Ledeb. Boraginaceae.

No. 14. June 18, 1934. North of Ashkhabad, in the Karakum Desert. A sand-loving annual, native to somewhat salty places in central Asia, with a tuft of erect stems 6 to 10 inches high, obtuse-spatulate leaves, and small white flowers in racemes.

108930. LATHYRUS sp. Fabaceae.

No. 42. June 26, 1934. From the Kopet Dagh near Ashkhabad.

108931. LEONTICE EVERSMAINI Bunge. Berberidaceae.

No. 16. From Repetek, Turkmenistan. A herbaceous perennial about a foot high, with pinnatisect leaves and terminal racemes of small yellow flowers. Native to Turkistan.

108932. LYCIUM RUTHENICUM Murr. Solanaceae.

No. 30. June 18, 1934. From the edge of the Karakum Desert, Ashkhabad. A shrub up to 6 feet high, with fascicled, linear leaves about 1 inch long and small purple flowers. Native to salty areas in southwestern Asia.

108933. MALCOMIA CIRCINNATA Boiss. Brassicaceae.

No. 72. June 8, 1934. From the Repetek Sand Desert Experiment Station, Turkmenistan. An annual about a foot high, with oblong-lanceolate, runcinate leaves and racemes of small pale-pink flowers. Native to Turkistan.

108934. MATRICARIA LAMELLATA Bunge. Asteraceae.

No. 31. From Repetek, June 23, 1934. A low annual, 3 to 5 inches high, with fleshy, hairy, pectinate leaves less than an inch long and small flower heads, the ray flowers white and the disk flowers yellow. It is a good grazing plant and is native to central Asia.

108935 to 108941. Collected in June 1934 in the clay foothills of the Kopet Dagh, south of Ashkhabad, near the border of Iran.

108835 to 108977—Continued.

108935. MEDICAGO RADIATA L. Fabaceae.

No. 57.

108936 to 108939. ONOBRYSCHIS spp. Fabaceae.

108936. ONOBRYSCHIS CHORASSANICA Bunge.

No. 34.

108937. ONOBRYSCHIS PULCHELLA Schrenk.

No. 33. An erect annual with narrow acute leaflets, stems about 2 feet high, and dull-yellow flowers. A forage plant native to the Soviet Union.

108938. ONOBRYSCHIS sp.

No. 80. Received under the name "perrisanica," for which a place of publication has not been found.

108939. ONOBRYSCHIS PULCHELLA Schrenk.

No. 32. An annual less than a foot high, with narrow leaflets and pink flowers. Native to the Soviet Union.

108940. PAPAVER sp. Papaveraceae.

No. 35.

108941. PAPAVER sp. Papaveraceae.

No. 36.

108942. PEGANUM HARMALA L. Zygophyllaceae.

No. 81. June 18, 1934. From the edge of the Karakum Desert, near Ashkhabad. In Iran this plant is used medicinally.

108943. PENNISETUM ORIENTALE L. Rich. Poaceae.

No. 45. June 19, 1934. From the foothills of the Kopet Dagh, 15 miles west of Ashkhabad.

108944 to 108946. PHELUM PANICULATUM Huds. Poaceae.

Collected June 20, 1934, in the Kopet Dagh, south of Ashkhabad, near the Iranian frontier.

108944. No. 40. 108946. No. 41.

108945. No. 29.

108947 to 108949. POA BULBOSA L. Poaceae. Bluegrass.

108947. No. 37. June 1934. From near Arice, Uzbekistan.

108948. No. 44. June 14, 1934. Montitash near Tashkent, Uzbekistan.

108949. No. 38. From the Kopet Dagh, south of Ashkhabad, in a rolling wheatfield, June 20, 1934.

108950. PRUNUS MICROCARPA Meyer. Amygdalaceae.

No. 43. June 20, 1934. From a mountain top in the Kopet Dagh, near Ashkhabad. A bush 3 to 7 feet high, with coarsely serrate leaves, rosy pink flowers less than an inch across, and small yellowish or red fruits. Native to Asia Minor.

108951 to 108953. RHEUM spp. Polygonaceae.

108835 to 108977—Continued.

108951. RHEUM sp.

No. 39. June 21, 1934. From the Kopet Dagh, south of Ashkhabad. Received under the name "turcomanicum," for which a place of publication has not been found.

108952 and 108953. RHEUM TURKESTANICUM Janischew.

June 23, 1934. Repetek, Tur'menistan. A wild rhubarb from the Transcaspian region, over 2 feet high, with a large thick rhizome and a short thickened, densely leafy stem. The cordate-reniform leaves, up to 8 in number, are about a foot wide.

For previous introduction see 98217.

108952. No. 48. 108953. No. 49.

108954. ROSA sp. Rosaceae.

No. 46. June 20, 1934. From the Kopet Dagh.

108955. SALSOLA ARBORESCENS RICHLERI Moquin. Chenopodiaceae.

No. 62. From the Repetek Sand Desert Experiment Station, Turkmenistan. A much-branched shrub with semiterete leaves and small inconspicuous flowers. Native to the deserts of Siberia.

For previous introduction see 107575.

108956 to 108958. SENECIO SUBDENTATUS Ledeb. Asteraceae.

An erect annual up to 9 inches high, with broadly linear leaves about 2 inches long, more or less entire, and corymbs of yellow flower heads. A good grazing plant, native to central Asia.

108956. No. 63. June 18, 1934. From sandy soil in the Karakum Desert.

108957 and 108958. From the Repetek Sand Desert Experiment Station, Turkmenistan.

108957. No. 61. May 28, 1934.

108958. No. 51. June 1934.

108959 and 108960. SMIRNOWIA TURKESTANA Bunge. Fabaceae.

June 24, 1934. From the Repetek Sand Desert Experiment Station, Turkmenistan. A much-branched shrub with long, almost filiform branches and leaves reduced to a single obovate leaflet. Native to the deserts of Turkistan.

For previous introduction see 101980.

108959. No. 53. 108960. No. 50.

108961 to 108964. STIPA spp. Poaceae. Grass.

108961. STIPA CAUCASICA Schmalh.

No. 54. June 17, 1934. Collected in the sandy soil of the Karakum Desert north of Ashkhabad. A tufted perennial grass over a foot high with narrow panicles. Native to the Caucasus.

108962. STIPA FONTANESII Parl.

No. 52. June 21, 1934. From the Kopet Dagh, in clay soil. A perennial grass with slender leaves. Native to Europe.

108835 to 108977—Continued.

108963 and 108964. STIPA SZOVITZIANA Trin.

A tufted perennial grass with fibrous roots and short rigid leaves. Native to Asia Minor, Arabia, and Iran.

For previous introduction see 106905.

108963. No. 55. June 20, 1934. From clay soil, in the Kopet Dagh, near Ashkhabad.

108964. No. 56. June 13, 1934. From Milibash on the Syr Darya.

108965 and 108966. June 8, 1934; from the Repetek Sand Desert Experiment Station, Turkmenistan.

108965. SUAEDA LYPKII Litv. Chenopodiaceae.

No. 60. An erect annual up to 16 inches high, with terete filiform leaves and inconspicuous flowers. Native to the Transcaspien region.

108966. TAMARIX KARELINI Bunge. Tamaricaceae.

No. 65. Received as *T. ramosissima*, a synonym of the above species. A bushy shrub with glaucous, deciduous branchlets and slender racemes of deep-purple flowers. Native to the vicinity of the Caspian Sea.

108967. TOURNEFORTIA sp. Boraginaceae.

No. 19. June 18, 1934. From the Karakum Desert north of Ashkhabad. Received under the name "sogdiana," for which a place of publication has not been found. A sand-binding plant.

108968 to 108970. TRIGONELLA spp. Fabaceae.

108968. TRIGONELLA ARCUATA Meyer.

No. 83. June 13, 1934. From Montitash near Arice.

For previous introduction and description see 108110.

108969 and 108970. Collected between Milibash on the Syr Darya and Tashkent, June 13, 1934.

108969. TRIGONELLA sp.

No. 82.

108970. TRIGONELLA sp.

No. 77.

108971. TULIPA sp. Liliaceae.

No. 78. Collected between Milibash on the Syr Darya and Tashkent, June 13, 1934.

108972 to 108974. Collected June 19 and 20, 1934, on the Kopet Dagh, near Ashkhabad.

108972. VICIA sp. Fabaceae.

No. 64.

108973. VICIA sp. Fabaceae.

No. 150-F. Found in dry rocky soil.

108974. VICIA sp. Fabaceae.

No. 66.

108975. (Undetermined.)

No. 141. June 13, 1934. A crucifer collected along the railroad south of Milibash along the Syr Darya.

108835 to 108977—Continued.

108976. (Undetermined.)

No. 142. June 13, 1934. A crucifer from Milibash on the Syr Darya.

108977. (Undetermined.)

No. 76. June 14, 1934. Collected on rolling land between Milibash and Tashkent.

108978. *ALLIUM SATIVUM* L. Liliaceae.
Garlic.

From Europe. Bulbs presented by Prof. Ivo Volarić, State Agronomist, Croatia, Yugoslavia. Received February 16, 1935.

Native garlic, introduced for Department specialists.

108979 to 108982. *TRITICUM AESTIVUM* L. Poaceae. Common wheat.

From New Zealand. Seeds presented by R. B. Tennent, Director, Fields Division, Department of Agriculture, Wellington. Received February 16, 1935.

Introduced for Department specialists.

108979. Solid straw Tuscan (standard).

108980. Solid straw Tuscan (variant).

108981. Solid straw Tuscan, Selection 13/28.

108982. Cross 7.

108983. *SOLANUM TUBEROSUM* L. Solanaceae. Potato.

From Venezuela, South America. Tubers collected by W. A. Archer, Bureau of Plant Industry. Received February 16, 1935.

From the market at Caracas. A cultivated variety of the Andes section of Venezuela, said to be the only potato that will produce a crop there.

108984 to 108989.

From Egypt, Africa. Seeds presented by Thomas W. Brown, Ministry of Agriculture, Giza. Received February 18, 1935.

Locally grown strains introduced for Department specialists.

108984. *ALLIUM CEPA* L. Liliaceae. Onion.108985 to 108987. *ALLIUM SATIVUM* L. Liliaceae. Garlic.108988. *APIUM GRAVEOLENS* L. Apiaceae. Celery.108989. *DAUCUS CAROTA* L. Apiaceae. Carrot.108990. *NEPHELIUM LAPPACEUM* L. Sapindaceae. Rambutan.

From Java. Seeds presented by A. M. Cramer, Sr., Wonosobo. Received February 11, 1935.

Tangkoeve, a freestone variety of an erect tropical tree 35 to 40 feet high, native to the Malay Archipelago, and not yet extensively cultivated elsewhere. The compound leaves are composed of five to seven pairs of elliptic, obovate or oblong, glabrate leaflets about 4 inches long, shining dark-green above, paler beneath. The small flowers are in loose axillary and terminal panicles. The crimson or yellowish fruits, in clusters of 10 to 12, are oval, about 2 inches

108990—Continued.

long, and covered with soft fleshy spines less than an inch long. The white juicy translucent flesh (aril) which adheres to the oblong flattened seed is acidulous in flavor.

For previous introduction see 101158.

108991 and 108992.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received February 9, 1935.

108991. *GILBERTIA ARBOREA* (L.) E. March. Araliaceae.

A large shrub or small tree, with oval-oblong or three-lobed leaves and umbels of small whitish flowers, succeeded by black fruits. Native to the Canal Zone.

108992. *QUISQUALIS INDICA* L. Combretaceae. Rangoon-creeper.

A rambling, subscandent shrub native to India, with opposite obovate leaves 4 inches long and short axillary and terminal spikes of tubular pink or red flowers. The obovoid fruits are 1 to 2 inches long and are sharply five-angled.

For previous introduction see 98380.

108993. *EPHEDRA* sp. Gnetaceae.

From India. Seeds presented by Ralph R. Stewart, Gordon College, Rawalpindi. Received February 7, 1935.

Introduced for Department specialists.

108994 to 109001.

From California. Seeds presented by James N. Robinson, Cash Nurseries, Sebastopol. Received February 12, 1935.

108994. *AGAPETES* sp. Vacciniaceae.

The agapetes are tender evergreen shrubs with handsome lustrous foliage and showy, usually scarlet, flowers. Native to the Himalayas at altitudes between 3,000 and 6,000 feet.

108995. *LEUCOSPERMUM REFLEXUM* Buek. Proteaceae.

An erect shrub with linear-oblong leaves, dentate at the apex, 1 to 2 inches long, and small yellow flowers in roundish heads 3 inches across. Native to South Africa.

108996. *PRIMULA KINGII* Watt. Primulaceae. Primrose.

A glabrous perennial, native to the Sikkim Himalayas. The elliptic-lanceolate, crenulate leaves, 2 to 3 inches long, are in a crowded rosette, and the slender scapes, 6 to 10 inches high, bear four or five claret-colored, funnel-shaped flowers nearly an inch across.

For previous introduction see 102324.

108997. *PRIMULA WATTHI* King. Primulaceae. Primrose.

A handsome primrose from the Sikkim Himalayas, with oblong-oblancoate, membranous, lobed-crenate leaves one-half inch across and small violet flowers in heads 2 inches across on a scape 5 to 6 inches high.

108998. *RHODODENDRON ANTHOPOGON* Don. Ericaceae.

A small shrub 1 foot high, with rough densely scaly branches and leaves which

108994 to 109001—Continued.

are over an inch long, cinnamon brown beneath, and tomentose from the layer of glands. The yellow flowers are in numerous short terminal fascicles.

For previous introduction see 58914.

108999. RHODODENDRON AUCKLANDII Hook. f. Ericaceae.

A rare shrub up to 8 feet high, native to the Sikkim Himalayas between 7,000 and 9,000 feet altitude. The oblong-elliptical, bright-green leaves are 4 to 10 inches long, and the flowers, white, tinged with pink, and 4 inches across, are in terminal clusters of three to five.

109000. SWERTIA MULTICAULIS D. Don. Gentianaceae.

A caespitose herbaceous perennial about 2 inches high, with lanceolate obtuse leaves and small purplish flowers. Native to the mountains of Nepal, India.

109001. TSUGA MERTENSIANA Carriere. Pinaceae.

A large tree, 200 feet or more in height, of pyramidal habit. Closely allied to *Tsuga canadensis*, but differing in its un-forked trunk and spirelike summit. Native to the Pacific coast of North America from Oregon to Alaska.

109002 to 109189.

From Turkey. Seeds collected by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received January 8, 1935.

109002 to 109009. AEGILOPS sp. Poaceae.

109002. AEGILOPS SPELTOIDES Tausch.

No. T-104. Collected September 26, 1934, about 10 miles east of Sivas. A bushy grass with slender erect stems and narrow rough leaves. It is native to western Asia, especially Syria.

For previous introduction see 45802.

109003. AEGILOPS sp.

No. T-59. September 25, 1934, at Palas Lake.

109004 and 109005. Collected September 21, 1934, at Ankara.

109004. AEGILOPS sp.

No. T-10.

109005. AEGILOPS sp.

No. T-5.

109006. AEGILOPS sp.

No. T-40. September 24, 1934. Near Kirshehir.

109007 and 109008. Collected September 21, 1934, at Ankara.

109007. AEGILOPS sp.

No. T-2.

109008. AEGILOPS sp.

No. T-7.

109009. AEGILOPS sp.

No. T-46. September 24, 1934. About 15 miles southeast of Kirshehir.

109010 to 109022. AGROPYRON spp. Poaceae. Wheatgrass.

109010 to 109012. AGROPYRON CRISTATUM (L.) Gaertn. Crested wheatgrass.

109002 to 109189—Continued.

109010. No. T-33. About 25 miles southeast of Ankara, September 23, 1934.

109011. No. T-68. September 25, 1934. Found on very dry red loam near Palas Lake, northeast of Kayseri.

109012. No. T-3. September 21, 1934. Found on dry gravelly clay soil at Ankara.

109013 to 109016. AGROPYRON TRICOPHORUM (Link) Richt.

For previous introduction see 107483.

109013. No. T-44. September 24, 1934. About 15 miles southeast of Kirshehir.

109014. No. T-95. September 26, 1934. Between 35 and 40 miles east of Sivas in dry limestone hills.

109015. No. T-58. September 25, 1934, at Palas Lake.

109016. No. T-45. September 24, 1934. About 15 miles southeast of Kirshehir.

109017. AGROPYRON sp.

No. T-16. September 23, 1934. About 30 miles northeast of Kirshehir on a dry mountainside.

109018. AGROPYRON sp.

No. T-32. September 23, 1934; Ankara.

109019. AGROPYRON sp.

No. T-121. September 27, 1934. In rocky soil in a mountain gorge, 50 miles south of Giresun.

109020. AGROPYRON sp.

No. T-100. September 26, 1934. Found in dry clay soil 65 miles northeast of Sivas.

109021. AGROPYRON sp.

No. T-79. About 50 miles northeast of Sivas on a mountain slope.

109022. AGROPYRON sp.

No. T-148. September 27, 1934. About 15 miles from Shebinkarahisar and Giresun.

109023 and 109024. AGROSTIS ALBA L. Poaceae. Redtop.

109023. No. T-127. From Shebinkarahisar.

109024. No. T-64. September 25, 1934. From a low area near Palas Lake, northeast of Kayseri.

109025 and 109026. AGROSTIS INTERRUPTA L.

An annual bushy grass up to 2 feet high. Native to sandy places in the Mediterranean countries.

For previous introduction see 107483.

109025. No. T-80. September 26, 1934. From a dry rocky mountainside about 65 miles east of Sivas.

109026. No. T-132. September 27, 1934. From rocky soil in a mountain gorge, 50 miles south of Giresun.

109002 to 109189—Continued.

109027 to 109029. ALLIUM spp. Liliaceae.

109027 and 109028. ALLIUM CEPA L.
Onion.

109027. No. T-180. From Samsun.

109028. No. T-135. From the bazaar
at Shebinkarahisar, September 27,
1934.

109029. ALLIUM sp.

No. T-72. September 25, 1934.
From Palas Lake.

109030. ALTHAEA sp. Malvaceae.

No. T-143. September 27, 1934.
About 65 miles south of Gitesun in a
mountain gorge.109031 to 109033. ANDROPOGON ISCHAEMUM
L. Poaceae.109031. No. T-6. September 21, 1934.
Ankara. From very dry permanent
sod growing on gravelly clay.109032. No. T-47. September 24, 1934.
From a very dry clay rolling plain,
about 7 miles east of Kirshehir.109033. No. T-60. September 25, 1934.
Kayseri. Collected on dry rocky soil.109034. ANETHUM GRAVEOLENS L. Api-
ceae. Dill.No. T-178. September 30, 1934. From
Samsun.109035. ARBUTUS ANDRACHNE L. Erica-
ceae.No. T-155. September 27, 1934. From
Giresun.For previous introduction and descrip-
tion see 108298.109036. AVENA DESERTORUM Less. Poa-
ceae.No. T-136. September 27, 1934. From
rocky soil in a mountain gorge, about 65
miles south of Giresun. A perennial
grass, native to central Asia, with a black
fibrous rhizome and rigid, elongated
leaves.

109037. RHODODENDRON sp. Ericaceae.

No. T-165. September 27, 1934.
From Giresun.

109038 to 109040. BETA VULGARIS L. Chenopodiaceae. Beet.

109038 and 109039. September 30, 1934.
From Samsun.

109038. No. T-179. 109039. No. T-184.

109040. No. T-169. September 27, 1934.
From the bazaar at Shebinkarahisar.109041 and 109042. BRASSICA OLERACEA CA-
PUTATA L. Brassicaceae. Cabbage.

September 30, 1934, at Samsun.

109041. No. T-187. 109042. No. T-183.

109043. BRIZA MEDIA L. Poaceae.

No. T-122. About 20 miles north of
Shebinkarahisar. A low perennial grass
with erect culms. Native to Europe.

109044. BRIZA MINOR L. Poaceae.

No. T-91. September 26, 1934. About
65 miles northeast of Sivas. An erect
annual grass, up to 3 feet high. Native
to Europe.

109002 to 109189—Continued.

109045. BROMUS sp. Poaceae.

No. T-62. September 25, 1934. An
annual grass collected 35 miles north-
east of Kayseri near Palas Lake.

109046. BROMUS sp. Poaceae.

No. T-70. September 25, 1934. About
105 miles northeast of Kayseri. A per-
ennial grass.

109047. BROMUS sp. Poaceae.

No. T-88. September 26, 1934. A
perennial grass found on dry limestone
hills about 65 miles east of Sivas.

109048. BROMUS sp. Poaceae.

No. T-123. September 27, 1934. Col-
lected at the mouth of a small canyon
about 10 miles from Shebinkarahisar, en
route to Giresun.

109049. CALAMAGROSTIS sp. Poaceae.

No. T-163. September 27, 1934.
10 miles from Shebinkarahisar, en route
to Giresun.

109050. CALAMAGROSTIS sp. Poaceae.

No. T-85. September 26, 1934. About
55 miles northeast of Sivas in the moun-
tains.

109051. CAMPANULA sp. Campanulaceae.

No. T-177. September 28, 1934. From
a mountainside at Giresun.

109052. CAMPANULA sp. Campanulaceae.

No. T-128. September 27, 1934. From
Giresun. A form with white flowers.

109053 and 109054. CAPSICUM ANNUUM L. Solanaceae. Common redpepper.

109053. No. T-37. September 24, 1934.
From the Kayseri bazar.109054. No. T-189. September 30, 1934.
A sweet pepper from Samsun.

109055. CISTUS sp. Cistaceae.

No. T-176. September 24, 1934. From
Giresun.

109056. CLEMATIS sp. Ranunculaceae.

No. T-166. September 27, 1934. From
Giresun.109057. CORIANDRUM SATIVUM L. Api-
ceae. Coriander.No. T-191. September 30, 1934. From
Samsun.

109058. COTONEASTER sp. Malaceae.

No. T-20. September 23, 1934. From
a dry rocky hillside about 65 miles south-
east of Ankara.

109059 to 109062. CUCUMIS MELO L. Cucurbitaceae. Muskmelon.

109059. No. T-81. September 26, 1934.
A long, gray netted melon from Sivas.109060. No. T-48. September 24, 1934.
A green-skinned melon of very good
flavor from Kirshehir.109061. No. T-141. September 27, 1934.
A round yellow melon from She-
binkarahisar.109062. No. T-49. September 24, 1934.
From Ankara. A melon with a
mottled green and yellow skin.

109002 to 109189—Continued.

109063. *CUCUMIS SATIVUS* L. Cucurbitaceae.
Cucumber.
No. T-148. September 27, 1934. From the bazar at Shebinkarahisar.
109064. *CUCURBITA MAXIMA* Duchesne. Cucurbitaceae. Squash.
No. T-196. September 30, 1934. From Samsun.
109065. *CYNANCHUM* sp. Asclepiadaceae.
No. T-161. September 27, 1934. From Giresun. An attractive vine with milky juice and seed pods like the milkweed.
- 109066 to 109068. *CYNODON DACTYLON* (L.) Pers. Poaceae. Bermuda grass.
109066. No. T-8. September 21, 1934. Along the roadside at Ankara.
109067. No. T-30. September 23, 1934. Along the roadside in dry stony clay soil about 65 miles southeast of Anlara.
109068. No. T-63. September 25, 1934. About 35 miles northeast of Kayseri.
- 109069 and 109070. *CYNOSURUS CRISTATUS* L. Poaceae. Crested dogtail.
109069. No. T-134. September 27, 1934. Collected in stony soil in a mountain canyon about 50 miles south of Giresun.
109070. No. T-130. September 27, 1934. About 10 miles from Shebinkarahisar, en route to Giresun.
- 109071 to 109073. *DACTYLIS GLOMERATA* L. Poaceae. Orchard grass.
109071. No. T-69. September 25, 1934. Collected about 25 miles northeast of Kayseri near Palas-Lake, on reddish clay loam.
109072. No. T-14. September 23, 1934. Collected 80 miles southeast of Ankara in very dry loam.
109073. No. T-19. September 23, 1934. From a dry overgrazed hillside of stony loam soil between 6 and 25 miles southeast of Ankara.
- 109074 and 109075. *DAUCUS CAROTA* L. Apiaceae. Carrot.
109074. No. T-182. September 30, 1934. From Samsun.
109075. No. T-131. September 27, 1934. From the bazaar at Shebinkarahisar.
- 109076 and 109077. *DESCHAMPSIA CAESPI-TOSA* (L.) Beauv. Poaceae.
109076. No. T-142. September 27, 1934. From rocky soil in a mountain gorge, 50 miles south of Giresun.
109077. No. T-160. September 27, 1934. Twenty miles from Shebinkarahisar, en route to Giresun.
109078. *DIANTHUS* sp. Silenaceae.
No. T-34. September 24, 1934. South-east of Kirshehir.
109079. *DIANTHUS* sp. Silenaceae.
No. T-74. September 21, 1934. From dry rocky soil at Kayseri.
109080. *ECHINOPS BANNATICUS* Roch. Asteraceae.
No. T-109. September 26, 1934. An ornamental, thistlelike plant with blue

109002 to 109189—Continued.

- stems and blue flowers, collected about 50 miles northeast of Sivas.
- 109081 to 109083. *ELICHRYSUM* spp. Asteraceae.
Strawflowers collected September 26, 1934, from 7 to 40 miles east of Sivas.
109081. *ELICHRYSUM* sp.
No. T-101.
109082. *ELICHRYSUM* sp.
No. T-112. A yellow strawflower found growing in limestone.
109083. *ELICHRYSUM* sp.
No. T-117.
109084. *EREMURUS* sp. Liliaceae.
No. T-50. September 25, 1934. From Kayseri.
109085. *EREMURUS* sp. Liliaceae.
No. T-57. September 25, 1934. From Kayseri.
- 109086 to 109088. *FESTUCA OVINA* L. Poaceae. Sheep fescue.
109086. No. T-66. September 25, 1934. About 100 miles from Kayseri, en route to Sivas, in barren limestone soil.
109087. No. T-110. September 26, 1934. Collected about 8 miles east of Sivas in limestone hills.
109088. No. T-77. About 8 miles northeast of Sivas on a dry stony mountainside. September 26, 1934.
109089. *GLAUCIUM* sp. Papaveraceae.
No. T-12. September 21, 1934. Ankara. A plant with orange-colored flowers like the California-poppy.
- 109090 and 109091. *HOLCUS LANATUS* L. Poaceae. Velvet grass.
September 27, 1934. About 12 miles from Shebinkarahisar, en route to Giresun.
109090. No. T-125. 109091. No. T-126.
109092. *HORDEUM BULBOSUM* L. Poaceae.
No. T-27. September 23, 1934. From a dry rocky hillside about 70 miles southeast of Ankara.
- 109093 to 109095. *JUNIPERUS* spp. Pinaceae.
109093. *JUNIPERUS COMMUNIS* L. Common juniper.
No. T-83. September 26, 1934. From a mountainside, 40 miles east of Sivas.
- 109094 and 109095. *JUNIPERUS OXYCEDRUS* L. Prickly juniper.
An ornamental evergreen tree, native to Europe, about 15 feet high, with light-green foliage covered somewhat with a whitish bloom. It is reported to thrive in dry rocky places.
For previous introduction see 79922.
109094. No. T-92. September 26, 1934. About 50 miles east of Sivas.
109095. No. T-26. September 23, 1934. About 65 miles southeast of Ankara.

109002 to 109189—Continued.

- 109096 to 109098. *KOELERIA CRISTATA* (L.) Pers. Poaceae.
109096. No. T-106. September 26, 1934. From a dry rocky mountainside, about 40 miles northeast of Sivas.
109097. No. T-61. September 25, 1934. About 107 miles northeast of Kayseri.
109098. No. T-93. September 26, 1934. From a dry stony mountainside, about 7 miles northeast of Sivas.
109099. *KOELERIA* sp. Poaceae.
No. T-15. September 23, 1934. From permanent grazing land on a stony hillside about 25 miles southeast of Ankara.
- 109100 and 109101. *LACTUCA SATIVA* L. Cichoriaceae. Garden lettuce.
109100. No. T-170. September 27, 1934. From the bazar at Shebinkarahisar.
109101. No. T-186. September 30, 1934. From Samsun.
109102. *LATHYRUS* sp. Fabaceae.
No. T-97. September 26, 1934. About 50 miles northeast of Sivas.
109103. *LEPIDIUM SATIVUM* L. Brassicaceae. Garden cress.
No. T-185. September 30, 1934. From Samsun.
- 109104 to 109106. *LINUM* spp. Linaceae. Flax.
109104. *LINUM* sp.
No. T-111. September 26, 1934. About 37 miles east of Sivas, from dry limestone hills.
- 109105 and 109106. *LINUM USITATISSIMUM* L.
109105. No. T-71. September 15, 1934. Thirty miles east of Kayseri.
109106. No. T-35. September 24, 1934. From the bazar at Kayseri.
109107. *LOLIUM PERENNE* L. Poaceae. Perennial ryegrass.
No. T-159. September 27, 1934. From a mountain gorge 50 miles south of Giresun.
- 109108 to 109111. *LOTUS* spp. Fabaceae.
Shrubby perennials found in woods and thickets on the mountainside near Giresun, September 27 and 28, 1934.
109108. *LOTUS* sp.
No. T-156.
109109. *LOTUS* sp.
No. T-174.
109110. *LOTUS* sp.
No. T-173.
109111. *LOTUS* sp.
No. T-158.
- 109112 and 109113. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.
109112. No. T-38. September 24, 1934. From the Kayseri bazar.
109113. No. T-181. September 30, 1934. From Samsun.

109002 to 109189—Continued.

109114. *MEDICAGO SATIVA* L. Fabaceae. Alfalfa.
No. T-120. September 26, 1934. From the Sivas bazar.
109115. *MEDICAGO FALCATA* L. Fabaceae. Yellow-flowered alfalfa.
No. T-115. September 26, 1934. About 50 miles northeast of Sivas.
- 109116 and 109117. Collected September 28, 1934, in woods near Giresun.
109116. *MESPILUS GERMANICA* L. Malaceae. Medlar.
No. T-172. This so-called wild-apple is acid and much like a quince until it turns brown, when it has a delicious flavor and aroma. Native to the Balkan region.
For previous introduction see 91842.
109117. *MOLINIA CAERULEA* (L.) Moench. Poaceae.
No. T-175. A grass with striped leaves which is cultivated as an ornamental for use in borders.
For previous introduction see 50540.
109118. *ONOBRYCHIS* sp. Fabaceae.
No. T-113. September 26, 1934. About 37 miles east of Sivas.
109119. *PEGANUM HARMALA* L. Zygophyllaceae.
No. T-11. September 21, 1934. From Ankara. A shrub common in dry soil in Turkey and Turkistan.
109120. *PENNISETUM* sp. Poaceae.
No. T-25. September 23, 1934. From a dry rocky hillside about 65 miles southeast of Ankara.
- 109121 to 109123. *PETROSELINUM HORTENSE* Hoffm. Apiaceae. Parsley.
109121. No. T-139. September 27, 1934. From the market at Shebinkarahisar.
- 109122 and 109123. Collected September 30, 1934, at Samsun.
109122. No. T-188. 109123. No. T-190.
- 109124 and 109125. *PHASEOLUS VULGARIS* L. Fabaceae. Common bean.
Collected September 30, 1934, at Samsun.
109124. No. T-195. A pole bean.
109125. No. T-194. A bush bean.
- 109126 to 109130. *PHLEUM* spp. Poaceae. Timothy.
- 109126 to 109129. *PHLEUM ARENARIUM* L.
109126. No. T-65. September 25, 1934. From a very dry, rocky clay field, much overgrazed, about 7 miles east of Kayseri.
109127. No. T-89. September 26, 1934. From a mountain slope about 55 miles northeast of Sivas.
109128. No. T-13. September 23, 1934. From a permanent grazing field on a dry stony loam hillside about 25 miles southeast of Ankara.
109129. No. T-154. September 27, 1934. From the rocky soil of a mountain gorge, 50 miles south of Giresun.

109002 to 109189—Continued.

109130. *PHLEUM PHLEOIDES* (L.) Karst.
No. T-17. From dry rocky soil about 65 miles southeast of Ankara, en route to Kirshehir.
109131. *PINUS* sp. Pinaceae.
No. T-76. September 26, 1934. Abundant in the mountains of northern Turkey.
- 109132 to 109142. *POA* spp. Poaceae.
Bluegrass.
- 109132 to 109135. *POA BULBOSA* L.
109132. No. T-43. September 24, 1934. From very dry clay soil of the rolling plain about 7 miles east of Kirshehir.
109133. No. T-55. September 25, 1934. About 8 miles northeast of Kayseri.
109134. No. T-105. September 26, 1934. From a dry stony mountainside, about 7 miles northeast of Sivas.
109135. No. T-41. September 24, 1934. Collected near Kirshehir.
109136. *POA* sp.
No. T-22. September 23, 1934. From a permanent grazing field on a dry stony hillside near Ankara.
109137. *POA* sp.
No. T-98. September 26, 1934. About 7 miles east of Sivas in limestone hills.
109138. *POA* sp.
No. T-107. September 26, 1934. From a mountain slope about 55 miles northeast of Sivas.
109139. *POA* sp.
No. T-24. September 23, 1934. From a dry rocky hillside about 65 miles southeast of Ankara.
109140. *POA* sp.
No. T-90. September 26, 1934. From a mountain slope about 55 miles northeast of Sivas.
109141. *POA* sp.
No. T-51. September 25, 1934. About 107 miles from Kayseri, en route to Sivas.
109142. *POA* sp.
No. T-116. September 26, 1934. About 7 miles east of Sivas on low limestone mountains.
109143. *POLYPOGON MONSPELIENSIS* (L.) Desf. Poaceae.
No. T-67. September 25, 1934. From a low area northeast of Kayseri near Palas Lake. An annual grass with soft bristly green or yellowish spikes up to 6 inches long.
For previous introduction see 107113.
109144. *PRUNUS* sp. Amygdalaceae.
No. T-147. September 27, 1934. A wild plum found at the entrance to a canyon about 12 miles north of Shebin-karahisar, en route to Giresun.

109002 to 109189—Continued.

109145. *PYRACANTHA COCCINEA* Roem. Malvaceae.
Scarlet firethorn.
No. T-133. September 27, 1934. A rather spiny, ornamental shrub with red fruit, collected at Giresun.
- 109146 to 109148. *RAPHANUS SATIVUS* L. Brassicaceae.
Radish.
109146. No. T-36. September 24, 1934. From the Kayseri bazar.
109147. No. T-193. September 30, 1934. From Samsun.
109148. No. T-137. September 27, 1934. From the Shebin-karahisar bazar.
109149. *RHAPHIS GRYLLOS* (L.) Desv. Poaceae.
No. T-23. September 23, 1934. From a dry rocky hillside about 65 miles southeast of Ankara.
109150. *RHODODENDRON* sp. Ericaceae.
No. T-162. September 27, 1934. From Giresun.
109151. *ROBINIA PSEUDACACIA* L. Fabaceae.
Common locust.
No. T-4. September 21, 1934. Black locust, collected along a roadside near Ankara.
- 109152 to 109154. *ROSA* spp. Rosaceae.
Rose.
109152. *ROSA* sp.
No. T-54. September 25, 1934. Near Palas Lake, about 27 miles northeast of Kayseri.
109153. *ROSA* sp.
No. T-53. September 25, 1934. A wild rose collected 100 miles northeast of Kayseri.
109154. *ROSA* sp.
No. T-198. October 1, 1934. A wild rose from Samsun.
109155. *RUBUS* sp. Rosaceae.
No. T-129. September 27, 1934. A wild blackberry collected near a mountain stream about 65 miles south of Giresun on the road from Shebin-karahisar. The berries are large, with a fine flavor, and the bush is a prolific bearer.
- 109156 and 109157. Collected September 27, 1934, at Giresun.
109156. *RUSCUS ACULEATUS* L. Convalariaceae.
Butchersbroom.
No. T-152. A shrub found growing in deep shade. The bright-red berries are borne on the leaves.
For previous introduction see 98159.
109157. *SCABIOSA* sp. Dipsacaceae.
No. T-149. A species with white flowers.
109158. *SILENE* sp. Silenaceae.
No. T-118. September 26, 1934. From Sivas. A plant found growing on almost bare limestone.
- 109159 and 109160. *SOLANUM MELONGENA* L. Solanaceae.
Eggplant.
109159. No. T-39. September 24, 1934. From the Kayseri bazar.

109002 to 109189—Continued.

109160. No. T-42. September 26, 1934. From Sivas. A long narrow type, grown commercially in Turkey.
- 109161 and 109162. SPINACIA OLERACEA L. Chenopodiaceae. **Common spinach.**
109161. No. T-146. September 27, 1934. From the bazar at Shebinkarahisar.
109162. No. T-192. September 30, 1934. From Samsun.
109163. STAPHYLEA PINNATA L. Staphyleaceae. **European bladdernut.**
- No. T-171. September 27, 1934. About 27 miles south of Giresun, en route to Shebinkarahisar. A treelike shrub with deciduous leaves and terminal clusters of small white flowers and much inflated membranaceous podlike fruits.
- For previous introduction see 50306.
- 109164 to 109172. STIPA spp. Poaceae. **Feathergrass.**
109164. STIPA CAPILLATA L.
- No. T-29. September 23, 1934. From a dry mountainside, 20 miles northeast of Kirshehir.
109165. STIPA sp.
- No. T-9. September 21, 1934. From Ankara.
109166. STIPA sp.
- No. T-78. September 26, 1934. From a dry rocky mountainside about 35 miles east of Sivas.
- 109167 to 109169. Collected September 23, 1934, from 25 miles to 85 miles southeast of Ankara.
109167. STIPA sp.
- No. T-18.
109168. STIPA sp.
- No. T-21. From a permanent grazing field on a stony dry hillside.
109169. STIPA sp.
- No. T-28. From very dry loam.
109170. STIPA sp.
- No. T-56. September 25, 1934. From dry red clay loam soil near Palas Lake, northeast of Kayseri.
- 109171 and 109172. Collected September 26, 1934, from a dry stony mountainside about 7 miles northeast of Sivas.
109171. STIPA sp.
- No. T-94.
109172. STIPA sp.
- No. T-108.
- 109173 to 109181. TRIFOLIUM spp. Fabaceae. **Clover.**
109173. TRIFOLIUM AGRARIUM L.
- No. T-144. September 27, 1934. *Hop clover*, found on a fairly moist mountain slope about 35 miles south of Giresun.
- For previous introduction see 108696.
- 109174 and 109175. TRIFOLIUM PRATENSE L. **Red clover.**

109002 to 109189—Continued.

109174. No. T-145. September 27, 1934. Collected along a mountain road 50 miles south of Giresun.
109175. No. T-96. September 26, 1934. Collected in the mountains about 50 miles northeast of Sivas.
109176. TRIFOLIUM sp.
- No. T-157. September 27, 1934. From Giresun.
- 109177 and 109178. Collected October 1, 1934, in the flats along the Black Sea, 10 miles east of Samsun.
109177. TRIFOLIUM sp.
- No. T-197.
109178. TRIFOLIUM sp.
- No. T-199.
- 109179 and 109180. Collected September 26, 1934, about 50 miles northeast of Sivas.
109179. TRIFOLIUM sp.
- No. T-86. From a dry mountain slope.
109180. TRIFOLIUM sp.
- No. T-82.
109181. TRIFOLIUM sp.
- No. T-138. September 27, 1934. From Giresun.
109182. VIBURNUM sp. Caprifoliaceae.
- No. T-124. September 27, 1934. An ornamental shrub with large clusters of bright-red berries one-half inch in diameter, found on the bank of a canyon near Giresun.
- 109183 to 109185. VICIA spp. Fabaceae. **Broadbean.**
109183. VICIA FABA L. **Broadbean.**
- No. T-149-A. September 27, 1934. From the Shebinkarahisar bazar.
109184. VICIA sp.
- No. T-114. September 27, 1934. From about 50 miles northeast of Sivas.
109185. VICIA sp.
- No. T-140. September 26, 1934. From basalt soil near Giresun.
109186. (Undetermined.)
- No. T-73. September 25, 1934. From Kayseri. A shrub.
109187. CORNUS MAS L. Cornaceae. **Cornelian-cherry.**
- No. T-1. September 18, 1934. *Kizil-jik*. From the Ankara bazar. Small, dark-red fruits with a distinctive flavor.
- For previous introduction see 107624.
109188. PLUMBAGO EUROPAEA L.
- No. T-52. September 25, 1934. A flowering plant from Kayseri.
109189. (Undetermined.)
- No. T-153. September 27, 1934. From Giresun. A shrub with black berries.
109190. FURCRAEA FOETIDA (L.) Haw. Amaryllidaceae.
- From Venezuela, South America. Bulbils collected by W. A. Archer, Bureau of

109190—Continued.

Plant Industry. Received February 16, 1935.

No. 2995. *Coquisa*. Collected January 27, 1935, near Caracas. A tropical American plant, resembling the agaves in general habit, with little or no trunk, and broadly oblanceolate spineless leaves 5 to 8 feet long. The loose panicles of greenish-white flowers are borne on a slender scape about 25 feet high.

109191 to 109198.

From Australia. Seeds presented by Arthur Yates & Co., Ltd., seed merchants, at the request of Dr. H. Wenbolz, Department of Agriculture, Sydney, New South Wales. Received February 21, 1935.

Locally grown varieties introduced for Department specialists.

109191 to 109196. *ALLIUM CEPA* L. Liliaceae. **Onion.**

109191. *Brown Spanish; Yates select Werwent Long Keeping.*

109192. *Early Golden Gloc.*

109193. *Hunter River Early Brown.*

109194. *Hunter River Early White.*

109195. *Odourless.*

109196. *White Imperial Spanish.*

109197 and 109198. *APIUM GRAVEOLENS* L. Apiaceae. **Celery.**

109197. *South Australian Green.*

109198. *South Australian White.*

109199. *CASSIA SIEBERIANA* DC. Caesalpiaceae.

From Africa. Seeds presented by F. W. Hall, Senior Agricultural Superintendent, Department of Agriculture, Gambia, British West Africa, at the request of Sir Arthur Hill, Director of the Royal Botanic Gardens, Kew, England. Received February 19, 1935.

A small handsome tropical tree with pinnate foliage and long racemes of large yellow flowers. It is closely related to *Cassia fistula*.

For previous introduction see 73928.

109200. (Undetermined.)

From China. Seeds presented by Dr. Joseph F. Rock, Yunnanfu, Yunnan. Received February 9, 1935.

Chung Tien Tz. A large tree with fruits the size of a peach, which burst when ripe and expose the seeds.

109201 to 109203. *ROBINIA PSEUDACACIA* L. Fabaceae. **Common locust.**

From France. Seeds purchased from Vilmoir-Andrieux & Cie., Paris. Received February 18, 1935.

Introduced for Department specialists.

109201. Variety *Bessoniana*. A form with a rather dense ovoid head.

109202. Variety *Fastigiata*. A fastigiate pyramidal form.

109203. Variety *Spectabilis*. A spineless form.

109204 to 109208.

From India. Seeds presented by Judson College, through Winfield H. Scott, American consul, Rangoon, Burma. Received February 19, 1935.

109204. *BAUHINIA* sp. Caesalpiaceae.

A shrub with white flowers.

109205. *BAUHINIA* sp. Caesalpiaceae.

A climbing baubinia with deeply-lobed leaves 2 inches long and mauve flowers 2 inches across.

109206. *BAUHINIA* sp. Caesalpiaceae.

A shrub with attractive foliage and cream-colored flowers.

109207. *CAESALPINIA PULCHERRIMA* (L.) Swartz. Caesalpiaceae. **Flowerfence.**

Peacock flower. A handsome tropical evergreen shrub about 7 feet high, with mimosalike foliage and yellow flowers which appear on the new growth.

For previous introduction see 73096.

109208. *DELONIX REGIA* (Boj.) Raf. Caesalpiaceae. **Royal poinciana.**

Known in India as the *Golden Mohur* tree.

For previous introduction see 39964.

109209. *FESTUCA CAPILLATA* Lam. Poaceae. **Hair fescue.**

From Germany. Seeds presented by Ernst & Von Spreckelsen, Saathandel, Hamburg. Received February 21, 1935.

Introduced for Department specialists.

109210. *AMBURANA CLAUDII* Schwacke and Taub. Fabaceae.

From Brazil. Seeds presented through the Bureau of Entomology and Plant Quarantine, Washington, D. C. Received February 20, 1935.

A large tropical tree with odd-pinnate leaves composed of 11 to 15 alternate leaflets and large clusters of cream-white flowers borne on the old wood. The seeds are crushed and used to perfume tobacco. Both the seeds and the wood have a strong odor of coumarin. Native to dry regions in Brazil and northern Argentina.

For previous introduction see 37906.

109211 to 109213. *FESTUCA* spp. Poaceae. **Fescue.**

From Germany. Seeds presented by R. Liefmann Söhne Nachf., Hamburg. Received February 21, 1935.

Introduced for Department specialists.

109211. *FESTUCA CAPILLATA* Lam. **Hair fescue.**

109212. *FESTUCA OVINA* L. **Sheep fescue.**

109213. *FESTUCA RUBRA* L. **Red fescue.**

109214 to 109406.

From Turkey. Seeds collected by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received January 11, 1935.

109214 and 109215. *ABELMOSCHUS ESCULENTUS* (L.) Moench. Malvaceae. **Okra.**

109214. No. T-293. October 4, 1934. From the Kastamonu bazar.

109214 to 109406—Continued.

109215. No. T-368. October 10, 1934.
From the Adapazari bazar.

109216. *ABIES* sp. Pinaceae. Fir.

No. T-314. October 5, 1934. About 15 miles south of Kastamonu.

109217. *AELUROPUS LITTORALIS* (Gouan) Parl. Poaceae.

No. T-263. October 5, 1934. From a rocky mountainside about 7 miles south of Tosya.

For previous introduction see 108843.

109218 to 109220. *AGROPYRON* spp. Poaceae. Wheatgrass.

109218. *AGROPYRON CRISTATUM* (L.) Gaertn. Crested wheatgrass.

No. T-391. October 15, 1934. From the Sazova Experiment Station near Eskishehir.

109219. *AGROPYRON INTERMEDIUM* (Host.) Beauv.

No. T-322. October 8, 1934. About 20 miles east of Bolu.

109220. *BRACHYPODIUM CAESPITOSUM* (Host.) Roem. and Schult. Poaceae.

No. T-376. October 10, 1934. From rocky clay on dry mountainside, about 20 miles southwest of Bolu.

109221 to 109225. *AGROSTIS* spp. Poaceae. Grass.

109221. *AGROSTIS ALBA* L. Redtop.

No. T-333. October 9, 1934. About 10 miles west of Duzce.

109222. *AGROSTIS SPICA-VENTI* L.

No. T-233. October 3, 1934. From dry clay hillside and flat about 6 miles west of Chorum. An annual grass, usually about 20 inches high, with feathery panicles 4 to 8 inches long. Native to Europe.

109223 to 109225. *AGROSTIS ALBA* L. Redtop.

109223. No. T-222. October 2, 1934. About 12 miles south of Samsun.

109224. No. T-259. October 4, 1934. About 12 miles north of Tosya.

109225. No. T-319. October 8, 1934. About 18 miles north of Kizilja Hammam.

109226 to 109231. *ALLIUM* spp. Liliaceae.

109226 to 109229. *ALLIUM CEPA* L. Onion.

109226. No. T-251. October 1, 1934. From the Chasamba bazar.

109227. No. T-289. October 4, 1934. From the Kastamonu bazar.

109228. No. T-350. October 10, 1934. From the Adapazari bazar.

109229. No. T-384. October 11, 1934. From the Nallihan bazar.

109230 and 109231. *ALLIUM PORRUM* L. Leek.

109230. No. T-380. October 11, 1934. From the Nallihan bazar.

109231. No. T-354. October 10, 1934. From the Adapazari bazar.

109214 to 109406—Continued.

109232 to 109234. *ALTHAEA* spp. Malvaceae.

Collected October 2, 1934.

109232. *ALTHAEA* sp.

No. T-211. Collected about 30 miles west of Samsun.

109233. *ALTHAEA* sp.

No. T-215. Collected about 12 miles south of Samsun. A form with pink flowers.

109234. *ALTHAEA* sp.

No. T-227. Collected about 70 miles south of Samsun.

109235. *ANETHUM GRAVEOLENS* L. Apiaceae. Dill.

No. T-353. October 10, 1934. From the Adapazari bazar.

109236. *APIUM GRAVEOLENS* L. Apiaceae. Celery.

No. T-359. October 10, 1934. From the Adapazari bazar.

109237. *ASCLEPIAS* sp. Asclepiadaceae.

No. T-323. October 8, 1934. Found growing abundantly on dry rocky hills in the vicinity of Kizilja Hammam.

109238. *ASTRAGALUS* sp. Fabaceae.

No. T-310. October 5, 1934. A perennial shrub 3 feet high found about 40 miles northeast of Ankara on a dry hillside.

109239. *ASTRAGALUS* sp. Fabaceae.

No. T-398. October 15, 1934. From the Sazova Experiment Station, Eskishehir.

109240. *BERBERIS* sp. Berberidaceae.

No. T-239. October 3, 1934. About 2 miles north of Iskilip.

109241 to 109243. *BRACHYPODIUM PINNATUM* (L.) Beauv. Poaceae. Grass.

109241. No. T-202. October 2, 1934. Collected about 30 miles west of Samsun on a rocky clay hillside; an excellent sod grass.

109242. No. T-320. October 8, 1934. Southwest of Bolu about 36 miles.

109243. No. T-374. October 10, 1934. About 12 miles southwest of Bolu on a rocky mountainside.

109244. *BRACHYPODIUM* sp.

No. T-201. October 2, 1934. About 12 miles west of Samsun on a steep hillside.

109245 to 109248. *BRASSICA* spp. Brassicaceae.

109245 to 109247. *BRASSICA OLERACEA CAPITATA* L. Cabbage.

109245. No. T-265. October 4, 1934. From Tosya.

109246. No. T-287. October 4, 1934. From the Kastamonu bazar.

109247. No. T-358. October 10, 1934. From the Adapazari bazar.

109248. *BRASSICA* sp.

No. T-268. October 4, 1934. From Tosya.

109214 to 109406—Continued.

109249. CALAMAGROSTIS sp. Poaceae.
No. T-257. October 4, 1934. From high mountains about 15 miles north of Tosya.
- 109250 and 109251. CANNABIS SATIVA L. Moraceae. Hemp.
109250. No. T-285. October 4, 1934. From the Kastamonu bazar.
109251. No. T-297. October 4, 1934. From the Agricultural Museum, Kastamonu.
- 109252 to 109255. CAPSICUM ANNUM L. Solanaceae. Common redpepper.
109252. No. T-366. October 10, 1934. From the Adapazari bazar.
109253. No. T-288. October 4, 1934. From the Kastamonu bazar.
109254. No. T-278. October 4, 1934. Large peppers from the Kastamonu bazar.
109255. No. T-363. October 10, 1934. A hot pepper from the Adapazari bazar.
- 109256 and 109257. LEPIDIUM SATIVUM L. Brassicaceae. Garden cress.
109256. No. T-383. October 11, 1934. From the Nallihan bazar.
109257. No. T-271. October 11, 1934. From the Kastamonu bazar.
109253. CENTAURIUM sp. Gentianaceae.
No. T-344. October 9, 1934. About 12 miles west of Duzce. A small plant with attractive pink flowers found in dry situations.
109259. CICER ARIETINUM L. Fabaceae. Chickpea.
No. T-361. October 10, 1934. From the Adapazari bazar.
109260. CICER sp. Fabaceae.
No. T-348. October 9, 1934. From a steep roadside bank about 12 miles west of Bolu.
109261. CISTUS sp. Cistaceae.
No. T-255. October 4, 1934. From rocky mountain slopes south of Tosya.
- 109262 and 109263. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.
109262. No. T-387. October 11, 1934. From the Nallihan bazar.
109263. No. T-232. October 3, 1934. From Chorum. A melon with orange-colored flesh and a yellow skin.
- 109264 and 109265. CUCUMIS MELO L. Cucurbitaceae. Muskmelon.
109264. No. T-316. October 3, 1934. From Samsun. A melon with mottled green and yellow skin and white flesh of a delicious flavor.
109265. No. T-386. October 11, 1934. From the Nallihan bazar.
109266. CORONILLA VARIA L. Fabaceae. Crown vetch.
No. T-301. October 5, 1934. From a moist rocky mountain slope, about 25 miles south of Kastamonu.

For previous introduction see 106521.

109214 to 109406—Continued.

109267. COTONEASTER sp. Malaceae.
No. T-243. October 3, 1934. From a dry rocky slope about 3 miles north of Iskilip.
109268. CRATAEGUS sp. Malaceae.
No. T-206. October 2, 1934. About 85 miles west of Samsun on a dry hillside.
109269. CRATAEGUS sp. Malaceae.
No. T-238. October 3, 1934. From Samsun. Fruit the size of a crab apple.
- 109270 to 109275. CUCUMIS spp. Cucurbitaceae.
109270 to 109272. CUCUMIS MELO L. Muskmelon.
109270. No. T-390. October 12, 1934. From Ankara. A melon with dark green rind and delicious white flesh.
109271. No. T-254. October 4, 1934. From Chorum. A round melon with green netted-type rind and white flesh which is only fair.
109272. No. T-230. October 3, 1934. From Chorum. A green-netted type.
- 109273 to 109275. CUCUMIS SATIVUS L. Cucumber.
109273. No. T-260. October 4, 1934. From Tosya.
109274. No. T-385. October 11, 1934. From the Nallihan bazar.
109275. No. T-277. October 4, 1934. From the Kastamonu bazar.
- 109276 to 109278. CUCURBITA spp. Cucurbitaceae.
109276 and 109277. CUCURBITA MAXIMA Duchesne. Squash.
October 4, 1934. From the Kastamonu bazar.
109276. No. T-286. 109277. No. T-282.
109278. CUCURBITA PEPO L. Pumpkin.
No. T-388. October 11, 1934. From the Nallihan bazar.
109279. DACTYLIS GLOMERATA L. Poaceae. Orchard grass.
No. T-375. October 10, 1934. From a dry clay hillside, 20 miles southwest of Bolu.
109280. DAUCUS CAROTA L. Apiaceae. Carrot.
No. T-273. October 10, 1934. From the Kastamonu bazar.
- 109281 to 109283. DIANTHUS spp. Silenaceae.
109281. DIANTHUS sp.
No. T-241. October 3, 1934. A rock pink collected about 3 miles north of Iskilip.
109282. DIANTHUS sp.
No. T-395. October 15, 1934. From a dry hillside at the Dry Land Experiment Station near Eskisbehir.
109283. DIANTHUS sp.
No. T-373. October 10, 1934. From rocks about 15 miles southwest of Bolu.

109214 to 109406—Continued.

109234. *DIGITALIS* sp. Scrophulariaceae.

No. T-325. October 8, 1934. Collected 50 miles north of Kizilja Hammam.

109235. *EREMURUS* sp. Liliaceae.

No. T-392. October 15, 1934. From the Dry Land Experiment Station near Eskishehir.

109236. *ERIANTHUS HOSTII* Griseb. Poaceae.

No. T-205. October 2, 1934. About 7 miles west of Samsun, in gullies and steep hillsides in rocky clay loam. A perennial reedlike grass with dense woolly panicles. Native to southern Europe and Asia Minor.

109237. *EUONYMUS* sp. Celastraceae.

No. T-347. October 9, 1934. A shrub growing beside a stream, about 15 miles north of Duzce.

109238. *EUONYMUS* sp. Celastraceae.

No. T-315. October 5, 1934. A tree with rose-colored berries found 20 miles south of Kastamonu.

109239. *FAGOPYRUM ESCULENTUM* Moench. Polygonaceae. Common buckwheat.

No. T-294. October 4, 1934. From the Agricultural Museum at Kastamonu.

109290 to 109292. *FESTUCA* spp. Poaceae.

109290. *FESTUCA* sp.

No. T-258. October 4, 1934. About 15 miles north of Tosya in the high mountains.

109291. *FESTUCA* sp.

No. T-336. October 9, 1934. A grass 3 feet tall found on the rocky slope of a stream bank about 15 miles west of Duzce.

109292. *FESTUCA* sp.

No. T-262. October 4, 1934. About 15 miles north of Tosya.

109293. *GENTIANA* sp. Gentianaceae.

No. T-302. October 5, 1934. About 25 miles south of Kastamonu.

109294. *HEDYSARUM* sp. Fabaceae.

No. T-87. October 26, 1934. Found in dry limestone at Sivas.

109295. *HIPPOPHAE RHAMNOIDES* L. Elaeagnaceae. Common sea-buckthorn.

No. T-203. October 2, 1934. About 50 miles south of Samsun. A rather thorny tree with leaves like the Russian-olive and great masses of fragrant orange-colored berries.

For previous introduction and description see 108063.

109296. *ILEX* sp. Aquifoliaceae.

No. T-337. October 9, 1934. About 9 miles west of Bolu.

109297. *IRIS HISTRIOIDES* Foster. Iridaceae.

No. T-216. October 4, 1934. About 70 miles south of Samsun.

109298 and 109299. *KOELERIA CRISTATA* (L.) Pers. Poaceae.

109214 to 109406—Continued.

109298. No. T-204. October 2, 1934. From a dry hillside about 2 miles south of Chorum.

109299. No. T-324. October 8, 1934. About 53 miles north of Kizilja Hammam.

109300 to 109304. *LACTUCA SATIVA* L. Cichoriaceae. Garden lettuce.

109300 to 109302. Collected October 4, 1934, in the Kastamonu bazar.

109300. No. T-270. Ordinary variety.

109301. No. T-291. Curly variety.

109302. No. T-290. Black variety.

109303. No. T-266. October 4, 1934. From Tosya.

109304. No. T-379. October 11, 1934. From Nallihan.

109305. *LAGENARIA LEUCANTHA* (Duchesne) Rusby. Cucurbitaceae. Calabash gourd.

No. T-281. October 4, 1934. From the Kastamonu bazar.

109306. *LEPTOCHLOA* sp. Poaceae. Grass.

No. T-221. October 2, 1934. Collected 75 miles south of Samsun on a dry rocky hillside.

109307. *LINUM USITATISSIMUM* L. Linaceae. Flax.

No. T-272. October 4, 1934. From the Kastamonu bazar.

109308. *LOLIUM PERENNE* L. Poaceae. Perennial ryegrass.

No. T-332. October 9, 1934. About 12 miles west of Bolu along a roadside. A large percentage of the sod of this section consists of this grass.

109309. *LOLIUM RIGIDUM* Gaud. Poaceae. Grass.

No. T-396. October 15, 1934. From the Dry Land Experiment Station near Eskishehir. A native grass used for lawns at Ankara.

109310 to 109314. *LOTUS* spp. Fabaceae.

109310. *LOTUS* sp.

No. T-342. October 9, 1934. About 12 miles west of Duzce.

109311. *LOTUS* sp.

No. T-321. October 8, 1934. About 75 miles northwest of Ankara near Kizilja Hammam.

109312. *LOTUS* sp.

No. T-209. October 2, 1934. About 15 miles south of Samsun.

109313. *LOTUS* sp.

No. T-311. October 5, 1934. From a moist rocky mountain slope 24 miles south of Kastamonu.

109314. *LOTUS* sp.

No. T-371-A. October 10, 1934. Collected in a river bottom 13 miles east of Adapazari.

109315 and 109316. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

109315. No. T-356. October 10, 1934. From the Adapazari bazar.

109316. No. T-280. October 4, 1934. From the Kastamonu bazar.

109214 to 109406—Continued.

109317. *MALUS* sp. Malaceae.
No. T-308. October 5, 1934. Wild apple trees found 12 miles south of Kastamonu.
- 109318 to 109321. *MEDICAGO* spp. Fabaceae.
109318. *MEDICAGO FALCATA* × *SATIVA*.
No. T-210. October 2, 1934. About 69 miles south of Samsun.
109319. *MEDICAGO LUPULINA* L.
Black medick.
No. T-331. October 9, 1934. From a steep bank by a roadside 6 miles west of Bolu.
109320 and 109321. *MEDICAGO SATIVA* L.
Alfalfa.
109320. No. T-299. October 4, 1934. From Tosya.
109321. No. T-397. October 15, 1934. From the Dry Land Experiment Station near Eslishehir.
109322. *MELICA CILIATA* L. Poaceae.
No. T-244. October 3, 1934. From a rocky clay hillside, 6 miles west of Chorum.
- 109323 to 109326. *MELILOTUS* spp. Fabaceae.
Sweetclover.
109323 and 109324. *MELILOTUS ALBA* Desr.
White sweetclover.
109323. No. T-225. October 2, 1934. Sixty-nine miles south of Samsun.
109324. No. T-371. October 10, 1934. From the heavy soil of flat bottom land 18 miles southeast of Adapazari.
109325. *MELILOTUS OFFICINALIS* (L.) Lam.
No. T-329. October 9, 1934. From a steep bank on a roadside, 6 miles west of Bolu.
109326. *MELILOTUS* sp.
No. T-305. October 5, 1934. From the mountains, 24 miles south of Kastamonu.
109327. *ONOBRYCHIS VULGARIS* Hill. Fabaceae.
No. T-394. October 15, 1934. From the Dry Land Experiment Station near Eslishehir where it grows profusely under irrigation; becomes 30 inches high and is cut three times in a season.
- 109328 to 109330. *ORYZA SATIVA* L. Poaceae.
Rice.
109328. No. T-327. October 8, 1934. From near Kizilja Hammam, 54 miles northwest of Ankara.
109329. No. T-378. October 11, 1934. From Nallihan.
109330. No. T-298. October 4, 1934. From Tosya.
- 109331 and 109332. *ORYZOPSIS PUBIFLORA* Hack. Poaceae.
Grass.
A densely tufted perennial grass with narrow linear leaves, the blades being about 4 inches long. Native to mountainous places in southern Iran.
109331. No. T-245. October 3, 1934. From 10 miles west of Chorum.

109214 to 109406—Continued.

109332. No. T-213. October 2, 1934. From 70 miles south of Samsun.
109333. *PALURUS SPINA-CHRISTI* Mill. Rhamnaceae.
Christ-thorn.
No. T-200. October 1, 1934. A spiny shrub found on flats near Charashamba.
For previous introduction see 46425.
109334. *PAPAVER* sp. Papaveraceae.
No. T-102. September 26, 1934. Collected 35 miles east of Sivas.
- 109335 to 109337. *PETROSELINUM HORTENSE* Hoffm. Apiaceae.
Farsley.
109335. No. T-292. October 4, 1934. From the Kastamonu bazar.
109336. No. T-381. October 11, 1934. From the Nallihan bazar.
109337. No. T-360. October 10, 1934. From the Adapazari bazar.
- 109338 to 109344. *PHASEOLUS* spp. Fabaceae.
Bean.
109338 and 109339. *PHASEOLUS COCCINEUS* L. Scarlet Runner bean.
109338. No. T-296. October 4, 1934. From the Agricultural Museum at Kastamonu.
109339. No. T-279. October 4, 1934. From the Kastamonu bazar.
109340 to 109344. *PHASEOLUS VULGARIS* L. Common bean.
109340. No. T-295. October 4, 1934. From the Agricultural Museum at Kastamonu. A bean eaten while green.
109341 to 109343. October 10, 1934. From the Adapazari bazar.
109341. No. T-367. *Cali fasulyiye*.
109342. No. T-365. *Barbonrye fasulyiye*.
109343. No. T-364. *Haray fasulyiye*.
109344. No. T-373-A. October 10, 1934. A red kidney bean collected about 12 miles east of Adapazari.
109345. *PHLEUM ARENARIUM* L. Poaceae.
Timothy.
No. T-252. October 3, 1934. Collected about 9 miles west of Chorum.
109346. *PHLEUM PHLEOIDES* (L.) Karst. Poaceae.
No. T-214. October 2, 1934. About 6 miles south of Samsun.
109347. *PHYSALIS ALKEKengi* L. Solanaceae.
Strawberry ground-cherry.
No. T-339. October 9, 1934. Collected near Duzce.
For previous introduction see 65536.
109348. *PISUM SATIVUM* L. Fabaceae. Pea.
No. T-370. October 10, 1934. *Bezeliye*. From the Adapazari bazar.
- 109349 to 109351. *POA* spp. Poaceae.
Bluegrass.
109349. *POA BULBOSA* L.
No. T-249. October 3, 1934. From a dry rocky clay hillside about 6 miles west of Chorum.

109214 to 109406—Continued.

109350. *POA COMPRESSA* L.
No. T-246. October 3, 1934. From a dry clay hillside about 6 miles west of Chorum.
109351. *POA* sp.
No. T-219. October 2, 1934. Collected 12 miles south of Samsun.
109352. *PYRACANTHA* sp. Malaceae.
No. T-208. October 2, 1934. A shrub collected 6 miles south of Samsun.
- 109353 to 109359. *RAPHANUS SATIVUS* L. Brassicaceae. Radish.
109353 and 109354. October 4, 1934. From the Kastamonu bazar.
109353. No. T-284. A red variety.
109354. No. T-269. A black variety.
109355. No. T-351. *Salgom*. October 10, 1934. From the Adapazari bazar.
109356. No. T-293. October 4, 1934. From the Kastamonu bazar. A white variety.
109357. No. T-369. *Kirmizi turup*. October 10, 1934. From the Adapazari bazar. A red variety.
109358. No. T-274. October 4, 1934. From the Kastamonu bazar. A long red variety.
109359. No. T-357. October 10, 1934. *Trup*. From the Adapazari bazar.
- 109360 and 109361. *RHAPHIS GRYPHUS* (L.) Desv. Poaceae. Grass.
109360. No. T-234. October 3, 1934. Collected 9 miles west of Chorum.
109361. No. T-218. October 2, 1934. From a dry rocky wash on a hillside 78 miles south of Samsun. This grass forms a good sod.
109362. *RHODOENDRON* sp. Ericaceae.
No. T-338. October 9, 1934. Collected 6 miles west of Bolu.
109363. *RHUS CORIARIA* L. Anacardiaceae. Sumac.
No. T-235. October 3, 1934. From a dry rocky hillside 4 miles west of Iskilip.
109364. *ROSA* sp. Rosaceae. Rose.
No. T-389. October 10, 1934. A wild rose collected 9 miles southwest of Bolu.
109365. *RUBUS* sp. Rosaceae.
No. T-228. October 3, 1934. An ever-bearing blackberry from Charshamba.
- 109366 and 109367. *SALVIA* spp. Menthaceae.
Collected October 5, 1934, 15 miles south of Kastamonu.
109366. *SALVIA* sp.
No. T-306.
109367. *SALVIA* sp.
No. T-304.
109368. *SECALE CEREALE* L. Poaceae. Rye.
No. T-317. October 4, 1934. From the Agricultural Museum at Kastamonu.

109214 to 109406—Continued.

- 109369 to 109371. *SOLANUM MELONGENA* L. Solanaceae. Eggplant.
109369. No. T-276. October 4, 1934. From the Kastamonu bazar.
109370. No. T-393. October 15, 1934. From Eskishehir. An eggplant 15 inches long and over an inch in diameter.
109371. No. T-362. October 10, 1934. *Patlican kemey*. From the Adapazari bazar.
- 109372 and 109373. *SPINACIA OLERACEA* L. Chenopodiaceae. Common spinach.
109372. No. T-382. October 11, 1934. From the Nallihan bazar.
109373. No. T-355. October 10, 1934. *Tspanek*. From the Adapazari bazar.
- 109374 to 109377. *STIPA* spp. Poaceae. Feathergrass.
109374 and 109375. *STIPA BROMOIDES* (L.) Beck.
A tufted perennial grass up to 2 feet high. Native to dry mountain regions of southern Europe.
109374. No. T-224. October 2, 1934. From a rocky clay hillside 31 miles west of Samsun.
109375. No. T-220. October 2, 1934. From a dry rocky hillside 72 miles south of Samsun.
109376. *STIPA CAPILLATA* L.
No. T-399. October 15, 1934. From a protected situation on a dry hillside at the Dry Land Experiment Station, Eskishehir.
109377. *STIPA* sp.
No. T-261. October 11, 1934. From a rocky mountain slope south of Tosya.
- 109378 to 109391. *TRIFOLIUM* spp. Fabaceae. Clover.
109378 to 109381. *TRIFOLIUM PRATENSE* L. Red clover.
109378. No. T-212. October 2, 1934. From a steep hillside 12 miles west of Samsun.
109379. No. T-309. October 5, 1934. From the mountains 25 miles south of Kastamonu.
109380. No. T-335. October 9, 1934. Collected 10 miles west of Duzce.
109381. No. T-340. October 9, 1934. Collected along the bank of a stream 6 miles west of Bolu.
- 109382 to 109386. *TRIFOLIUM REPENS* L. White clover.
109382. No. T-248. October 3, 1934. From the top of a mountain northwest of Iskilip.
109383. No. T-264. October 4, 1934. Collected 12 miles north of Tosya.
109384. No. T-300. October 5, 1934. Collected in the mountains 25 miles south of Kastamonu.
109385 and 109386. Collected October 9, 1934, about 11 miles west of Duzce on a mountain slope.
109385. No. T-341.
109386. No. T-343.

109214 to 109406—Continued.

109387. TRIFOLIUM sp.
No. T-256. October 4, 1934. Collected 12 miles north of Tosya.
109388. TRIFOLIUM sp.
No. T-226. October 2, 1934. Collected along an irrigation ditch, 62 miles south of Samsun.
- 109389 to 109391. TRIFOLIUM spp.
A collection of hop clovers with large bright-yellow flowers.
109389. TRIFOLIUM sp.
No. T-313. October 5, 1934. Collected 25 miles south of Kastamonu.
109390. TRIFOLIUM sp.
No. T-267. October 4, 1934. Collected 15 miles north of Tosya.
109391. TRIFOLIUM sp.
No. T-330. October 9, 1934. Found near a stream 12 miles from Bolu.
109392. TRIGONELLA sp. Fabaceae.
No. T-326. October 8, 1934. From dry gravelly soil in a valley 46 miles north of Kizilja Hammam. It does not seem to be eaten by stock to any extent.
- 109393 and 109394. Collected October 5, 1934, in the mountains south of Kastamonu.
109393. VICIA sp. Fabaceae.
No. T-312.
109394. SATHYRUS PRATENSIS L. Fabaceae.
No. T-303.
109395. VICIA sp. Fabaceae.
No. T-217. October 2, 1934. Collected 12 miles south of Samsun.
109396. VIGNA SINENSIS (Torner) Savi. Fabaceae.
No. T-352. October 10, 1934. *Borulse*, black-eyed peas from Adapazari.
109397. VITIS VINIFERA L. Vitaceae.
European grape.
No. T-247. October 3, 1934. From Chorum. A very large blue grape which is almost seedless.
- 109398 to 109400. ZEA MAYS L. Poaceae.
Corn.
- 109398 and 109399. October 10, 1934; two types of corn grown in the vicinity of Adapazari.
109398. No. T-377. White.
109399. No. T-377-A. Yellow.
109400. No. T-275. October 4, 1934. Popcorn from the Kastamonu bazar.
109401. (Undetermined.)
No. T-223. October 2, 1934. Collected about 30 miles west of Samsun.
109402. (Undetermined.)
No. T-334. October 9, 1934. A shrub collected near a stream 6 miles west of Bolu.

109214 to 109406—Continued.

109403. (Undetermined.)
No. T-240. October 3, 1934. A low-growing shrub found on a dry rocky slope 9 miles north of Iskilip. The shrub is grazed by goats.
109404. DIGITALIS sp. Scrophulariaceae.
No. T-237. October 3, 1934. A flowering plant found on rocky slopes about 4 miles north of Iskilip.
109405. (Undetermined.)
No. T-328. October 9, 1934. An unknown legume found on a steep roadside bank 12 miles west of Bolu.
109406. (Undetermined.)
No. T-307. October 5, 1934. A flowering plant found about 15 miles south of Kastamonu.
- 109407 and 109408.
From Java. Seeds presented through A. M. Cramer, Sr., Wonosobo. Received February 25, 1935.
109407. BOEUA GANDARIA Blume. Anacardiaceae.
A large tropical evergreen tree, with glossy oblong leaves, racemes of very small yellow flowers, and egg-shaped fruits about 3 inches long. The small young fruits are pickled in a salt solution and eaten like olives with meat. When ripe, the red fruits are eaten fresh. Native to the East Indies.
For previous introduction see 31865.
109408. LANSIUM DOMESTICUM Jack. Meliaceae. Langsat.
Doekoe. A Malayan tree up to 40 feet high, with pinnate leaves composed of five to seven elliptic leaflets each 4 to 8 inches long. The fruits, borne in dense pendulous clusters, vary from oval to round and from 1 to 2 inches in diameter, velvety and straw colored, with a thick leathery skin enclosing juicy aromatic flesh, and one to three large seeds. The seeds are extremely bitter. The best fruits are found in the village of Menteng, near Batavia.
For previous introduction see 80998.
109409. FRAXINUS HOLOTRICHA Koehne. Oleaceae. Ash.
From Rumania. Seeds collected by Dr. Edgar Anderson, Arnold Arboretum Balkan expedition. Received February 20, 1935.
A small tree with leaves about 8 inches long composed of 9 to 13 leaflets. Collected in the hybrid Fraxinus "Forest" on the Danube delta, a region of very low rainfall and very cold winters.
109410. PASSIFLORA LIGULARIS Juss. Passifloraceae. Sweet granadilla.
From South America. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry, at Baños, Tunguragua Province, Ecuador. Received February 25, 1935.
Introduced for Department specialists.
For previous introduction and description see 108829.

109411 to 109419.

From Burma. Seeds presented by D. Rhind, Economic Botanist, Mandalay. Received February 25, 1935.

A collection of locally grown varieties, introduced for Department specialists.

109411 to 109414. *APIUM GRAVEOLENS* L. Apiaceae. **Celery.**

109411. *Golden Self-Blanching.*

109412. *Rose Standard.*

109413. *White Plume.*

109414. *White Solid.*

109415 to 109419. *DAUCUS CAROTA* L. Apiaceae. **Carrot.**

109415. *Champion.*

109416. *Earliest Short Horn.*

109417. *Early Gem.*

109418. *Exhibition.*

109419. *Nantes.*

109420 to 109422.

From the Union of Soviet Socialist Republics. Seeds presented by the Director, Botanic Garden, Samara. Received February 25, 1935.

109420. *ATRIPLEX NITENS* Schkuhr. Chenopodiaceae.

A large erect-stemmed annual about 6 feet high, growing in cultivated places.

109421. *ATRIPLEX TATARICA* L. Chenopodiaceae.

A bushy annual up to 3 feet tall. Native to coastal deserts in Asia Minor.

109422. *SALSOLA MUTICA* C. A. Mey. Chenopodiaceae.

A desert annual, upright or rarely ascending, about 2 feet high. The gray-green linear leaves are about one-sixth of an inch long. Native to southeastern Europe.

109423 to 109435. *MEDICAGO SATIVA* L. Fabaceae. **Alfalfa.**

From the Union of Soviet Socialist Republics. Seeds presented by A. T. Belov, Central Plant Breeding Station, Tashkent, Turkistan, through H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received January 30, 1935.

109423 to 109426. Each sample of seed was collected from a single plant of wild alfalfa.

109423. No. 1199. From Khorog, the Pamirs.

109424. No. 1200. From Porshnev near Khorog, the Pamirs.

109425. No. 1201. From Porshnev near Khorog, the Pamirs.

109426. No. 1202. From near Khorog, the Pamirs.

109427. No. 1203. Wild alfalfa from near Khorog, the Pamirs.

109428. No. 1204. Wild alfalfa collected near the plant breeding station at Tashkent.

109429. No. 1205. From Chartim in the Ghund Valley, the Pamirs.

109423 to 109435—Continued.

109430. No. 1206. From the Ghund Valley, the Pamirs.

109431. No. 1207. Wild alfalfa from the Kishlan, Upper Khorog, Ghund Valley, the Pamirs.

109432. No. 1208. Wild alfalfa from the Ghund Valley, the Pamirs.

109433. No. 1209. From Kishlan Jaben in the Sarch-Dara Valley, the Pamirs.

109434 and 109435. From Khorog, the Pamirs.

109434. No. 1210. **109435.** No. 1211.

109436. *PHASEOLUS VULGARIS* L. Fabaceae. **Common bean.**

From Maine. Seeds presented by H. S. Howard, Waterville, through the Bureau of Entomology and Plant Quarantine. Received March 4, 1935.

Wild Goose beans.

109437 to 109447.

From the Union of Soviet Socialist Republics. Seeds presented by the Repetek Sand Desert Station, Turkmenistan, through H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received February 2, 1935.

Introduced for Department specialists.

109437. *AGROPYRON ORIENTALE* (L.) Roem. and Schult. Poaceae. No. 1218.

For previous introduction and description see 108846.

109438. *AGROPYRON SQUARROSUM* Roth. Poaceae.

No. 1213.

109439. *AMMODENDRON CONOLLYI* Bunge. Fabaceae.

No. 1212.

For previous introduction and description see 108852.

109440. *ARISTIDA PENNATA* MINOR Litv. Poaceae.

No. 1221.

For previous introduction and description see 108865.

109441. *ATRIPLEX DIMORPHOSTEGIA* Kar. and Kir. Chenopodiaceae.

No. 1222.

For previous introduction and description see 108879.

109442. *BROMUS TECTORUM* L. Poaceae. No. 1215.

For previous introduction and description see 108885.

109443. *CUTANIDA MEMPHITICA* (Spreng.) Richter. Poaceae.

No. 1214.

For previous introduction and description see 108906.

109444. *ISATIS VIOLASCENS* Bunge. Brassicaceae.

No. 1220.

For previous introduction and description see 108928.

109437 to 109447—Continued.

109445. *KOCHIA STELLARIS* Moq. Chenopodiaceae.
 No. 1217. An erect annual plant, native to the Karakum Desert, Turkistan; up to a foot high, much branched, with flat linear leaves and very small greenish flowers. In general appearance it resembles *Kochia scoparia*.
 For previous introduction see 98216.
109446. *MALCOMIA CIRCINNATA* Boiss. Brassicaceae.
 No. 1216.
 For previous introduction and description see 108933.
109447. *SENECIO SUBDENTATUS* Ledeb. Asteraceae.
 No. 1219.
 For previous introduction and description see 108958.

109448. *PRUNUS ARMENIACA* L. Amygdalaceae. **Apricot.**

From Syria. Trees presented by Joseph Dabbous, Bab Rouma, Damascus, through the American consulate general at Beirut. Received March 7, 1935.
Hamway.
 Introduced for Department specialists.

109449. *AMYGDALUS PERSICA* L. Amygdalaceae. **Peach.**

From Java. Seeds presented by A. M. Cramer, Sr., Wonosobo. Received February 25, 1935.
Tosari peach. A naturalized peach from Tosari.
 Introduced for Department specialists.

109450 to 109605.

From Turkey and Rumania. Seeds collected by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received January 17, 1935.
 The numbers preceded by a capital T were collected in Turkey and those preceded by a capital R from Rumania.

Introduced for Department specialists.

109450 to 109452. *AGROPYRON* spp. Poaceae. **Wheatgrass.**

109450. *AGROPYRON CRISTATUM* (L.) Gaertn. **Crested wheatgrass.**

No. T-554. October 24, 1934. Collected 12 miles east of Kirshehir.

109451. *AGROPYRON* sp.

No. T-489. October 24, 1934. Collected 50 miles northeast of Izmir on rolling land, in heavy soil.

109452. *AGROPYRON INTERMEDIUM* (Host) Beauv.

No. T-508. October 26, 1934. A large bunch grass collected 31 miles southeast of Bandirma along the road to Bursa, on low flat land.

109453. *BACHYPODIUM PINNATUM* (L.) Beauv. Poaceae. **Grass.**

No. T-464. October 23, 1934. Collected 25 miles east of Izmir on the road to Kasaba.

109450 to 109605—Continued.

109454 to 109456. *AGROSTIS* spp. Poaceae.

109454. *AGROSTIS ALBA* L.

No. R-561. September 9, 1934. Collected at Constanza in a depression along the sandy beach.

109455. *AGROSTIS* sp.

No. R-564. September 10, 1934. Found in pure sand at Mamaia, near Constanza.

109456. *AGROSTIS SCABRIGLUMIS* Boiss. and Reut.

No. T-463. October 23, 1934. Collected 25 miles east of Izmir near a gully on the road to Kasaba.

109457. *ALLIUM CEPA* L. Liliaceae. **Onion.**

No. T-522. October 30, 1934. From the Ankara bazar.

109458. *ALTHAEA* sp. Malvaceae.

No. T-497. October 24, 1934. From Bergama.

109459 and 109460. *ANDROPOGON ISCHAEMUM* L. Poaceae.

For previous introduction see 109033.

109459. No. T-415. October 17, 1934. Collected about 22 miles northeast of Adana.

109460. No. T-411. October 17, 1934. From a dry flat plain 12 miles east of Adana.

109461. *ASTRAGALUS* sp. Fabaceae.

No. T-439. October 18, 1934. A perennial shrub collected 44 miles northwest of Adana.

109462 to 109465. *BACHYPODIUM* spp. Poaceae. **Grass.**

109462. *BACHYPODIUM RAMOSUM* (L.) Roem. and Schult.

No. T-501. October 26, 1934. Collected about 25 miles southeast of Bandirma. A blue-green, perennial, creeping grass, much branched at the base, found in the warmer portions of the Mediterranean countries, especially on chalky soil and in dry rocky places.
 For previous introduction see 88904.

109463. *BACHYPODIUM* sp.

No. T-422. October 17, 1934. Collected 22 miles northeast of Adana.

109464. *BACHYPODIUM* sp.

No. T-445. October 18, 1934. From a rocky slope in the foothills 25 miles west of Adana.

109465. *BACHYPODIUM* sp.

No. T-512. October 26, 1934. A bunch grass collected about 16 miles southeast of Bandirma.

109466 and 109467. October 30, 1934; from the Ankara bazar.

109466. *BRASSICA ALBA* (L.) Boiss. Brassicaceae. **White mustard.**

No. T-525.

109467. *BRASSICA* sp.

No. T-528.

109450 to 109605—Continued.

- 109468 to 109471. *CAPSIUM ANNUUM* L. Solanaceae. Common redpepper.
109468. No. T-527. From the Ankara bazar, October 30, 1934.
- 109469 and 109470. Collected October 21, 1934, at the Konya bazar.
109469. No. T-474.
109470. No. T-476. A hot pepper.
109471. No. T-407. Collected October 16, 1934, at the Adana bazar.
109472. *CELTIS* sp. Ulmaceae.
No. T-555. October 18, 1934. A shrub collected northwest of Adana.
109473. *CERCIS SILIQUASTRUM* L. Caesalpiniaceae. Judas-tree.
No. T-452. October 18, 1934. Collected 44 miles northwest of Adana.
For previous introduction see 26684.
109474. *CISTUS LADANIFERUS* L. Cistaceae. Gum rockrose.
No. T-470. October 23, 1934. Collected 12 miles east of Izmir on the road to Kasaba. A handsome bushy evergreen from 4 to 8 feet in height, with large deep-green leaves, silvery white below, and numerous large showy white flowers. Native to the Mediterranean countries.
For previous introduction see 48666.
109475. *CLEMATIS* sp. Ranunculaceae.
No. T-437. October 18, 1934. Collected about 47 miles northwest of Adana.
- 109476 and 109477. *CORNUS MAS* L. Cornaceae. Cornelian-cherry.
Collected October 3, 1934. *Kiziljick* (plumlike).
109476. No. T-229. Collected about 31 miles south of Samsun.
109477. No. T-236. Collected about 16 miles north of Iskilip.
- 109478 to 109485. *CUCUMIS* spp. Cucurbitaceae.
- 109478 and 109479. *CUCUMIS MELO* L. Muskmelon.
109478. No. T-556. October 26, 1934. A green and yellow melon from Balikesir.
109479. No. T-526. October 30, 1934. From the Ankara bazar.
- 109480 to 109485. *CUCUMIS SATIVUS* L. Cucumber.
- 109480 and 109481. Collected October 20, 1934, at the Ankara bazar.
109480. No. T-531. A long green cucumber.
109481. No. T-530.
109482. No. T-400. From the Adana bazar. A large cucumber grown under irrigation.
109483. No. T-475. October 21, 1934. From the Konya bazar.
109484. No. T-403. October 16, 1934. From the Adana bazar. A cucumber grown on dry land.
109485. No. T-408. October 16, 1934. From the Adana bazar. A cucumber adapted to either dry or irrigated

109450 to 109605—Continued.

- land; irrigation improves development.
109486. *CUCURBITA PEPO* L. Pumpkin.
No. T-524. October 30, 1934. From the Ankara bazar.
- 109487 and 109488. *CYNODON DACTYLON* (L.) Pers. Poaceae. Bermuda grass.
109487. No. T-412. October 17, 1934. Collected from a cultivated field on dry land, 22 miles northeast of Adana.
109488. No. T-482. October 21, 1934. Collected in a dry ravine about 3 miles west of Konya.
- 109489 to 109492. *DACTYLIS GLOMERATA* L. Poaceae. Orchard grass.
109489. No. T-447. October 18, 1934. From a rocky mountain slope about 38 miles northwest of Adana.
109490. No. T-461. October 23, 1934. Collected on a mountain slope 12 miles east of Izmir.
109491. No. T-491. October 24, 1934. From Bergama, found among the old ruins.
109492. No. T-484. October 21, 1934. From a dry ravine, about 3 miles west of Konya.
- 109493 and 109494. *DIANTHUS* spp. Silenaceae.
109493. No. T-494. October 24, 1934. From Bergama.
109494. No. T-510. October 26, 1934. About 16 miles southeast of Bandirma.
109495. *ERIANTHUS HOSTII* Griseb. Poaceae. Grass.
No. T-468. October 23, 1934. Collected near a gully about 22 miles east of Izmir on the road to Kasaba.
For previous introduction and description see 109286.
109496. *ERIANTHUS RAVENNAE* (L.) Beauv. Poaceae. Ravenna grass.
No. T-416. October 17, 1934. Found near a spring about 16 miles east of Adana.
For previous introduction see 78779.
109497. *FESTUCA OVINA* L. Poaceae. Sheep fescue.
No. T-486. October 21, 1934. From dry rocky mountains about 3 miles south of Konya.
109498. *FESTUCA* sp. Poaceae.
No. T-346. October 9, 1934. Collected in deep shade near Bolu.
109499. *GENISTA* sp. Fabaceae.
No. T-432. October 18, 1934. A shrub, collected 38 miles west of Adana.
109500. *GENISTA* sp. Fabaceae.
No. T-467. October 23, 1934. A shrub or small tree, collected about 18 miles east of Izmir.
109501. *HAYNALDIA HORDEACEA* (Coss. and Dur.) Hack. Poaceae. Grass.
No. T-462. October 23, 1934. From the roadside 5 miles east of Izmir on the

109450 to 109605—Continued.

road to Kasaba. A tufted perennial grass with rigid leaves. Native to the mountains of Algeria.

109502 and 109503. HORDEUM BULBOSUM L. Grass. Poaceae.

109502. No. T-515. October 26, 1934. Collected about 9 miles southeast of Bandirma, en route to Bursa.

109503. No. T-417. October 14, 1934. Collected 12 miles northeast of Adana.

109504. ONONIS sp. Fabaceae.

No. R-566. September 10, 1934. A spiny perennial growing on the sands at Mamaia near Constanza.

109505. IRIS sp. Iridaceae.

No. T-490. October 24, 1934. Collected 50 miles northeast of Izmir.

109506. IRIS sp. Iridaceae.

No. T-514. October 26, 1934. Collected about 31 miles southeast of Bandirma.

109507. JUNIPERUS OXYCEDRUS L. Pinaceae. Prickly juniper.

No. T-440. October 18, 1934. Collected 38 miles west of Adana.

109508. LACTUCA SATIVA L. Cichoriaceae. Garden lettuce.

No. T-477. October 21, 1934. From the Konya bazar.

109509 and 109510. LINUM USITATISSIMUM L. Linaceae. Flax.

109509. No. T-479. October 21, 1934. From the Konya bazar.

109510. No. T-523. October 30, 1934. From the Ankara bazar.

109511. LOLIUM REMOTUM Schrank. Grass. Poaceae.

No. T-505. October 26, 1934. Collected 18 miles southeast of Bandirma.

109512 to 109514. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

109512. No. T-529. October 30, 1934. From the Ankara bazar.

109513. No. T-409. October 16, 1934. Large tomatoes from the Adana bazar.

109514. No. T-473. October 21, 1934. From the Konya bazar.

109515 and 109516. MANISURIUS DIGITATA (Sidth. and Smith) Kuntze. Poaceae. Grass.

A perennial grass native to Asia Minor, with stems over 4 feet high.

109515. No. T-426. October 17, 1934. From the railroad embankment 12 miles east of Adana.

109516. No. T-513. October 26, 1934. From a low area 28 miles southeast of Bandirma.

109517 to 109522. MEDICAGO spp. Fabaceae.

109517. MEDICAGO FALCATA L. Yellow-flowered alfalfa.

No. R-567. September 10, 1934. Found in great abundance on pure sands at Mamaia, near Constanza.

109450 to 109605—Continued.

109518 and 109519. MEDICAGO SATIVA L. Alfalfa.

109518. No. T-472. October 21, 1934. From the Konya bazar.

109519. No. T-550. October 30, 1934. From the Ankara bazar.

109520. MEDICAGO sp.

No. T-500. October 24, 1934. *Bur clover*. Collected 3 miles southeast of Bergama.

109521. MEDICAGO sp.

No. T-498. October 21, 1934. *Bur clover*. Found growing on rather low ground near Bergama.

109522. MEDICAGO sp.

No. T-471. October 23, 1934. *Bur clover*. Gathered from a thick stand on the mountain side 18 miles east of Izmir on the road to Kasaba.

109523 to 109526. MELILOTUS spp. Fabaceae. Sweetclover.

109523. MELILOTUS ALBA Desr. White sweetclover.

No. R-562. September 9, 1934. From the sand along the beach at Constanza. A variety with large seeds.

109524. MELILOTUS INDICA (L.) All.

No. R-565. September 10, 1934. Collected at Constanza on moist sandy land near the Black Sea.

For previous introduction see 107562.

109525. MELILOTUS sp.

No. T-507. October 26, 1934. Collected about 15 miles southeast of Bandirma.

109526. MELILOTUS sp.

No. T-469. October 23, 1934. Collected 18 miles east of Izmir.

109527 to 109529. Collected October 18, 1934, about 30 miles northwest of Adana.

109527 and 109528. MYRTUS COMMUNIS L. Myrtaceae. True myrtle.

109527. No. T-448. *Leucocarpa*. A form with white berries.

109528. No. T-441. *Melanocarpa*. A form with black berries.

109529. NERIUUM OLEANDER L. Apocynaceae. Oleander.

No. T-443. A shrub with pink flowers.

109530. OLEA EUROPAEA L. Oleaceae. Olive.

No. T-418. October 17, 1934. A wild olive from a rocky mountain slope about 12 miles east of Adana.

109531 to 109536. ORYZOPSIS spp. Poaceae. Grass.

109531 to 109533. ORYZOPSIS COERULESCENS (Desf.) Hack.

For previous introduction see 88917.

109531. No. T-455. October 23, 1934. Collected on a rough hillside about 12 miles east of izmir, en route to Kasaba.

109450 to 109605—Continued.

109532. No. T-436. October 18, 1934. From a dry rocky slope 44 miles northwest of Adana.
109533. No. T-421. October 17, 1934. From bare limestone hills about 15 miles east of Adana.
- 109534 to 109536. *ORYZOPSIS MILIACEA* (L.) Benth. and Hook.
109534. No. T-442. October 18, 1934. Collected 25 miles west of Adana on rocky slopes in scrub oak clumps.
109535. No. T-456. October 23, 1934. From a mountain side east of Izmir on the road to Kasaba.
109536. No. T-438. October 18, 1934. From rocky slopes in the foothills about 30 miles northwest of Adana.
109537. *PASSIFLORA* sp. Passifloraceae. No. T-483. October 21, 1934. From a garden at Konya.
109538. *PENNISETUM ORIENTALE* L. Rich. Poaceae. Grass. No. T-487. October 21, 1934. From a very dry ravine, about 3 miles west of Konya. For previous introduction see 108943.
- 109539 and 109540. *PHALARIS MINOR* Retz. Poaceae. Grass. An erect or ascending annual grass with linear leaves from 2 to 6 inches long, and tufted culms up to 3 feet high. Native to the Mediterranean countries. For previous introduction see 49158.
109539. No. T-506. October 26, 1934. Collected about 15 miles from Bandirma.
109540. No. T-492. October 24, 1934. From heavy soil on rolling land, 50 miles northeast of Izmir.
- 109541 to 109545. *PHASEOLUS* spp. Fabaceae. Bean. Collected October 21, 1934, at the Konya bazar.
109541. *PHASEOLUS COCCINEUS* L. Scarlet Runner bean. No. T-478-A.
- 109542 to 109545. *PHASEOLUS VULGARIS* L. Common bean.
- 109542 to 109544. Collected October 21, 1934, at the Konya bazar.
109542. No. T-478.
109543. No. T-478-B.
109544. No. T-478-C.
109545. No. T-532. October 30, 1934. From the Ankara bazar.
109546. *PHLEUM PHLEOIDES* (L.) Karst. Poaceae. Timothy. No. T-435. October 18, 1934. From the rocky foothills about 40 miles northwest of Adana.
109547. *PHLEUM SUBULATUM* (Savi) Aschers. and Graebn. Poaceae. Timothy. No. T-457. October 23, 1934. From the flat plain east of Izmir on the road to Kasaba.

109450 to 109605—Continued.

- 109548 and 109549. *PHRAGMITES COMMUNIS* Trin. Poaceae. For previous introduction see 108372.
109548. No. T-511. October 26, 1934. Collected about 22 miles southeast of Bandirma beside a stream.
109549. No. T-454. October 18, 1934. Collected about 31 miles northwest of Adana.
- 109550 and 109551. *PINUS HALEPENSIS* Mill. Pinaceae. Aleppo pine. For previous introduction see 30815.
109550. No. T-450. October 18, 1934. Collected about 31 miles northwest of Adana.
109551. No. T-552.
109552. *PISTACIA LENTISCUS* L. Anacardiaceae. Lentisk. No. T-496. October 24, 1934. An attractive shrub with dense clusters of bright-red berries which become black. Collected 50 miles northeast of Izmir.
109553. *PISTACIA VERA* L. Anacardiaceae. Pistache. No. T-405. October 16, 1934. Purchased in Adana, but grown on dry places at Gaziantep.
- 109554 and 109555. *PISUM ELATIUS* Bieb. Fabaceae. Collected October 23, 1934, 18 miles east of Izmir.
109554. No. T-450.
109555. No. T-459-A.
- 109556 to 109560. *POA* spp. Poaceae. Bluegrass.
- 109556 to 109558. *POA BULBOSA* L.
109556. No. T-460. October 23, 1934. Collected about 18 miles east of Izmir on the road to Kasaba.
109557. No. T-431. October 18, 1934. Collected in a moist gully in the foothills 44 miles northwest of Adana.
109558. No. T-488. October 21, 1934. From dry slopes about 3 miles west of Konya.
109559. *POA* sp. No. T-458. October 23, 1934. From dry rocky soil about 15 miles east of Izmir.
109560. *POA* sp. No. T-253. October 4, 1934. Collected about 12 miles north of Tosya.
109561. *PYRUS* sp. Malaceae. No. T-502. October 26, 1934. A wild pear collected about 12 miles southeast of Bandirma.
- 109562 to 109567. *RAPHANUS SATIVUS* L. Brassicaceae. Radish. 109562. No. T-519. October 30, 1934. A red radish from the Ankara bazar.
- 109563 and 109564. Collected October 16, 1934, at the Adana bazar.
109563. No. T-406. A long red radish.

109450 to 109605—Continued.

109564. No. T-402. A globular radish.
109565. No. T-480. October 21, 1934. A red radish from the Konya bazar.
109566. No. T-521. October 30, 1934. A black radish from the Ankara bazar.
109567. No. T-401. October 16, 1934. A white radish from the Adana bazar.
- 109568 to 109570. RHUS spp. Anacardiaceae.
109568. RHUS sp.
No. T-499. October 24, 1934. Collected in the old ruins at Bergana.
109569. RHUS sp.
No. T-504. October 25, 1934. Collected between Izmir and Bandirma, near Harta.
109570. RHUS sp.
No. T-551. October 30, 1934. Collected about 3 miles south of Ankara.
109571. SOLANUM MELONGENA L. Solanaceae. Eggplant.
No. T-404. October 16, 1934. From the Ankara bazar.
109572. SORGHUM sp. Poaceae.
No. T-449. October 18, 1934. A large grass, 5 feet tall, collected in heavy soil in flat country about 23 miles west of Adana.
- 109573 and 109574. SPARTIUM JUNCEUM L. Fabaceae. Weavers-broom.
Collected October 18, 1934, 44 miles northwest of Adana.
109573. No. T-429. 109574. No. T-430.
- 109575 to 109577. STIPA spp. Poaceae. Grass.
109575. STIPA BROMOIDES (L.) Beck.
No. T-414. October 17, 1934. Collected in dwarf oak clumps on a flat dry plain, about 12 miles east of Adana.
109576. STIPA sp.
No. T-485. October 21, 1934. Collected on dry stony mountains about 3 miles south of Konya.
109577. STIPA sp.
Seeds mixed with other seed.
109578. STRAX OFFICINALIS L. Styracaceae. Snowbell.
No. T-433. October 18, 1934. Collected about 31 miles northwest of Adana. A shrub or small tree with broadly oval leaves over 2 inches long and fragrant white flowers three-fourths of an inch long, in small clusters. Native to southern Europe and Asia Minor.
109579. THEMEDA QUADRIVALVIS (L.) Kuntze. Poaceae. Grass.
No. T-424. From a dry rocky mountain slope 15 miles northeast of Adana. A coarse rather tough annual which grows in tufts from 1 to 3 feet high. It is native to India and is closely related to the kangaroo grass of Australia and Tasmania.

For previous introduction see 59362.

109450 to 109605—Continued.

- 109580 to 109582. TRIFOLIUM spp. Fabaceae. Clover.
109580. TRIFOLIUM sp.
No. T-520. October 30, 1934. From the Ankara bazar.
- 109581 and 109582. TRIFOLIUM REPENS L. White clover.
109581. No. R-563. October 10, 1934. From moist sandy soil near the Black Sea at Constanza.
109582. No. T-503. October 26, 1934. Collected 18 miles southeast of Bandirma.
- 109583 to 109600. TRITICUM spp. Poaceae. Wheat.
- 109583 to 109599. TRITICUM AESTIVUM L. Common wheat.
October 30, 1934. From the Seed Improvement Station, Ankara.
109583. No. T-533.
109584. No. T-534.
109585. No. T-535.
109586. No. T-536.
109587. No. T-537.
109588. No. T-538.
109589. No. T-539.
109590. No. T-540.
109591. No. T-541.
109592. No. T-542.
109593. No. T-543.
109594. No. T-544.
109595. No. T-545.
109596. No. T-546.
109597. No. T-547.
109598. No. T-548.
109599. No. T-549.
109600. TRITICUM AESTIVUM \times SECALE CEREALE. Wheat-rye hybrid.
No. R-560. August 1934. From Moscow.
For previous introduction see 94611.
109601. VICIA FABA L. Fabaceae. Broadbean.
No. T-481. October 21, 1934. From the Konya bazar.
109602. VITEX AGNUS-CASTUS L. Verbenaceae. Lilac chaste-tree.
No. T-444. October 18, 1934. A large tree with very aromatic foliage and delicate lavender flowers. Collected 28 miles northwest of Adana.
For previous introduction see 96518.
109603. VITEX sp. Verbenaceae.
No. T-465. October 23, 1934. Collected 18 miles east of Izmir.
109604. (Undetermined.)
No. T-413. October 17, 1934. Collected about 12 miles east of Adana.
109605. (Undetermined.)
No. T-495. October 24, 1934. A shrub with bright-green leaves and clusters of blue berries. Collected 50 miles northeast of Izmir.

109606 to 109792.

Plants growing at the United States Plant Introduction Garden, Glenn Dale, Md.; originally grown by the Office of Crop Physiology and Breeding Investigations (CPB), a section of the Division of Horticultural Crops and Diseases. Numbered in January 1935 for convenience in distribution.

109606. AEGLOPSIS CHEVALIERI Swingle. Rutaceae.

CPB. 7633. A small spiny evergreen tree about 10 feet high, native to the Ivory Coast, western tropical Africa, with simple ovate leaves about 5 inches long. It has white flowers in short panicles, and the roundish or pear-shaped, brownish-orange, hard-shelled fruits are 2 to 4 inches in diameter.

109607 and 109608. ARGANIA SPINOSA (L.) Skeels (*A. sideroxylon* Roem. and Schult.). Sapotaceae. **Argan.**

Originally from Morocco. The argan tree of western Morocco grows to a large size and bears an abundance of very acrid fruits, somewhat resembling small plums, that are eaten by cattle and goats.

For previous introduction see 100480.

109607. CPB. 7729-A.

109608. CPB. 12746. Originally received as seeds from R. Maire, Botanic Garden, University of Algiers, Algeria, June 29, 1926.

109609 to 109616. ATALANTIA spp. Rutaceae.

109609. ATALANTIA sp.

CPB. 10089.

109610. ATALANTIA sp.

CPB. 11226. Originally from India.

109611. ATALANTIA CEYLANICA (Arn.) Oliver.

CPB. 11225. From India. A much-branched spiny evergreen shrub or small tree, native to Ceylon and India, of interest chiefly as a stock for citrus fruits.

For previous introduction see 98732.

109612 and 109613. ATALANTIA MONOPHYLLA DC.

A small tropical evergreen, usually spiny, tree native to British India. It has oval emarginate leaves and orange-like fruits three-fourths of an inch in diameter.

For previous introduction see 74237.

109612. CPB. 10256. Originally received as seeds from the Experiment Station, Santiago de las Vegas, Cuba, June 24, 1924.

109613. CPB. 10258. Originally received as seeds from the Experiment Station, Santiago de las Vegas, Cuba, July 14, 1924.

109614. ATALANTIA DISTICHA (Blanco) Merrill.

CPB. 10261-H. A small tropical evergreen tree, native to the Philippines, with lanceolate, doubly serrate leaves and terminal corymbs of small white flowers.

109606 to 109792—Continued.

109615 and 109616. ATALANTIA RACEMOSA Wight.

A small evergreen tree or shrub found in the lower mountain regions of Ceylon and in southern India. The white flowers are produced in short racemes, and the small round berry has two to six seeds.

For previous introduction see 36102.

109615. CPB 7518.

109616. CPB. 7518-A.

109617. BALSAMOCITRUS DAWEI Stapf. Rutaceae.

CPB. 2920. A tree about 60 feet tall, native to the subtropical plateau of Uganda, Africa. It has panicles of white flowers and subglobose fruits, 4 to 6 inches in diameter, with a thick hard shell, containing numerous large seeds.

109618. AFRÆGLE GABONENSIS (Swingle) Engler. Rutaceae.

CPB. 7516-B. A thorny tree or shrub with simple or trifoliate leaves 5 to 8 inches long. The hard-shelled fruits are pear-shaped, about 4 inches in diameter. Native to the French Congo.

109619. CAVANILLESIA PLATANIFOLIA H. B. K. Bombacaceae.

CPB. 12627. Originally received as seeds from J. E. Higgins, Summit, Canal Zone, May 10, 1928. A Colombian tree up to 100 feet high, with a large thick trunk, smooth pale bark, large shallowly five- to seven-lobed leaves, and red flowers 1 inch long.

For previous introduction see 98928.

109620. CITRUS MEDICA L. Rutaceae. **Citron.**

CPB. 11178. *Etirog* citron.

For previous introduction see 105957.

109621. CITROPSIS SCHWEINFURTHII (Engler) Swingle and Kellerman. Rutaceae.

CPB. 2902. A spiny shrub or small tree with three- to five-foliate leaves and large white flowers in small axillary clusters. The orange-like fruits are about 1 inch in diameter. Native to tropical Africa.

109622. CITROPSIS sp.

CPB. 7800-g-c. A species from Kisantu, Belgian Congo, which has a much larger leaf than *Citropsis schweinfurthii*.

109623 to 109639. CITRUS spp. Rutaceae.

109623. CITRUS sp.

CPB. 2826. *Kinokuni* orange.

109624 to 109631. Presented by the Director of Agriculture, Manila, Philippine Islands.

109624. CITRUS sp.

CPB. 7819. *Limon Real* No. 18. Originally received as seeds; collected on the island of Bohol. Received February 21, 1914.

109625 to 109627. Originally received as seeds; collected on the island of Bohol. Received April 1, 1914.

109625. CITRUS sp.

CPB. 7825. *Amontay* No. 7.

109606 to 109792—Continued.

109626. CITRUS sp.
CPB. 7826. *Talamisan* No. 11.
109627. CITRUS sp.
CPB. 7827. *Talamisan* No. 11.
109628. CITRUS AURANTIUM L.
CPB. 7829. *Dalandan*. A sour orange. Received April 1, 1914.
109629. CITRUS LIMONIA Osbeck. Lemon.
CPB. 7833. A small lemon collected in Moro Province, Philippine Islands. Presented by the Director of Agriculture, April 1, 1934.
109630. CITRUS sp.
CPB. 7835. *Mamis*. Received from the Director of Agriculture, Philippine Islands, April 1, 1914.
109631. CITRUS LIMONIA Osbeck. Lemon.
CPB. 7837. *Davao* lemon. Received April 1, 1914.
109632. CITRUS AURANTIFOLIA (Christm.) Swingle. Lime.
CPB. 7861. *Mandarin* lime. Budsticks brought from Manila by H. H. Boyle. Received May 22, 1914.
109633. CITRUS LIMONIA Osbeck. Lemon.
CPB. 1158. Sweet lemon. Originally received as seeds from Jaffa, Palestine, March 4, 1914.
109634. CITRUS WEBBERI Wester. Alsem.
CPB. 10026. *Kalpi*. Originally received as seeds and presented by P. J. Wester, Philippine Islands. Received February 24, 1919.
- 109635 and 109636. Received March 19, 1919, from Atherton Lee, Bureau of Plant Industry; collected by him in China.
109635. CITRUS NOBILIS Lour. King orange.
CPB. 10031. *Chu-Kai*, vermillion orange.
109636. CITRUS sp.
CPB. 10032. *Pong-Kaa*, honey orange.
- 109637 and 109638. From China; originally received as seeds, presented by G. Weidman Groff. Received March 29, 1919.
109637. CITRUS sp.
CPB 10034. *Chinka*.
109638. CITRUS sp.
CPB. 10036. *Pook Ling Mung*.
109639. CITRUS sp.
CPB. 10046. *Iskalan*. From the Philippine Islands. Presented by P. J. Wester. Received April 16, 1919.
109640. MICROMELUM TEPHROCARPUM Turcz. Rutaceae.
CPB. 10048. A small evergreen tree with unequally pinnate leaves. The small white flowers, in large terminal panicles, are followed by small dry berries. Native to thickets in the Philippine Islands.

109606 to 109792—Continued.

- 109641 to 109646. CITRUS spp. Rutaceae.
109641. CITRUS sp.
CPB. 10052. *Kisum*. From the Philippine Islands. Collected in the Amboanga district by E. D. Merrill. Received January 21, 1920.
109642. CITRUS sp.
CPB. 10056. *Chamoudi* orange. From Egypt. Plants collected by S. C. Mason, Alexandria. Received August 7, 1920.
- 109643 and 109644. From Egypt; plants collected by S. C. Mason. Received July 21, 1922.
109643. CITRUS sp.
CPB. 10173-A. *Chamoudi* orange.
109644. CITRUS sp.
CPB. 10173-D. *Chamoudi* orange.
109645. CITRUS sp.
CPB. 10076-A. From the Philippine Islands. A seedling from CPB. 10076, brought in by P. J. Wester. Received June 18, 1930.
109646. CITRUS NOBILIS UNSHIU Swingle. Satsuma orange.
CPB. 10077. From the Philippine Islands. Plants presented by P. J. Wester. Received May 18, 1930.
For previous introduction see 105226.
109647. PARAMIGNYA LONGIPEDUNCULATA Merr. Rutaceae.
CPB. 10200. From Los Banos, Philippine Islands. Presented by G. B. Lontok. Received May 24, 1923. A woody climber with elliptic-ovate leaves about 3 inches long and small white flowers. Native to the Philippine Islands.
- 109648 to 109762. CITRUS spp. Rutaceae.
109648. CITRUS sp.
CPB. 10280. From Japan. Originally introduced as seeds, presented by Dr. T. Tanaka, Imperial University, Hako-zaki, Fukuoka. Received February 18, 1925, under the name "pectinifera," for which a place of publication has not been found.
109649. CITRUS sp.
CPB. 10301. Budwood presented by Dr. H. J. Webber, from Buitenzorg, Java. Received August 11, 1935. *Dejerock limoli*, a small fruited species with a rough skin.
109650. CITRUS AURANTIUM L. Seville orange.
CPB. 10330-A. *Chinotto* orange. A seedling of CPB. 10330, which came originally from C. Allegra, Catania, Sicily. Received November 18, 1925.
See 65128 for the introduction of CPB. 10330.
109651. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Mandarin orange.
CPB. 10346. *Szinkom*. Received from the Director of Agriculture, Philippine Islands, February 20, 1925.
109652. CITRUS sp.
CPB. 10358. From Japan. Originally received as seed, from Dr. T. Tanaka, Miyazaki, March 30, 1926.

109606 to 109792—Continued.

109653. CITRUS AURANTIFOLIA (Christm.) Swingle. **Lime.**

CPB. 10385. *Dayap lime*. Received from T. D. Bagarino, Los Banos, Philippine Islands, November 6, 1926.

109654. CITRUS sp.

CPB. 10552. *Sour Kat*. Plants received from F. A. McClure, Canton, China, June 27, 1927.

109655. CITRUS sp.

CPB. 10652. Mandarin × lemon. Plants from H. R. Wright, Auckland, New Zealand. Received July 12, 1930.

109656. CITRUS sp.

CPB. 14002. *Ling Mung*. From China. Budwood presented by G. Weidman Groff, Canton. Received August 20, 1919.

109657. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. **Mandarin orange.**

CPB. 14003. *Chin Chow Kom*. Swatow orange. Originally received as budwood. Collected on the Canton Christian College grounds, Canton, China. Received August 20, 1919.

109658. CITRUS SINENSIS (L.) Osbeck.

CPB. 14007. *Tim Kat*. Budwood of a sweet orange, collected near Canton, China, by E. May, Jr. Received August 1919.

109659 to 109661. Originally received as budwood, collected in Japan by W. T. Swingle.

109659. CITRUS sp.

CPB. 14027. *Hime Buntan*. Received in 1919.

109660. CITRUS sp.

CPB. 14041. *Sambo*. Received in 1919.

109661. CITRUS AURANTIUM L.

CPB. 14043. *Zadaidai*. Received in January 1918.

109662. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. **Mandarin orange.**

CPB. 14045. *Swatow orange*. Collected by E. May near the College of Agriculture, Los Banos, Philippine Islands, in 1919.

109663. CITRUS sp.

CPB. 14046. From Japan. Originally collected as budwood by E. May at the Ikeda Nursery, Ikeda. Received November 3, 1919.

109664. CITRUS sp.

CPB. 14026. *Natsume daidai*. Originally collected at the Los Banos Nursery, Philippine Islands, by E. May. Received December 1919.

109665 and 109666. CITRUS AURANTIFOLIA (Christm.) Swingle. **Lime.**

Dayap lime. Received from the Department of Agriculture, Manila, January 12, 1927.

109665. CPB. 10527-C.

109666. CPB. 10527-D.

109667. CITRUS SINENSIS (L.) Osbeck.

CPB. 10841. *Avana*.

109606 to 109792—Continued.

109668. CITRUS SINENSIS (L.) Osbeck.

CPB. 10842. *Avana blood*.

109669. CITRUS MEDICA L. **Citron.**

CPB. 10843. *Yemen citron*.

109670. CITRUS sp.

CPB. 11587. *Yuzu*. Obtained at Seattle, Wash., January 13, 1931, by Paul Hedtke, plant quarantine inspector.

109671. CITRUS GRANDIS (L.) Osbeck. **Grapefruit.**

CPB. 11893. *Shaddock*. Seedling plants received from Thomas R. Towns, Holguin, Cuba, June 23, 1922. Seeds of this same shaddock were received and given the F. P. I. No. 55030.

109672. CITRUS LIMONIA Osbeck.

CPB. 12702-C. *Rough lemon*. From T. Ralph Robinson, Terra Ceia, Fla. Received November 4, 1932.

109673. CITRUS sp.

CPB. 15130. *Som Sa*. Budded plants received from Los Banos, Philippine Islands, but originally collected by O. A. Reinking on a trip to Siam in 1920. Received June 14, 1921.

109674. CITRUS AURANTIUM L. **Seville orange.**

CPB. 10339. From San Juan, Puerto Rico; presented by O. W. Barrett. Received December 1, 1925.

109675. CITRUS sp.

CPB. 11430. Received from Tahiti, May 1919, under the name, "cambra-voixora odoratissima," for which a place of publication has not been found.

109676 to 109678. CITRUS GRANDIS (L.) Osbeck. **Grapefruit.**

109676. CPB. 7834. From the Philippine Islands. Presented by O. W. Barrett, Bureau of Agriculture, Manila. Received April 1, 1914.

109677. CPB. 10044. Siamese pummelo. From Hong Kong, China. Collected by W. T. Swingle. Received April 11, 1919.

109678. CPB. 10059. Red pummelo. From Saharanpur, India. Received March 22, 1920.

109679. CITRUS sp.

CPB. 10072. *Ichang*. From Nanking, China. A large-fruited hybrid, presented by Prof. J. H. Reisner. Received May 5, 1920.

109680 to 109715. CITRUS GRANDIS (L.) Osbeck. **Grapefruit.**

109680 to 109689. Received October 15, 1920, from Siam. Collected by O. A. Reinking.

109680 to 109688. *Kao Pan*.

109680. CPB. 10078.

109681. CPB. 10079.

109682. CPB. 10080.

109683. CPB. 10081.

109684. CPB. 10082.

109685. CPB. 10083.

109606 to 109792—Continued.

109686. CPB. 10084.
 109687. CPB. 10085.
 109688. CPB. 10087.
 109689. CPB. 10088. *Phuang*.
 109690 and 109691. Collected in Java by O. A. Reinking. Received January 26, 1922.
 109690. CPB. 10126.
 109691. CPB. 10127.
 109692. CPB. 10129. *Koon Non*. Collected by O. A. Reinking in China or Siam. Received January 26, 1922.
 109693. CPB. 10130. *Nakorn Chaisi*. Collected by O. A. Reinking in Siam. Received January 26, 1922.
 109694. CPB. 10132. *Kao Ruantia*. Collected by O. A. Reinking in Indo-China or Siam. Received January 26, 1922.
 109695. CPB. 10210. From Johannesburg, South Africa. Presented by R. A. Davis. Received October 6, 1923.
 109696. CPB. 10242. *Marsh seedless* grapefruit. Budwood presented by C. S. Pomeroy, Riverside, Calif. Received March 26, 1931.
 109697 to 109702. From Java. Originally received as seed, collected by H. J. Webber. Received August 11, 1925.
 109697. CPB. 10304.
 109698 to 109700. Especially selected pink-fleshed shaddock.
 109698. CPB. 10305.
 109699. CPB. 10306.
 109700. CPB. 10707.
 109701. CPB. 10311. Especially selected deep-red-fleshed shaddock.
 109702. CPB. 10312. Especially selected pink-fleshed shaddock.
 109703. CPB. 10343. *Pummelo Siamese*. From Bangkok, Siam. Seeds presented by Yai S. Sanitwongse. Received December 20, 1925.
 109704. CPB. 10359. *Better Pummelo*. From Los Banos, Philippine Islands. Presented by J. D. Bagarino. Received March 31, 1926.
 109705 and 109706. Ichang hybrid. Originally received as seeds. Collected by W. T. Swingle, China-Japan trip, 1926. Received January 7, 1927.
 109705. CPB. 10500—H.
 109706. CPB. 10504—A.
 109707. CPB. 11468. *Siamese seedless*.
 109708. CPB. 14012. *Siamese*. From Los Banos, Philippine Islands. Budwood collected by E. May. Received October 30, 1919.
 109709 to 109715. Budded plants presented by G. Weidman Groff through O. A. Reinking, Los Banos, Philippine Islands.

109606 to 109792—Continued.

109709. CPB. 15072. *Pin Shan Kong Yan*. From Dengo Shan, Kwangtung Province, China. Received June 14, 1921.
 109710. CPB. 15073. *Kong Yan*. From Lakkau, China. Received June 14, 1921.
 109711. CPB. 15076. *Sha Tin Yau*. From Wuchow, Kwangtung Province, China. Received in 1920.
 109712. CPB. 15079. *Song Ma Yau*. From Lip Tak, Kwangtung Province, China. Received January 26, 1922.
 109713. CPB. 15080. *Song Ma Yau*. From Szwei, Kwangtung Province, China. Received June 14, 1921.
 109714. CPB. 15084. *Wong Yau*. From Lip Tak, China. Received June 14, 1920.
 109715. CPB. 15123. *Kao Pan*. From Nakon Chaisi, Siam. Received June 9, 1920.
 109716 to 109719. CITRUS HYSTRIX DC. Rutaceae.
 109716. CPB. 7831. *Cobuyao*. From the Philippine Islands. Seeds presented by O. W. Barrett, Bureau of Agriculture, Manila. Received April 1, 1914.
 109717. CPB. 10049. From the Philippine Islands. A wild orange collected by W. T. Swingle at Mount Maquiling, Los Banos. Received April 16, 1919.
 109718. CPB. 10272. Originally received as seeds presented by C. B. Lontok, through J. E. Higgins, Los Banos, Philippine Islands. Received November 6, 1924.
 109719. CPB. 14011. Budwood from a wild tree on Mount Maquiling, Los Banos, Philippine Islands, presented through E. May. Received October 30, 1919.
 109720 and 109721. CITRUS LIMONIA Osbeck. Rutaceae. Lemon.
 109720. CPB. 7341. *Matta* lemon. From Lahore, India. Seeds of this variety, when received June 6, 1911, were given the P. I. No. 31215.
 109721. CPB. 10247—A. *India* lemon. A seedling presented by H. E. Peake, Khaltoo Fruit Orchards, Solan Brewery KS. Ry., India. Received April 15, 1924.
 109722. CITRUS sp.
 CPB. 10267. From India. Plants presented by H. E. Peake, Khaltoo Fruit Orchards, Solan Brewery KS. Ry. Received October 3, 1934.
 109723 to 109726. CITRUS LIMONIA Osbeck. Lemon.
 Originally received as seeds; from Surinam, February 11, 1922.
 109723. CPB. 11845. *Borneo* lemon.
 109724. CPB. 11846. *Baboon* lemon.
 109725. CPB. 12920. *Meyer* lemon. Budwood received from T. Ralph Robinson, Terra Ceia, Fla., January 27, 1931.

109606 to 109792—Continued.

109726. CPB. 15115. From Saigon, Indo-China. Budded plants presented by G. Weidman Groff, through O. A. Reinking, Los Banos, Philippine Islands. Received June 14, 1921.

109727 and 109728. CITRUS spp. Rutaceae.

Received December 12, 1921, under the name "moi," for which a place of publication has not been found.

109727. CITRUS sp.

CPB. 10123.

109728. CITRUS sp.

CPB. 10124.

109729. CITRUS NOBILIS Lour. Rutaceae.

CPB. 10582. Plants presented by C. W. Edwards, United States Experiment Station, Guam. Received August 29, 1928.

109730. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Rutaceae. Mandarin orange.

CPB. 12384. *Batangas Mandarin*. Plant collected by E. May, Philippine Islands. Received May 1919.

109731. CITRUS NOBILIS UNSHIU Swingle. Rutaceae. Satsuma orange.

CPB. 14009. *Owari* (C. A. 4411) Budsticks from the College of Agriculture, Los Banos, Philippine Islands. Received September 2, 1919.

109732 to 109735. CITRUS spp. Rutaceae

From Kwangtung Province, China. Plants presented by G. Weidman Groff, through O. A. Reinking, Los Banos, Philippine Islands. Nos. 109732 and 109733 were received June 14, 1921.

109732. CITRUS NOBILIS Lour.

CPB. 15097. *Chiu Kom*. Collected at Swatow.

109733. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Mandarin orange.

CPB. 15099. *Tim Kon*. A mandarin orange from Szwui.

109734 and 109735. CITRUS NOBILIS Lour.

109734. CPB. 15102. *Kat*. Collected at Lo Kong Tung. Received January 26, 1922.

109735. CPB. 15106. *Sun Chu Sha Kat*. Collected at Szwui. Received June 14, 1921.

109736 to 109753. CITRUS NOBILIS UNSHIU Swingle. Rutaceae.

Satsuma orange.

109736. CPB. 867. *Moriya*. Plant collected by W. T. Swingle on his China-Japan trip, 1926. Received January 4, 1927.

109737 to 109749. From Japan. Budwood presented by Dr. T. Tanaka. Received April 27, 1921.

109737. CPB. 10093. *Shintani Wase*.

109738. CPB. 10094. *Hozaki Wase*.

109606 to 109792—Continued.

109739. CPB. 10095. *Ishikawa Wase*.

109740. CPB. 10096. *Horie Wase*.

109741. CPB. 10097. *Sueoka Wase*.

109742. CPB. 10098. *Hozaki Wase*.

109743. CPB. 10099. *Sueoka Wase*.

109744. CPB. 10101. *Mizometo's round Owari*.

109745. CPB. 10102. *Moriguch's Ikeda*.

109746. CPB. 10103. *Gyotoku's Zairai*.

109747. CPB. 10104. *Yoshino*.

109748. CPB. 11101. *Kawano Wase*.

109749. CPB. 12996. *Kawano Wase*.

109750 and 109751. Plants grown from budwood of trees brought by E. May from the Ikeda Nursery, Ikeda, Japan. Received November 3, 1919.

109750. CPB. 14046. *Kawano Wase*.

109751. CPB. 14047. *Hira*.

109752. CPB. 14048. *Ikiriki*. From Kobe, Japan. Received from Dr. T. Tanaka, December 1919.

109753. CPB. 14051. *Kawano Wase*. From Japan. Budwood collected by Dr. T. Tanaka. Received December 1919.

109754. CITRUS sp. Rutaceae.

CPB. 12080. *Sveequeasaa*. From Japan. Originally received as seeds, presented by Dr. T. Tanaka, Imperial University, Hakozaki, Fukuoka. Received February 18, 1935, under the name "pectinitera," for which a place of publication has not been found. See also F. P. I. 109648.

109755 and 109756. CITRUS SINENSIS (L.) Osbeck. Rutaceae. Orange.

109755. CPB. 10252. *Poorman* orange. From New Zealand. Budsticks presented by George A. Green, Auckland. Received June 17, 1924.

109756. CPB. 14007. *Tim Kat*. Budwood collected by E. May near Canton, China. Received in August 1919.

109757. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Mandarin orange.

CPB. 14054. *Swatow* orange. From Hong Kong, China. Plants collected by Mr. Byrd and given to E. May. Received October 29, 1919.

109758. PARAMIGNYA MONOPHYLLA Wight. Rutaceae.

CPB. 11433. A stout climbing evergreen shrub, native to the Sikkim Himalayas and the mountains of Khasi, between 2,000 and 5,000 feet altitude. The root contains large crystals of oxalate of lime and is used by the country people as an alternative tonic.

For previous introduction see 45159.

109759 to 109761. CITRUS SINENSIS (L.) Osbeck.

From Kwangtung Province, China. Budded plants presented by G. Weidman

109606 to 109792—Continued.

Groff, through O. A. Reinking, Los Banos, Philippine Islands. Received June 14, 1921.

109759. CPB. 15093. *Lau Ch'ang*. From Szwui.

109760. CPB. 15094. From Paak Shan.

109761. CPB. 15095. *Hang Chang*. From Szwui.

109762. CITRUS SOUTHWICKII Wester. Rutaceae. *Limao*.

From the Philippine Islands. Plant presented by the Bureau of Agriculture, Manila. Received May 26, 1915. A compact thorny tree which becomes about 20 feet high, with dark-green, thick, distinct leaves and attractive oblate inedible fruits, used by the Boholanos for washing clothes. Native to the Philippine Islands, from the island of Bohol through Mindanao.

For previous introduction see 41387.

109763. FERONIELLA OBLATA Swingle. Rutaceae. *Krassan*.

CPB. 7521. (Date of origin not found.) A spiny tree up to 65 feet high, native to forests in Cambodia and Cochin-China. The leaflets of the pinnate leaves are oval with rounded or flattened tips, and the very fragrant white flowers appear in panicles on the branches of the previous year's growth. The small fruits, less than 3 inches in diameter, are borne in clusters and have a pronounced orange flavor when young. The edible pinkish pulp is subacid and is used as a condiment in sauces.

For previous introduction see 43968.

109764. FICUS sp. Moraceae. *Fig*.

CPB. 10348. *Kazzi*. From Syria. Cuttings presented by A. E. Day, American University, Beirut. Received March 4, 1926.

109765. FORTUNELLA HINDSII (Champ.) Swingle. Rutaceae.

CPB. 7462-A. From Hong Kong, China. Originally presented by S. T. Dunn, Superintendent, Botanical and Forestry Department, January 1909. A small shrub with oval-elliptic, leathery leaves and small orange fruits. Native to southeastern China.

For previous introduction see 24587.

109766. HESPERETHUSA CRENULATA (Roxb.) Roemer. Rutaceae.

CPB. 2758. (Date of origin not found.) A shrub or small tree, native to India, where it grows in dry situations up to 4,000 feet altitude. The very small fruits are occasionally eaten.

109767. HYDNOCARPUS ANTHELMINTHICA Pierre. Flacourtiaceae.

CPB. 15132. Seedling plants collected by O. A. Reinking in Siam in 1920; received from Los Banos, Philippine Islands, June 14, 1921. The *maikrabao*, as this tree is called in Siam, where it is native, is 30 to 60 feet tall, with large leathery leaves a foot long, pale yellow above and greenish below. The rose or purplish flowers are followed by round fruits 3 inches in diameter which contain about 80 seeds, from which a fatty oil is expressed. This oil closely resembles chaul-

109606 to 109792—Continued.

moogra oil, which is used in the treatment of leprosy.

For previous introduction see 65731.

109768. LITCHI CHINENSIS Sonner. Sapindaceae. *Lychee*.

CPB. 12978-C. Specimen of fruit from Estero, Fla., from P. W. Campbell, June 30, 1931.

109769 to 109773. MICROCITRUS AUSTRALASICA (F. Muell.) Swingle. Rutaceae. *Finger lime*.

A spiny shrub or small tree 15 to 30 feet high, with small oval or ovate leaves up to 1½ inches long. The finger-shaped, slender fruits, up to 4 inches long, contain very acid juice. Native to New South Wales and Queensland.

For previous introduction see 57702.

109769. CPB. 7307. From Australia.

109770. CPB. 7307-B. A seedling of CPB. 7307.

109771. CPB. 7775-B. Received originally as seeds from James Pink, Brisbane, Australia, in May 1906, and assigned P. I. No. 18550.

109772. CPB. 11372. Originally received as seeds from Australia.

109773. CPB. 11411. *Sang*.

109774 and 109775. MICROCITRUS GARRAWAYI (Bail.) Swingle.

A small tree or shrub with very small, white flowers and ovoid to finger-shaped fruits. Native to Queensland, Australia.

109774. CPB. 11008.

109775. CPB. 11466.

109776. MICROCITRUS sp.

CPB. 7775-E. Original seed from Australia. Received under the name "virgata," for which a place of publication has not been found.

109777. MURRAYA EXOTICA L. Rutaceae. *Orange-jasmine*.

CPB. 7380. From India. An evergreen shrub, native throughout tropical Asia to the East Indies and as far as New Zealand. It has handsome pinnate foliage and large fragrant white flowers.

109778. PEDILANTHUS TITHYMALOIDES Poit. Euphorbiaceae.

CPB. 13104. A tender, cactuslike shrub about 5 feet high, native to tropical America. The red or purple flowers are in dense terminal cymes. In Mexico this is known as the *candelilla*.

109779. PISTACIA MEXICANA H. B. K. Anacardiaceae.

CPB. 7581. Originally received as seeds from Mexico, July 1, 1912. A slender shrub or small tree with pinnate leaves composed of 11 to 29 oblique-oblong leaflets and small dry fruits with edible seeds. Native to Mexico.

109780 to 109786. SEVERINIA BUXIFOLIA (Poir.) Ten. Rutaceae.

A small spiny shrub, native to southern China, with elliptical, wavy margined, glossy-green leaves. The small pure-white flowers are borne in axillary clusters, and the black succulent berries are about the size of a pea.

109606 to 109792—Continued.

109780 and 109781. The original plants were received as *Atalantia bilocularis* from the Director of Agriculture, Buitenzorg, Java, in June 1910.

109780. CPB. 2916-A.

109781. CPB. 2916-C.

109782 to 109784. No data of origin found.

109782. CPB. 2760-A.

109783. CPB. 2760-AA.

109784. CPB. 2760-C.

109785. CPB. 11115. From the Philippine Islands.

109786. CPB. 11321. No data of origin found.

109787 and 109788. *CHAETOSPERMUM GLUTINOSUM* (Blanco) Swingle. Rutaceae.

109787. CPB. 10168-A. Originally received from the Hawaii Agricultural Experiment Station, Honolulu, June 27, 1922.

109788. CPB. 10524. Collected by W. T. Swingle on his China-Japan trip in 1926.

109789. *TRIPHASIA TRIFOLIA* (Burm. f.) P. Wilson. Rutaceae.

CPB. 7788. (No data of origin.) A spiny shrub with compound leaves composed of three ovate leaflets notched at the tip. The white, sweet-scented axillary flowers are followed by small berries which are used in making jams and preserves.

109790. *CITRUS GRANDIS* (L.) Osbeck. Rutaceae. **Grapefruit.**

CPB. 11250. *Buntan*. (No data of origin.)

109791. *CITRUS SINENSIS* (L.) Osbeck. Rutaceae.

CPB. 10556. From Australia. Presented by G. Williams, Director, Department of Agriculture and Stock, Brisbane, Queensland. Received August 11, 1927.

109792. *GLYCOSMIS PENTAPHYLLA* (Retz.) Correa. Rutaceae.

CPB. 2914. From Java. An unarmed shrub with evergreen compound leaves, panicles of small white fragrant flowers, and small white berries. Originally received as seed and assigned P. I. No. 28124.

109793. *AMYGDALUS PERSICA* L. **Amygdalaceae.** **Peach.**

From central Asia. Seeds presented through the Institute of Plant Industry, Leningrad. Received March 1, 1935.

Variety *Ferganensis*. Introduced for Department specialists.

109794 to 109803.

From the Union of Soviet Socialist Republics. Bulbs presented by V. Alferov, Introduction Garden of Subtropical Cultures, Sukhum, through the Institute of Plant Industry, Leningrad. Received March 1, 1935.

109794. *CYCLAMEN IBERICUM* Stev. Primulaceae.

No. 833. A dwarf herbaceous perennial, native to the Caucasus region, with

109794 to 109803—Continued.

oval-rounded leaves zoned with white above and purple flowers with darker-colored throats.

For previous introduction see 89093.

109795 to 109803. *TULIPA* spp. Liliaceae. **Tulip.**

109795. *TULIPA BORSZCZOWI* Regel.

No. 832.

For previous introduction and description see 108405.

109796. *TULIPA FOSTERIANA* Hoog.

No. 838.

For previous introduction and description see 107585.

109797. *TULIPA GREIGH* Regel.

No. 837.

For previous introduction and description see 108407.

109798. *TULIPA KAUFMANNIANA* Regel.

No. 836.

For previous introduction and description see 108408.

109799. *TULIPA KOROLKOVII* Regel.

No. 831.

For previous introduction see 106776.

109800. *TULIPA KUSCHKENSIS* B. Fedtsch.

No. 839.

For previous introduction and description see 108410.

109801. *TULIPA LEHMANNIANA* Merck.

No. 830. A tulip from Bokhara, Turkistan, with four very narrow leaves about 4 inches long and a bright-yellow flower, the segments being less than 2 inches long.

109802. *TULIPA OSTROWSKIANA* Regel.

No. 829.

For previous introduction and description see 108412.

109803. *TULIPA SCHRENKII* Regel.

No. 840. A tulip from Turkistan, with broadly campanulate yellow or purple-yellow flowers borne on a stem nearly a foot high. The leaves are wavy margined.

For previous introduction see 100645.

109804. *ZIZIPHUS JUJUBA* Mill. **Rhamnaceae.** **Chinese jujube.**

From Japan. Seeds presented by Kan Yashiroda, Tonosho-Kyoku, Kagawaken. Received February 27, 1935.

Variety *Inermis*. A form without spines, from the coldest part of Japan.

109805 to 109830.

From Manchuria. Seeds presented by the Kungchuling Experiment Station of the South Manchurian Railway, through H. G. MacMillan and J. L. Stephens, Bureau of Plant Industry. Received February 26, 1935.

109805 to 109830—Continued.

Introduced for Department specialists.

109805 to 109809. AGROPYRON spp. Poaceae. Wheatgrass.

109805. AGROPYRON CILIARE (Trin.) Franch.

No. 84. A tall-growing, short-awned grass.

For previous introduction see 88967.

109806. AGROPYRON CRISTATUM (L.) Gaertn. Crested wheatgrass.

No. 70.

For previous introduction see 109450.

109807. AGROPYRON REPENS (L.) Beauv. Quackgrass.

No. 80.

For previous introduction see 108428.

109808. AGROPYRON SEMICOSTATUM Nees.

No. 75. A perennial, fibrous-rooted grass with erect stems and narrowly linear leaves. Native to Asia from Afghanistan to Manchuria.

For previous introduction see 101645.

109809. AGROPYRON SEMICOSTATUM Nees.

No. 85.

109810. ARTHRAXON HISPIDUS (Thunb.) Makino. Poaceae. Grass.

No. 86. A slender branching annual grass with decumbent or creeping stems about 2 feet long. Native to Japan.

109811. ASTRAGALUS DAVURICUS (Pall.) DC. Fabaceae.

No. 79. A perennial from 2 to 5 feet high with purple flowers.

For previous introduction see 105583.

109812. BROMUS INERMIS Leyss. Poaceae. Bromegrass.

No. 77.

For previous introduction see 107898.

109813. BROMUS RAMOSUS Huds. Bromegrass.

No. 76.

109814. CHLORIS sp. Poaceae. Grass.

No. 81.

109815. DIGITARIA ISCHAEMUM (Schreb.) Muhl. Poaceae. Grass.

No. 87.

For previous introduction see 101653.

109816. DIGITARIA SANGUINALIS (L.) Scop. Poaceae. Grass.

No. 82.

For previous introduction see 59298.

109817. ELYMUS sp. Poaceae.

No. 78.

109818. ERAGROSTIS CILIANENSIS (All.) Link. Poaceae.

No. 65.

For previous introduction see 107053.

109819. ERAGROSTIS PILOSA (L.) Beauv. Poaceae.

No. 67. A grass over 2 feet tall, found in moist situations.

For previous introduction see 107673.

109805 to 109830—Continued.

109820. ERIOCHLOA VILLOSA (Thunb.) Kunth. Poaceae.

No. 89.

For previous introduction see 101659.

109821. HORDEUM BREVISUBULATUM (Trin.) Link. Poaceae.

No. 66.

For previous introduction see 107932.

109822. KOELERIA CRISTATA (L.) Pers. Poaceae.

No. 90.

For previous introduction see 109299.

109823. LESPEDEZA BICOLOR Turcz. Fabaceae.

No. 91.

For previous introduction see 104671.

109824. LESPEDEZA STRIATA (Thunb.) Hook. and Arn. Fabaceae.

No. 71.

For previous introduction see 90359.

109825. ECHINOCHLOA CRUS-GALLI FRUMENTACEA (Roxb.) W. F. Wight. Poaceae.

No. 74.

For previous introduction see 87718.

109826. POA sp. Poaceae.

No. 73.

109827. SETARIA LUTESCENS (Weigel) Hubbard. Poaceae. Grass.

No. 88. An annual grass about 2 feet high, erect or sometimes prostrate. Native to central Europe.

109828. SETARIA VIRIDIS (L.) Beauv. Poaceae. Grass.

No. 83.

For previous introduction see 107699.

109829. SOJA MAX (L.) Piper. Fabaceae. Soybean.

No. 68.

109830. VICIA AMOENA Fisch. Fabaceae.

No. 72.

For previous introduction and description see 108726.

109831 to 109838. LYCOPERSICON ESCULENTUM Mill. Solanaceae.

From northern Africa. Seeds presented by H. Brayard, Director, Experiment Station, Marrakech, Morocco. Received March 5, 1935.

A collection of French varieties, introduced for Department specialists.

109831. *De Marmande.*

109832. *Des Allies.*

109833. *Joffre.*

109834. *Merville des Marches.*

109835. *Pierrette.*

109836. *Precoce des Halles.*

109837. *Premiere.*

109838. *Profusion.*

109839 to 109875.

From Venezuela. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received February 28, 1935.

Introduced for Department specialists.

109839 and 109840. *ARACHIS HYPOGAEA* L. Fabaceae. **Peanut.**

Cultivated peanuts obtained in the market at Caracas, January 23, 1935. Said to be native.

109839. No. 2971. *Mani.*

109840. No. 2972. *Mani americano.*

109841. *ARRABIDAEA* sp. Bignoniaceae.

No. 3039. Collected near La Democracia, February 4, 1935. An ornamental climbing shrub.

109842. *BANISTERIOPSIS* sp. Malpighiaceae.

No. 2951. January 22, 1935. From the lower Catuche Woods, near Caracas. A vine 20 to 30 feet high, clambering over other vegetation.

109843. *BANISTERIOPSIS GUATEMALENSIS* (Ndu.) C. B. Robinson. Malpighiaceae.

No. 3005. February 5, 1935. Collected between Limon and El Sombrero. A climbing shrub about 20 feet high; native to Guatemala.

109844. *CAJANUS INDICUS* Spreng. Fabaceae. **Pigeon-pea.**

No. 2969. January 23, 1935. *Quinchoncho.* Obtained in the market at Caracas.

109845. *CICER ARIETINUM* L. Fabaceae. **Chickpea.**

No. 2956. January 23, 1935. *Garbanzo.* A cultivated variety originally from Spain. Obtained in the market at Caracas.

For previous introduction see 109259.

109846. *CLEOME STYLOSA* Eichl. Capparidaceae.

No. 2990. January 27, 1935. *Barbacajo.* Collected on the outskirts of Caracas. A shrub about 4 feet high with sticky compound leaves of 5 to 11 lanceolate leaflets and small white to pinkish flowers. Native to Venezuela.

109847. *CHENOPIDIUM AMBROSIODES* L. Chenopodiaceae.

No. 2989. Collected on the outskirts of Caracas, January 27, 1935.

109848. *COMBRETUM FRUTICOSUM* (Loefl.) Stuntz. Combretaceae.

No. 3014. February 3, 1935. Near El Sombrero, State of Guarico. An ornamental climbing shrub with opposite elliptical leaves and spikes of orange and green flowers. Native to temperate regions from Argentina to Brazil.

For previous introduction see 107292.

109849. *ERYTHRINA* sp. Fabaceae.

No. 3021. February 4, 1935. Near El Sombrero, State of Guarico. A large tree.

109850. *HURA CREPITANS* L. Euphorbiaceae. **Sandboxtree.**

No. 3016. *Habillo.* February 3, 1935. Near El Sombrero, State of Guarico. A tall tree with large poplarlike leaves and

109839 to 109875—Continued.

globose explosive capsules about 3 inches in diameter. Native to tropical America.

For previous introduction see 106992.

109851. *INDIGOFERA SUFFRUTICOSA* Mill. Fabaceae.

No. 2984. January 27, 1935. Near Caracas. A scantily branching open shrub 4 to 5 feet high.

For previous introduction see 107471.

109852. *INDIGOFERA SUFFRUTICOSA* Mill. Fabaceae.

No. 2985. January 27, 1935. Near Caracas. In habit and appearance this is much like No. 2984 (109851) except that the fruit and leaves are larger.

109853. *JACARANDA FILICIFOLIA* (Anders.) Don. Bignoniaceae.

No. 2997. January 28, 1935. Near Caracas. A cultivated shade tree with fernlike leaves and showy panicles of large blue-purple flowers.

109854. *BONTIA DAPHNOIDES* L. Myoporaceae.

No. 3000. *Olivo.* Collected near Caracas, January 8, 1935. A small tree with small glossy alternate lanceolate leaves and axillary flowers which are either solitary or in pairs. The fruit is a fleshy drupe containing eight hard seeds.

For previous introduction see 44907.

109855. *NISSOLIA FRUTICOSA* Jacq. Fabaceae.

No. 3009. Collected between Limon and El Sombrero, State of Guarico, February 3, 1935. A somewhat woody vine with opposite pinnate leaves and axillary racemes of small yellow flowers. Native to Central America.

109856. *PAULLINIA LEIOCARPA* Greisb. Sapindaceae.

No. 2950. Collected at Antimano, near Caracas, January 12, 1935. A climbing shrub.

109857 and 109858. *PHASEOLUS LUNATUS* L. Fabaceae. **Lima bean.**

From the market at Caracas, January 23, 1935.

109857. No. 2968. *Guaracaros.*

109858. No. 2970. *Guaracaros blanco.*

109859 to 109864. *PHASEOLUS VULGARIS* L. Fabaceae. **Common bean.**

From the market at Caracas, January 23, 1935.

109859. No. 2959. *Frijol.*

109860. No. 2961. *Carraotas negras.* The most popular variety; widely cultivated also in Central America.

109861. No. 2962. *Carraotas amarillas.*

109862. No. 2964. *Taitaguita.*

109863. No. 2966. *Poucha rosada.*

109864. No. 2967. *Carraota dominó.*

109865 and 109866. *PISUM SATIVUM* L. Fabaceae. **Pea.**

From the market at Caracas, January 23, 1935.

109865. No. 2957. *Arvejas amarillas.*

109839 to 109875—Continued.

109866. No. 2963. *Arvejas verdes*.
 109867. RUPRECHTIA CORIACEA (Karst.) Blake. Polygonaceae.
 No. 3015. *Biscochito*. From near El Sombrero, State of Guarico, February 3, 1935. A small tree, 20 feet high, native to Venezuela, with ovate-lanceolate, acute leaves about 3 inches long.
 109868. RUPRECHTIA sp. Polygonaceae.
 No. 3030. Collected between El Sombrero and La Democracia, State of Guarico, February 4, 1935. A small tree.
 109869. SAPINDUS SAPONARIA L. Sapindaceae. Southern soapberry.
 No. 3031. *Para Para, pepo*. Collected between El Sombrero and La Democracia, State of Guarico, February 4, 1935.
 For previous introduction see 51410.
 109870. SCHOENOCALON OFFICINALE (Schlecht.) A. Gray. Melanthiaceae.
 No. 2994. *Cebadilla*. From Antimano, near Caracas, January 28, 1935. A bulbous plant, native to tropical America, about 3 feet high, with long linear, grass-like leaves and small white flowers on a long spike.
 For previous introduction see 45810.
 109871. SERJANIA GLABRATA H. B. K. Sapindaceae.
 No. 2954. From the lower Catuche Woods, near Caracas, January 22, 1935. A climbing shrub with alternate biternate leaves and white flowers in axillary spike-like racemes. Native to temperate regions in Peru.
 For previous introduction see 101251.
 109872. SICANA ODORIFERA (Vell.) Naud. Cucurbitaceae. Casabanana.
 No. 2975. *Cajúa*. From the market at Caracas, January 23, 1935. A subtropical ornamental vine with cylindrical fruits over a foot long, which have finely mottled dark reddish rinds and yellow flesh with a pleasing odor somewhat like that of the muskmelon. The fruit is used for preserves or dulces.
 For previous introduction see 98882.
 109873 to 109875. VIGNA spp. Fabaceae.
 From the market at Caracas, January 23, 1935.
 109873 and 109874. VIGNA CYLINDRICA (Stickm.) Skeels. Catjang.
 109873. No. 2958. *Frijol blanco de sopa*.
 109874. No. 2965. *Frijoles negros*.
 109875. VIGNA SINENSIS (Torner) Savi. Cowpea.
 No. 2960. *Frijol caia de santo*.
 109876 to 109878. FESTUCA spp. Poaceae. Fescue.
 From Germany. Seeds presented by Gustav Zülzer, Hamburg. Received March 5, 1935.
 Introduced for Department specialists.
 109876. FESTUCA CAPILLATA Lam. Hair fescue.
Sapi.
 For previous introduction see 109211.

109876 to 109878—Continued.

- 109877 and 109878. FESTUCA OVINA L. Sheep fescue.
 For previous introduction see 109497.
 109877. *Sano*. 109878. *Saru*.
 109879 to 109883.
 From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received February 28, 1935.
 109879. CASSIA BACILLARIS L. f. Caesalpinaceae.
 A small tree of rather straggly habit with pinnate foliage and golden-yellow flowers in loose racemes.
 For previous introduction see 106514.
 109880. CASSIA EXCELSA Schrad. Caesalpinaceae.
 Received under the varietal name "angustifolia," for which a place of publication has not been found.
 109881. ENTADA GIGAS (L.) Fawcett and Rendle. Mimosaceae.
 A woody climber with stems often 100 feet long, bipinnate leaves about 6 inches long, and small racemes of yellow or white flowers. The fruit is a large, flat, jointed pod 3 to 7 feet long, with one seed to a joint. The handsome deep-brown seeds are 2 inches across. Native to the West Indies.
 109882. IPOMOEA SINUATA Ortega. Convolvulaceae.
 A handsome vine with attractive palmately-divided leaves and bell-shaped flowers 1 to 2 inches wide, white with a purple center. Native to Mexico.
 For previous introduction see 26411.
 109883. TECTONA GRANDIS L. f. Verbenaceae. Teak.
 A tall evergreen tree, native to southern and central Asia, with opposite ovate leaves and white or bluish flowers in terminal panicles 6 inches long. The wood is highly prized by shipbuilders because of its great strength and durability.
 For previous introduction see 94201.
 109884. ALOE sp. Liliaceae.
 From Venezuela. Plants collected by W. A. Archer, Bureau of Plant Industry. Received March 12, 1935.
 No. 3072. *Zabila*. Collected February 16, 1935, near the sea on a dry hillside, on the road between Caracas and Cabo Blanco. A stemless aloe about a foot high with dull yellow flowers.
 109885 to 109888.
 From China. Seeds and bulbs presented by Andrew Tse, Hong Kong. Received March 7, 1935.
 A collection of Chinese vegetables introduced for Department specialists.
 109885. ALLIUM CEPHA L. Liliaceae. Onion.
 109886. ALLIUM SATIVUM L. Liliaceae. Garlic.
 Bulbs.
 109887. APIUM GRAVEOLENS L. Apiaceae. Celery.

109885 to 109888—Continued.

109888. *DAUCUS CAROTA* L. Apiaceae.
Carrot.

109889 to 109893.

From Japan. Seeds and bulbs presented by Takatsuga Abiko, Director, Hokkaido Agricultural Experiment Station, Kotoni, Sapporo. Received March 7, 1935.

Introduced for the use of Department specialists.

109889 to 109892. *ALLIUM* spp. Liliaceae.

109889. *ALLIUM CEPA* L. Onion.

Sapporo ki-tamanegi.

109890 to 109892. *ALLIUM SATIVUM* L.
Garlic.

Bulbs: *Nin-niku.*

109893. *DAUCUS CAROTA* L. Apiaceae.
Carrot.

Sapporo futo-ninjin (big carrot).

109894 to 109896.

From Venezuela. Bulbs collected by W. A. Archer, Bureau of Plant Industry. Received March 12, 1935.

109894. *HIPPEASTRUM AULICUM* Herb.
Amaryllidaceae.

No. 3074. February 18, 1935. From the market at Caracas. A form with six to nine broadly linear leaves 1 to 2 feet long and a scape 2 feet high bearing, usually, two large bright-red tubular flowers having segments 5 to 6 inches long and a green corona in the throat of the flowers. Native to Brazil.

For previous introduction see 93158.

109895. *AMARYLLIS* sp. Amaryllidaceae.

No. 3073. *Lirio sanjuanero*. Collected at the market in Caracas, February 18, 1935. A cultivated ornamental with red flowers.

109896. *FREESIA* sp. Iridaceae.

No. 3075. *Nardo*. From the market at Caracas, February 18, 1935. A cultivated ornamental.

109897 to 109899. *FESTUCA* spp. Poaceae.

From Germany. Seeds presented by Gustav Schott, Samenwerke, Hamburg-Wandsbek und Aschaffenburg a. M. Received March 5, 1935.

Introduced for Department specialists.

Seeds grown in Bavaria.

109897. *FESTUCA CAPILLATA* Lam.
Hair fescue.

109898. *FESTUCA RUBRA* L. Red fescue.

Received as variety "parva," for which a place of publication has not been found.

109899. *FESTUCA RUBRA* L. Red fescue.

Received as variety "sylvaticus," for which a place of publication has not been found.

109900. *PRUNUS SUBHIRTELLA* Miquel.
Amygdalaceae. Higan cherry.

From England. Scions presented by Collingwood Ingram, Benenden, Kent. Received March 15, 1935.

109900—Continued.

Variety *Rosea-plena*. A form with rather large, double, pink flowers produced in profusion.

For previous introduction see 108755.

109901. *PYRUS COMMUNIS* L. Malaceae.
Pear.

From Michigan. Scions presented by Stanley Johnson, Horticultural Experiment Station, South Haven. Received March 15, 1935.

Gorabella pear. Introduced for Department specialists.

For previous introduction see 107639.

109902 to 109909. *AMYGDALUS* spp.
Amygdalaceae.

From England. Scions presented by Thomas Rivers & Son Ltd., Sawbridgeworth, at the request of R. G. Hutton, East Malling Research Station, East Malling, Kent. Received March 15, 1935.

Introduced for Department specialists.

109902 to 109908. *AMYGDALUS PERSICA* L.
Peach.

109902. *Bellegrade.*

109503. *Golden Eagle.*

109904. *Kestrel.*

109905. *Magdala.*

109906. *Prince of Wales.*

109907. *Princess of Wales.*

109908. *Violetta Hatvie.*

109909. *AMYGDALUS PERSICA* NECTARINA
Ait. Nectarine.

Newton. A nectarine of delicious quality.

For previous introduction see 107335.

109910 to 109913. *ZEPHYRANTHES* spp.
Amaryllidaceae. Zephyrily.

From India. Bulbs purchased from the Chandra Nursery, Rhenock, Siklim State. Received March 15, 1935.

Introduced for Department specialists.

109910. *ZEPHYRANTHES* sp.

109911. *ZEPHYRANTHES* sp.

109912. *ZEPHYRANTHES ROSEA* Lindl.

For previous introduction see 107147.

109913. *ZEPHYRANTHES* sp.

Received under the name "sulphurea," for which a place of publication has not been found.

109914 to 109945.

From Venezuela. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received March 4, 1935.

Introduced for Department specialists.

109914. *ALLIUM CEPA*. Liliaceae. Onion.

No. 3037. From La Victoria, February 5, 1935. A cultivated red onion, said to have been introduced from the Canary Islands.

109914 to 109945—Continued.

109915. *CALLIANDRA MARGINATA* Griseb. Mimosaceae.

No. 3003. Collected between Caracas and Maracay, February 2, 1935. An unarmed shrub or tree. Native to Trinidad.

109916. *BOWDICHIA VIRGILIOIDES* H. B. K. Fabaceae.

No. 3002. *Aicornoque*. From a dry hillside at Limón near Maracay, Department of Aragua, February 2, 1935. A small usually crooked tree about 25 feet high, with leathery compound leaves and terminal panicles of small purplish-blue flowers. Native to dry regions in Venezuela and Brazil.

109917. *CENTROSEMA PLUMIERI* (Turp.) Benth. Fabaceae.

No. 3028. Collected February 4, 1935, between El Sombrero and La Democracia in a river bed. A tropical ornamental vine, native to Brazil, with white and red flowers. Of value as a green manure.

For previous introduction see 106591.

109918. *CENTROSEMA PUBESCENS* Benth. Fabaceae.

No. 3038. Collected between El Sombrero and La Democracia, February 4, 1935.

109919. *CENTROSEMA VIRGINIANUM* (L.) Benth. Fabaceae.

No. 2998. January 29, 1935. From a dry hillside at Antimano, near Caracas.

109920. *CASSIA RETICULATA* Willd. Caesalpinaceae.

No. 3017. Collected February 4, 1935, at El Sombrero. An evergreen shrub about 10 feet high, with racemes of small yellow flowers. Native to tropical America.

109921 and 109922. *CASSIA BIFLORA* L. Caesalpinaceae.

A shrub about 10 feet high, native to tropical America, with compound leaves and small racemes of showy yellow flowers.

109921. No. 2953. Collected January 22, 1935, in the lower Catuche Woods, near Caracas, on a dry hillside.

109922. No. 3008. Collected February 3, 1935, between Limón and El Sombrero, Department of Aragua.

109923. *CAYAPONIA AMERICANA* (Lam.) Cogn. Cucurbitaceae.

No. 3029. Collected between El Sombrero and La Democracia, February 4, 1935. *Benenito*. A woody vine with large rough, deep-green, five-lobed leaves and small ovoid fruits, less than an inch long that turn red when ripe.

For previous introduction see 98823.

109924. *CHAETOCALYX PARVIFLORA* Benth. Fabaceae.

No. 2992. Collected January 28, 1935, at Antimano, near Caracas. An evergreen vine with pinnate leaves and small pale-yellow flowers in short axillary racemes. Native to eastern Brazil.

109925. *CHENOPodium AMBROSIOIDES* L. Chenopodiaceae. **Wormseed.**

No. 2982. Pasote. From Antimano, near Caracas, January 26, 1935.

109914 to 109945—Continued.

109926. *GYNANDROPSIS PENTAPHYLLA* (L.) DC. Capparidaceae.

No. 3026. Collected February 4, 1935, between El Sombrero and La Democracia, in a river bed. An annual up to 15 feet high.

109927. *CENTROSEMA PUBESCENS* Benth. Fabaceae.

No. 3027. Collected between El Sombrero and La Democracia, February 4, 1935.

109928. *TEPHROSIA CINEREA* L. Fabaceae.

No. 3033. Collected near Los Teques, State of Miranda, February 5, 1935. A shrubby perennial with a thick rootstalk, slender ascending stems 3 to 4 feet long, and purplish flowers in rather dense racemes. Native to the West Indies.

109929. *BENTHAMANTHA CARIBAEA* (Jacq.) Kuntze. Fabaceae.

No. 3010. February 3, 1935. Collected on dry banks between Limón and El Sombrero. A shrub up to 6 feet high.

109930. *CUCUMIS MELO* L. Cucurbitaceae. **Muskmelon.**

No. 3036. February 5, 1935. From La Democracia. Fruit oval, yellow, ribbed, 8 inches long and about 5 inches in diameter, of unusually good flavor.

For previous introduction see 109479.

109931. *CASSIA BIFLORA* L. Caesalpinaceae.

No. 3007. Collected between Limón and El Sombrero, Department of Aragua, February 3, 1935.

For previous introduction see 109921.

109932. *DESMANTHUS VIRGATUS* (L.) Willd. Mimosaceae.

No. 2978. From Miramar, near El Valle, Federal District, January 24, 1935. A slender climbing shrub 5 to 6 feet high, with sensitive bipinnate leaves.

For previous introduction see 107161.

109933. *DESMANTHUS DEPRESSUS* Humb. and Bonpl. Mimosaceae.

No. 3023. Collected February 4, 1925, between El Sombrero and La Democracia, State of Guárico. A dwarf, prostrate perennial, native to dry sandy places in tropical America.

109934. *GALACTIA STRIATA* (Jacq.) Urban. Fabaceae.

No. 3001. Collected February 2, 1935, at Limón, near Maracay, Department of Aragua, on a dry hillside. A small vine with pink, pea-shaped flowers.

For previous introduction see 95692.

109935. *INDIGOFERA SUBULATA* Vahl. Fabaceae.

No. 3034. Collected near Los Teques, State of Miranda, February 5, 1935. A shrubby herb up to 3 feet high, with salmon-pink flowers in racemes 5 to 10 inches long. Native to tropical America.

For previous introduction see 24763.

109914 to 109945—Continued.

109936. *INDIGOFERA SUFFRUTICOSA* Mill. Fabaceae.

No. 2952. *Anil*. From the lower Catuche Woods, near Caracas, January 22, 1935.

For previous introduction and description see 109851.

109937. *JACARANDA FILICIFOLIA* (Anders.) Don. Bignoniaceae.

No. 2997. January 28, 1935. From Antimano, near Caracas.

For previous introduction and description see 109853.

109938. *LONCHOCARPUS FENDLERI* Benth. Fabaceae.

No. 3006. *Majomo*. Collected February 3, 1935, between Limón and El Sombrero, Department of Aragua. A small to medium-sized deciduous tree with seven to nine oblong, subovate, downy-woolly leaflets, and pink flowers less than an inch long in axillary racemes. Native to Venezuela.

109939. *LONCHOCARPUS STENURUS* Pittier. Fabaceae.

No. 3019. February 4, 1935, from El Sombrero. A shrub or small tree, sometimes 30 feet high. Native to Venezuela.

109940. *NICOTIANA TABACUM* L. Solanaceae.

No. 2955. January 22, 1935. From the lower Catuche Woods, near Caracas, on a dry hillside; escaped from cultivation.

109941. *PAULLINIA* sp. Sapindaceae.

No. 2996. *Bejuco mulato*. January 27, 1935. Collected near Caracas.

109942. *PHYLLANTHUS ACUMINATUS* Vahl. Euphorbiaceae.

No. 2979. *Hediondo*. January 24, 1935. From Miramar, near El Valle, Federal District. A small tree 20 feet high.

109943. *POLYGONUM PUNCTATUM* Ell. Polygonaceae.

No. 2983. *Barbasco*. Collected near Caracas, January 27, 1935.

109944. *SERJANIA* sp. Sapindaceae.

No. 2981. *Cruceta*. From the Catuche Woods, Caracas, January 26, 1935.

109945. *TERAMNUS VOLUBILIS* Sw. Fabaceae.

No. 3024. Collected February 4, 1935, between La Democracia and El Sombrero, from a dry bank. A small woody vine with oblong or elliptical-lanceolate leaflets and very small, violet-rose flowers in axillary racemes. Native to tropical America.

109946 and 109947.

From India. Seeds presented by W. Gregson, Director of Agriculture, Tenasserim Circle, Moulmein. Received March 11, 1935.

Introduced for Department specialists.

109946. *APIUM GRAVEOLENS* L. Apiaceae.
Celery.

Tayoke Nan Nan.

109946 and 109947—Continued.

109947. *DAUCUS CAROTA* L. Apiaceae.
Carrot.

Mone-Lar-U-Ni.

109948 to 109950.

From Germany. Seeds presented by Rudolf Neumüller, Frankenthal, Pfalz. Received March 12, 1935.

Introduced for Department specialists.

109948 and 109949. *ALLIUM CEPA* L. Liliaceae.
Onion.

109948. *Zittau Yellow Giant*.

109949. No. 2444. *Nürnbergger*.

109950. *SCORZONERA HISPANICA* L. Cichoriaceae.
Black salsify.

Heinemann, One Year Giant.

109951 to 109956. *CUCURBITA PEPO* L. Cucurbitaceae.

From Austria. Seeds purchased from M. Eifer & Co., through Francis R. Stewart, American consul, Vienna. Received March 7, 1935.

Introduced for Department specialists.

A collection of soft-seeded pumpkin varieties grown in Austria.

109951. *Zitronen* (citron).

109952. *Apfel* (apple).

109953. *Bischofsmitre* (bishop's miter).

109954. *Pomeranzen* (orange).

109955. *Turkenbund* (turban).

109956. *Birne* (pear).

109957 to 109962. *SOLANUM TUBEROSUM* L. Potato.

From the Netherlands. Tubers purchased from Professor Brockema, Director, Instituut voor Plantenveredeling, Wageningen. Received March 18, 1935.

Introduced for Department specialists.

For previous introduction see 108215.

109957. *Albion*.

109958. *Bevlander*.

109959. *Frisco*.

109960. *Neordeling*.

109961. *Triumph*.

109962. *West Brabander*.

109963. *EUCHARIS NARCISSIFLORA* Huber. Amaryllidaceae.

From Ecuador. Bulbs collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received March 15, 1935.

No. 6855. February 5, 1935. Province of Napo-Pastaza, along the trail between Indillama and Canelos, in a dense forest at 13,000 feet altitude. A little-known Amazonilly that differs from other species in having smaller flowers in dense umbels. The leaves are lanceolate-ovate and the scape is about 15 inches high. Native to tropical South America.

109964 to 109966.

From Venezuela. Bulbs collected by W. A. Archer, Bureau of Plant Industry. Received March 15, 1935.

109964 to 109966—Continued.

109964. AMARYLLIS sp. Amaryllidaceae.

No. 3094. *Lirio*. Collected February 23, 1935, along the highway between Valencia and El Cambul. A cultivated form with salmon-pink flowers.

109965. HIPPEASTRUM REGINAE (L.) Herb. Amaryllidaceae.

No. 3104. *Lirio morado*. A cultivated form with purplish flowers; collected along the highway between Valencia and El Cambul, February 23, 1935.

109966. HYMENOCALLIS CARIBAEA. Amaryllidaceae. Caribbean spiderlily.

No. 3103. *Lirio*. A cultivated form, collected February 23, 1935, along the highway between Valencia and El Cambul, of the West Indian spiderlily, with 12 or more strap-shaped leaves over 2 feet long and an umbel of 6 to 12 white flowers, with linear perianth segments about 3 inches long.

109967. PISTACIA CABULICA Stocks. Anacardiaceae.

From India. Seeds presented by Harindar Singh Dinsa, Government Gardens, Lahore, Punjab. Received March 12, 1935.

A tree about 15 feet high, native to Afghanistan, with compound leaves 2 inches long, having five to nine lanceolate-oblong leaflets and rounded-compressed fruits.

For previous introduction see 18635.

109968 to 109970. LINUM USITATISSIMUM L. Linaceae. Flax.

From the Netherlands. Seeds presented by B. C. Algra, Stiens. Received March 16, 1935.

Introduced for Department specialists.

109968. *Dorst's Original "I" B.*

109969. *Dorst's Original "F" 6.*

109970. *Dorst's Original Concurrent.*

109971 to 109986.

From Venezuela. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received March 11, 1935.

Introduced for Department specialists.

109971. ANGELONIA SALICARIAEFOLIA Humb. and Bonpl. Scrophulariaceae.

No. 3045. *Mastranto morado*. Collected February 12, 1935, near Sabana Grande. A bushy annual up to 2 feet high, with numerous sessile, oblong, viscid-hairy leaves 1 to 2 inches long. The solitary, long-stalked, axillary flowers vary in color from bright violet to deep lavender. Native to Venezuela.

109972. ASPIDOSPERMA VARGASII A. DC. Apocynaceae.

No. 3022. From La Democracia, near Para, State of Guario, February 4, 1935. A tree up to 30 feet tall, with elliptic leaves about 4 inches long and numerous small yellow flowers in dense cymes. Native to Venezuela.

109973. BONTIA DAPHNOIDES L. Myoporaceae.

No. 3063. *Olivo*. Collected on the road between Caracas and Cabo Blanco, Federal District, February 16, 1935.

For previous introduction and description see 109854.

109971 to 109986—Continued.

109974. CANAVALLIA GLADIATA (Jacq.) DC. Fabaceae. Swordbean.

No. 3061. Caracas, February 15, 1935. Presented by the Director, Ministerio de Agricultura.

For previous introduction see 80505.

109975. CARDIOSPERMUM HALICACABUM L. Sapindaceae. Balloonvine.

No. 3020. *Farolita de la Virgen*. From El Sombrero, February 4, 1935.

109976. CASSIA OCCIDENTALIS L. Caesalpiniaceae.

No. 3048. *Brusca*. Collected on the highway southeast of Antimano, February 15, 1935.

For previous introduction see 106566.

109977. CROTON FLAVENS L. Euphorbiaceae.

No. 3069. *Carcanapire*. Collected February 15, 1935, on dry hillsides near the sea on the road between Caracas and Cabo Blanco. An aromatic shrub 2 to 10 feet high, with ovate leaves 1 to 4 inches long and pale-yellow or white flowers. Native to the West Indies.

109978. DATURA METEL L. Solanaceae.

No. 3049. *Nongue*. February 15, 1935. Southwest of Antimano on the highway.

109979. HURA CREPITANS L. Euphorbiaceae. Sandbottle.

No. 3057. Collected February 15, 1935, on the highway southwest of Antimano.

For previous introduction and description see 109850.

109980. JATROPHA GOSSYPIFOLIA STAPHYSAGRIFOLIA (Mill.) Muell. Arg. Euphorbiaceae.

No. 3046. *Tuatua morada*. Collected February 15, 1935, on the highway southwest of Antimano. A shrub about 5 feet high, native to tropical America, with three- to five-lobed leaves about 5 inches across and small red to purplish flowers in cymes.

109981. NICOTIANA GLAUCA R. Grah. Solanaceae.

No. 3062. *Almorranera*. Collected February 16, 1935, on the road between Caracas and Cabo Blanco. A slender shrub or small tree 10 to 20 feet high, with yellow flowers in loose terminal panicles. It is native to South America from Argentina to Bolivia.

For previous introduction see 42336.

109982. PAROSELA CARTHAGINENSIS (Jacq.) Killip. Fabaceae.

No. 2993. *Barbasco blanco*. Collected January 28, 1935, at Antimano, near Caracas, on a dry hillside. A shrub about 4 feet high, with small pinnate leaves less than 2 inches long and dense spikes of purple, rose, or white flowers. Native to northern South America.

109983. PASSIFLORA LIGULARIS JUSS. Passifloraceae. Sweet granadilla.

No. 3058. *Parche amarilla*. Purchased near Los Teques, February 13, 1935.

For previous introduction and description see 109410.

109971 to 109986—Continued.

109984. *PLUCHEA* sp. Asteraceae.

No. 3066. *Salvia*. Collected on the road between Caracas and Cabo Blanco, February 15, 1935. A shrub 2 to 5 feet high, with aromatic leaves and stems and bright-lavender flowers.

109985. *SCHOENOCALON OFFICINALE* (Schlecht.) A. Gray. Melanthiaceae.

No. 3060. *Cebadilla*. From Caracas, February 15, 1935. Presented by Señor Alamo, Director, Ministerio de Agricultura.

For previous introduction and description see 109870.

109986. *TERAMNUS UNCINATUS* (L.) Swartz. Fabaceae.

No. 3047. Collected on the highway southwest of Antimano, February 15, 1935. A small vine with a fleshy taproot, native to tropical America. It is used as forage in Brazil and in the Virgin Islands.

For previous introduction see 92941.

109987 and 109988. *BACCHARIS PILULARIS* DC. Asteraceae.

From California. Seeds presented by Carl B. Wolf, Rancho Santa Ana Botanic Garden, Anaheim. Received February 7, 1935.

An evergreen shrub 2 to 5 feet high, native to the Pacific coast of the United States, with sessile, obovate leaves less than an inch long and whitish flower heads.

109987. B-226. 109988. B-227.

109989. *CUCUMIS MELO* L. Cucurbitaceae. Muskmelon.

From India. Seeds presented by the Director of Agriculture, North-West Frontier Province, Peshawar, through M. I. Shah, Utah State Agricultural College, Logan, Utah. Received March 15, 1935.

Kulachi melon. Introduced for Department specialists.

109990. *NEPHELIUM MUTABILE* Blume. Sapindaceae. Pulasan.

From Java. Seeds presented by A. M. Cramer, Wonosobo, through H. S. Wolfe, horticulturist in charge, Subtropical Experiment Station, Homestead, Fla. Received March 19, 1935.

A small Malayan tree 30 feet high, with compound leaves and small clusters of red fruits, commonly about the size of walnuts. The juicy flesh (properly the aril) is translucent, whitish, has a sweet, slightly acidulous flavor, and encloses a single large oblong seed.

For previous introduction see 106102.

109991 to 110020.

From northern Africa. Plants and cuttings presented by H. Brayard, Directeur de la Station Expérimentale, Marrakech, Morocco. Received March 23, 1935.

109991 to 110011. *PRUNUS* spp. Amygdalaceae.109991 to 110007. *PRUNUS ARMENIACA* L.109991. *Pêche Précoce*.109992. *Angoumeis*.

109991 to 110020—Continued.

109993. *Bergeron*.109994. *Blanc Rose à Confre*.109995. *Cluster*.109996. *Corot*.109997. *Doctor Mascle*.109998. *Galta Rocha*.109999. *Gros Blanc d'Auvergne*.110000. *Hemskirke*.110001. *Luizet Special*.110002. *Précoce d'Alexandria*.110003. *Précoce du Portugal*.110004. *Re Imberto*.110005. *Saint Ambroise*.110006. *Shiplay's Early*.110007. *Stella*.110008 to 110010. *PRUNUS AVIUM* L. Sweet cherry.110008. *Bigarreau Grosse Bombellaise*.110009. *Bigarreau Marmotte*.110010. *Bigarreau Pelissier*.110011. *PRUNUS* sp.Cherry, *La Plus Précoce de la Marché*.110012 to 110020. *VITIS* spp. Vitaceae.110012. *Abbot*.110013. *Ahmed ould Ali*.110014. *Ain Kelba*.110015. *Assoued Zine*.110016. *Bezoul el kedim*.110017. *Bezoul el Kelba*.110018. *Bou Asserghim*.110019. *Geir*.110020. *Zene Abiot*.110021 to 110051. *JUGLANS* spp. Juglandaceae. Walnut.

From Canada. Seeds purchased from G. H. Corsan, Islington, Ontario. Received March 12, 1935.

A collection of Carpathian walnuts, introduced for Department specialists.

110021 to 110045. *JUGLANS REGIA* L. Persian walnut.

110021. No. 1.

110034. No. 17.

110022. No. 2.

110035. No. 20.

110023. No. 3.

110036. No. 22.

110024. No. 5.

110037. No. 24.

110025. No. 6.

110038. No. 25.

110026. No. 7.

110039. No. 26.

110027. No. 9.

110040. No. 27.

110028. No. 10.

110041. No. 29.

110029. No. 11.

110042. No. 33.

110030. No. 13.

110043. No. 39.

110031. No. 14.

110044. No. 42.

110032. No. 15.

110045. [No data.]

110033. No. 16.

110021 to 110051—Continued.

- 110046 to 110051. JUGLANS spp.
 110046. No. 34. *Manchurian heartnut*.
 110047. No. 8. *Japanese walnut*.
 110048. No. 35. *Faust heartnut*.
 110049. [No data.]
 110050. No. 23. *Globe*.
 110051. No. 23—A. (Long nuts.)

110052 to 110060.

From Mexico. Seeds collected in the State of Yucatan by J. H. Kempton, Bureau of Plant Industry. Received March 15, 1935. Introduced for Department specialists.

110052. GOSSYPIUM sp. Malvaceae. Cotton.

Cultivated cotton, collected between Merida and Pisti, January 29, 1935. The Mayas often grow a few plants for candlewicks.

110053. VIGNA SINENSIS (Turner) Savi. Fabaceae. Cowpea.

- 110054 to 110060. ZEA MAYS L. Poaceae. Corn.

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|----------------|----------------|
| 110054. No. 1. | 110058. No. 5. |
| 110055. No. 2. | 110059. No. 6. |
| 110056. No. 3. | 110060. No. 7. |
| 110057. No. 4. | |

110061 to 110083.

From the Union of Soviet Socialist Republics. Seeds presented by the Botanic Garden, Alma Ata, through H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received March 11, 1935.

Introduced for Department specialists.

The field numbers are those of the Westover and Enlow series.

110061. AEGILOPS SQUARROSA L. Poaceae.

No. 1223. For previous introduction see 107866.

- 110062 to 110065. AGROPYRON spp. Poaceae. Wheatgrass.

110062. AGROPYRON CRISTATUM (L.) Gaertn. Crested wheatgrass.

No. 1224.

110063. AGROPYRON REPENS (L.) Beauv. Quackgrass.

No. 1225.

110064. AGROPYRON SIBIRICUM (Willd.) Beauv.

No. 1226. For previous introduction see 108847.

110065. AGROPYRON UGAMICUM Drobov.

No. 1227. A tufted perennial grass about 2 feet high, native to Turkistan.

110066. ALOPECURUS PRATENSIS L. Poaceae. Meadow foxtail.

No. 1229.

110067. ALOPECURUS ARUNDINACEUS Poir. Poaceae.

No. 1230.

110068. ARISTIDA PENNATA Trin. Poaceae.

No. 1231. For previous introduction see 108323.

110061 to 110083—Continued.

110069. ARTEMISIA LEUCODES Schrenk. Asteraceae.

No. 1232. A biennial, white-woolly throughout, with erect stems, leaves palmately and finely divided, and white flower heads in axillary clusters. Native to sandy places in central Asia.

110070. ARTEMISIA RUPESTRIS L. Asteraceae.

No. 1233. A perennial herb, native to Siberia, with bipinnatisect leaves and inconspicuous flower heads in racemes.

- 110071 to 110073. ASTRAGALUS spp. Fabaceae.

110071. ASTRAGALUS DENDROIDES Kar. and Kir.

No. 1234. A large erect shrub with oval-lanceolate leaflets and oblong spikes of pale-blue flowers. Native to the mountains of central Asia.

110072. ASTRAGALUS SIEVERSIANUS Pall.

No. 1235. An erect or ascending perennial, with oblong hairy leaflets and axillary clusters of pale-yellow flowers. Native to central Asia.

For previous introduction see 107496.

110073. ASTRAGALUS VULPINUS Willd.

No. 1236. A perennial astragalus native to the desert regions of south-eastern Siberia.

For previous introduction see 61398.

110074. BROMUS INERMIS Leyss. Poaceae. Bromegrass.

No. 1237.

110075. BROMUS JAPONICUS Thunb. Poaceae. Bromegrass.

No. 1238. A biennial upright or ascending grass of wide distribution in Europe and Asia. It is commonly from 1 to 2 feet high.

- 110076 to 110079. ELYMUS spp. Poaceae.

110076. ELYMUS ARALENSIS Regel.

No. 1240. A tall erect perennial grass, native to Siberia.

For previous introduction see 61416.

110077. ELYMUS SIBIRICUS L.

No. 1241.

For previous introduction see 108495.

110078. ELYMUS sp.

No. 1228.

110079. ELYMUS sp.

No. 1239.

110080. LEPIDIUM REPENS Boiss. Brassicaceae.

No. 1242. A stout perennial about a foot high, with oblong, wavy-margined leaves and inconspicuous white flowers. Native to central Asia.

110081. ONOBRYCHIS CHORASSANICA Bunge. Fabaceae.

No. 1243.

For previous introduction see 108936.

110061 to 110083—Continued.

110082. *PEGANUM HARMALA* L. Zygophyllaceae.

No. 1244.

For previous introduction see 109119.

110083. *TRIFOLIUM FRAGIFERUM* L. Fabaceae.

No. 1245.

110084. *SCABIOSA CAUCASICA* Bieb. Dipsacaceae.

From Chile. Seeds presented by Miss Elsie Brown, editor of the Bulletin of the Pan American Union, through J. L. Colom, Chief, division of agricultural cooperation, Pan American Union. Received March 15, 1935.

From Santiago, Chile. Said to be a superior strain of the Caucasian scabiosa.

110085 to 110091. *MALUS SYLVESTRIS* Mill. Malaceae. **Apple.**

From Poland. Scions presented by W. I. Filewicz, Sinoleka Experiment Station, Sosnowe, near Siedlce. Received March 22, 1935.

Introduced for Department specialists.

110085. *Baumann's Reinette*.

For previous introduction see 102132.

110086. *Boshopskie* (Belle de Boskoop).

110087. *Glogierowka*.

110088. *Kosztela*.

110089. *Landsberger Reinette*.

110090. *Malinowe Oberlandskie*.

110091. *Reinette Kolsa* (Cox Orange Pippin).

110092. *PRUNUS SUBHIRTILLA* Miquel. Amygdalaceae. **Higan cherry.**

From Maryland. Scions collected by H. C. Skeels at Takoma Park. Received September 18, 1931. Numbered in March 1937.

Var. *Shidarehigan*. A strain with deep-pink flowers borne in great profusion; tree growing in front of the residence of H. W. Hochbaum, 7529 Blair Road.

For previous introduction see 91465.

110093. *CAREX PHYSODES* Bieb. Cyperaceae.

From the Union of Soviet Socialist Republics. Roots collected in Turkistan by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received October 11, 1934.

Introduced for Department specialists.

No. 150-B. From the Repetek Sand Desert Station, Turkmenistan, June 1934. A perennial sedge, usually about 6 inches high, with filiform leaves, said to be an excellent forage plant. Native to sandy deserts in Turkistan.

For previous introduction see 108896.

110094 and 110095. *DIOSCOREA* spp. Dioscoreaceae. **Yam.**

From Venezuela. Tubers collected by W. A. Archer, Bureau of Plant Industry. Received March 15, 1935.

110094 and 110095—Continued.

Introduced for Department specialists.

From the market at Valencia, February 24, 1935.

110094. No. 3105. *Name pino*.

110095. No. 3106. *Name criollo*.

110096. *CITRUS* sp. Rutaceae.

From Algeria. Scions presented by J. Brichet, Directeur, Jardin d'Essai du Hamma, Algiers. Received March 29, 1935.

Introduced for Department specialists.

Bedmar Vernia. A late-ripening Spanish orange.

110097. *TEPHROSIA* sp. Fabaceae.

From Africa. Seeds presented by R. Andersen, Ypata Estate, Kitall, Kenya Colony. Received March 21, 1935.

Introduced for Department specialists.

An upright leguminous plant found on rocky slopes.

110098 and 110099.

From India. Seeds purchased from Mrs. P. Kohli, Baramula, Kashmir. Received March 23, 1935.

Introduced for Department specialists.

110098. *IRIS KUMAONENSIS* Wall. Iridaceae.

A dwarf iris of the Pseudevansia section, 2 to 12 inches high, native to the western Himalayas from Kashmir to Kumaon between 9,000 and 12,000 feet altitude. The flaccid linear leaves are 12 to 14 inches long, and the solitary flowers have a perianth tube 2 to 3 inches long. The bright-lilac falls, 1 to 2 inches long, are blotched with darker lilac, and the claw has a beard of yellow-tipped hairs on a white crest. The erect standards are over an inch broad.

For previous introduction see 101782.

110099. *LILIUM POLYPHYLLUM* D. Don. Liliaceae.

A lily with stoloniferous white, pink-tinged bulb, a smooth green stem 4 to 5 feet high, and numerous erect scattered, linear to oblong-lanceolate leaves 2 to 8 inches long. The fragrant nodding flowers, 2 to 12 in a lax umbel or raceme, are pale creamy yellow outside, marbled white spotted and streaked with purple within, and are 2 to 3 inches across. It is native to the western Himalayas at altitudes between 6,000 and 12,000 feet.

For previous introduction see 90981.

110100 to 110151.

From the Union of Soviet Socialist Republics. Seeds presented by the Botanic Garden, Alma Ata. Received March 11, 1935.

Introduced for Department specialists.

110100. *ACONITUM EXCELSUM* Reichb.

For previous introduction and description see 107865.

110101. *ACONITUM NAPELLUS* L. Ranunculaceae.

For previous introduction see 66909.

110100 to 110151—Continued.

110102 to 110105. ALLIUM spp. Liliaceae.

110102. ALLIUM sp.

110103. ALLIUM sp.

110104. ALLIUM sp.

110105. ALLIUM sp.

110106. ANEMONE ALBANA Stev. Ranunculaceae.

A low alpine perennial, native to Asia Minor, with tripinnatifid leaves and nodding yellow campanulate flowers.

110107. ARCHANGELICA SONGORICA Lipsky. Apiaceae.

A stout perennial about 1 foot high, with pinnately dissected leaves and large terminal umbels of small white flowers. Native to high altitudes in central Asia.

110108. ASTER ALPINUS L. Asteraceae.

For previous introduction and description see 107891.

110109 to 110111. ATRAPHAXIS spp. Polygonaceae.

110109. ATRAPHAXIS MUSCHKETOWI Krassn.

A dwarf spreading shrub, about 3 feet high and wide, with narrow-oblong leaves up to 2 inches long and small white flowers in terminal racemes. Native to central Asia.

110110. ATRAPHAXIS PYRIFOLIA Bunge.

A spiny shrub about 1 foot high, with thick, leathery, round leaves about 1 inch wide. Native to central Asia.

110111. ATRAPHAXIS SPINOSA L.

A spiny shrub 1 to 1½ feet high, with small, cordate, prickly leaves and inconspicuous flowers. Native to dry stony places in Asia Minor.

110112. CHAEROPHYLLUM LONGILOBUM (Kar. and Kir.) O. and B. Fedtsch. Apiaceae.

An aromatic herb, native to central Asia, with pinnately dissected foliage and compound umbels of small white flowers.

110113. CODONOPSIS OVATA Benth. Campanulaceae.

For previous introduction and description see 108052.

110114. CRYPTODISCUS CACHROIDES Schrenk. Apiaceae.

A herbaceous perennial with small greenish flowers. Native to Turkistan.

110115. DELPHINIUM sp. Ranunculaceae.

110116. DESCHAMPSIA KOELERIOIDES Regel. Poaceae.

A tufted, hardy perennial grass about 1 foot high. Native to Tien Shan, central Asia, at 8,000 feet altitude.

110117. ECHINOPS ALBICAULIS Kar. and Kir. Asteraceae.

A perennial with thistlelike leaves and pale-blue, one-flowered heads, densely clustered at the ends of the branches. Native to sandy locations of central Asia.

110100 to 110151—Continued.

110118. EPHEDRA EQUISETINA Bunge. Gnetaceae.

An erect or ascending shrub up to 6 feet high, with slender greenish branches and scalelike leaves. Native to China.

110119. EREMOSTACHYS MOLUCCELLOIDES Bunge. Menthaceae.

A hardy perennial mint, over a foot high, with cordate or ovate-oblong leaves and yellowish-white flowers, over an inch long, in whorls. Native to Mongolia and Siberia.

110120. EREMURUS ANISOPTERUS Regel. Liliaceae.

An eremurus about 2 feet high, native to Asia Minor, with small, milky-white flowers in a long raceme and narrow linear leaves.

110121 to 110123. FERULA spp. Apiaceae.

110121. FERULA sp.

110122. FERULA sp.

110123. FERULA sp.

110124. GENTIANA ALGIDA Pall. Gentianaceae.

A perennial alpine gentian with numerous stems 4 to 5 inches high, lanceolate-linear leaves, and numerous white flowers over 2 inches long, with narrow lines of blue spots. Native to central Asia.

110125. GYPSOPHILA TIANSCHANICA M. Popov and B. Schischk. Silenaceae.

A hardy herbaceous perennial, with ascending stems, native to the Tien Shan in central Asia, with straight lanceolate leaves and numerous corymbs of small white flowers.

110126. HEDYSARUM HEDYSAROIDES (L.) Stuntz. Fabaceae.

A hardy herbaceous ornamental perennial, native to the alpine regions of central Europe. It is about a foot high and produces spikes of purple flowers in midsummer.

For previous introduction see 67895.

110127. HEDYSARUM SEMENOWII Regel and Herd. Fabaceae.

An erect hardy herbaceous perennial with purplish flowers. Native to Turkistan.

For previous introduction see 107546.

110128. HIEROCHLOE ODORATA (L.) Beauv. Poaceae.

Sweetgrass.

For previous introduction see 53174.

110129. INULA RHIZOCEPHALA Schrenk. Asteraceae.

A stemless perennial with numerous oblong radical leaves about 3 inches long and 10 to 20 small yellowish flower heads. Native to mountainous regions of central China.

110130 to 110132. IRIS spp. Iridaceae.

110130. IRIS ALBERTI Regel.

For previous introduction and description see 107933.

110100 to 110151—Continued.

110131. IRIS ENSATA Thunb. Russian iris.

A very hardy Chinese form of the Russian iris, found in moist places.

For previous introduction see 107678.

110132. IRIS SONGARICA Schrenk.

A densely tufted Apogon iris about 1 foot high, with narrow-linear, strongly ribbed leaves up to a foot long and two to three lilac-colored flowers over an inch long. Native to central Asia.

110133. ISATIS COSTATA C. A. Mey. Brassicaceae.

An erect bushy annual about 3 feet high, native to northern India, with oblong leaves 3 to 4 inches long and small yellow flowers in a many-branched panicle raceme.

110134. LIBANOTIS SUBSIMPLEX M. Popov. Apiaceae.

A hardy perennial native to the Alatau Mountains, central Asia, with finely divided leaves and umbels of small white flowers.

110135. LINUM sp. Linaceae. Flax.

Received under the specific name "chionophilum," for which a place of publication has not been found.

110136. LINUM HETEROSEPALUM Regel. Linaceae. Flax.

A perennial with erect stems over a foot high, ovate-lanceolate leaves, and corymbs of rather large yellow flowers. Native to Turkistan.

110137. MALCOMIA AFRICANA (Willd.) Ait. Brassicaceae.

A summer-blooming annual about 9 inches high, with lanceolate dentate leaves and racemes of small purple flowers. Native to tropical Africa.

For previous introduction see 107554.

110138. NEOGAYA sp. Apiaceae.

Received under the name "urbis marorum," for which a place of publication has not been found.

110139. NITRARIA SCHOBERI L. Zygophyllaceae.

A hardy, densely-branched shrub of spreading habit, with small bluish-green leaves and small berries which change from light green through red into a violet black. It is native to China, where it grows on strongly alkaline flats.

For previous introduction see 106621.

110140. OXYTROPIS RECOGNITA Bunge. Fabaceae.

A stemless alpine, native to central Asia, with pinnate leaves and racemes of comparatively large buff-colored flowers.

110141. PEDICULARIS DOLICHO RHIZA Schrenk. Scrophulariaceae.

A hardy herbaceous perennial about a foot high, with deeply pinnately cut leaves resembling those of *Achillea millefolium* and terminal spikes of golden-yellow flowers. Native to central Asia.

110142. POLYGONUM SONGARICUM Schrenk. Polygonaceae.

For previous introduction and description see 107981.

110100 to 110151—Continued.

110143. POTENTILLA SIBIRICA Th. Wolf. Rosaceae.

A perennial alpine, native to Siberia, with erect or ascending stems about 1 foot high, pinnatifid leaves, and dense cymes of small yellow flowers; closely related to *Potentilla pennsylvanica*, but not so tall and with smaller foliage.

110144. PRIMULA ALGIDA Adam. Primulaceae.

A perennial primrose, white-mealy or yellow-mealy throughout, with oblong-spatulate leaves and deep rose-violet flowers. It is native to marshy areas in Asia Minor and is closely related to *Primula farinosa*.

For previous introduction see 91992.

110145. PRIMULA NIVALIS Pall. Primulaceae.

A hardy primrose, with glabrous, sometimes farinose, lanceolate or oblong-ovate leaves 3 to 5 inches long, and erect white or purple flowers three-fourths of an inch across, in a dense umbel terminating a stout scape 3 to 10 inches high. A variable species with well-marked geographical forms; native to western and central Asia.

110146. PUCCINELLIA DISTANS (L.) Parl. Poaceae.

An erect or decumbent perennial grass, native to Europe and Asia; naturalized in the United States.

For previous introduction see 64793.

110147. RHEUM SONGARICUM Schrenk. Polygonaceae.

A coarse herbaceous perennial with deeply cordate, reniform leaves. Native to alkaline deserts in central Asia.

110148. RUMEX CONFERTUS Willd. Polygonaceae.

A perennial about 4 feet high, with lanceolate leaves. Native to the mountains of Asia Minor.

110149. RUMEX sp. Polygonaceae.

110150. SEMENOVIA TRANSILIENSIS Regel and Herd. Apiaceae.

A perennial about a foot high, native to central Asia, with pinnately dissected leaves and compound umbels of small white flowers.

110151. SPARTIUM JUNCEUM L. Fabaceae. Spanish broom.

For previous introduction see 51151.

110152 to 110171.

From Manchuria. Seeds collected by the Asiatic Expedition. Received March 20, 1935.

Introduced for Department specialists.

110152. AGROPYRON CRISTATUM (L.) Gaertn. Poaceae. Crested wheatgrass.

No. 8-IV. September 7, 1934. From Arshan-yamen, Barga District. Found in sandy, half-desert soil on the border of a deep valley.

110153. ARUNDINELLA ANOMALA Steud. Poaceae. Grass.

No. 7-IV. September 28, 1934. Collected at Barim station, western line of the Chinese Eastern Railway, in a river valley, and from a stony mountain slope.

110152 to 110171—Continued.

For previous introduction see 90130.

110154 to 110158. *ELYMUS* spp. Poaceae.
Grass.

110154. *ELYMUS DASYSTACHYS* Trin.

No. 18a-IV. September 5, 1934. From sand dunes near the Ganjour Monastery, Barga District. A perennial grass 2 to 3 feet high, with creeping rhizomes. Native to central Asia.

110155 to 110158. *ELYMUS PSEUDO-AGROPYRON* Trin.

A perennial grass with a creeping rhizome and flat leaves.

For previous introduction see 107672.

110155. No. 9-IV. August 7, 1934. From marshy alkaline shore of Lake Khangai-nor, Barga District.

110156. No. 10-IV. September 25, 1934. Collected on a damp saline steppe north of the Manlou station, western line of the Chinese Eastern Railway.

110157. No. 10a-IV. October 1934. Collected on an alkaline steppe in the vicinity of Manlou station, western line of the Chinese Eastern Railway.

110158. No. 10c-IV. October 1934. Collected on an alkaline steppe in the vicinity of Manlou station, western line of the Chinese Eastern Railway.

110159. *LESPEDEZA BICOLOR* Turcz. Fabaceae.

No. 12-IV. October 1, 1934. Collected on the rocky shore of the Tal River, below Barim station, western line of the Chinese Eastern Railway.

For previous introduction see 109823.

110160. *OXYTROPIS MYRIOPHYLLA* (Pall.) DC. Fabaceae.

No. 11-IV. September 9, 1934. Collected near Khandagal, Barga District, on the sunny side of a steep mountain slope in stony half-desert soil on the road to Khalyim-Arshan. A stemless perennial with a large root, pinnate leaves about 8 inches long, and purplish flowers in racemes. Native to the mountains of Siberia.

110161. *SETARIA VIRIDIS* (L.) Beauv. Poaceae.

No. 6-IV. October 24, 1934. Collected on an alkaline steppe northeast of Manlou station, western line of the Chinese Eastern Railway.

For previous introduction see 109828.

110162 to 110166. *STIPA* spp. Poaceae.
Grass.

110162 and 110163. *STIPA BAICALENSIS* Roshev.

A tufted perennial grass up to 2 feet tall, native to the steppes of Siberia.

110162. No. 4-IV. September 28, 1934. Collected in a river valley on the mountain slope near Barim station, western line of the Chinese Eastern Railway.

110163. No. 5-IV. September 2, 1934. From a stony steppe, Tal River Valley near Barim station, west-

110152 to 110171—Continued.

ern line of the Chinese Eastern Railway.

110164 to 110166. *STIPA SIBIRICA* Lam.

From a stony mountain slope of the Tal River Valley, near Barim station, western line of the Chinese Eastern Railway. An erect perennial grass, native to Siberia, up to 4 feet tall with well-developed roots.

For previous introduction see 107703.

110164. No. I-IV and No. Ia-IV. September 28, 1934.

110165. No. 2-IV. July 2, 1934.

110166. No. 3-IV. September 29, 1934.

110167 and 110168. *THERMOPSIS LANCEOLATA* R. Br. Fabaceae.

September 6, 1934. From sand dunes in the neighborhood of the Ganjour Monastery, Barga District. A perennial herb up to 2 feet high, with oblong-lanceolate leaflets and bright-yellow flowers in terminal racemes. Native to Siberia and Alaska where it is found in moist sandy places.

For previous introduction see 107705.

110167. No. 16-IV. 110168. No. 17-IV.

110169 and 110170. *TRIFOLIUM LUPINASTER* L. Fabaceae.

Collected on stony wooded steppes on a mountain slope near Barim station, western line of the Chinese Eastern Railway.

110169. No. 14-IV. September 30, 1934.

110170. No. 15-IV. September 28, 1934.

110171. *VICIA* sp. Fabaceae.

No. 13-IV. September 28, 1934. From stony steppes in the vicinity of Barim station, western line of the Chinese Eastern Railway.

110172 to 110196.

From Venezuela. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received March 15, 1935.

Introduced for Department specialists.

110172. *ACHRAS ZAPOTA* L. Sapotaceae.
Sapodilla.

No. 3109. *Nispero*. Collected February 24, 1935, at Valencia. A small tropical American tree with dark-green leathery leaves and roundish fruits about 2 inches in diameter; these have thin skin and pale-brown, soft, juicy, sweet pulp.

For previous introduction see 103804.

110173. *CENTROSEMA PUBESCENS* Benth. (*Bradburya pubescens* (Benth.) Kuntze). Fabaceae.

No. 3078. February 23, 1935. Collected on the highway between Valencia and El Cambul, State of Carabobo.

110174. *BROWNEA GRANDICEPS* Jacq. Caesalpiniaceae.

No. 3110. *Rosa de monte*. Collected February 26, 1935, at Valencia. A handsome evergreen tropical American tree about 30 feet in height, with attractive pinnate foliage and bright-red flowers in large dense capitate spikes borne at the ends of the branches.

For previous introduction see 98808.

110172 to 110196—Continued.

110175. *CALOPOGONIUM CAERULEUM* (Benth.) Hemsl. Fabaceae.

No. 3077. *Semiruco*. Collected February 23, 1935, along the highway between Valencia and El Cambul, State of Carabobo.

For previous introduction and description see 108657.

110176. *CALOTROPIS GIGANTEA* (L.) R. Br. Asclepiadaceae.

No. 3068. Collected February 16, 1935, on the road between Caracas and Cabo Blanco.

110177. *CANAVALIA* sp. Fabaceae.

No. 3118. Collected February 26, 1935, between Valencia and Guataporo, State of Carabobo.

110178. *CLITORIA TERNATEA* L. Fabaceae.

No. 3076. *Zapitico de reina*. A vine collected on the highway between Valencia and El Cambul, State of Carabobo, February 23, 1935.

110179. *TEPHROSIA CANDIDA* DC. (*Cracca candida* (DC.) Kuntze). Fabaceae.

No. 3111. *Barbasco*. Collected on the farm of Sr. L. Stelling at Valencia, February 26, 1935.

For previous introduction see 107461.

110180 to 110183. Collected on the highway between Valencia and El Cambul, State of Carabobo, February 23, 1935.

110180. *TEPHROSIA SENNA* H. B. K. (*Cracca senna* (H. B. K.) Kuntze). Fabaceae.

No. 3088. A shrub with membranous pinnate leaves and violet flowers in racemes 5 or 6 inches long. Native to Colombia.

110181. *CROTALARIA INCANA* L. Fabaceae.

No. 3080. *Espadilla*.

For previous introduction see 106572.

110182. *CROTALARIA STIPULARIA* Desv. Fabaceae.

No. 3096. An annual about a foot high, native to the West Indies.

110183. *CROTON* sp. Euphorbiaceae.

No. 3102.

110184 and 110185. Collected at the market at Valencia, February 24, 1935.

110184. *CUCUMIS ANGURIA* L. Cucurbitaceae. West Indian gherkin.

No. 3107. *Pepino de monte*. A cultivated vegetable used as sweets or desserts, in salads, and in soups.

For previous introduction see 51222.

110185. *CUCUMIS MELO* L. Cucurbitaceae. Muskmelon.

No. 3108.

For previous introduction see 109989.

110172 to 110196—Continued.

110186 to 110191. Collected along the highway between Valencia and El Cambul, State of Carabobo, February 23 to 25, 1935.

110186. *MOMORDICA CHARANTIA* L. Cucurbitaceae. Balsam-pear.

No. 3079. *Cunde'amor*.

110187. *DATURA METEL FASTUOSA* (L.) Safford. Solanaceae.

No. 3099. *Nongué morada*.

110188. *DESMANTHUS VIRGATUS* (L.) Willd. Mimosaceae.

No. 3081. *Sensitiva*.

For previous introduction see 109932.

110189. *EUPATORIUM ODORATUM* L. Asteraceae.

No. 3083. *Cruceta*.

110190. *EUPATORIUM* sp. Asteraceae.

No. 3100. *Cruceta moranda*.

110191. *HURA CREPITANS* L. Euphorbiaceae.

No. 3101. *Jabillo*.

110192. *MELINIS MINUTIFLORA* Beauv. Poaceae. Molasses grass.

No. 3112. *Yaragua*, a cultivated forage grass collected on the farm of Sr. E. Stelling at Valencia, February 26, 1935.

For previous introduction see 105780.

110193 and 110194. Collected on the highway between Valencia and El Cambul, February 23 and 25, 1935.

110193. *SAPINDUS SAPONARIA* L. Sapindaceae. Southern soapberry.

No. 3087. *Para para*. A tree 50 feet high.

For previous introduction see 109869.

110194. *SCOPARIA DULCIS* L. Scrophulariaceae.

No. 3086. *Escobilla*. A glabrous annual 1 to 3 feet high.

110195. *STIZOLOBIUM PRURITUM* (Wight) Piper and Tracy. Fabaceae.

No. 3113. *Pica pica*. Collected between Valencia and Guataporo, February 26, 1935. A vine with curved pods covered with brown stinging hairs.

For previous introduction see 89016.

110196. *XYLOPIA AROMATICA* (Lam.) Baill. Annonaceae.

No. 3089. *Fruta de burra*. Collected along the highway between Valencia and El Cambul, State of Carabobo, February 23, 1935. A low tree about 20 feet high. Native to the Guianas.

110197. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.

From Canada. Scions presented by Prof. M. B. Davis, Central Experiment Station, Ottawa. Received March 30, 1935.

Lawfam. Introduced for Department specialists.

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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 123



Washington, D. C.

Issued January, 1940

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, APRIL 1 TO JUNE 30, 1935 (Nos. 110198-111857)

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INTRODUCTORY STATEMENT

This inventory, No. 123, records the plant material (Nos. 110198 to 111857) received by the Division of Plant Exploration and Introduction during the period from April 1 to June 30, 1935.

As a direct result of the agricultural explorations carried on in central Asia by H. L. Westover and C. R. Enlow, of the Bureau of Plant Industry, the Department received nearly 500 lots of seeds from the Institute of Plant Industry, Leningrad, Union of Soviet Socialist Republics. One particular shipment (Nos. 111477-111585) consisted almost wholly of distinct local strains of forage grasses; another shipment (Nos. 111605-111685) was made up entirely of local strains of alfalfa and other species of *Medicago*. This material is intended primarily for the use of the specialists of the Soil Conservation Service of this Department, and will be tested in the colder and drier sections of the West.

During the summer of 1935, W. A. Archer was still collecting in northern South America and, during the period covered by this inventory, nearly 200 lots of seeds were sent in by him, mostly from Colombia. As before, leguminous plants occupied a conspicuous place in these collections, while the markets of small villages and towns yielded seeds of numerous local strains of vegetables and fruits that will be tested in the vegetable-breeding program for our Southern States.

Eighty-three lots of grasses (Nos. 111249-111331), including several not before introduced into the United States, were presented by the Jardin Botanique de l'Université de Cluj, Rumania. Grasses also constituted the greater part of 37 lots of seeds from Australia (Nos. 110518-110555), presented by the Division of Plant Industry, Canberra.

The introduction of nearly 50 species and varieties of *Allium* from widely scattered sources throughout the globe is a result of an attempt to assemble and grow all available members of this hitherto much-neglected genus. These will, of course, be of value to vegetable breeders interested in the close relatives of those species commonly grown for food, but their introduction will also bring about a more definite knowledge concerning the ornamental value of many little-known species.

Several apparently new species of *Prunus* and *Solanum* are recorded in a shipment of 58 lots of seeds presented by A. H. Lee, Kulu, Punjab, India (Nos. 111764-111821), along with a considerable number of new perennial and woody plants of ornamental value, mostly from the temperate highlands of northern India. Two other shipments of new or rare, mostly woody, plants from western China also should be noted: One of 12 lots (Nos. 111737-111748), presented by Lord Aberconway, Tal-y-Cafn, North Wales; the other of 53 lots of seeds (Nos. 111349 to 111401) from H. H. Chung, National Wu-Han University, Hupeh, China.

The botanical determinations of seeds introduced have been made and the nomenclature determined by Paul Russell, who has had general supervision of this inventory.

B. Y. MORRISON,
Principal Horticulturist, in Charge.

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D. C., January 18, 1939.

INVENTORY¹

110198 to 110212.

From Italy. Plants purchased from Fratelli Sgaravatti, Saonara (Padova). Received April 2, 1935.

Introduced for Department specialists.

110198 to 110202. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.

110198. *Agosticella*.

110199. *Clara Mayer*.

110200. *Lugliatica*.

110201. *Paviagiatta*.

110202. *Perla di Zolia*.

110203. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.

Renetta di Berk.

110204 and 110205. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

110204. *Bianco de Carpentras*.

110205. *Della val Venosta*.

110206 to 110212. *PYRUS COMMUNIS* L. Malaceae. Common pear.

110206. *Bergamotta d'estate*.

110207. *Butirra a sapore di mandorla*.

110208. *Butirra Liegel*.

110209. *Conte di Parigi*.

110210. *Direttoro Alphand*.

110211. *Moscato S. Pietro*.

110212. *Soldato Agricoltore*.

110213 to 110216. *ERIOBOTRYA JAPONICA* (Thunb.) Lindl. Malaceae. Loquat.

From Syria. Scions presented by Mahmud Shurwaf, Beirut. Received April 2, 1935.

Introduced for Department specialists.

For previous introduction see 104381.

110213. *Ahmar*. 110215. *Khoudrie*.

110214. *Boidee*. 110216. *Mawie*.

110217 to 110221. *FESTUCA* spp. Poaceae. Fescue.

From England. Seeds presented by Sutton & Sons Ltd., Reading. Received March 26, 1935.

Introduced for Department specialists.

110217. *FESTUCA OVINA DURUSCULA* (L.) Koch. Hard fescue.

A grass which does well on sterile or stony soil.

For previous introduction see 55834.

110218. *FESTUCA CAPILLATA* Lam. Hair fescue.

For previous introduction see 109897.

110219. *FESTUCA RUBRA COMMUTATA* Gaud. Chewings fescue.

A perennial grass with loosely tufted culms, originally from New Zealand.

For previous introduction see 73392.

110220. *FESTUCA RUBRA GENUINA* Gren. and Godr. Creeping red fescue.

A loosely tufted, perennial grass over a foot high, native to central Europe.

110221. *FESTUCA RUBRA* L. Red fescue.

A glaucescent form of red fescue.

For previous introduction see 109899.

110222. *ABRUS PRECATORIUS* L. Fabaceae. Rosary-pea.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received March 27, 1935. Numbered in April 1935.

Var. *Alba*. A white-flowered form of the well-known rosary-pea.

¹ It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Plant Exploration and 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 seed samples or 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

110223. ZEPHYRANTHES sp. *Amaryllidaceae.*

From Trinidad, British West Indies. Bulbs presented by Dr. S. C. Harland, Cotton Research Station. Received April 5, 1935.

A pink-flowered species, collected in Colombia.

110224 and 110225.

From Scotland. Seeds presented by the Royal Botanic Garden, Edinburgh. Received February 25, 1930. Numbered in April 1935.

110225. ALLIUM NUTANSL. *Liliaceae.*

For previous introduction see 104629.

110225. ALLIUM NUTANS L. *Liliaceae.*

Onion.

110226. ALLIUM TANGUTICUM Regel. *Liliaceae.* *Onion.*

From England. Seeds presented by the Royal Botanic Garden, Kew. Received March 1, 1935. Numbered in April 1935.

For previous introduction see 78997.

110227. ALLIUM CAERULEUM Pall. *Liliaceae.* *Onion.*

From the Netherlands. Bulbs purchased from C. G. Van Tubergen, Ltd., Zwanenburg Nurseries, Haarlem. Received November 1, 1930. Numbered in April 1935.

A blue-flowered onion with slender grassy leaves and 14-inch stalks bearing close heads of small deep-blue flowers.

For previous introduction see 106747.

110228 to 110245.

From Africa. Seeds presented by J. B. H. Lejeune, Director, Experiment Station of Kisozi, Kisozi, Ruanda-Urundi. Received March 21, 1935. Numbered in April 1935.

110228 to 110233. PHASEOLUS VULGARIS L. *Fabaceae.* *Common bean.*

A collection of beans from the territory of Urundi.

110228. A white bean.

110229. A white bean veined with violet.

110230. A white bean veined with black.

110231. A brown bean.

110232. A black bean.

110233. A pink bean veined with brown.

110234 and 110235. RICINUS COMMUNIS L. *Euphorbiaceae.* *Castor-bean.*

Collected in the territory of Urundi.

110234. The common type.

110235. A form with larger seeds.

110236 to 110245. SORGHUM VULGARE Pers. *Poaceae.* *Sorghum.*

Sorghums from the territory of Ruanda.

110236. *Igihori.*

110237. *Nyagachara.*

110238. *Mugabo.*

110239. *Amauenzi.*

110240. *Urukina.*

110241. *Nyirogikori.*

110242. *Amagunu.*

110228 to 110245—Continued.

110243. *Amagunu B.*

110244. *Ruyonge.*

110245. *Rugori.*

110246 to 110253. SORGHUM VULGARE Pers. *Poaceae.* *Sorghum.*

From India. Seeds presented by the Agricultural Research Institute, Coimbatore, South India. Received March 25, 1935. Numbered in April 1935.

110246. Pearly white seed.

110247. Chalky or milky-white seed.

110248. Brown seed.

110249. Red seed.

110250. Yellow seed without brown tint.

110251. White seed with yellow base.

110252. Yellow seed with brown tint.

110253. White seed with red base.

110254 to 110260. AVENA SATIVA L. *Poaceae.* *Oats.*

From Italy. Seeds presented by Professor Todaro, Istituto Sperimentale di Cerealicoltura, Bologna. Received March 25, 1935. Numbered in April 1935.

110254. *Bruna delle Alpi.* No. 227.

110255. *Crema.* No. 226.

110256. *Di Lacomia.* No. 224.

110257. *Nera di Tunisia.* No. 221. A very early-maturing black oat.

110258. *Romana primaveraile.* No. 9.

110259. *Rousse.* No. 220.

110260. *Soldanelle primaveraile.* No. 232.

110261 and 110262.

From British Guiana. Seeds presented by the Director of Agriculture, Georgetown, at the request of W. A. Archer, Bureau of Plant Industry. Received March 26, 1935. Numbered in April 1935.

Introduced for Department specialists.

110261. *ALEXA* sp. *Fabaceae.*

Hairaballi.

110262. *STRYCHNOS NUX-VOMICA L.* *Loganiaceae.*

For previous introduction see 7210.

110263 and 110264.

From England. Plants presented by G. T. Spinks, University of Bristol Research Station, Long Ashton, Bristol. Received April 4, 1935.

Introduced for Department specialists.

110263. *FRAGARIA* sp. *Rosaceae.* *Strawberry.*

Royal Sovereign.

110264. *RUBUS FRUTICOSUS L.* *Rosaceae.* *Blackberry.*

Ashton Cross.

110265 and 110266.

From the Union of South Africa. Seeds presented by E. G. Bryant, Prieska. Received March 26, 1935.

Introduced for Department specialists.

110265 and 110266—Continued.

110265. *ENNEAPOGON BRACHYSTACHYUS* (Jaub. and Spach) Stapf. Poaceae. Grass.

A perennial grass, often cespitose, native to Arabia and northern Africa, with genic lately ascending, slender stems 2 to 6 inches long.

110266. *PENNISETUM CILIARE* (L.) Link. Poaceae. Grass.

A perennial grass with ascending stems up to 2 feet long. Native to southern Africa.

For previous introduction see 75345.

110267 to 110269. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.

From Brazil. Seeds presented by C. A. Kurg, Chefe, Departamento Genetica, Instituto Argonomico de São Paulo. Received March 29, 1935. Numbered in April 1935.

Local varieties from Campinas, Minas Geraes, originally selected and propagated from trees naturalized in Brazil. Introduced for Department specialists.

110267. *Abobora*. 110269. *Branca*.

110268. *Amarella*.

110270. *LAWSONIA INERMIS* L. Lythraceae. Henna.

From Florida. Seeds presented by Hamilton P. Traub, Horticultural Field Laboratory, Bureau of Plant Industry, Orlando. Received March 23, 1935. Numbered in April, 1935.

The henna bush of the Orient; the foliage contains an orange dye. It is a good hedge plant, comparable to *Dodonaea viscosa*.

For previous introduction see 97722.

110271 to 110273.

From Ecuador. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received March 15, 1935. Numbered in April 1935.

110271. *BOMAREA* sp. Amaryllidaceae.

Collected on the lower slopes of the volcano of Pichincho, Province of Pichincho, December 29, 1934, between 9,000 and 12,000 feet altitude. A climbing shrub about 6 feet high; the flowers are crimson without and orange, flecked with black on the inside. The shrub is quite common in this region and is seen also in the valleys of Quito south of Chilo.

For previous introduction see 108820.

110272. *CEDRELA ODORATA* L. Meliaceae. Cigarbox-cedar.

From Quito, January 1934. *West Indian* or *Spanish* cedar. The soft fragrant wood is easily worked and is in great demand for cigar boxes. The tree is also used for shade on coffee plantations.

For previous introduction see 104253.

110273. *PASSIFLORA LIGULARIS* Juss. Passifloraceae. Sweet granadilla.

From the market in the Valle de Chillo, January 1935.

For previous introduction see 109983.

110274. (Undetermined.)

From Cochinchina. Seeds presented by M. Poilane, Arboretum de Erang Bom, Erang Bom. Received August 21, 1934. Numbered in April 1935.

110275 to 110278. *SOLANUM TUBEROSUM* L. Solanaceae. Potato.

From Germany. Tubers presented by Dr. A. Schlumberger, Horticultural Institute, Berlin-Dahlem. Received April 8, 1935.

A collection of scab-resistant potatoes, introduced for Department specialists.

110275. *Aal*. 110277. *Rheingold*.

110276. *Ostragis*. 110278. *Treff As*.

110279 to 110282. *FESTUCA RUBRA COMUTATA* Gaud. Poaceae. Chewings fescue.

From New Zealand. Seeds presented by A. S. Paterson & Co., Ltd., Dunedin. Received April 2, 1935.

Introduced for Department specialists.

110279. *Leg*. 110281. *Pol*.

110280. *Cun*. 110282. *M. J*.

110283 and 110284. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

From Michigan. Plants presented by Stanley Johnson, Superintendent, Horticultural Experiment Station, South Haven. Received April 8, 1935.

Introduced for Department specialists.

110283. *Isabella*. 110284. *Phillips*.

110285 to 110301.

From China. Seeds collected by Prof. Ira J. Condit, University of California, College of Agriculture, Los Angeles. Received March 28, 1935. Numbered in April 1935.

110285. *ACANTHOPANAX TRIFOLIATUM* (L.) C. Schneid. Araliaceae.

From Swatow, Kwangtung. A hardy spiny climbing shrub, native to western China, with slender-stemmed, three-parted, light-green leaves and compound terminal umbels of small greenish flowers followed by small black berries.

For previous introduction see 63330.

110286. *ARGYREIA OBTUSIFOLIA* Lour. Convolvulaceae.

From Canton district, Kwangtung. A woody unarmed climber, native to southern Indo-China, with ovate, obtuse leaves and panicles of showy, white flowers followed by bright-red fruits.

110287. *BISCHOPIA TRIFOLIATA* (Roxb.) Hook. Euphorbiaceae.

From Swatow, Kwangtung. A handsome tropical tree, native to southeastern Asia, with bronze-green, trifoliate leaves; suitable for street planting in subtropical regions.

For previous introduction see 67677.

110288. *HIBISCUS TILIACEUS* L. Malvaceae. Linden hibiscus.

From Swatow, Kwangtung. A tall shrub or small tree up to 30 feet high, widely cultivated in the Tropics. The broadly cordate leaves are hoary beneath, and the yellow flowers are 2 to 3 inches long.

For previous introduction see 98781.

110285 to 110301—Continued.

110289. *ILEX PUBESCENS* Hook. and Arn. Aquifoliaceae.

From Chinchow, Kwangtung, on the North River at 1,000 feet altitude, November 1934. An evergreen shrub or small tree native to southeastern China, with densely pubescent, slender branches, entire acute ovate-oblong leaves about 3 inches long, and axillary umbels of small lilac-colored, rarely white, flowers followed by small red berries.

110290. *PSYCHOTRIA SERPENS* L. Rubiaceae.

From Swatow, Kwangtung, January 19, 1935. A woody trailer with stems 2 to 6 feet long, opposite, ovate-acute succulent leaves, and terminal corymbs of small inconspicuous flowers. Native to the East Indies.

110291. *RANDIA SINENSIS* Roem. and Schult. Rubiaceae.

From near Lingnan University, Canton, November 23, 1934. A spiny sarub about 5 feet high, native to southern China, with simple lanceolate leaves and terminal racemes of small white flowers followed by spherical fruits up to an inch in diameter.

110292 to 110294. *RAPHANUS SATIVUS* L. Brassicaceae. Radish.

A collection of Manchurian radishes presented by Dr. S. Kumazawa, Director of the Vegetable Breeding Station, Taihoku, Taiwan, January 25, 1935.

110292. A round red radish.

110293. A radish with red flesh and green skin.

110294. Green skin variety.

110295. *RHUS* sp. Anacardiaceae. Sumac.

From White Cloud Mountain at 1,500 feet altitude, near Canton, December 16, 1934. A subtropical shrub with beautiful autumn-colored foliage.

110296. *ROSA CYMOSA* Tratt. Rosaceae. Rose.

From the Baptist Mission Compound, Swatow, Kwangtung, January 19, 1935. A tall bushy climber with clusters of small, single, white flowers and dull-red hips.

For previous introduction see 32949.

110297. *SMILAX RIPARIA* A. DC. Smilacaceae. Greenbrier.

From near Lingnan University, Canton, December 20, 1934. An unarmed herbaceous climber with umbels of red berries. Native to southeastern China.

110298. *VIBURNUM LUZONICUM FORMOSANUM* (Hance) Rehd. Caprifoliaceae.

From a hillside near Taihoku, Taiwan, January 24, 1935. A slender-branched shrub with ovate, membranous, sinuate-dentate leaves, terminal corymbs of fragrant white flowers, and ovoid red fruits. Native to Taiwan.

110299. *VIBURNUM ODORATISSIMUM* Ker. Caprifoliaceae. Sweet viburnum.

From the Baptist Mission Compound, Swatow, Kwangtung, November 12, 1934. An evergreen shrub or small tree with shining leathery leaves up to 8 inches long. The fragrant white flowers are pro-

110285 to 110301—Continued.

duced in large broad panicles and are followed by red fruits which turn black as they ripen.

For previous introduction see 66321.

110300. *VANIERIA* sp. Moraceae.

From near Lingnan University, Canton, November 27, 1934. Received under the name "rectispina," for which a place of publication has not been found. The vanierias are woody, spiny plants, native to southeastern Asia, closely related to the cudranias. The inconspicuous flowers are followed by fleshy subglobose fruits that resemble mulberries.

110301. (Undetermined.)

From near the Lingnan University, Canton, January 9, 1935. Received as *Eurya chinensis*, but the seeds are not of that genus.

110302 to 110307.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Plant Industry, Leningrad, through H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received March 21, 1935. Numbered in April 1935.

The field numbers are those of the Westover-Enlow series. Introduced for Department specialists.

110302. *AGROPYRON DESERTORUM* (Fisch.) Schult. Poaceae. Wheatgrass.

No. 1346. From the Lower Volga region.

110303. *AGROPYRON STRIGOSUM* (Bieb.) Boiss. Poaceae. Wheatgrass.

No. 1347. For previous introduction see 101140.

110304. *ATRIPLEX TATARICA* L. Chenopodiaceae. Saltbush.

No. 1351. A bushy annual up to 3 feet tall. Native to coastal deserts in Asia Minor.

For previous introduction see 109421.

110305. *CAREX STENOPHYLLA* Wahlenb. Cyperaceae.

No. 1349. A perennial grasslike herb with triangular stems from 2 to 10 inches high. Native to dry grounds in northern Eurasia.

110306. *KOCHIA PROSTRATA* (L.) Schrad. Chenopodiaceae.

No. 1350. A more or less prostrate, shrubby perennial with linear leaves. Native to Asia Minor.

110307. *POA TATARICA* Fisch. Poaceae. Bluegrass.

No. 1348. A tall tufted perennial grass, native to dry regions of southeastern Europe and Asia Minor.

110308 and 110309.

From Ecuador. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received March 15, 1935. Numbered in April 1935.

110308. *BEGONIA* sp. Begoniaceae.

No. 6861-a. *Acangogarachí*. From Napo-Pastaza Province, February 7, 1935, at 1,000 feet altitude, in dense forest. A climbing form 15 feet high with red flowers.

110308 and 110309—Continued.

110309. *TEPHROSIA TOXICARIA* (Sw.) Pers.
Fabaceae.

No. 6836-a. *Barbasco chico*. From Napo-Pastaza Province, February 5, 1935, near Payo in an open field, at 1,100 feet altitude. A plant about 5 feet high with whitish flowers.

110310. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.

From Idaho. Scions presented by Ed. L. Dailey, Priest River. Received April 11, 1935.

A seedling apple, introduced for Department specialists.

110311. *PHYTELEPHAS MACROCARPA* Ruiz and Pav. Phoenicaceae. Ivory-nut palm.

From Ecuador. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received March 15, 1935.

No. 6905-a. *Chilimoyo*. From Napo-Pastaza Province near Canchos in dense forest. A tall tropical-American palm with a thick rough trunk and foliage resembling the coconut palm. The large bony fruits are commonly used for making buttons.

For previous introduction see 93759.

110312 to 110315. *EREMURUS* spp. Liliaceae. Desertcandle.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Plant Industry, Leningrad, through H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received April 5, 1935.

Introduced for Department specialists.

The field numbers are those of the Westover and Enlow series.

110312. *EREMURUS AURANTIACUS* Baker.

No. 1352. A perennial herb over a foot high, native to Afghanistan, with small yellow flowers in a dense raceme 6 inches long.

110313. *EREMURUS ROBUSTUS* Regel. Giant desertcandle.

No. 1353. A tall hardy herbaceous perennial with pale-pink flowers on a stalk 5 to 8 feet high. Native to Turkistan.

For previous introduction see 107528.

110314. *EREMURUS TAURICUS* Stev.

No. 1354. A large xerophytic perennial with a rosette of broadly linear acute leaves a foot or more long and white flowers in a simple dense raceme over a foot long on a stout scape as long as the leaves. It is native to the mountains of Turkey and is closely related to the yellow-flowered *Eremurus spectabilis*.

For previous introduction see 100638.

110315. *EREMURUS* sp.

No. 1355. From central Asia.

110316 to 110324. *CUCURBITA* spp. Cucurbitaceae.

From Czechoslovakia. Seeds purchased from A. Spaldak, Experimental Arboretum, Olomouc. Received April 5, 1935.

110316 to 110320. *CUCURBITA MAXIMA* Duchesne. Squash.

110316 to 110324—Continued.

110316. Round green.

110317. Round yellow.

110318. No. 1411.

110319. No. 1407.

110320. Received as *Cucurbita pepo* × *metlopepo*.

110321 to 110324. *CUCURBITA PEPO* L. Pumpkin.

110321. Long, green, pear-shaped.

110322. Yellow, egg-shaped.

110323. Yellow.

110324. No. 1419.

110325 to 110327.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received April 8, 1935.

110325. *COMBRETUM GRANDIFLORUM* Don. Combretaceae.

An ornamental climbing shrub producing long flowering branches of brilliant red flowers in closely packed spikes. It is native to upper Guinea and the Congo region, in tropical Africa, and is adapted to hot muggy summers and very dry winters.

For previous introduction see 72993.

110326. *ELAEODENDRON* sp. Celastraceae.

Seeds originally from the Department of Agriculture, Mauritius.

110327. *TERMINALIA SUPERBA* Engl. and Diels. Combretaceae.

A large handsome tree, 60 to 120 feet high, with obovate-oblong leaves 4 to 6 inches long and small whitish flowers in spikes as long as the leaves. Native to tropical Africa.

110328 to 110331. *NICOTIANA* spp. Solanaceae. Tobacco.

From Iraq. Seeds presented by M. S. Radi, Director of Agriculture, Baghdad. Received April 10, 1935.

A collection of tobaccos from Iraq and the Near East, introduced for Department specialists.

110328. *NICOTIANA RUSTICA* L.110329 to 110331. *NICOTIANA TABACUM* L.110332. *JUGLANS NIGRA* L. Juglandaceae. Black walnut.

From Canada. Scions presented by Dane Learn, Aylmer, Ontario. Received April 18, 1935.

Introduced for Department specialists.

Learn.

110333. *FRAGARIA* sp. Rosaceae. Strawberry.

From England. Plants presented by the East Malling Research Station, East Malling, Kent. Received April 18, 1935.

Introduced for Department specialists.

Royal Sovereign.

110334 to 110338.

From England. Plants presented by Sir Arthur W. Hill, Director, Royal Botanic Gardens, Kew, Surrey. Received April 19, 1935.

110334. ARUNDINARIA ANCEPS Mitf. Poaceae. **Bamboo.**

Because of the uncertainty of its origin, this arundinaria was named anceps. It is now believed to be native to northern India. The culms are round and slender and are reported to grow 10 to 15 feet high in England. On small plants there are two or three branches at each node, with rather long branchlets having 8 to 10 linear-lanceolate leaves. The leaves are light green, over 3 inches long and three-eighths of an inch wide. The tessellation (cross venation) is minute and unusually regular.

For previous introduction see 89699.

110335. CHIMONOBAMBUSA FALCATA (Nees) Nakai. Poaceae. **Bamboo.**

A slender clump bamboo growing to a height of 20 feet, but not exceeding half an inch in diameter, having the young stems covered with a bluish-white, waxy coating soon turning yellowish green. The light-green, striate-veined leaves are 4 to 6 inches long by one-third of an inch wide, with downy sheaths. The species is not very hardy, being native to the lower slopes of the Himalayas in north-western India.

For previous introduction see 45902.

110336. SINARUNDINARIA NITIDA (Mitf.) Nakai. Poaceae. **Bamboo.**

A bamboo, native to central China, which becomes 15 feet tall in England. The light-green leaves, four to six on a branch, are over 2 inches long by three-eighths of an inch wide and have three pairs of prominent secondary veins and six intermediate veins. The tessellation is close and regular and the culm sheaths are rather persistent.

For previous introduction see 89704.

110337. THANNOCALAMUS SPATHIFLORUS (Trin.) Munro. Poaceae. **Bamboo.**

A running bamboo, native to the north-western Himalayas, said to grow 20 to 25 feet high. The thin delicate leaves, three to six on a branch, are up to 3 inches long by seven-sixteenths of an inch wide. The midrib and secondary veins are inconspicuous. There are three pairs of the latter and five to seven intermediate veins between. The tessellation is rather close and regular. In its native habitat the species is said to occur as undergrowth in coniferous forests, and it is inferred that it will prefer partial shade.

For previous introduction see 89706.

110338. PSEUDOSASA DISTICHA (Mitf.) Nakai.

A dwarf bamboo of running habit growing 3 to 5 feet high, with rather narrow leaves 2 to 4 inches long, in pronouncedly distichous arrangement.

For previous introduction see 101174.

110339. ALLIUM CEPA L. Liliaceae. **Onion.**

From Germany. Seeds presented by Rudolph Neumüller, Frankenthal, Palz. Received April 15, 1935.

Gochsheim, a pear-shaped onion; introduced for Department specialists.

110340 to 110349. CUCURBITA spp. Cucurbitaceae.

From Yugoslavia. Seeds presented by Ive Volarić, Stenjevec, Croatia. Received April 20, 1935.

Introduced for Department specialists.

110340 to 110343. CUCURBITA MAXIMA Duchesne. **Squash.**

These varieties are used baked for food.

110340. *Misirace.*110341. *Stambolka.*110342. *Velike bele za peć.* (A large variety.)110343. *Stambolka* of Belentija.110344 to 110349. CUCURBITA PEPO L. **Pumpkin.**110344. *Poliske I.*110345. *Poliske II.*110346. *Riberke za kuhat*, for home use.

110347 and 110348. For home use; also fed to hogs.

110347. No. 10. 110348. No. 11.

110349. No. 12. Fed to hogs.

110350 to 110449.

From the Union of Soviet Socialist Republics. Seeds presented by the Department of New Cultures, Institute of Plant Industry, Leningrad, through H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received March 20, 1935. Numbered in April 1935.

Introduced for Department specialists; the field numbers are those of the Westover and Enlow series.

110350 to 110352. ALOPECURUS PRATENSIS L. Poaceae. **Meadow foxtail.**

110350. No. 1246. From Armenia.

110351. No. 1247. From Georgia, Transcaucasia.

110352. No. 1248. From Georgia, Transcaucasia.

110353. ARRHENATHERUM ELATIUS (L.) Beauv. Poaceae. **Tall oatgrass.**

No. 1255. From Azerbaijan.

For previous introduction see 89811.

110354 to 110357. ASTRAGALUS spp. Fabaceae. **Milkvetch.**

110354. No. 1249. From Armenia.

110355. No. 1250. From Armenia.

110356. No. 1251. From Armenia.

110357. No. 1252. From Georgia, Transcaucasia.

110358. BECKMANNIA ERUCAEFORMIS (L.) Host. Poaceae. **Sloughgrass.**

No. 1256. From Armenia.

110359. BRACHYPODIUM PINNATUM (L.) Beauv. Poaceae. **Grass.**

No. 1258. From Georgia, Transcaucasia.

110360. BROMUS JAPONICUS Taunb. Poaceae. **Bromegrass.**

No. 1259. From Georgia, Transcaucasia.

110350 to 110449—Continued.

110361. *BROMUS* sp. Poaceae.
Brome-grass.
No. 1257. From Karaklis, Armenia.
- 110362 to 110376. *DACTYLIS GLOMERATA* L. Orchard grass.
Poaceae.
110362. No. 1260. From Georgia, Transcaucasia.
110363. No. 1261. From Armenia.
110364. No. 1262. From Armenia.
110365. No. 1263. From Georgia, Transcaucasia.
110366. No. 1264. From Armenia.
110367. No. 1265. From Armenia.
110368. No. 1266. From Armenia.
110369. No. 1267. From Georgia, Transcaucasia.
110370. No. 1268. From Georgia, Transcaucasia.
110371. No. 1269. From near Tiflis, Georgia, Transcaucasia.
110372. No. 1270. From Armenia.
110373. No. 1271. From Daghestan.
110374. No. 1272. From Georgia, Transcaucasia.
110375. No. 1273. From Georgia, Transcaucasia.
110376. No. 1274. From Armenia.
110377. *FESTUCA OVINA* L. Poaceae.
Sheep fescue.
No. 1275. From Armenia.
110378. *FESTUCA RUBRA* L. Poaceae.
Red fescue.
No. 1276. From Armenia.
- 110379 to 110384. *GALEGA* spp. Fabaceae
Goatsrue.
110379. *GALEGA ORIENTALIS* Lam.
No. 1281. From Georgia, Transcaucasia.
For previous introduction see 108629.
110380. *GALEGA* sp.
No. 1253. From Georgia, Transcaucasia.
110381. *GALEGA* sp.
No. 1277. From Armenia.
110382. *GALEGA* sp.
No. 1278. From Armenia.
110383. *GALEGA* sp.
No. 1279. From Georgia, Transcaucasia.
110384. *GALEGA* sp.
No. 1280. From Georgia, Transcaucasia.
- 110385 to 110387. *KOELERIA* spp. Poaceae.
Grass.
110385. *KOELERIA CRISTATA* (L.) Pers.
No. 1284. From Georgia, Transcaucasia.
- 110386 and 110387. *KOELERIA HIRSUTA* Gand.

110350 to 110449—Continued.

- From Armenia. A slender perennial grass with upright, densely tufted culms up to 2 feet high. Native to central Europe.
110386. No. 1282. 110387. No. 1285.
110388. *LATHYRUS PRATENSIS* L. Fabaceae.
Yellow vetchling.
No. 1286. From Georgia, Transcaucasia.
110389. *MELICA TRANSILVANICA* Schur. Poaceae.
No. 1287. From Karaklis, Armenia. A perennial grass up to 3 feet high, closely related to *Melica ciliata*. Native to central Europe.
- 110390 to 110392. *MELILOTUS OFFICINALIS* (L.) Lam. Fabaceae. Sweetclover.
110390. No. 1288. From Armenia.
110391. No. 1289. From Georgia, Transcaucasia.
110392. No. 1290. From Tiflis, Georgia, Transcaucasia.
- 110393 to 110404. *ONOBRYCHIS VULGARIS* Hill. Fabaceae. Sanfoin.
110393. No. 1297. From Armenia.
110394. No. 1291. From Georgia, Transcaucasia.
110395. No. 1292. From Azerbaijan.
110396. No. 1293. From Georgia, Transcaucasia.
110397. No. 1294. From Armenia.
110398. No. 1295. From Armenia.
110399. No. 1296. From Armenia.
110400. No. 1298. From Armenia.
110401. No. 1299. From Daghestan.
110402. No. 1300. From Georgia, Transcaucasia.
110403. No. 1301. From Armenia.
110404. No. 1302. From Armenia.
110405. *ONOBRYCHIS* sp. Fabaceae.
No. 1303. From Georgia, Transcaucasia.
110406. *ONOBRYCHIS* sp. Fabaceae.
No. 1304. From Georgia, Transcaucasia.
- 110407 to 110412. *PHLEUM* spp. Poaceae.
Timothy.
- 110407 to 110410. *PHLEUM PRATENSE* L.
110407. No. 1344. From Georgia, Transcaucasia.
110408. No. 1306. From Georgia, Transcaucasia.
110409. No. 1307. From Armenia.
110410. No. 1308. From Georgia, Transcaucasia.
110411. *PHLEUM* sp.
No. 1305. From Armenia.
110412. *PHLEUM PRATENSIS* L.
No. 1283. From Armenia.
110413. *PISUM SATIVUM* L. Fabaceae. Pea.
No. 1343. From Armenia.

110350 to 110449—Continued.

110414 to 110444. *TRIFOLIUM* spp. Fabaceae.

110414 and 110415. *TRIFOLIUM ALPESTRE* L.

110414. No. 1309. From Armenia.

110415. No. 1310. From Armenia.

110416. *TRIFOLIUM AMBIGUUM* Bieb.

No. 1311. From Armenia.

110417 and 110418. *TRIFOLIUM ELEGANS* Savi.

A smooth perennial clover with stems 8 to 20 inches long, found throughout Europe and the Caucasus, especially in siliceous soils. The flowers are whitish or pink, and the plant is used for forage.

For previous introduction see 56672.

110417. No. 1312. From Armenia.

110418. No. 1313. From Armenia.

110419 to 110428. *TRIFOLIUM PRATENSE* L. Red clover.

110419. No. 1314. From Georgia, Transcaucasia.

110420. No. 1315. From the State Farm, Bideny, Armenia.

110421. No. 1316. From Armenia.

110422. No. 1317. From Georgia, Transcaucasia.

110423. No. 1318. From Armenia.

110424. No. 1319. From Barmakin, Georgia, Transcaucasia.

110425. No. 1320. From the State Farm, Bideny, Armenia.

110426. No. 1321. From the State Farm, Bideny, Armenia.

110427. No. 1329. From Lenkoran, Armenia.

110428. No. 1322. From Georgia, Transcaucasia.

110429. *TRIFOLIUM REPENS*. White clover.

No. 1323. From Armenia.

110430 to 110432. *TRIFOLIUM RESUPINATUM* L. Strawberry clover.

110430. No. 1324. From the State Farm, Bideny, Armenia.

110431. No. 1325. From Afghanistan.

110432. No. 1326. From Persia.

110433. *TRIFOLIUM SUBTERRANUM* L. Subterranean clover.

No. 1333. From Lenkoran, Armenia.

110434. *TRIFOLIUM* sp.

No. 1327. From Armenia. Received under the name "trichaeifolium," for which a place of publication has not been found.

110435. *TRIFOLIUM* sp.

No. 1328. From Georgia, Transcaucasia.

110436. *TRIFOLIUM* sp.

No. 1329. From Georgia, Transcaucasia.

110350 to 110449—Continued.

110437. *TRIFOLIUM* sp. No. 1330. From Georgia, Transcaucasia.

110438. *TRIFOLIUM* sp.

No. 1331. From Georgia, Transcaucasia.

110439. *TRIFOLIUM* sp.

No. 1332. From the Borzhom region, Georgia, Transcaucasia.

110440. *TRIFOLIUM* sp.

No. 1334. From Georgia, Transcaucasia.

110441. *TRIFOLIUM* sp.

No. 1335. From Georgia, Transcaucasia.

110442. *TRIFOLIUM* sp.

No. 1336. From the State Farm, Z. U. K., Georgia, Transcaucasia.

110443. *TRIFOLIUM* sp.

No. 1337. From Daghestan.

110444. *TRIFOLIUM* sp.

No. 1338. From the State Farm, Bideny, Armenia.

110445. *TRisetum FLAVESCENS* (L.) Beauv. Poaceae. Grass.

No. 1254. From Armenia. A grass resembling tall meadow oatgrass, growing on open ground, in copses, and in meadows, which may prove valuable as a forage.

For previous introduction see 101585.

110446 to 110449. *VICIA* spp. Fabaceae. Vetch.

110446. *VICIA* sp.

No. 1342. From Armenia.

110447. *VICIA* sp.

No. 1341. From Georgia, Transcaucasia.

110448. *VICIA* sp.

No. 1340. From Georgia, Transcaucasia.

110449. *VICIA* sp.

No. 1345. From Armenia.

110450 to 110466.

From England. Plants purchased from Maurice Pritchard & Sons, Christchurch, Hants, England. Received April 20, 1935.

Introduced for Department specialists.

110450 to 110452. *ASTER* spp. Astera-ceae.

110450. *Marjorie*.

110451. *Nancy*.

110452. *Victor*.

110453 to 110461. *KNIPHOFIA* spp. Lilia-ceae.

110453. *Dr. Legate*.

110454. *Greybeard*.

110455. *Lighthouse*.

110456. *Mrs. Samuel Smith*.

110450 to 110466—Continued.

110457. *Northiae Kathari*.
 110458. *Preziosa*.
 110459. *R. Wilson Kerr*.
 110460. *Scarchlight*.
 110461. *Vincent's Delight*.
 110462 to 110466. TRADESCANTIA VIRGINIANA L. Commelinaceae.
 110462. *Henry Marshall*.
 110463. *Lilac Time*.
 110464. *Pauline*.
 110465. *Purple Dome*.
 110466. Delicate pale gray.

110467 to 110478. PRUNUS spp. Amygdalaceae.

From Germany. Plants purchased from Otto Schmitz-Hübsch, Merten, Kreis Bonn. Received April 2, 1935.

Introduced for Department specialists.

- 110467 to 110471. PRUNUS AVIUM L. Sweet cherry.
 110467. *Büttner's rote Knorpelkirsche*.
 110468. *Dönissens gelbe Knorpelkirsche*.
 110469. *Grosse schwarze Knorpelkirsche*.
 110470. *Hedelfinger Riesen*.
 110471. *Jabulay*.
 110472 and 110473. × PRUNUS EFFUSA (Host) Schneid. Duke cherry.
 A semisour cherry.
 110472. *Kaiserin Eugenie*.
 110473. *Königin Hortense*.
 110474 and 110475. PRUNUS AVIUM L. Sweet cherry.
 110474. *Coburger Maiherzkirsche*.
 110475. *Mohrenkirsche*.
 110476. × PRUNUS EFFUSA (Host) Schneid. Duke cherry.
Rote Maikirsche. A semisour cherry.
 110477 and 110478. PRUNUS CERASUS L. Sour cherry.
 110477. *Königliche Amarelle*.
 110478. *Schattenmorelle*.

110479 to 110505.

From Manchuria. Seeds presented by B. W. Skvortzov, botanical department, second high school, Chinese Eastern Railway, Harbin, through H. G. MacMillan, Bureau of Plant Industry. Received April 12, 1935.

Introduced for Department specialists.

110479. ACONITUM KUSNEZOFFII Reichenb. Ranunculaceae. Monkshood.
 An erect hardy herbaceous perennial, native to northeastern Asia, with terminal clusters of bluish flowers.
 For previous introduction see 101395.
 110480. AGROPYRON REPENS (L.) Beauv. Poaceae. Quackgrass.
 For previous introduction see 110063.

110479 to 110505—Continued.

110481. BECKMANNIA SYZIGACHNE (Steud.) Fern. Poaceae.
 For previous introduction see 108618.
 110482 and 110483. CHLORIS VIRGATA Swartz. Poaceae. Feather fingergrass.
 110484. CLEISTOGENES SEROTINA (L.) Keng. Poaceae. Grass.
 A loosely tufted or solitary perennial grass over a foot high, native to low grounds in southern Europe.
 110485. DIGITARIA sp. Poaceae. Grass.
 110486. ECHINOCHLOA CRUSGALLI (L.) Beauv. Poaceae. Grass.
 For previous introduction see 109825.
 110487. ELYMUS DAHURICUS Turcz. Poaceae. Grass.
 For previous introduction see 108486.
 110488. ERAGROSTIS PILOSA (L.) Beauv. Poaceae. Grass.
 For previous introduction see 109819.
 110489. ERIOCHLOA VILLOSA (Thunb.) Kunth. Poaceae. Grass.
 For previous introduction see 109820.
 110490. GLYCINE GRACILIS Skvortzov. Fabaceae.
 A procumbent or twining herb about 3 feet long, native to northern Manchuria, with bright-green, hairy, petioled leaves, and clusters of small white or reddish-violet flowers.
 110491. SOJA sp. Fabaceae.
 Received under the name "ussuriensis," for which a place of publication has not been found.
 110492. HETEROPAPPUS HISPIDUS (Thunb.) Less. Asteraceae.
 A perennial herb, native to eastern Asia, with rough stems and linear leaves. The clear-blue, asterlike flower heads are borne singly at the ends of the branchlets, forming broad corymblike clusters 8 to 10 inches across.
 For previous introduction see 101395.
 110493 to 110496. LESPEDEZA spp. Fabaceae.
 110493 and 110494. LESPEDEZA BICOLOR Turcz.
 110495. LESPEDEZA DAURICA (Laxm.) Schindler.
 A tall annual up to 3 feet high, with small white flowers.
 For previous introduction see 108230.
 110496. LESPEDEZA sp.
 110497. MEDICAGO LUPULINA L. Fabaceae.
 110498 and 110499. MELILOTUS SUAVEOLENS Ledeb. Fabaceae.
 For previous introduction see 90558.
 110500. SETARIA LUTESCENS (Weigel) Hubbard. Poaceae. Grass.
 110501. SETARIA VIRIDIS (L.) Beauv. Poaceae. Grass.

110479 to 110505—Continued.

110502. *THLADIANTHA DUBIA* Bunge. Cucurbitaceae.

A tuberous rooted climber with pale-green, heart-shaped leaves and numerous campanulate yellow flowers. Native to northern China.

For previous introduction see 90410.

110503 to 110505. *VICIA* spp. Fabaceae. Vetch.

110503. *VICIA JAPONICA* A. Gray.

For previous introduction see 81659.

110504. *VICIA* sp.

110505. *VICIA JAPONICA* A. Gray.

110506. *SACCHARUM SPONTANEUM* L. Poaceae. Grass.

From India. Cuttings presented by the Imperial Sugar Cane Station, Coimbatore. Received April 25, 1935.

Introduced for Department specialists.

Variety *Burma*. A grass closely related to sugarcane.

For previous introduction see 106899.

110507 and 110508. *OLEA EUROPAEA* L. Oleaceae. Olive.

From Spain. Cuttings presented by Ramon Sala, Balagu r-Pc., Lerida. Received April 25, 1935.

Introduced for Department specialists.

110507. *Cordovi* variety.

110508. An unnamed variety which produces very large fruits, but does not bear a large crop.

110509 to 110513.

From China. Plants presented by the Lingnan University, Canton. Received April 9, 1935.

Introduced for Department specialists.

110509. *ARENDINARIA AMABILIS* McClure. Poaceae.

A bamboo with erect cylindrical culms usually 20 feet high, rarely 40 feet, and near-lanceolate leaves about a foot long; probably of garden origin.

110510. *BAMBUSA TULDROIDES* Munro. Poaceae.

Chang ko chuk. A thick-walled, stiff, straight bamboo of the sympodial type cultivated for its culms which in well-established clumps are 24 feet high and about 5 inches in circumference. It is one of the most important economic bamboos in this part of China.

For previous introduction see 80875.

110511. *PHYLLOSTACHYS* sp. Poaceae.

110512. *SCHIZOSTACHYUM FUNGHOMI* McClure. Poaceae.

A cultivated clump bamboo, native to southern China, with erect culms up to 30 feet high and about 3 inches in diameter.

110513. (Undetermined.)

An undetermined bamboo.

110514. *PASSIFLORA LIGULARIS* Juss. Passifloraceae. Sweet granadilla.

From Venezuela. Seeds presented by Dr. Henry Pittier. Received April 19, 1935.

Introduced for Department specialists.

For previous introduction see 110273.

110515. *NICOTIANA TABACUM* L. Solanaceae. Tobacco.

From Peru. Seeds presented by the Estación Agronómica de Piura. Received April 18, 1935.

A wild tobacco collected in the fields around Lima; introduced for Department specialists.

110516 and 110517. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

From Michigan. Scions and trees purchased from Frank Keplinger, Farwell. Received April 26, 1935.

Introduced for Department specialists.

110516. *Admiral Byrd*.

110517. *Sherman*.

110518 to 110555.

From Australia. Seeds presented by Dr. A. McTaggart, Senior Plant Introduction Officer, Division of Plant Industry, Canberra, Federal Commonwealth Territory. Received April 17, 1935.

A collection of forage plants introduced for Department specialists; the field numbers are those of the Federal Commonwealth Territory.

110518 and 110519. *BROMUS* spp. Poaceae. Bromegrass.

110518. *BROMUS* sp.

FCT. No. 1963.

110519. *BROMUS* sp.

FCT. No. 1494.

110520. *DESCHAMPSIA CAESPITOSA* (L.) Beauv. Poaceae. Tufted hairgrass.

FCT. No. 3639.

For previous introduction see 109077.

110521 to 110552. *FESTUCA* spp. Poaceae. Fescue.

110521. *FESTUCA ALOPECUROS* Schousb.

FCT. No. 2518. An annual grass, native to the western Mediterranean region, with tufted culms up to a foot high, seldom reaching 2 feet high.

110522. *FESTUCA AMETHYSINA* L.

FCT. No. 2383. A densely caespitose perennial grass with fibrous roots, stout culms, and very narrow leaves. Native to the Mediterranean countries.

For previous introduction see 58700.

110523 and 110524. *FESTUCA ELATIO* ARUNDINACEA (Schreb.) Wimm.

For previous introduction see 108501.

110523. FCT. No. 5609.

110524. FCT. No. 5760.

110525. *FESTUCA CAPILLATA* Lam. Hair fescue.

FCT. No. 2475.

110518 to 110555—Continued.

- 110526 to 110531. *FESTUCA ELATIOR* L.
Meadow fescue.
110526. FCT. No. 1144.
110527. FCT. No. 5875.
110528. FCT. No. 2100.
110529. FCT. No. 5610.
110530. FCT. No. 5712.
110531. FCT. No. 5713.
110532. *FESTUCA RUBRA* HETEROPHYLLA
(Lam.) Mutel. Shade fescue.
- FCT. No. 2101. A densely tufted perennial grass, used for lawns in shady places. Native to Europe.
110533. *FESTUCA MAIREI* St. Yves.
- FCT. No. 1499. A grass native to Morocco.
- For previous introduction see 74166.
110534. *FESTUCA MARITIMA* L.
- FCT. No. 5792. A tufted annual grass, native to Spain, with culms about a foot high.
110535. *FESTUCA OVINA* L. Sheep fescue.
- FCT. No. 2102.
- 110536 to 110538. *FESTUCA OVINA* SULTANA Hack.
110536. FCT. No. 2092.
110537. FCT. No. 2385.
110538. FCT. No. 2093.
- 110539 to 110541. *FESTUCA OVINA* VALESIACA (Schleich.) Link.
- A perennial grass, with slender culms about 1 foot high. Native to central Europe.
110539. FCT. No. 2094.
110540. FCT. No. 2386.
110541. FCT. No. 2478.
110542. *FESTUCA VARIA* Haenke.
- FCT. No. 2362.
- 110543 to 110547. *FESTUCA RUBRA* L.
Red fescue.
110543. FCT. No. 1294.
110544. FCT. No. 3460.
110545. FCT. No. 2104.
110546. FCT. No. 5761.
110547. FCT. No. 1295.
110548. *FESTUCA RUBRA* COMMUTATA
Gaud. Chewings fescue.
- FCT. No. 1293.
110549. *FESTUCA SPADICEA* L.
- FCT. No. 2363.
- For previous introduction see 89827.
110550. *FESTUCA VARIA* Haenke.
- FCT. No. 2387.
- For previous introduction see 89828.
110551. *FESTUCA* sp.
- FCT. No. 2519.
110552. *FESTUCA* sp.
- FCT. No. 2103.

110518 to 110555—Continued.

- 110553 to 110555. *SCLERPOPOA RIGIDA* (L.)
Griseb.
- An annual tufted grass up to a foot in height, with linear, sharp-pointed leaves and rigid panicles. Native to Asia Minor.
- For previous introduction see 58709.
110553. FCT. No. 1763.
110554. FCT. No. 2477.
110555. FCT. No. 2520.
- 110556 to 110558.
- From Paraguay. Seeds presented by the Botanic Garden, Asunción. Received April 18, 1935.
- Introduced for Department specialists.
110556. *MALVASTRUM* sp. Malvaceae.
- Originally from Napalpi, Chaco, Argentina.
110557. *MALVASTRUM* sp. Malvaceae.
110558. *SPHAERALCEA BONARIENSIS* (Cav.)
Griseb. Malvaceae.
- A tender shrubby perennial about 1 foot high. Native to Argentina.
- 110559 to 110590.
- From France. Seeds and bulbs presented by the Director, Botanic Garden, Nantes. Received April 20, 1935.
- Introduced for Department specialists.
- Unless otherwise mentioned, the material was received as seed.
- 110559 to 110567. *ALLIUM* spp. Liliaceae.
Onion.
110559. *ALLIUM CARINATUM* L.
- Bulbets of a species with narrowly linear leaves and lilac-purple flowers, produced in a comparatively large head. It is found throughout southern Europe, especially in the Alps.
- For previous introduction see 104626.
110560. *ALLIUM CEPA* L.
110561. *ALLIUM OCHROLEUCUM* Waldst.
and Kit.
- An allium, native to central Europe, with terete stems over a foot high, linear leaves, and umbels of 15 to 20 yellowish-white flowers.
110562. *ALLIUM ODORUM* L.
- A European onion cultivated in Japan for its leaves, which are produced abundantly in the spring and eaten as greens.
- For previous introduction see 78986.
110563. *ALLIUM OLERACEUM* L.
- Bulbets of a central European allium with stems 2 to 3 feet high, semiterete leaves, and greenish-yellow flowers.
110564. *ALLIUM PORRUM* L. Leek.
110565. *ALLIUM SIBIRICUM* L.
- An allium, native to Siberia, with semiterete leaves, cylindrical scape up to 2 feet high, and an umbel of many rose-colored flowers.

110559 to 110590—Continued.

110566. *ALLIUM SPHAEROCEPHALON* L.

Bulbs of a European onion with a scape 1 to 2 feet high, leafy only a third of its length. The half-terete leaves are much shorter than the stem and the bright or dark-purple flowers are freely borne in globose or ovoid umbels about an inch in diameter.

110567. *ALLIUM VINEALE* L.

Bulbets of a pink-flowered wild onion, about a foot high, native to England.

For previous introduction see 78999.

110568. *CUCUMIS MELO* L. Cucurbitaceae.
Muskmelon.110569 to 110574. *CUCURBITA PEPO* L. Cucurbitaceae.
Pumpkin.110569. *Annulata*.110570. *Oviformis*.110571. *Patisson*.110572. *Platycarpa striata*.110573. *Pyriformis*.110574. *Verrucosa*.110575 to 110580. *FESTUCA* spp. Poaceae.
Fescue.110575. *FESTUCA ELATIOR ARUNDINACEA* (Schreb.) Wimm.110576. *FESTUCA OVINA GLAUCA* (Lam.) Koch. Blue fescue.110577. *FESTUCA RUBRA* L. Red fescue.110578 and 110579. *FESTUCA RUBRA HETEROPHYLLA* (Lam.) Mutel.110580. *FESTUCA SPADICEA* L.110581. *POA NEMORALIS* L. Poaceae.
Wood bluegrass.

For previous introduction see 78805.

110582 to 110584. *RHEUM* spp. Polygo-
naceae. Rhubarb.110582. *RHEUM AUSTRALE* Dob.

For previous introduction see 31037.

110583. *RHEUM OFFICINALE* Baill.

For previous introduction see 104375.

110584. *RHEUM RHAPONTICUM* L.
Common rhubarb.110585 to 110590. *SOLANUM* spp. Solana-
ceae.110585. *SOLANUM CILIATUM* Lam.

A spiny perennial with cordate leaves and small clusters of white flowers.

110586. *SOLANUM DULCAMARA* L.
Bitter nightshade.110587. *SOLANUM GUINEENSE* L.

For previous introduction see 93096.

110588. *SOLANUM MELONGENA* L.
Eggplant.110589. *SOLANUM MINIATUM* Bernh.

An annual, native to southern Europe, with unarmed stems over a foot high, ovate glabrous leaves, and racemes of small white flowers.

110590. *SOLANUM NIGRUM* L.
Black nightshade.

110591 to 110593.

From Guatemala. Seeds collected by Nancy Bell Fairchild, at Antigua. Received April 22, 1935.

110591. *CASSIA* sp. Caesalpiniaceae.

A shrub with yellow flowers.

110592. *CEDELEA* sp. Meliaceae.

110593. (Undetermined.)

Jaapa.

110594 to 110611.

From England. Seeds presented by the Director, Cambridge University Botanic Garden. Received April 18, 1935.

Introduced for Department specialists.

110594. *CUCUMIS SATIVUS* L. Cucurbita-
ceae. Cucumber.110595 to 110597. *LYCOPERSICON ESCULEN-
TUM* Mill. Solanaceae. Tomato.

110595. [No varietal name.]

110596. *Cerasiforme*.110597. *Piriforme*.110598 to 110604. *PASSIFLORA* spp. Passi-
floraceae. Passionflower.110598. *PASSIFLORA BANKSII* Benth.

An evergreen climber with broad three-lobed leaves nearly 3 inches across and about 2 inches wide. Native to New South Wales and Queensland.

For previous introduction see 35104.

110599. *PASSIFLORA CAPSULARIS* L.

A tall slender climber with red tendrils, two-lobed leaves, and solitary, rosy-red flowers about 2 inches across. Native to Brazil and northeastern Paraguay.

For previous introduction see 45168.

110600. *PASSIFLORA EDULIS* Sims.
Purple granadilla.110601. *PASSIFLORA GRACILIS* Jacq.
Crinkled passionflower.

A Brazilian vine with smooth slender stems and bluntly three-lobed, membranous leaves up to 3 inches long. The pale-green to whitish flowers are about 1 inch across, and the ovoid purple fruits are about 2 inches long.

For previous introduction see 49026.

110602. *PASSIFLORA LIGULARIS* JUSS.
Sweet granadilla.110603. *PASSIFLORA LUTEA* L.
Yellow passionflower.

For previous introduction see 43115.

110604. *PASSIFLORA SUBEROSA* L.
Cork passionflower.

A woody climber with roundish, three-lobed leaves, small greenish-yellow flowers, and ovoid black berries. Native to tropical America.

For previous introduction see 97776.

110605 to 110607. *PISUM* spp. Fabaceae.
Pea.110605. *PISUM JOMARDI* Schrank.

A hardy white-flowered annual pea about 3 feet high, native to Egypt.

For previous introduction see 104858.

110594 to 110611—Continued.

110606. *PISUM SATIVUM* L.110607. *PISUM SATIVUM UMBELLATUM* L.

A form of the ordinary garden pea with the flowers in umbellike clusters.

For previous introduction see 59396.

110608 to 110611. *SOLANUM* spp. Solanaceae.110608. *SOLANUM ATROPURPUREUM* Schrank.

For previous introduction see 104863.

110609. *SOLANUM CAPSICASTRUM* Link.
False Jerusalem-cherry.110610. *SOLANUM MARGINATUM* L. f.
Nightshade.

A prickly shrub from 3 to 6 feet high with white-tomentose, blue-veined foliage and white, blue-veined flowers about 1 inch in diameter. Native to Ethiopia.

For previous introduction see 25097.

110611. *SOLANUM MELONGENA* L.
Eggplant.110612. *JUBAEA CHILENSIS* (Molina) Baill. Phoenicaceae. Sirup palm.

From Chile. Seeds presented by W. R. Grace & Co., Santiago, at the request of H. G. McMillan, Bureau of Plant Industry. Received April 18, 1935.

A Chilean palm, 40 feet high, which thrives on very dry soil. The pinnate leaves are 6 to 12 feet long, and the coconutlike fruits are 2 inches in diameter. It is ornamental but a slow grower.

For previous introduction see 89995.

110613 and 110614.

From Cuba. Seeds presented by R. M. Grey, Superintendent of the Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received April 24, 1935.

110613. *ACROCOMIA MEXICANA* Karw.
Phoenicaceae. Palm.

A prickly palm about 20 feet high, with a spiny, brown-woolly trunk often a foot thick and terminal leaves from 6 to 8 feet in length. The sheathing bases of the leaves are armed with long black spines, and the spathe also is very spiny. The fragrant yellow flowers are followed by round fruits in very long clusters. This palm is found in the cooler parts of Mexico up to 3,000 feet altitude.

For previous introduction see 101695.

110614. *CRESCENTIA CUJETE* L. Bignoniaceae.
Calabash-tree.

A handsome tree, native to tropical America, with wide-spreading branches and glossy, oblong, dark-green leaves 4 to 6 inches long. The globose, pendulous fruits, 18 to 20 inches in diameter, have woody shells, and, when dried are used for domestic purposes.

For previous introduction see 102279.

110615 to 110617. *ZEPHYRANTHES* spp. Amaryllidaceae.

From Mexico. Bulbs purchased from Dr. C. A. Purpus, Zacuapam, Huatusco, Vera Cruz. Received April 30, 1935.

110615 to 110617—Continued.

110615. *ZEPHYRANTHES PALLIDA* M. Roem.

A tropical American zephyranthes with narrow-linear, radical leaves about 1 foot long and large white flowers tinged with red.

110616 and 110617. *ZEPHYRANTHES VERECUNDA* Herb.

A bulbous perennial with narrowly lanceolate leaves and funnel-shaped flowers, 1 to 2 inches long, which vary in color from greenish white to red. It is native to the highlands of central Mexico.

For previous introduction see 91835.

110616. A form with white flowers tinged with rose red.

110617. A form with light rose-red flowers.

110618 to 110633.

From Sweden. Seeds presented by the Director, Botanic Garden, Upsala. Received April 18, 1935.

Introduced for Department specialists.

110618. *CUCURBITA PEPO* L. Cucurbitaceae.
Pumpkin.110619. *FESTUCA AMETHYSTINA* L. Poaceae.
Fescue.110620. *FESTUCA ELATIOR ARUNDINACEA* (Schreb.) Wimm.
Fescue.110621. *IRIS RUTHENICA* Ker. Iridaceae.

A Chinese iris with a tuft of linear leaves about 6 inches long at flowering time, becoming a foot long later. The outer segments of the violet-scented flowers are lilac, marked with bluish purple; the inner segments are deep purple violet.

For previous introduction see 67004.

110622. *PASSIFLORA SUBEROSA* L. Passifloraceae.
Cork passionflower.

For previous introduction see 110604.

110623 and 110624. *PISUM SATIVUM* L. Fabaceae.
Pea.110623. *Medullare*.110624. *Saccharatum*.110625 to 110629. *RHEUM* spp. Polygonaceae.
Rhubarb.110625. *RHEUM FRANZENBACHII* Muentzer.

For previous introduction see 105160.

110626. *RHEUM MACROPTERUM* Mart.

For previous introduction see 69106.

110627. *RHEUM OFFICINALE* Baill.110628. *RHEUM UNDULATUM* L.

For previous introduction see 104648.

110629. *RHEUM WEBBIANUM* Royle.

A stout perennial up to 6 feet high, native to the Himalayas at altitudes of 10,000 to 14,000 feet.

110630 to 110633. *SOLANUM* spp. Solanaceae.110630. *SOLANUM CAPSICASTRUM* Link.
False Jerusalem-cherry.110631. *SOLANUM DULCAMARA* L.
Bitter nightshade.

110618 to 110633—Continued.

110632. SOLANUM SISYMBRIFOLIUM Lam.

A plant with small round black fruits.

For previous introduction see 93098.

110633. SOLANUM TRIFLORUM CALOPHYLLUM (Phil.) Bitter.

A coarse annual nightshade, native to Argentina and Chile.

110634 to 110637. FESTUCA spp. Poaceae. Fescue.

From New South Wales. Seeds presented by G. D. Ross, Under Secretary, Department of Agriculture, Sydney. Received April 24, 1935.

Introduced for Department specialists.

110634 and 110635. FESTUCA ELATIOR L. Meadow fescue.

110636. FESTUCA ELATIOR ARUNDINACEA (Schreb.) Wimm.

110637. FESTUCA RUBRA L. Red fescue.

110633 to 110663.

From Sweden. Seeds presented by Dr. A. H. Magnusson, Director, Botanic Garden, Göteborg. Received April 22, 1935.

Introduced for Department specialists.

110638 to 110648. ALLIUM spp. Liliaceae. Onion.

110638. ALLIUM CERNUUM Roth. Nodding onion.

For previous introduction see 66425.

110639. ALLIUM DELICATULUM Sievers.

A Siberian allium about a foot high, with three or four narrow leaves and straw-colored flowers in flat umbels.

110640. ALLIUM FLAVUM L.

A wild onion with an upright or ascending stem up to a foot high, narrowly linear leaves about as long as the stem, and small yellow bell-shaped flowers in a rather dense cluster. Native to dry rocky places, especially in chalky soil, in south-central Europe.

For previous introduction see 104632.

110641. ALLIUM FRIGIDUM Boiss. and Heldr.

An allium with stems 3 to 5 inches high, two to three semi-terete leaves, and small umbels of reddish-yellow flowers. Native to Greece.

110642. ALLIUM HELDREICHII Boiss.

A Grecian species, a foot or less in height with thin terete leaves shorter than the scape and rosy flowers.

For previous introduction see 58873.

110643. ALLIUM ODORUM L.

For previous introduction and description see 110562.

110644. ALLIUM PULCHELLUM Don.

An onion with narrow-linear leaves about 1 foot long and a rather dense umbel of bell-shaped, violet flowers. Native to Asia Minor.

For previous introduction see 104634.

110638 to 110663—Continued.

110645. ALLIUM SENESCENS L.

A wild European onion, 1 to 2 feet high, with narrow erect often twisted leaves and numerous rather small pink or lilac flowers in dense heads.

For previous introduction see 78993.

110646. ALLIUM STELLATUM Fraser.

For previous introduction see 78994.

110647. ALLIUM TANGUTICUM Regel.

For previous introduction see 110226.

110648. ALLIUM VICTORIALIS L.

For previous introduction see 103779.

110649 to 110652. FESTUCA spp. Poaceae. Fescue.

110649. FESTUCA OVINA BRACHYPHYLLA (Schult.) Piper. Alpine fescue.

An alpine perennial grass, native to central Europe.

110650. FESTUCA OVINA INDIGESTA (Boiss.) Hack.

A dwarf perennial grass, native to Spain at altitudes between 6,000 and 9,000 feet.

110651. FESTUCA VARIA ALPESTRIS (Roem. and Schult.) Hack.

A perennial grass, native to the mountains of central Europe, with culms 1 to 2 feet high.

110652. FESTUCA VARIA SCOPARIA Kern. and Hack.

A perennial grass about a foot high, native to western Europe.

110653. QUAMOCLIT COCCINEA (L.) Moench. Convolvulaceae. Scarlet starglory.

For previous introduction see 97783.

110654 to 110656. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

110657. RHEUM ALEXANDRAE Batal. Polygonaceae.

A stout herbaceous perennial, native to China, with a rosette of elliptic-ovate, dark, glossy-green leaves, and flower stems 3 to 4 feet high, bearing large pale-yellow, overlapping leaflike bracts.

For previous introduction see 105159.

110658 to 110663. SOLANUM spp. Solanaceae.

110658. SOLANUM AVICULARE Forst. f. Nightshade.

A bushy shrub, 6 to 8 feet high, with lacinate leaves 10 inches long, small cymes of large dark-purple flowers, and yellowish fruits 1 inch in diameter which are used for making marmalade.

For previous introduction see 95397.

110659. SOLANUM GRACILE Otto.

A slender branching perennial about 2 feet high, with oval to oblong-lanceolate leaves and white flowers in small racemes, followed by black berries. Native to tropical America.

110660. SOLANUM HETERODOXUM Dun.

A tall annual, native to Mexico, with pilose stems 2 to 3 feet high, lobed leaves, and pale-blue flowers followed by black berries.

110638 to 110663—Continued.

110661. *SOLANUM HUMILE* Lam.

A dwarf, shrubby perennial with ovate leaves and violet-colored flowers. Known only in cultivation.

110662. *SOLANUM LUTEUM* Mill.

A hairy herb, with branching stems over 2 feet high, woolly ovate leaves, and umbels of small white flowers followed by yellow berries. Native to temperate South America.

110663. *SOLANUM MINIATUM* Bernh.

For previous introduction and description see 110589.

110664 to 110675.

From Australia. Seeds presented by Dr. H. Wenholtz, Department of Agriculture, Sydney, New South Wales. Received April 26, 1935.

A collection of seeds from the Bathurst Experiment Farm, introduced for Department specialists.

110664 to 110670. *ALLIUM CEPA* L. Liliaceae. Onion.110664. *Barletta B. 321.*110665. *Dubbo White.*110666. *Lord Howe Island B. 319.*110667. *Odorless B. 337.*110668. *Hunter River Brown Spanish.*110669. *Maitland White.*110670. *White Pearl.*110671. *APIUM GRAVEOLENS* L. Apiaceae. Celery.

South Australian celery.

110672 to 110675. *DAUCUS CAROTA* L. Apiaceae. Carrot.110672. *Colonial B. 345.*110673. *Fine Long Red B. 343.*110674. *Long Bunching.*110675. *Coreless Long Red.*110676. *HABRANTHUS BRACHYANDRUS* (Baker) Sealy. Amaryllidaceae.

From Argentina. Bulbs presented by Ing. Paul Ramella, Director de la Estación Experimental Central, Bergamino. Received May 4, 1935.

A Paraguayan habranthus with three or four erect, pale-green leaves and a peduncle about a foot long bearing a single flower; this has a large funnel-shaped perianth, purplish red with pale pink tips.

110677. *ORYZA SATIVA* L. Poaceae. Rice.

From the Fiji Islands. Seeds presented through the Division of Cereal Crops and Diseases, Bureau of Plant Industry. Received April 27, 1935.

Sonacalif rice; introduced for Department specialists.

110678. *BAUHINIA PURPUREA* L. Caesalpiniaceae.

From India. Seeds presented by F. G. Dickason, through Winfield E. Scott,

110678—Continued.

American consul, Rangoon, Burma. Received April 25, 1935.

A small tree with pink flowers; collected February 17, 1935, in the nursery at Judson College, Rangoon.

110679 to 110681. *NICOTIANA TABACUM* L. Solanaceae. Tobacco.

From Brazil. Seeds presented by Henrique Barradas, Ministerio da Agricultura Campo de Sementes de Fumo, Tracuateua. Received April 30, 1935.

Introduced for Department specialists.

110679. *Barury.*110680. *Preitinho.*110681. *Saracá.*

110682 to 110684.

From Cuba. Seeds presented by R. M. Grey, Superintendent of the Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received April 29, 1935.

Introduced for Department specialists.

110682. × *DOMBEYA CAYEUXII* Andre. Sterculiaceae.

A hybrid between *Dombeya mastersii* and *D. wallichii*. It is a handsome shrub about 6 feet high, with large cordate leaves and pendent corymbs of showy pink flowers. The parents are native to tropical Africa and Madagascar, respectively.

110683. *DOMBEYA SPECTABILIS* Bojer. Sterculiaceae.

A tree up to 30 feet high, with large velvety cordate-lobed leaves and drooping umbels of showy scarlet flowers. Native to Madagascar.

110684. *AVERRHOA BILIMBI* L. Oxalidaceae. Bilimbi.

A tree 20 to 60 feet high, cultivated in parts of South America and the West Indies for the sake of its greenish-yellow, cucumber-shaped acid fruits which are pickled or used as a relish with meat. It is tropical in its requirements.

For previous introduction see 108253.

110685 to 110764.

From Lithuania. Seeds and bulbs presented by Dr. C. Regel, Director, Botanic Garden, Kaunas. Received April 24, 1935.

Introduced for Department specialists, and, unless otherwise specified, the material was received as seeds.

110685. *AGROPYRON* sp. Poaceae. Grass.110686 to 110702. *ALLIUM* spp. Liliaceae. Onion.110686. *ALLIUM AFLATUNENSE* B. Fedtsch.

A large allium with broad-oblong leaves and umbels of purple flowers on a scape up to 4 feet high. Native to Turkistan.

110687. *ALLIUM ALBIDUM* Fisch.

A species with clustered oblong bulbs, very narrow semi-terete leaves, and white or yellowish-white flowers. Native to the southeastern part of Europe.

For previous introduction see 95567.

110685 to 110764—Continued.

110688. *ALLIUM CANADENSE* L.
Meadow garlic.
Bulbs received.
110689. *ALLIUM CARINATUM* L.
Bulbs received.
For previous introduction and description see 110559.
110690. *ALLIUM CAERULEUM* Pall.
For previous introduction and description see 110227.
110691. *ALLIUM FISTULOSUM* L.
Welsh onion.
110692. *ALLIUM FISTULOSUM* L.
Welsh onion.
Bulbs received under the varietal name "viviparum," for which a place of publication and a description have not been found.
110693. *ALLIUM FLAVUM* L.
For previous introduction and description see 110640.
110694. *ALLIUM PULCHELLUM* Don.
For previous introduction and description see 110644.
110695. *ALLIUM SATIVUM* L. Garlic.
Bulbs received.
110696. *ALLIUM SCHOENOPRASUM* L.
Chives.
110697. *ALLIUM SCORODOPRASUM* L.
Bulbs received.
For previous introduction see 73528.
110698. *ALLIUM SIBIRICUM* L.
For previous introduction and description see 110565.
110699. *ALLIUM STELLATUM* Fraser.
For previous introduction see 110646.
110700. *ALLIUM SUAVEOLENS* Jacq.
An allium up to 18 inches high with flat, linear leaves and an umbel of numerous pink fragrant flowers. Native to central Europe.
110701. *ALLIUM URCEOLATUM* Regel.
Bulbs of an onion, native to Turkistan, with linear leaves and bright-blue flowers borne in a hemispherical head.
For previous introduction see 66433.
110702. *ALLIUM VIVIPARUM* Kar. and Kir.
An allium, native to Siberia, with flattened leaves and hemispherical umbels of small azure flowers.
110703. *ARRHENATHERUM ELATIUS* (L.) Beauv. Poaceae. Tall oatgrass.
For previous introduction see 110353.
- 110704 to 110719. *CUCURBITA* spp. Cucurbitaceae.
- 110704 and 110705. *CUCURBITA MAXIMA* Duchesne. Squash.
- 110706 and 110707. *CUCURBITA MOSCHATA* Duchesne.
110706. *Maliformis striata*.
110707. *Maliformis striata maxima*.

110685 to 110764—Continued.

- 110708 to 110719. *CUCURBITA PEPO* L. Pumpkin.
110708. *Cucumiformis aurea viridistriata*.
110709. *Cucumiformis striata*.
110710. *Elongata striata*.
110711. *Lageniformis verrucosa viridis*.
110712. *Maliformis aurea*.
110713. *Maliformis aurea striata*.
110714. *Maliformis lutea*.
110715. *Maliformis striata minor*.
110716. *Paragonica*.
110717. *Pyriformis albo-striata*.
110718. *Pyriformis striata oblonga*.
110719. *Pyriformis verrucosa*.
- 110720 to 110723. *FESTUCA* spp. Poaceae. Fescue.
110720. *FESTUCA ELATIOR* L. Meadow fescue.
110721. *FESTUCA MAIREI* St. Yves.
For previous introduction and description see 110533.
110722. *FESTUCA MYUROS* L.
An annual grass with culms about a foot high and narrow leaf blades. Native to Europe.
For previous introduction see 107057.
110723. *FESTUCA ELATIOR* L. Meadow fescue.
110724. *MUHLENBERGIA FOLIOSA* (Roem. and Schult.) Trin. Poaceae.
A perennial grass of garden origin with decumbent culms rooting at the base.
- 110725 to 110756. *NICOTIANA TABACUM* L. Solanaceae. Tobacco.
110725. *Athanensis*.
110726. *Amersfoort*.
110727. *Atropurpurea*.
110728. *Atrosanguinea*.
110729. *Brazil*.
110730. *Derebcinska*.
110731. *Drinovec*.
110732. *Ercegovina stolak*.
110733. *Friedrichstaler*.
110734. *Galente*.
110735. *Gigantea*.
110736. *Gundi*.
110737. *Havanensis*.
110738. *Kentucky*.
110739. *Longifolia*.
110740. *Macrophylla*.
110741. *Maryland*.
110742. *Muscatteller*.
110743. *Ohio*.
110744. *Platana arcadia*.

110685 to 110764—Continued.

110745. *Portorico*.
 110746. *Saloniki*.
 110747. *Samsun*.
 110748. *Spagnuolo di Comiso*.
 110749. *Sumatra*.
 110750. *Sarmalinsky*.
 110751. *Tiubek*.
 110752. *Tykkulak*.
 110753. *Unguschet*.
 110754. *Virginica*.
 110755. *Wigandoides*.
 110756. *Brazil beneventano*.
 110757. *PHASEOLUS VULGARIS* L. Fabacae. Common bean.
Butterkönigin.

110758 to 110761. *RHEUM* spp. Polygono-rhubarb.

110758. *RHEUM PALMATUM* L.

Received under the varietal name "przewalskii," for which a place of publication and a description have not been found.

110759. *RHEUM PALMATUM TANGUTICUM* Maxim.

A tall perennial up to 6 feet high, with large rounded cordate leaves. Native to northeastern Asia.

For previous introduction see 31035.

110760. *RHEUM RHAPONTICUM* L. Common rhubarb.

110761. *RHEUM UNDULATUM* L. Rhubarb.

For previous introduction see 110628.

110762. *SOLANUM CAPSICASTRUM* Link. Solanaceae. False Jerusalem-cherry.

110763. *ARALIA* sp. Araliaceae.

110764. *SOLANUM DULCAMARA* L. Solanaceae. Bitter nightshade.

Albiflora.

110765 to 110817.

From France. Seeds and bulblets presented by the Muséum d'Histoire Naturelle, Paris. Received April 26, 1935.

Introduced for Department specialists and, unless stated otherwise, the material was received as seeds.

110765 to 110786. *ALLIUM* spp. Liliaceae. Onion.

110765. *ALLIUM ANGULOSUM* L.

An onion originally from Tonkin, French Indo-China, the leaves of which are used like chives.

For previous introduction see 59347.

110766. *ALLIUM CANADENSE* L. Meadow garlic.

Bulblets received.

110767. *ALLIUM CARINATUM* L.

110768. *ALLIUM DIOSCORIDIS* Sibth. and Smith.

110765 to 110817—Continued.

A tall white-flowered onion up to 3 feet high, with long, broadly linear leaved leaves as long as the scape. The nodding umbel consists of 20 to 30 flowers. Native to France and Corsica.

For previous introduction see 95355.

110769. *ALLIUM FALLAX* Schult. f.

An Austrian allium 5 to 10 inches high, with linear leaves and lilac-purple flowers in a hemispherical head.

For previous introduction see 104883.

110770. *ALLIUM FISTULOSUM* L. Welsh onion.

110771. *ALLIUM FLAVUM* L.

110772. *ALLIUM MOLY* L. Lily leek.

An allium with broad glaucous leaves and a scape 10 to 15 inches high, bearing a compact head of bright-yellow flowers. Native to southern Europe.

For previous introduction see 91381.

110773. *ALLIUM MUTABILE* Michx. Wild onion.

An allium with linear leaves about 1 foot long and a dense erect umbel of white, pink, or rose-colored flowers. Native to the southeastern United States.

110774. *ALLIUM NUTANS* L.

A Siberian species with narrow leaves, all radical, and nodding heads of rosy-white flowers.

For previous introduction see 58683.

110775. *ALLIUM OBLIQUUM* L.

A species cultivated in Siberia as a substitute for garlic. It has narrowly egg-shaped bulbs and stems up to 3 feet in height.

For previous introduction see 73525.

110776. *ALLIUM ODORUM* L.

110777. *ALLIUM OLERACEUM* L.

Bulblets received.

110778. *ALLIUM PANICULATUM* L.

A Mediterranean allium up to 2 feet high, with linear half-terete leaves and purplish flowers.

For previous introduction see 66952.

110779. *ALLIUM POLYPHYLLUM* Kar. and Kir.

A Siberian species, 1 to 2 feet high, with flat, linear leaves and rose-colored flowers.

For previous introduction see 60230.

110780. *ALLIUM ROTUNDUM* L.

A Hungarian allium, about 2 feet high, with broadly linear leaves and a globular head of purple or rarely whitish flowers.

110781. *ALLIUM SCHOENOPRASUM* L. Chives.

110782. *ALLIUM SPHAEROCEPHALON* L.

For previous introduction and description see 110566.

110765 to 110817—Continued.

110783. ALLIUM STRICTUM Schrad.

An allium, native to Siberia, with several linear leaves on a stem over a foot high and an umbel of rose-colored flowers.

110784. ALLIUM SUBHIRSUTUM L.

A Mediterranean allium with narrow, hairy-margined leaves a foot long and white flowers.

For previous introduction see 91380.

110785. ALLIUM URSINUM L.

A wild European onion which grows in large masses in the open woods. When in flower it is very effective, clothing the ground with its broad green leaves, above which the numerous umbels of white flowers are borne on scapes a foot high.

For previous introduction see 78998.

110786. ALLIUM VINEALE L.

Bullets received.

For previous introduction and description see 110567.

110787. CARICA PAPAYA L. Papayaceae.
Papaya.110788. CARICA QUERCIFOLIA (St. Hil.)
Benth. and Hook.

For previous introduction see 105864.

110789. CUCUMIS SATIVUS L. Cucurbita-
ceae. Cucumber.110790 to 110792. CUCURBITA spp. Cucur-
bitaceae.110790. CUCURBITA MAXIMA Duchesne.
Squash.110791. CUCURBITA MOSCHATA Duchesne.
Cushaw.

110792. CUCURBITA PEPO L. Pumpkin.

110793 to 110801. FESTUCA spp. Poaceae.
Fescue.

110793. FESTUCA ALOPECUROS Schousb.

For previous introduction and description see 110521.

110794. FESTUCA CAPILLATA Lam.
Hair fescue.110795. FESTUCA BERTONENSIS (All.)
Asch. and Graebn.

An annual grass with decumbent stems about a foot high. Native to southern Europe.

110796. FESTUCA ELATIOR L.
Meadow fescue.110797. FESTUCA ELATIOR ARUNDINACEA
(Schreb.) Wimm.

110798. FESTUCA MAIREI St. Yves.

For previous introduction see 110721.

110799. FESTUCA MYUROS L.

For previous introduction and description see 110722.

110800. FESTUCA OVINA DURUSCULA (L.)
Koch.

For previous introduction and description see 110217.

110801. FESTUCA SPADICEA L.

110765 to 110817—Continued.

110802. CATAPODIUM TUBERCULOSUM Moris.
Poaceae.

An annual grass about 8 inches high, with slender stems. Native to southern Europe.

For previous introduction see 74161.

110803. FESTUCA sp. Poaceae. Fescue.

110804. FESTUCA sp. Poaceae. Fescue.

110805 and 110806. LYCOPERSICON ESCU-
LENTUM Mill. Solanaceae. Tomato.110807. PASSIFLORA GRACILIS Jacq. Pas-
sifloraceae. Crinkled passionflower.

For previous introduction and description see 110601.

110808. PHASEOLUS LUNATUS L. Faba-
ceae. Lima bean.110809. SCLEROPOA RIGIDA (L.) Griseb.
Poaceae. Grass.

For previous introduction and description see 110555.

110810 to 110817. SOLANUM spp. Solana-
ceae.110810. SOLANUM AURICULATUM Ait.
Nightshade.

A shrubby perennial, 4 feet high, with large hairy mulleinlike leaves up to 7 inches long and small violet flowers in dense corymbs. Native to Madagascar.

For previous introduction see 104593.

110811. SOLANUM CALDASII Humb. and
Bonpl.

A white-hairy perennial with unequally pinnatisect leaves 4 inches long and small flowers one-half inch across, in long-stalked racemes. Native to Ecuador.

For previous introduction see 104594.

110812. SOLANUM DULCAMARA L.
Bitter nightshade.

110813. SOLANUM GRACILE Otto.

For previous introduction and description see 110659.

110814. SOLANUM HETERODOXUM Dun.

For previous introduction and description see 110630.

110815. SOLANUM SISYMBRIFOLIUM Lam.

For previous introduction and description see 110632.

110816. SOLANUM SODOMEUM L.
Nightshade.

A subtropical bushy evergreen about 3 feet high with small violet flowers. Native to the warmer regions of the Old World.

For previous introduction see 8881.

110817. SOLANUM TRIFLORUM Nutt.

For previous introduction see 104598.

110818 to 110821. SOLANUM TUBEROSUM
L. Solanaceae. Potato.

From Norway. Tubers presented by the Åkervekstforsøkene Landbrukshøiskolen, Oslo. Received May 3, 1935.

110818 to 110821—Continued.

Introduced for Department specialists.

110818. No. 1.

110819. No. 2.

110820. No. 3. A new variety derived from a cross between *Hindenburg* and *Centifolia*. It is wart immune and resistant to late blight and black scab. It has also proved to be a heavy yielder with well-shaped tubers.

110821. No. 4. *Centifolia*.

110822 to 110829.

From Cuba. Seeds presented by R. M. Grey, Superintendent of the Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received April 27, 1935.

110822. *ALBIZZIA* sp. Mimosaceae.

110823. *ARCHONTOPHOENIX ALEXANDRAE* (F. Muell.) Wendl. and Drude. *Phoenixaceae*. Palm.

A pinnate-leaved palm 70 to 80 feet high, with leaves several feet long and lanceolate, usually entire, leaflets up to 2 feet in length and whitish beneath. The yellow-green flowers are borne in a cluster about a foot long and are followed by small dry round fruits. It is native to Queensland, Australia.

For previous introduction see 104679.

110824. *BIGNONIA MAGNIFICA* Bull. *Bignoniaceae*.

A vigorous climbing vine, native to Colombia, with attractive deep-green simple elliptic-ovate leaves and large trumpet-shaped flowers over 3 inches across. These range in color from mauve to purple red, the throat being primrose.

For previous introduction see 76488.

110825. *CASSIA GRANDIS* L. f. *Caesalpiniaceae*. Pink-shower.

A leguminous tree, 40 to 50 feet high, that produces masses of pale-pink flowers in the early spring before the leaves appear. Native to Panama.

For previous introduction see 106917.

110826 and 110827. *COCHLOSPERMUM VITIFOLIUM* (Willd.) Spreng. *Cochlospermaeae*.

From Cuba. Seeds presented by the Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received April 27, 1935.

A deciduous shrub or small tree, native to Central America, with grapelike leaves and bright-yellow flowers, sometimes 6 inches across, in large clusters.

For previous introduction see 93266.

110826. Cuban type.

110827. Panama type.

110828. *LYCOSERIS OBLONGIFOLIA* Rusby. *Asteraceae*.

A shrub about 8 feet high, with leathery lanceolate leaves, densely white-hairy beneath, and showy orange-yellow flower heads. Native to Guatemala.

110829. *MYRCIARIA CAULIFLORA* (Mart.) Berg. *Myrtaceae*. Jaboticaba.

A Brazilian tree up to 35 feet high, with narrowly elliptic acuminate leaves, short-pedicelled flowers produced directly

110822 to 110829—Continued.

from the bark of the trunk and branches, and purplish-violet, globose edible fruits up to nearly 2 inches in diameter.

For previous introduction see 105745.

110830 to 110832.

From Venezuela and Colombia. Bulbs collected by W. A. Archer, Bureau of Plant Industry. Received May 3, 1935.

Introduced for Department specialists.

110830. *FURCRAEA* sp. *Amaryllidaceae*.

No. 3193. Collected near Capacho, Tachira, Venezuela, March 12, 1935.

110831. *GLADIOLUS PSITTACINUS* Hook. *Iridaceae*. Parrot gladiolus.

No. 3262. *Palmaña San Jose*. From a mountain plateau in Colombia, March 24, 1935. A gladiolus with a stout stem 3 feet or more high and usually four rigid swordlike leaves up to 2 feet long. The many-flowered spike reaches a foot or more in length. The flowers are a rich yellow, grained and overlaid with red, particularly about the margins of the segments.

For previous introduction see 57797.

110832. *AMARYLLIS BELLADONNA* L. *Amaryllidaceae*.

No. 3261. *Azucana*. From a paramo swamp in Colombia, March 24, 1935. Flowers pink and white.

110833. *FURCRAEA CUBENSIS* (Jacq.) Vent. *Amaryllidaceae*.

From Haiti. Bulbils presented by Russell Bean. Received May 25, 1935.

Collected March 6, 1935, south of Fort Liberty Bay, Haiti, found growing on lime soil in partial shade. A nearly trunkless, succulent plant with lanceolate, bright-green leaves 3 to 6 feet long which yield fiber softer and finer than sisal. The small greenish-white flowers are borne on a stalk sometimes 20 feet high. The bulbils are as plentiful as seeds.

For previous introduction see 33493.

110834 to 110837. *AVENA SATIVA* L. *Poaceae*. Oats.

From the Union of Soviet Socialist Republics. Seeds presented by G. N. Shlykov, Department of New Cultures, Institute of Plant Industry, Leningrad. Received May 8, 1935.

Introduced for Department specialists.

110834. No. 3444. *Zhentshushina*. From Vyatka.

110835. No. 8231. No. 26-2015. From Ukraine.

110836. No. 8232. No. 21-18. From Ukraine.

110837. No. 7237. *Verkhnistchesky 053*. From Ukraine.

110838 and 110839.

From Mexico. Seeds purchased from Dr. C. A. Purpus, Zacuapam, Huatusco, Vera Cruz. Received April 30, 1935.

110838. *AECHMEA BRACTEATA* (Sw.) Griseb. *Bromeliaceae*.

A West Indian epiphyte, with 12 to 20 spiny, oblong, radical leaves about 2 feet

110838 and 110839—Continued.

long and a showy spike of small yellow flowers on a stout scape up to 3 feet high.

110839. *AECHMEA MEXICANA* Baker. Bromeliaceae.

A tropical epiphyte with a basal rosette of 20 to 30 large, fine-toothed leaves and a lax panicle of crimson flowers borne on a long stalk arising from the center of the plant. Native to central Mexico.

For previous introduction see 108016.

110840 to 110844.

From Germany. Seeds presented by Gebrüder Dippe A. G., Quedlinburg. Received April 26, 1935.

Introduced for Department specialists.

110840. *BETA VULGARIS* L. Chenopodiaceae. Common beet.

Delicacy. A blood-red table beet of excellent flavor.

110841. *BRASSICA OLERACEA* BOTRYTIS L. Brassicaceae. Cauliflower.

Success.

110842. *CUCUMIS SATIVUS* L. Cucurbitaceae. Cucumber.

Ideal. A pickling cucumber.

110843 and 110844. *PHASEOLUS VULGARIS* L. Fabaceae. Common bean.

Stringless wax bushbeans.

110843. *Dippegold.* 110844. *Superba.*

110845 to 110858.

From Colombia and Venezuela. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received April 30, 1935.

Introduced for Department specialists.

110845. *BOCCONIA FRUTESCENS* L. Papaveraceae.

No. 3280. *Trompillo.* Presented April 4, 1935, by Dr. Perez, Departamento Tolima, Colombia. A large showy shrub 10 feet high, with large deeply lobed attractive leaves which are pale beneath. The small greenish-yellow flowers are borne in great numbers in large pendent panicles often a foot long.

For previous introduction see 88211.

110846. *HYLOCEREUS POLYRHIZUS* (Weber) Britt. and Rose. Cactaceae. Nightblooming cereus.

No. 3268. *Pitahaya.* From the market at Bogotá, Colombia, March 27, 1935. A triangular-stemmed cactus, sometimes a shrub and in other situations a climbing vine, with large bright-red flowers. The plant is cultivated for its pale-yellow fruits which are about 5 inches long, something like an artichoke in appearance, with pulp of delicious flavor.

For previous introduction see 54973.

110847. *CESTRUM MUTISII* Willd. Solanaceae.

No. 3222. *Tinto.* Pamplona, Colombia, March 23, 1935. A shrub 4 to 10 feet high, with oblong-acuminate leaves and pale-green flowers.

110848. *CESTRUM SANTANDERIANUM* Franey. Solanaceae.

No. 3255. Collected March 24, 1935, in a paramo swamp along the highway between Pamplona and Malaga, Colombia.

110845 to 110858—Continued.

A bushy shrub up to 20 feet high, with oblong or elliptic leaves about 5 inches long and pale greenish-yellow flowers in loose clusters in the upper axils. Native to northern South America.

110849. *TEPHROSIA TOXICARIA* (Sw.) Pers. Fabaceae.

No. 3279. *Barbasco.* From the Departamento del Huila, Colombia, April 4, 1935. Presented by Dr. Pérez Arbalaz.

110850 and 110851. *CUCUMIS MELO* L. Cucurbitaceae. Melon.

From the Bogotá, Colombia market, March 27, 1935.

110850. No. 3269. 110851. No. 3270.

110852. *PLATYMISCIUM DIADELPHUM* Blake. Fabaceae.

No. 3214. *Peraco.* March 19, 1935. Outskirts of Cucuta, Colombia. A shrub 2 to 6 feet high, or sometimes a tree, found in dry semidesert areas growing among cacti.

110853. *MAMMEA AMERICANA* L. Clusiaceae. Mamey.

No. 3271. *Zapote mamey.* From the market at Bogotá, Colombia, April 2, 1935. A tropical tree with glossy dark-green foliage and large gray-green, edible fruits.

For previous introduction see 98868.

110854. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

No. 3277. From La Uribe, near Bogotá, Colombia, April 3, 1935. A cultivated plant 15 feet high, with vermilion flowers.

110855. *PASSIFLORA* sp. Passifloraceae.

No. 3267. *Curuba de castilla.* From the market at Bogotá, Colombia, March 27, 1935.

110856. *PAULLINIA FUSCESCENS* H. B. K. Sapindaceae.

No. 3207. From the outskirts of San Cristobal, Tachira, Venezuela, March 13, 1935. A twining vine, native to northern Brazil, with bright-red fruits.

110857. *PHYLLANTHUS SALVIAEFOLIUS* H. B. K. Euphorbiaceae.

No. 3273. *Cedrillo, Barbasquillo, Chirrinchao.* From La Uribe, near Bogotá, Colombia, April 3, 1935. A shrub 15 to 20 feet high, native to Colombia.

110858. *PHYSALIS* sp. Solanaceae.

No. 3265. *Uchuba.* From the market at Bogotá, Colombia, March 27, 1935. A cultivated fruit, used for jellies and preserves.

110859. *LUPINUS* sp. Fabaceae.

From Washington, D. C. Seeds presented by Dr. A. Hrdlicka, Curator, Division of Physical Anthropology, United States National Museum. Received May 6, 1935.

A pink lupine collected on Kodiak Island, Alaska, in the summer of 1934.

110860. *GOSSYPIUM KIRKII* Masters. Malvaceae. Cotton.

From Trinidad, British West Indies. Seeds presented by Dr. S. C. Harland, Empire Cotton Growing Corporation, Cotton Research Station. Received April 27, 1935.

Introduced for Department specialists.

110860—Continued.

A bushy, somewhat climbing plant from eastern tropical Africa with palmately five-lobed leaves and light-yellow flowers.

For previous introduction see 80210.

110861. CYCAS SIAMENSIS Miquel.
Cycadaceae.

From Burma, India. Seeds presented by W. V. Palmer, silviculturist, Mayayo. Received May 3, 1935.

A small eventually palmlike tree with a trunk 2 to 6 feet high, much swollen at the base. The stiffly spreading light-green, pinnately compound leaves are 3 feet long, and the ovoid fruits, about 6 inches long, are covered with orange wool. Native to Siam.

For previous introduction see 102373.

110862. HETEROSPATHE ELATA Scheff.
Phoenicaceae. Palm.

From Manila, Philippine Islands. Seeds presented by David Barry, Jr., Los Angeles, Calif. Received May 11, 1935.

Bonga. A tall unarmed palm with a straight slender stem and long pinnate leaves, growing in protected situations where the rainfall is evenly distributed. It is one of the most attractive and graceful palms and will make a good plant for the conservatory and possibly a good house plant. Native to Netherland India.

110863. ZEPHYRANTHES sp. Amaryllidaceae.

From Mexico. Bulbs purchased from Dr. C. A. Purpus, Zacuapam, Huatusco, Vera Cruz. Received May 11, 1935.

Introduced for Department specialists.

A species with white flowers.

110864 and 110865.

From Puerto Rico. Seeds presented by Atherton Lee, Director, Agricultural Experiment Station, Mayaguez. Received May 8, 1935.

Introduced for Department specialists.

110864. CASSIA NODOSA Buch.—Ham. Caesalpinziaceae.

A moderate-sized, deciduous tree with long drooping branches and glossy bipinnate leaves. In the spring it bears a profusion of beautiful pink, rose-scented flowers in dense long-stalked racemes. The leaves and flowers appear at the same time. Native to northwestern India.

For previous introduction see 101435.

110865. ERYTHRINA POEPPIGIANA (Walp.) O. F. Cook (E. micropteryx Poepp.). Fabaceae. Bucare.

A handsome, tender, leguminous tree with showy red flowers; native to Peru.

For previous introduction see 102606.

110866. ZEPHYRANTHES TUBISPATHA (L'Herit.) Herb. Amaryllidaceae.

From the British West Indies. Bulbs presented by F. G. Harcourt, Agricultural Superintendent, Agricultural Department, Dominica. Received May 15, 1935.

Brujita blanca. A summer flowering plant with four or five narrow-linear leaves 5 to 12 inches long and a slender scape 4

110866—Continued.

inches long bearing a white flower about 2 inches in length. Native to the West Indies.

For previous introduction see 107148.

110867. ILEX CORNUTA Lindl. and Paxt. Aquifoliaceae. Chinese holly.

Plants growing at the United States Plant Introduction Garden, Chico, Calif. Numbered in May, 1935, for convenience in distribution.

A seedling of P. I. 24638; this has a beautiful round habit of growth, and the large, attractive berries are parthenocarpic.

110868. POA PALUSTRIS L. Poaceae. Fowl meadow grass.

From Canada. Seeds presented by H. F. Roberts, University of Manitoba, Winnipeg. Received May 8, 1935.

For previous introduction see 104677.

110869 and 110870.

From Cuba. Seeds presented by R. M. Grey, Superintendent of the Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received May 10, 1935.

110869. HETEROPHRAGMA ADENOPHYLLUM (DC.) Seem. Bignoniaceae.

A handsome tree related to the catalpa, but adapted for cultivation in tropical regions only, as it is very susceptible to frost. It reaches a height of 30 to 50 feet, with large opposite pinnate leaves and woolly, brownish-yellow flowers in terminal panicles. Native to tropical Africa.

For previous introduction see 105788.

110870. TECOMA STANS (L.) Juss. Bignoniaceae.**110871 to 110877.**

From the Union of Soviet Socialist Republics. Seeds presented by the Botanic Garden, Samara 2. Received May 13, 1935. Introduced for Department specialists.

110871. ARTEMISIA GLAUCA Pall. Asteraceae.

A herbaceous perennial up to 2 feet high. Native to Siberia.

110872. ASTER HOLOPHYLLUS Hemsl. Asteraceae.

An annual or biennial, with oblong-linear puberulent leaves and small sky-blue flower heads. Native to the Amur River region, Siberia.

110873. ASTRAGALUS ALOPECUROIDES L. Fabaceae. Foxtail milkvetch.

An erect pubescent Siberian species 2 to 5 feet high, with narrowly oval leaves and yellow flowers produced in thick oblong spikes.

For previous introduction see 66536.

110874. CAYLUSEA ABYSSINICA (Fres.) Fisch. and Mey. Resedaceae.

A bushy annual up to 3 feet high, with narrow leaves and large racemes of inconspicuous flowers. Native to Ethiopia.

110875. LATHYRUS sp. Fabaceae.**110876. LYCOPERSICON ESCULENTUM Mill.** Solanaceae. Tomato.

110871 to 110877—Continued.

110877. *LYCOPERSICON ESCULENTUM* Mill.
Solanaceae. Tomato.

Reine de Hative.

110878 to 110882.

From the Union of Soviet Socialist Republics. Seeds presented by the Botanic Garden of the Academy of Sciences, Minsk. Received May 11, 1935.

Introduced for Department specialists.

110878. *DESCHAMPSIA CAESPITOSA* (L.) Beauv. Poaceae. Tufted hairgrass.

110879 to 110882. *FESTUCA* spp. Poaceae. Fescue.

110879. *FESTUCA OVINA* L. Sheep fescue.

110880. *FESTUCA OVINA DURIUSCULA* (L.) Koch.

110881. *FESTUCA OVINA GLAUCA* (Lam.) Koch.

110882. *FESTUCA OVINA SULCATA* Hack.

110883 to 110975.

From Colombia and Venezuela. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received May 3, 1935.

Introduced for Department specialists.

110883. *ABELMOSCHUS ESCULENTUS* (L.) Moench. Malvaceae. Okra.

No. 3126. *Quimbombo*. From the market at Barquisimeto, Venezuela, March 2, 1935. The seeds are roasted and ground to make a beverage like coffee.

110884. *LEUCAENA GLAUCA* (L.) Benth. Mimosaceae.

No. 3216. From Cucuta, Colombia, March 19, 1935.

For previous introduction see 94782.

110885. *ACNISTUS* sp. Solanaceae.

No. 3188. *Uvita*. Collected March 12, 1935, near Capacho, Tachira, Venezuela. A small tree 10 to 20 feet high, with white flowers. It is cultivated for its edible fruits.

110886. *ALLIUM SCHOENOPRASUM* L. Liliaceae. Chives.

No. 3168. *Cebollin*. Locally grown seed purchased March 7, 1935, at Casa de Hierro, a hostelry in the Andes, Venezuela.

110887. *ALTHAEA ROSEA* (L.) Cav. Malvaceae. Hollyhock.

No. 3148. From El Sol de los Andes, near San Cristobal, Tachira, Venezuela, March 8, 1935. A cultivated hollyhock with fringed pink petals.

110888. *AMBROSIA CUMANENSIS* H. B. K. Ambrosiaceae.

No. 3199. *Altamisia*. From San Cristobal, Tachira, Venezuela, March 13, 1935. A herbaceous perennial about 2 feet high. Native to Venezuela.

110889. *ANETHUM GRAVEOLENS* L. Apiaceae. Dill.

No. 3130. *Hinojo*. From the market at Barquisimeto, Venezuela, March 2, 1935. A cultivated plant, used medicinally and as a refreshing drink.

110883 to 100975—Continued.

110890. *ASPIDOSPERMA* sp. Apocynaceae.

No. 3201. From San Cristobal, Tachira, Venezuela, March 13, 1935. A slender tree 20 feet high.

110891. *BANISTERIOPSIS* sp. Malpighiaceae.

No. 3117. Collected between Valencia and Guatoporo, Carabobo, Venezuela, February 26, 1935. A small shrub 2 to 3 feet high with semitwining branches.

110892. *BANISTERIOPSIS* sp. Malpighiaceae.

No. 3192. From near Capacho, Tachira, Venezuela, March 12, 1935. A woody vine about 20 feet high.

110893 to 110895. *BAUHINIA* spp. Caesalpiniaceae.

110893 and 110894. *BAUHINIA CUMANENSIS* H. B. K.

Bejuca de cadena. Collected along the highway between Valencia and El Cambul, Carabobo, Venezuela, February 23, 1935. A shrubby climber about 30 feet long, native to Venezuela, with bifid ovate leaves and terminal racemes of small white fragrant flowers.

110893. No. 3085. 110894. No. 3098.

110895. *BAUHINIA MOLLICELLA* Blake.

No. 3179. *Librito*. From near Capacho, Tachira, Venezuela, March 12, 1935. A spiny tree about 20 feet high, with white flowers. Native to Venezuela.

110896. *BENINCASA HISPIDA* (Thunb.) Cogn. Cucurbitaceae. Waxgourd.

No. 3135. *Pepino extranjero*. From the market at Barquisimeto, Venezuela, March 2, 1935. A cultivated waxgourd 6 by 7 inches, covered with thick gray bloom. The white flesh smells like a cucumber. It is boiled as a vegetable, also used raw in salads. Probably introduced from China by the local Chinese.

For previous introduction see 105334.

110897. *BOWDICHIA VIRGILIOIDES* H. B. K. Fabaceae.

No. 3120. *Chaparro*. Collected between Valencia and Guatoporo, Carabobo, Venezuela, February 26, 1935. A small, usually crooked tree about 25 feet high, with leathery compound leaves and terminal panicles of small blue flowers, followed by seed pods which turn reddish when near maturity. Native to dry regions in Venezuela and Brazil.

For previous introduction see 109916.

110898. *CENTROSEMA PUBESCENS* Benth. Fabaceae.

No. 3218. Collected between Cucuta and Pamplona, Colombia, March 20, 1935.

For previous introduction see 110173.

110899 to 110901. *BRASSICA* spp. Brassicaceae.

110899 and 110900. Locally grown seed from Casa de Hierro, Chachopo, Merida, Venezuela, March 7, 1935.

110899. *BRASSICA CAMPESTRIS* L. Rutabaga.

No. 3164. *Ruta*.

110883 to 110975—Continued.

110900. BRASSICA OLERACEA BOTRYTIS L.
Cauliflower.

No. 3167. *Coliflor*.

110901. BRASSICA sp.

No. 3128. *Mostaza*. From the market at Barquisimeto, Venezuela, March 2, 1935. A mustard cultivated for birdseed.

110902 and 110903. BUDDLEIA AMERICANA L. Loganiaceae.

A shrub or small tree with fragrant small yellow flowers in paniced spikes. Native to tropical America.

110902. No. 3071. Collected on the road between Caracas and Cabo Blanco, Federal District, Venezuela, February 16, 1935.

110903. No. 3189. *Salvia, Santa Maria*. Collected near Capacho, Tachira, Venezuela, March 13, 1935.

110904. CAJANUS INDICUS Spreng. Fabaceae.
Pigeonpea.

No. 3187. *Quinchocho*. From near Capacho, Tachira, Venezuela, March 12, 1935. A shrub 6 to 10 feet high with yellow flowers. It is cultivated and used as a food.

110905. CALOTROPIS PROCERA Ait. Asclepiadaceae.

No. 3067. Collected on the road between Caracas and Cabo Blanco, Federal District, Venezuela, February 15, 1935. The giant milkweed, which becomes a shrub 6 to 15 feet high. The stems furnish a fine fiber, and the floss from the fruits is used for stuffing mattresses. Introduced from India, the plant has now become naturalized in Venezuela.

For previous introduction see 73507.

110906. CANAVALLA MACROPLEURA Piper. Fabaceae.

No. 3041. From near Sabana Grande, Federal District, Venezuela, February 12, 1935. A woody vine native to Venezuela.

110907. CAPSICUM sp. Solanaceae.

No. 3136. From Barquisimeto, Venezuela, March 3, 1935. A cultivated ornamental.

110908. CARDIOSPERMUM GRANDIFLORUM Sw. Sapindaceae.

No. 3115. *Farolita de la virgen*. Collected between Valencia and Guataporo, Venezuela, February 26, 1935. A woody vine up to 25 feet long, with biternate leaves about 8 inches long and white flowers in axillary corymbs. Native to Jamaica.

110909. URVILLEA ULMACEA H. B. K. Sapindaceae.

No. 3186. From near Capacho, Tachira, Venezuela, March 12, 1935. A large climbing shrub with tendrils, trifoliate leaves, and axillary racemes of small whitish flowers. Native to Venezuela.

110910 and 110911. CARICA PAPAYA L. Papayaceae.
Papaya.

From the market at Barquisimeto, Venezuela, March 2, 1935.

110883 to 110975—Continued.

110910. No. 3132. *Lechosa*. A cultivated fruit 13 by 3 inches, with pale cream-colored flesh.

110911. No. 3131. *Lechosa*. A cultivated fruit 8 by 4 inches, five-ribbed, with orange-colored flesh.

110912. CASSIA sp. Caesalpinaceae.

No. 3194. *Brusca negra*. From near Capacho, Tachira, Venezuela, March 12, 1935.

110913. PHYTOLACCA ICOSANDRA L. Phytolaccaceae.

No. 3173. *Tabonera*. From Casa de Hierro, Chachopo, Merida, Venezuela, March 7, 1935. An erect ornamental perennial, somewhat succulent, 3 to 10 feet high, with elliptic-ovate leaves 3 to 12 inches long, greenish flowers, and racemes of black berries. Native to tropical America.

110914. CLEOME ACULEATA L. Capparidaceae.

No. 3206. From near San Cristobal, Tachira, Venezuela, March 13, 1935. An annual up to 3 feet high, with digitately three-foliolate leaves and small solitary white flowers. Native to tropical America.

For previous introduction see 107762.

110915. CLITORIA DENDRINA Pittier. Fabaceae.

No. 3092. Along the highway between Valencia and El Cambul, Carabobo, Venezuela, February 23, 1935. A shrubby tree about 15 feet high, with small dark-purple flowers in dense terminal clusters which appear before the trifoliate leaves. Native to Venezuela.

110916. TEPHROSIA CINEREA (L.) Pers. Fabaceae.

No. 3212. From a dry river bed near San Cristobal, Tachira, Venezuela, March 13, 1935. A shrubby perennial with a thick rootstalk, slender ascending stems 3 to 4 feet long, and small purplish flowers in rather dense showy racemes. Native to the West Indies.

For previous introduction see 109928.

110917. BENTHAMANTHA CARIBAEA (Jacq.) Kuntze. Fabaceae.

No. 3154. Near El Cobre, Tachira, Venezuela, along the roadside, March 8, 1935. A shrub up to 6 feet high.

For previous introduction see 109929.

110918. TEPHROSIA TOXICARIA (Sw.) Pers. Fabaceae.

No. 3200. *Barbasco de raiz*. San Cristobal, Tachira, Venezuela, March 13, 1935.

For previous introduction and description see 110309.

110919 to 110921. CROTON spp. Euphorbiaceae.

110919. CROTON PUNGENS Jacq.

No. 3223. Collected between Cucuta and Pamplona, Colombia, March 20, 1935. A small shrub about 6 feet high, native to Brazil, with small cream-colored flowers.

110883 to 110975—Continued.

110920. *CROTON GOSSYPIFOLIUS* Vahl.

No. 3190. Near Capacho, Tachira, Venezuela, March 12, 1935. A slender tree up to 45 feet high. Native to Trinidad.

110921. *CROTON DOLICHOSTACHYUS* Pitier.

No. 3146. *Pringamozza*. Collected between Barquisimeto and Carora, Lara, Venezuela, March 6, 1935. A shrub or small tree up to 9 feet high. Native to Venezuela.

110922 and 110923. *CUCURBITA MOSCHATA* Duchesne. Cucurbitaceae. Cushaw.

Aullama. From the market at Barquisimeto, Venezuela, March 2, 1935. A small squash, 12 by 8 inches, with green skin covered with yellow blotches.

110922. No. 3133. 110923. No. 3134.

110924. *DALBERGIA* sp. Fabaceae.

No. 3202. From San Cristobal, Tachira, Venezuela, March 13, 1935. A large tree.

110925. *DATURA ARBOREA* L. Solanaceae. Floripondio.

No. 3224. Collected between Cucuta and Pamplona, Colombia, March 20, 1935. A shrub or small tree with ovate-lanceolate leaves and large trumpet-shaped, greenish-white, fragrant flowers.

For previous introduction see 91414.

110926. *DAUCUS CAROTA* L. Apiaceae. Carrot.

No. 3163. *Zanahoria*. Chachopo, Merida, Venezuela. Locally grown seed purchased at Casa de Hierro, Venezuela, March 7, 1935.

110927 and 110928. *ESPELETIA* spp. Asteraceae.

Fruitejon. An attractive yellow-flowered shrub up to 4 feet high, found growing in paramos, where it makes small thickets. The dense wool that covers the leaves is used in making cushions and mattresses.

110927. No. 3157. From the roadside near El Cobre, Tachira, Venezuela, March 8, 1935.

110928. No. 3243. From the highway between Pamplona and Malaga, Colombia, March 24, 1935.

110929. *FICUS ANGUSTIFOLIA* Blume. Moraceae.

No. 3140. *Matapolo*. From near Timotes, Venezuela, March 6, 1935. A woody vine up to 20 feet long. Native to the Molucas, Netherland India.

110930. *GLIRICIDIA SEPIUM* (Jacq.) Kunth. Fabaceae.

No. 3119. *Mataraton*. Collected between Valencia and Guataporo, Carabobo, Venezuela, February 26, 1935. A small tree up to 30 feet high, with alternate compound leaves. The flowers resemble those of the black locust in size, but are pink.

For previous introduction see 106990.

110931. *GOSSYPIUM HIRSUM* L. Malvaceae. Upland cotton.

110883 to 110975—Continued.

No. 3217. Collected between Cucuta and Pamplona, Colombia, March 20, 1935. Scanty plants 2 feet high; either wild or escaped from cultivation.

For previous introduction see 102751.

110932. *GOSSYPIUM* sp. Malvaceae. Cotton.

No. 3221. Collected between Cucuta and Pamplona, Colombia, March 20, 1935. Plants 3 feet high, probably escaped from cultivation.

110933 and 110934. *HORDEUM VULGARE* L. Poaceae. Barley.

Cebada. From the market at Barquisimeto, Venezuela, March 2, 1935. Used for making soft drinks.

110933. No. 3124. 110934. No. 3125.

110935. *JATROPHA URENS* L. Euphorbiaceae.

No. 3144. *Pringamozza*. Collected between Barquisimeto and Carora, Lara, Venezuela, March 6, 1935. A shrubby perennial up to 10 feet high, covered with stinging hairs; with ternate leaves 6 to 15 inches across and small sweet-scented white flowers. Native to tropical America.

110936 to 110938. *LACTUCA SATIVA* L. Cichoriaceae. Garden lettuce.

110936. No. 3165. *Lechuga taza*. From Casa de Hierro, Chachopo, Merida, Venezuela, March 7, 1935. A curly lettuce.

110937. No. 3166. *Lechuga blanco*. From Casa de Hierro, Chachopo, Merida, Venezuela, March 7, 1935. A white lettuce.

110938. No. 3137. *Lechuga*. From the market at Barquisimeto, Venezuela, March 2, 1935.

110939. *LINUM USITATISSIMUM* L. Linaceae. Flax.

No. 3129. *Linaza*. From the market at Barquisimeto, Venezuela, March 2, 1935.

For previous introduction see 109970.

110940. *LONCHOCARPUS SERICEUS* (Poir.) H. B. K. Fabaceae.

No. 3185. *Zapato*. From near Capacho, Tachira, Venezuela, March 12, 1935. A slender tree up to 60 feet high with racemes of lavender flowers.

For previous introduction see 106996.

110941. *LONCHOCARPUS PUNCTATUS* H. B. K. Fabaceae.

No. 3213. *Peraco*. Near San Antonio, Venezuela, March 18, 1935. A small tree or shrub about 9 feet high. Native to Venezuela.

110942 to 110944. *LUPINUS* spp. Fabaceae.110942. *LUPINUS* sp.

No. 3156. *Choco*. From paramo near Timotes, Merida, Venezuela, March 7, 1935, at 13,000 feet altitude. An herb 2 feet high, with purple flowers.

110943 and 110944. *LUPINUS PANICULATUS* Desr.

110883 to 110975—Continued.

A stout perennial lupine over 2 feet high, with lanceolate leaflets and racemes of showy purple flowers, the standards pink tipped and with a yellow margin. Native to Peru.

110943. No. 3155. *Chocho*, *Quinchoco*. From Sabana Grande, Venezuela, March 8, 1935.

110944. No. 3196. *Tuna*. From San Cristobal, Tachira, Venezuela, March 13, 1935.

110945 and 110946. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

110945. No. 3159. From Sabana Grande, Merida, Venezuela, March 8, 1935. Escaped from cultivation; fruit up to 1 inch in diameter.

110946. No. 3215. *Ovita*. From the Cucuta market, Colombia, March 19, 1935. A small, red, five-ribbed tomato with scanty seeds, dry pulp, and tough skin. Said to be a local variety.

110947. *NICOTIANA TABACUM* L. Solanaceae. Tobacco.

No. 3162. A cultivated tobacco purchased at the Casa de Hierro, Chachopo, Merida, Venezuela, March 7, 1935. Locally grown seed.

110948. *OENOTHERA TETRAPTERA* Cav. Onagraceae.

No. 3242. From the highway between Pamplona and Malaga, Colombia, March 24, 1935. A perennial about a foot high, with alternate subpinnate leaves and large, solitary flowers, white, becoming rose with age. Native to Mexico.

110949. *ORTHROSANTHUS CHIMBORACENSIS* (H. B. K.) Baker. Iridaceae.

No. 3151. Paramo near Bailadores, Tachira, Venezuela, March 8, 1935. An irishike plant, native to the Andes, where it grows at the frost line, 12,500 feet or more altitude. It has a stout woody rhizome, grasslike leaves a foot or more long, and small blue flowers, opening in succession along a lax narrow panicle.

110950 and 110951. *PASSIFLORA* spp. Passifloraceae.

From the market at San Cristobal, Venezuela, March 9, 1935. A cultivated vine. The fruits are used in making a refreshing drink.

110950. *PASSIFLORA* sp.

No. 3176. *Parchita*.

110951. *PASSIFLORA* sp.

No. 3175. *Curuba*. A pale cream-colored, faintly scented fruit, 3 inches long and 2 inches in diameter, with seeds enclosed in orange-colored pulp which smells and tastes something like grapefruit.

110952. *PAULLINIA ERIANTHA* Benth. Sapindaceae.

No. 3183. Collected near Capacho, Tachira, Venezuela, March 12, 1935. A woody vine, native to Colombia and Peru.

110953. *PHYSALIS* sp. Solanaceae.

No. 3237. Collected along the highway between Pamplona and Malaga, Colombia, March 24, 1935. An herb 1 foot high; the flowers are cream-colored with a brown star-shaped marking at the base of the corolla.

110883 to 110975—Continued.

110954 to 110956. *PIPER* spp. Piperaceae. Pepper.

110954. *PIPER TUBERCULATUM* Jacq.

No. 3118-A. Between Valencia and Guataporo, Carabobo, Venezuela, February 28, 1935. A slender shrub 10 feet high.

110955 and 110956. From San Cristobal, Tachira, Venezuela, March 13, 1935.

110955. *PIPER* sp.

No. 3209. *Cordoncillo*.

110956. *PIPER* sp.

No. 3211.

110957 and 110958. *SAMANEA SAMAN* (Jacq.) Merr. Mimosaceae.

The *rain tree* of the West Indies. A large spreading tree up to 60 feet high, native to Central America, but widely distributed throughout the Tropics as an ornamental shade tree.

For previous introduction see 99004.

110957. No. 3122. *Saman*. Collected between Valencia and Guataporo, Carabobo, Venezuela, February 26, 1935.

110958. No. 3208. *Saman*. Collected at San Cristobal, Tachira, Venezuela, March 13, 1935.

110959. *POLYGONUM PUNCTATUM* Ell. Polygonaceae. Fleecflower.

No. 3198. From near San Cristobal, Tachira, Venezuela, March 13, 1935, found growing in a ditch. A slender shrub 2 to 3 feet high with white flowers.

For previous introduction see 106580.

110960. *PSIDIOPSIS MORITZIANUM* Berg. Myrtaceae.

No. 3150. *Siete cueros*. From Sabana Aura, Tachira, Venezuela, March 8, 1935. An ornamental evergreen shrub about 6 feet high, with small sweet aromatic guavalike fruits.

110961. *RUPRECHTIA* sp. Polygonaceae.

No. 3191. From near Capacho, Tachira, Venezuela, March 12, 1935. A tree about 15 feet high.

110962 to 110965. *SERJANIA* spp. Sapindaceae.

110962. *SERJANIA RHOMBEA* Radlk.

No. 3184. Near Capacho, Tachira, Venezuela, March 12, 1935. A climbing shrub, native to Venezuela.

110963 and 110964. *SERJANIA GLABRATA* H. B. K.

A climbing shrub with alternate bi-ternate leaves. Native to the temperate regions of Peru.

For previous introduction see 109871.

110963. No. 3177. Near Capacho, Tachira, Venezuela, March 12, 1935.

110964. No. 3116. Collected between Valencia and Guataporo, Carabobo, Venezuela, February 26, 1935. A vine 30 feet high.

110965. *SERJANIA* sp.

No. 3178. From near Capacho, Tachira, Venezuela, March 12, 1935.

110883 to 110975—Continued.

110966. *SESAMUM ORIENTALE* L. Pedalia-
ceae. Sesame.

No. 3123. *Ajonjali*. From the market at Barquisimeto, Venezuela, March 2, 1935.

For previous introduction see 104263.

110967. *SOLANUM* sp. Solanaceae.

No. 3195. *Tuna*. From San Cristobal, Tachira, Venezuela, March 13, 1935. An herb 2 feet high, with ovoid or ellipsoid orange fruits.

110968. *TAGETES APEPALA* Posada. Aster-
ceae.

No. 3147. *Ruda de perro*, *Amapola*. From El Sol de los Andes, near San Cristobal, Tachira, Venezuela, March 8, 1935. An erect annual, native to Colombia at an altitude of about 5,500 feet.

110969. *TRAGOPOGON PORRIFOLIUS* L. Ci-
choriaceae. Vegetable-oyster.

No. 3169. From Casa de Hierro, Chachopo, Merida, Venezuela, March 7, 1935.

110970. *TRIPLARIS FELIPENSIS* Wedd.
Polygonaceae.

No. 3197. *Palo Santo*. From San Cristobal, Tachira, Venezuela, March 13, 1935. A tree up to 20 feet high, with ovate-elliptic leaves about 1 foot long. Native to Venezuela at about 1,000 feet altitude.

110971 to 110975. *ZEA MAYS* L. Poaceae.
Corn.

Cultivated varieties used for food.

110971. No. 3203. *Blandito*. From San Cristobal, Tachira, Venezuela, March 13, 1935.

110972. No. 3161. *Chiquito*. From Tovar, Tachira, Venezuela, March 7, 1935. A white variety which produces well in cold climates. Stalks 2 to 3 feet high, ears 6 to 8 inches long, 1 to 3 per stalk.

110973. No. 3138. *Cariaca*. From the market at Barquisimeto, Venezuela, March 2, 1935.

110974. No. 3204. *Blanco*. From San Cristobal, Tachira, Venezuela, March 13, 1935.

110975. No. 3160. *Chiquito*, *Chimirito*, *Perrito*. From Tovar, Tachira, Venezuela, March 7, 1935. A yellow form of No. 3161. [See 110972 for description.]

110976 to 110989.

From the Union of Soviet Socialist Republics. Seeds presented by W. Kern, Botanic Garden, Academy of Sciences, Alma-Ata, Kazakstan. Received May 9, 1935.

Introduced for Department specialists.

110976 to 110978. *ALLIUM* spp. Liliaceae.

110976. *ALLIUM GLACIALE* Vved.

An allium with terete stems about 1 foot high, linear leaves, and dense umbels of small pink flowers. Native to Turkistan.

110977. *ALLIUM MONADELPHUM* Turcz.

An allium, native to eastern Siberia, with terete leaves and a scape over 1 foot high, with a dense umbel of small rose-purple flowers.

110976 to 110989—Continued.

110978. *ALLIUM PLATYSPATHUM* Schrenk.

An allium with a scape 3 to 6 inches high, several linear leaves, and an umbel of small purple flowers. Native to Turkistan.

110979. *ALLIUM* sp.

110980. *FESTUCA ELATIOR ARUNDINACEA* (Schreb.) Wimm. Poaceae. Fescue.

For previous introduction see 110797.

110981. *FESTUCA OVINA SULCATA* Hack. Poaceae. Fescue.

For previous introduction see 110882.

110982 to 110984. *IRIS* spp. Iridaceae.

110982. *IRIS SONGARICA* Schrenk.

A densely tufted Apogon iris about 1 foot high, with narrow-linear, strongly ribbed leaves up to a foot in length and two to three lilac-colored flowers over an inch long. Native to central Asia.

For previous introduction see 110132.

110983. *IRIS* sp.

110984. *IRIS* sp.

110985. *PICEA SCHRENKIANA* Fisch. and Mey. Pinaceae. Schrenk spruce.

A large tree up to 100 feet high, with ashy gray branchlets, often narrowly pyramidal in habit. The dark-green, rigid leaves are over an inch long, and the dark shining brown cylindrical cones are 3 to 5 inches long and an inch in diameter. Native to central Asia at altitudes between 4,500 and 10,000 feet.

For previous introduction see 52659.

110986 to 110989. *RHEUM* spp. Polygonaceae. Rhubarb.

110986 and 110987. *RHEUM SONGARICUM* Schrenk.

A coarse herbaceous perennial with deeply cordate, reniform leaves. Native to alkaline deserts in central Asia.

For previous introduction see 110147.

110988. *RHEUM WITTROCKII* Lundstroem.

A tall broad-leaved European species with light-pink flowers and fruits.

For previous introduction see 69107.

110989. *RHEUM* sp.

110990 to 111018.

From Colombia. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received May 10, 1935.

Introduced for Department specialists.

110990. *BOCCONIA FRUTESCENS* L. Papaveraceae.

No. 3308. *Trompeto*. Collected along the railroad track between Anolaima and Cachipay, Cundinamarca.

For previous introduction and description see 110845.

110991. *BOMAREA* sp. Amaryllidaceae.

No. 3275. *Pecosa*. From La Uribe, near Bogotá, April 3, 1935. A climbing plant which grows 20 feet high, with golden-brown flowers marked with darker spots.

110990 to 111018—Continued.

110992. *DIOCLEA SERICEA* H. B. K. Fabaceae.

No. 3291. From La Esperenza, Cundinamarca, April 11, 1935. A tender shrubby twiner about 4 feet long, with ternate leaves and long axillary racemes of showy lavender flowers. Native to Colombia.

110993. *CANAVALIA* sp. Fabaceae.

No. 3345. From La Esperenza, Cundinamarca, April 12, 1935.

110994. *CARICA PAPAYA* L. Papayaceae.
Papaya.

No. 3292. From La Mesa, Cundinamarca, April 13, 1935. A cultivated papaya.

110995. *CHAMAECRISTA FLAVICOMA* (H. B. K.) Greene. Caesalpiniaceae.

No. 3303. From Anolaima, Cundinamarca, April 16, 1935. A small yellow-flowered shrub 2 to 3 feet high. Native to Venezuela.

110996. *CISSAMPELOS PAREIRA* L. Menispermaceae.

No. 3290. From La Esperenza, Cundinamarca, April 11, 1935. A climbing shrub, with pettate, downy leaves and small greenish flowers in axillary cymes, followed by red drupes. Native to tropical America.

110997 and 110993. *CLIBADIUM SURINAMENSE* L. Asteraceae.

A plant 4 to 7 feet high, with white flowers occurring in thick stands.

For previous introduction see 108257.

110997. No. 3281. From La Esperenza, Cundinamarca, April 11, 1935.

110998. No. 3305. From Anolaima, Cundinamarca, April 16, 1935.

110999. *CENTROSEMA PLUMIERI* (Turp.) Benth. Fabaceae.

No. 3338. From La Esperenza, Cundinamarca, April 11, 1935. A tropical ornamental vine, native to Brazil, with red and white flowers. It is of value as a green manure.

For previous introduction see 109917.

111000. *CROTON GOSSYPHIFOLIUS* Vahl. Euphorbiaceae.

No. 3287. From La Esperenza, Cundinamarca, April 11, 1935.

For previous introduction and description see 110920.

111001. *ERYTHRINA CORALLODENDRUM* L. Fabaceae.
Coraltree.

No. 3311. *Chochito*, *Cortes*, *Perez* Collected April 16, 1935, along the railroad track between Anolaima and Cachipay, Cundinamarca. A Central American tree about 20 feet high, with showy crimson flowers in loose racemes. It is cultivated in Colombia as an ornamental and for living fence posts.

111002. *GALACTIA VELUTINA* Benth. Fabaceae.

No. 3288. From La Esperenza, Cundinamarca, April 11, 1935. A slender perennial climber, soft-hairy throughout, with oval-obtuse leaflets and purple flowers. Native to British Guiana.

For previous introduction see 108220.

110990 to 111018—Continued.

111003. *NICOTIANA* sp. Solanaceae.

No. 3296. *Tabaquilla*. From Anolaima, Cundinamarca, April 16, 1935. A cultivated ornamental herb 3 feet high, with the basal leaf up to 6 inches long and viscid-pubescent as in tobacco. The flowers are crimson.

111004. *NICOTIANA ALATA* Link and Otto. Solanaceae.
Winged tobacco.

No. 3297. *Tabaquilla*. From Anolaima, Cundinamarca, April 16, 1935. A cultivated ornamental herb, 3 feet high, with viscid leaves and white flowers which are deep pink inside.

For previous introduction see 42334.

111005 to 111008. *PASSIFLORA* spp. Passifloraceae.

From Mesa, Cundinamarca, April 13, 1935.

No. 3293. Fruits slightly ribbed, golden yellow, oval, 2½ by 3½ inches.

111005. *PASSIFLORA* sp.

111006. *PASSIFLORA* sp.

No. 3294. *Curuba de India*. Fruits 2¾ by 3¾ inches; ground color pale greenish cream, with bright red blush which may cover the major part of the surface.

111007. *PASSIFLORA* sp.

No. 3295. *Curuba de India*. Fruits the same size and shape as 3294 (PI. 111006), but pale green without the red blush.

111008. *PASSIFLORA RUBRA* L.

No. 3309. From the railroad between Anolaima and Cachipay, Cundinamarca, April 17, 1935. A softly pubescent vine with crescent-shaped, cordate leaves 2 to 4 inches broad, greenish flowers 2 inches across, and red fruits 2 inches long. Native to the West Indies.

For previous introduction see 102353.

111009 and 111010. *PHYLLANTHUS ACUMINATUS* Vahl. Euphorbiaceae.

From La Esperenza, Cundinamarca, April 11, 1935. A large shrub or sometimes a tree 25 feet high, with ovate-acuminate leaflets 1 inch long and small greenish flowers.

For previous introduction see 106936.

111009. No. 3282. 111010. No. 3289.

Nos. 111011 to 111013 were collected at La Uribe, near Bogotá, April 3, 1935.

111011. *PIPER* sp. Piperaceae.

No. 3274. *Cordoncillo*. A shrub 10 feet high with small greasy, globular fruits.

111012 to 111014. *POLYGONUM* spp. Polygonaceae.
Fleeceflower.

111012. *POLYGONUM SAGITTATUM* L.

No. 3276. *Barbasco*. A form with pink flowers.

111013. *POLYGONUM HYDROPIPEROIDES* Michx.

No. 3278. *Barbasco*. A form with white flowers.

110990 to 111018—Continued.

111014. *POLYGONUM PUNCTATUM* ELL.

No. 3312. *Barbasco*. From the railroad between Anolaima and Cachipay, Cundinamarca, April 17, 1935. A plant with red stems found on small knolls, but not near water. The dry plant has a peppery odor.

For previous introduction and description see 110959.

111015. *POTHOMORPHE PELTATA* (L.) Miq. Piperaceae.

No. 3285. From La Esperanza, Cundinamarca, April 11, 1935. An erect shrub with rounded-cordate, peltate leaves, closely allied to Piper. Native to western India.

For previous introduction see 107767.

111016. *TAGETES AETALA* Posada. Asteraceae.

No. 3286. *Ruda*. From La Esperanza, Cundinamarca, April 11, 1935.

For previous introduction and description see 110968.

111017. *VIGNA PILOSA* (Klein) Baker. Fabaceae. Cowpea.

No. 3283. From La Esperanza, Cundinamarca, April 11, 1935.

For previous introduction see 30963.

111018. *ZEA MAYS* L. Poaceae. Corn.

No. 3337. From Cachipay, Cundinamarca, April 17, 1935. A cultivated popcorn.

111019 to 111023.

From the Union of Soviet Socialist Republics. Bulbs presented by the Plant Quarantine Board, Sukhum, Abkhasia, Transcaucasus. Received May 20, 1935.

Bulbs collected in the Abkhasian Mountains and in the plains and deserts of Turkistan; introduced for Department specialists.

111019. *COLCHICUM* sp. Melanthiaceae.111020. *GALANTHUS* sp. Amaryllidaceae.111021. *MUSCARI* sp. Liliaceae.111022. *PANCRATIUM* sp. Amaryllidaceae.111023. *POLIANTHES TUBEROSA* L. Amaryllidaceae. Tuberosa.

For previous introduction see 21635.

111024. *SOLANUM TUBEROSUM* L. Solanaceae. Potato.

From Colombia. Tubers collected by W. A. Archer, Bureau of Plant Industry. Received May 25, 1935.

Introduced for Department specialists.

No. 3373. *Papa criolla amarilla*. From the market at Popayan, Cundinamarca, May 7, 1935.

111025. *CITRUS GRANDIS* (L.) Osbeck. Rutaceae. Grapefruit.

From Brazil. Budsticks presented by Dr. Agésilau Bitancourt, Subdirector de Biologia Vegetal, São Paulo. Received May 25, 1935.

Introduced for Department specialists.

Paraiso. A sweet grapefruit with a rind of uniform thickness, pink flesh, and rather coarse juice vesicles. Some of the fruits weigh over 5 pounds.

111026. *ZEPHYRANTHES* sp. Amaryllidaceae.

From Colombia. Bulbs collected by W. A. Archer, Bureau of Plant Industry. Received May 22, 1935.

Introduced for Department specialists.

No. 3307. Collected along the railroad between Anolaima and Cachipay, Cundinamarca, April 17, 1935. A pink-flowered form.

111027 and 111028.

From the Straits Settlements. Seeds presented by the Director, Botanic Gardens, Singapore. Received May 21, 1935.

Introduced for Department specialists.

111027. *CALAMUS SCIPIONUM* Lour. Phoenicaceae. Rattan palm.

A climbing palm 40 to 50 feet high, with alternate pinnatisect leaves 4 to 5 feet long; the male spadix is 20 feet long and the female 10 feet. This rattan is native to Malaysia, where the canes are used for making furniture, for which purpose it is especially suitable because of the ease with which it splits.

For previous introduction see 51708.

111028. *DAEMONOROPS GRANDIS* (Griff.) Mart. Phoenicaceae.

A climbing palm from the Malay Peninsula, with very stout, more or less prickly stems and pinnatisect leaves about 15 feet long, with narrow leaflets over a foot in length.

111029 to 111033. *PISTACIA VERA* L. Anacardiaceae. Pistachio.

From the Union of Soviet Socialist Republics. Seeds presented by A. M. Popov, Institute of Plant Industry, of the Lenin Academy of Agricultural Sciences, Leningrad. Received May 20, 1935.

Introduced for Department scientists. From Azerbaijan.

111029. No. 1668. 111032. No. 1672.

111030. No. 1670. 111033. No. 1669.

111031. No. 1671.

111034 to 111039.

From Colombia. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received May 16, 1935.

Introduced for Department specialists.

111034 to 111036. *TEPHROSIA* spp. Fabaceae.111034. *TEPHROSIA CINEREA* (L.) Pers.

No. 3342. *Barbasco*. From Tocaima, Cundinamarca, April 19, 1935.

For previous introduction and description see 110916.

111035. *TEPHROSIA TOXICARIA* (Sw.) Pers.

No. 3350. *Barbasco*. From Obanda, April 6, 1935.

For previous introduction and description see 110918.

111036. *TEPHROSIA* sp.

No. 3352. *Barbasco*. From Valle de Cauca, Huila, April 1935.

111034 to 111039—Continued.

111037. *PASSIFLORA ANTIOQUIENSIS* Karst. Passifloraceae.

No. 3544. *Curuba de Antioquia*. From La Mesa, Cundinamarca, April 20, 1935. A woody vine with deeply three-lobed leaves and large purple flowers, solitary in the leaf axils. It is cultivated for its edible, spindle-shaped green fruits over 4 inches long and 1½ inches in diameter. Native to Colombia.

111038. *PAULLINIA* sp. Sapindaceae.

No. 3339. From Tocaima, Finca Chunday, Cundinamarca, April 19, 1935. A climbing shrub whose red fruits are borne in clusters on the stem.

111039. *POLYGONUM* sp. Polygonaceae.

No. 3351. *Barbasco*. From Neiva, Huila, April 6, 1935.

111040 to 111103.

From India. Seeds presented by the Lloyd Botanic Garden, Darjeeling, at the request of the Director of the Botanical Survey of India, Calcutta. Received May 13, 1935.

Introduced for Department specialists.

111040. *CLEMATIS BUCHANIANA* DC. Ranunculaceae.

A vigorous Himalayan species which will cover a large wall space with buoyant hairy leaves and in September is covered with cymes of pendent, fragrant, whitish-yellow flowers.

For previous introduction see 52676.

111041. *CLEMATIS CONNATA* DC. Ranunculaceae.

A large woody climbing vine native to the temperate Himalayas at altitudes between 4,000 and 10,000 feet. The leaves are made up of three to seven broadly cordate leaflets 2 to 4 inches long, with coarsely serrate or three-lobed margins, and the small creamy tubular flowers are borne in large panicles.

For previous introduction see 102755.

111042. *CREPIS GLOMERATA* (Decaisne) Benth. and Hook. Cichoriaceae.

A herbaceous perennial up to 6 inches high, with variable foliage and many densely crowded heads of yellow flowers. Native to the Himalayas between 13,000 and 17,000 feet altitude.

111043. *CRYPTOLEPIS ELEGANS* Wall. Asclepiadaceae.

A slender climber with oblong or linear-oblong leaves over 2 inches long and fragrant yellow flowers in axillary and terminal cymes. Native to eastern and northeastern India.

For previous introduction see 47669.

111044. *CYNOGLOSSUM FURCATUM* Wall. Boraginaceae.

A perennial, native to India, with numerous stems from a rosette of lanceolate, soft-haired, entire leaves. The small blue flowers are borne in long slender clusters similar to those of the forget-me-not.

For previous introduction see 76034.

111040 to 111103—Continued.

111045. *EMBELIA FLORIBUNDA* Wall. Myrsinaceae.

A large evergreen woody climber with narrow leaves over 8 inches long and large, axillary, bushy racemes of very small white flowers. Native to northeastern India.

For previous introduction see 47677.

111046. *ERIGERON* sp. Asteraceae.

111047. *EUPHORBIA SIKKIMENSIS* Boiss. Euphorbiaceae.

A stout perennial 3 to 4 feet high, native to the Sikkim Himalayas at altitudes of 8,000 to 10,000 feet. The linear-lanceolate, glabrous leaves are 2 to 4 inches long, and the small inconspicuous flowers are surrounded by broad ovate yellow bracts.

For previous introduction see 102759.

111048. *GAULTHERIA NUMMULARIODES* Don. Ericaceae.

A procumbent shrub covering banks with much-branched densely leafy stems, native to the Himalayas at altitudes up to 9,000 feet. The leathery ovate leaves are one-half inch long, and the small reddish, or nearly white, tubular flowers are solitary on densely bracted axillary pedicels; they are followed by small fleshy blue-black fruits.

For previous introduction see 102762.

111049. *GENTIANA ELWESII* C. B. Clarke. Gentianaceae.

A perennial herb about 1 foot high, with elliptic or oblong leaves and showy blue flowers about an inch long, in small terminal heads. Native to the Himalayas from 13,000 to 15,000 feet altitude.

111050. *GERBERA KUNZEANA* Braun and Aschers. Asteraceae.

A herbaceous perennial with a rosette of oblong to ovate lyrate-pinnatifid leaves 5 to 10 inches long and bracted scapes a foot high bearing white or pink asterlike flower heads 1 to 3 inches across. Native to temperate slopes of the Himalayas from 7,000 to 12,000 feet altitude.

For previous introduction see 86676.

111051. *HERACLEUM WALLICHII* DC. Apiaceae.

A stout perennial, about 4 feet high, with compound umbels of small yellow flowers. Native to the Himalayas at 10,000 feet altitude.

111052. *HELWINGIA HIMALAICA* Hook. f. and Thoms. Cornaceae.

An undershrub with lanceolate or ovate-lanceolate leaves and umbels of small greenish flowers. Native to the Himalayas between 5,000 and 9,000 feet altitude.

111053. *HERACLEUM NEPALENSE* D. Don. Apiaceae.

A herbaceous perennial 2 to 5 feet high, with large pinnate leaves and compound umbels of small white flowers. Native to the Himalayas between 5,000 and 12,000 feet altitude.

111040 to 111103—Continued.

111054. *HYPERICUM HOOKERIANUM* Wight and Arn. Hypericaceae. St. Johnswort.

A compact shrub up to 6 feet high, with bright red-brown branches, evergreen leaves 1 to 4 inches long, and many-flowered corymbs of large golden-yellow flowers, each about 2 inches across. Native to the Himalayas.

For previous introduction see 102766.

111055. *IMPATIENS URTICIFOLIA* Wall. Impatiéntaceae.

A slender herb, 2 to 3 feet high, native to the temperate slopes of the Himalayas up to 12,000 feet altitude in Sikkim, India. The alternate membranous leaves, 4 to 6 inches long, are elliptic-ovate with a long point and have crenate margins. The flowers, nearly 1 inch in diameter, are yellow with white to purple streaks and are borne in small axillary clusters on slender pedicels.

For previous introduction see 99733.

111056. *INULA HOOKERI* C. B. Clarke. Asteraceae.

A simple or branched perennial herb, native to the Himalayas between 7,000 and 10,000 feet altitude. The shaggy stem is 1 to 2 feet high, with elliptic-lanceolate membranous leaves 3 to 5 inches long and terminal clusters of one to three yellow sunflowerlike heads 1 to 2 inches across.

For previous introduction see 100197.

111057. *JUNIPERUS PSEUDOSABINA* Fisch. and Mey. Pinaceae. Juniper.

A low shrub, with globose berries, native to dry sunburned mountain slopes in Turkistan.

For previous introduction see 34140.

111058. *LACTUCA HASTATA* DC. Cichoriaceae.

A robust perennial up to 7 feet high, with pinnatifid leaves about a foot long and small heads of blue, purple, or dark-red flowers. Native to the Himalayas between 4,000 and 12,000 feet altitude.

111059. *LARIX GRIFFITHII* Hook. f. and Thoms. Pinaceae.

A slender tree 20 to 60 feet high, with long pendulous branchlets and large erect cones 2 to 4 inches long. Native to the Himalayas from 8,000 to 12,000 feet altitude.

111060. *LEEA ASPERA* Wall. Vitaceae.

A shrubby perennial up to 4 feet high, with handsome pinnate foliage and juicy black fruits the size of large currants. Native to the Himalayas up to 6,000 feet altitude.

111061. *LILIUM GIGANTEUM* Wall. Liliaceae. Giant lily.

A lily native to the Himalayas between 5,000 to 12,000 feet altitude, with bulbs that grow close to the surface. The hollow stems are 6 to 9 feet high, and the handsome cordate leaves are shining dark green above and paler beneath. The large fragrant white flowers, often 12 in a raceme, are slightly greenish without, and the inner surface of the segments is tinged with deep purple.

For previous introduction see 105893.

111040 to 111103—Continued.

111062. *LILIUM WALLICHIANUM* Schult. f. Liliaceae. Wallich lily.

A lily 4 to 6 feet high, with linear leaves 6 to 9 inches long and, usually, solitary waxy creamy-white fragrant flowers 9 inches long which are golden yellow at the base inside and green outside.

For previous introduction see 92409.

111063. *MACHILUS GAMMIEANA* King. Lauraceae.

An evergreen tree with linear or oblanceolate leaves about 6 inches long and axillary panicles of small whitish flowers. Native to the Himalayas at about 7,500 feet altitude.

111064. *MECONOPSIS HORRIDULA* Hook. f. and Thoms. Papaveraceae.

A low alpine perennial herb native to the Sikkim Himalayas at altitudes between 14,000 and 17,000 feet. The lanceolate, nearly entire leaves are 3 to 5 inches long, and the blue-purple poppy-like flowers, 1 to 2 inches across, are borne singly on scapes 4 to 8 inches high.

For previous introduction see 99923.

111065. *MECONOPSIS PANICULATA* (Don) Prain. Papaveraceae.

A herbaceous perennial with yellow flowers found on the slopes of the Himalayas in the provinces of Nepal, Sikkim, and Bhutan in northern India.

For previous introduction see 33362.

111066. *MICROGLOSSA ALBESCENS* (DC.) Benth. Asteraceae.

An ornamental subtropical shrub with narrow, sharp-pointed leaves and heads of light lilac flowers. Native to the temperate Himalayas in India.

For previous introduction see 76038.

111067. *MUSSAENDA MACROPHYLLA* Wall. Rubiaceae.

A large shrub, native to the tropical Himalayas, with stout branches, slightly hairy leaves up to 10 inches in length, and cymes of flowers with orange-lobed corollas and white-lobed calyces.

For previous introduction see 47738.

111068. *NYSSA SESSILIFLORA* Hook. f. and Thoms. Cornaceae. Tupelo.

An Asiatic relative of the black gum (*Nyssa sylvatica*), which is a tree 60 feet tall, with oblong, punctate leaves. The soft, gray, even-grained wood is used for building purposes.

For previous introduction see 93221.

111069. *OSTODES PANICULATA* Blume. Euphorbiaceae.

An evergreen tree, native to India and Java, with pubescent branchlets and stout white-barked branches. The leathery, long-pointed serrate leaves are 8 to 12 inches long, and the inconspicuous flowers, in glabrous panicles a foot long, are followed by rough three-lobed woody capsules an inch long.

For previous introduction see 102769.

111070. *NICANDRA PHYSALODES* (L.) Gaertn. Solanaceae. Apple-of-Peru.

For previous introduction see 95220.

111040 to 111103—Continued.

111071. POLYGONUM SPHAEROSTACHYUM Meisn. Polygonaceae. Fleecflower.

A perennial herb 6 to 12 inches high, native to the Himalayas at an altitude of 15,000 feet in India and Tibet. The long-petioled radicle leaves are linear-lanceolate with crenulate margins, and the small drooping crimson flowers are borne in solitary erect cylindrical or capitate spikes.

For previous introduction see 100211.

111072. POLYGONATUM VERTICILLATUM (L.) All. Convallariaceae. Solomonseal.

A perennial herb with a creeping rootstock, angled and grooved stems 2 to 4 feet high, whorls of four to eight linear leaves 3 to 6 inches long, and axillary peduncles bearing two or three tubular, whitish flowers with green tips, followed by red berries. Native to Europe and temperate Asia.

For previous introduction see 93157.

111073. POTENTILLA GRIFFITHII Hook. f. Rosaceae.

An erect or ascending herbaceous perennial 1 to 2 feet high, with compound leaves about 2 inches long and yellow flowers in paniced corymbs. Native to the Himalayas between 6,000 and 14,000 feet altitude.

111074. PRIMULA ELONGATA Watt. Primulaceae. Primrose.

A primrose with a rosette of glabrous obovate leaves about 4 inches long and golden yellow flowers an inch across, in a small dense umbel on a scape a foot high. Native to the Sikkim Himalayas at 13,500 feet altitude.

For previous introduction see 41581.

111075. PRIMULA FLORIBUNDA Wall. Primulaceae. Buttercup primrose.

A glandular-pubescent primrose 5 to 8 inches high, with ovate or elliptic membranous leaves and small golden-yellow, fragrant flowers in three to five dense superimposed umbels. Native to the Himalayas at altitudes of 2,500 to 6,500 feet.

111076. RHODODENDRON EDGEWORTHII Hook. f. Ericaceae.

A shrub, often epiphytic, 4 to 6 feet high, native to the Himalayas in Sikkim, India. The elliptic-ovate leaves, 4 inches long, are strongly bullate above and densely cobwebby-tomentose beneath. The fragrant white or pink-tinged flowers are broadly tubular and 3 to 4 inches long.

For previous introduction see 97392.

111077. RHODODENDRON GRANDE Wight. Ericaceae.

A tree up to 30 feet high, native to the Sikkim Himalayas between 8,000 and 10,000 feet altitude. The elliptic to oblanceolate leaves, 6 to 12 inches long, are shining deep green above and silvery white beneath. The mortar-shaped flowers, 2 to 3 inches long, are pale rose in the bud, opening creamy white with basal purple blotches, and are borne in large rounded clusters of 20 to 25.

For previous introduction see 102779.

111078. RUBUS ALPESTRIS Blume. Rosaceae. Raspberry.

A straggling shrub found on the temperate slopes of the Himalayas between 7,000 and 18,000 feet altitude.

For previous introduction see 41674.

111040 to 111103—Continued.

111079. RUBUS ELLIPTICUS J. E. Smith. Rosaceae. Yellow Himalayan raspberry.

A very stout shrub which, especially when young, is densely covered with long red, almost hairlike, spines. The flowers are white, and the deep yellow, almost orange, very juicy acid fruits are edible. The shrub is found in the Himalayas at altitudes between 6,000 and 7,000 feet.

For previous introduction see 76914.

111080 to 111082. SAUSSUREA spp. Asteraceae.

111080. SAUSSUREA DELTOIDEA (DC.) C. B. Clarke.

A tall herbaceous perennial 4 to 8 feet high, with large leaves having cottony lower surfaces. The extremely variable flower heads are often tipped with purple, and the corollas are white. Native to the central and eastern Himalayas at altitudes of 6,000 to 11,500 feet.

For previous introduction see 73154.

111081. SAUSSUREA GOSSIPIPHORA D. Don.

A curious perennial over a foot high, found in the Himalayas in poor soil among limestone rocks between 14,000 and 15,500 feet altitude. The plant grows as a white woolly mass, with linear-lanceolate basal leaves. The oblong and densely cottony bluish flower heads are buried among cottony scales.

For previous introduction see 59265.

111082. SAUSSUREA UNIFLORA Wall.

A slender herbaceous perennial about 2 feet high, native to the Himalayas at altitudes between 10,000 and 15,000 feet. The purple flowers are in campanulate heads about 2 inches across.

111083. SCABIOSA HOOKERI C. B. Clarke. Dipsacaceae.

A perennial herb with linear-spatulate leaves about 6 inches long and globose, dense, pale-violet flower heads over an inch in diameter, on scapes up to a foot high. Native to the Himalayas at 10,000 to 14,000 feet altitude.

111084. SELINUM PAPYRACEUM C. B. Clarke. Apiaceae.

A large branching perennial 2 to 6 feet high, with ovate tripinnate leaves, the lower ones a foot long, and compound umbels of small whitish flowers. Native to the Sikkim Himalayas.

111085. SELINUM TENUIFOLIUM Wall. Apiaceae.

A hardy perennial about 8 feet high, with fernlike foliage, the ultimate segments of the leaves being narrowly lanceolate and acute. The small white flowers are borne in umbels. Native to the Himalayas.

For previous introduction see 47790.

111086 to 111089. SENECIO spp. Asteraceae.

111086. SENECIO ALATUS Wall.

A stout perennial 1 to 2 feet high, with membranous ovate leaves 5 to 12 inches long and yellow flower heads less than an inch across, in large panicles. Native to the Himalayas at altitudes of 6,000 to 13,000 feet.

111040 to 111103—Continued.

111087. *SENECIO GRACILIFLORUS* DC.

An erect perennial 2 to 6 feet high, with large pinnatifid leaves and corymbs of small erect or drooping yellow flower heads. Native to the Himalayas at altitudes of 8,000 to 13,000 feet.

111088. *SENECIO LIGULARIA* Hook. f.

A stout perennial with cordate-sagittate leaves, 1 foot or less in diameter, and numerous many-flowered yellow flower heads. Native to the temperate Himalayas from 9,000 to 12,000 feet altitude.

111089. *SENECIO SCANDANS* Buch-Ham.
Climbing groundsel.

An attractive autumn-flowering composite from the Himalayas, with a woody stem and climbing habit. The yellow flower heads are in few-flowered loose paniclelike clusters.

For previous introduction see 61623.

111090. *SMILAX FEROX* Wall. Smilacaceae.

A stout prickly shrub with ovate leathery leaves about 3 inches long and umbels of small red berries. Native to the Himalayas at altitudes of 5,000 to 8,000 feet.

111091. *SMILAX RIGIDA* Wall. Smilacaceae.

A small erect shrub with leathery, rounded-oval leaves about 1 inch long, a few small prickles, and dense umbels of small black berries. Native to the Himalayas at altitudes of 7,000 to 10,000 feet.

111092. *SOLANUM MACRODON* Wall. Solanaceae.

An erect shrubby plant, clothed with minute, glistening, jointed hairs, growing at altitudes of 3,000 to 8,000 feet in the temperate Himalayas. The lanceolate leaves, 2 to 6 inches long, are setulose above, and the purple-rose or nearly white flowers are followed by small globose berries.

For previous introduction see 49656.

111093 to 111095. *SWERTIA* spp. Gentiana-ceae.111093. *SWERTIA BIMACULATA* (Sieb. and Zucc.) Hook. f. and Thoms.

An erect annual 2 to 6 feet in height, with numerous white or yellowish-green flowers in panicles. The plant is native to the eastern Himalayas at altitudes of 5,000 to 8,000 feet.

For previous introduction see 47807.

111094. *SWERTIA DILATATA* C. B. Clarke.

An herb 1 to 3 feet high, with lanceolate leaves over an inch long and paniculate cymes of greenish-yellow flowers. Native to the Himalayas between 4,000 and 12,000 feet altitude.

111095. *SWERTIA PURPURASCENS* (D. Don) Wall.

This species is very closely related to *Swertia bimaculata*, from which it differs in having purple flowers with reflexed corolla lobes. It grows on the western Himalayas at altitudes ranging from 5,000 to 12,000 feet.

For previous introduction see 47808.

111040 to 111103—Continued.

111096. *SYMPLOCOS GLOMERATA* King. Symplocaceae.

A shrub or small tree becoming 10 feet high, with narrow leathery leaves 6 inches long and axillary clusters of small white flowers. This shrub is rather common in the hills of Sikkim and Bhutan, India, at altitudes of 1,000 to 8,000 feet.

For previous introduction see 55910.

111097. *THALICTRUM CHELIDONII* DC. Ranunculaceae.

A handsome ornamental plant 15 inches high, with pale-green foliage, pubescent beneath. The delicate silvery lavender flowers, over an inch across, are borne in graceful sprays. Native to the temperate Himalayas at altitudes between 8,000 and 12,000 feet.

For previous introduction see 102331.

111098. *THALICTRUM CULTRATUM* Wall. Ranunculaceae. Meadowrue.

A glabrous herbaceous perennial 2 to 4 feet high, with compound leaves made up of obovate leaflets half an inch long and lax panicles of greenish-white flowers. Native to the temperate Himalayas in India.

For previous introduction see 86688.

111099. *THERMOPSIS LANCEOLATA* R. Br. Fabaceae.

A perennial herb up to 2 feet high, with oblong-lanceolate leaflets and bright-yellow flowers in terminal racemes. Native to Siberia and Alaska, where it is found in moist sandy places.

For previous introduction see 110168.

111100. *URARIA LAGOPUS* DC. Fabaceae.

A woody, densely caespitose perennial up to 12 feet high, with trifoliate leaves and terminal and axillary racemes of purple flowers. Native to India from the Punjab to Assam.

For previous introduction see 47857.

111101. *VACCINIUM RETUSUM* (Griff.) Hook. f. Vacciniaceae.

A small shrub, usually epiphytic, native to the Himalayas between 7,000 and 9,000 feet altitude, with obovate-oblong leaves about 1 inch long and racemes of small white flowers.

111102. *VIBURNUM STELLULATUM* Wall. Caprifoliaceae.

A large evergreen shrub with elliptic-lanceolate leaves about 3 inches long and small orange-red berries. Native to the temperate Himalayas and said to be hardy in England.

For previous introduction see 68348.

111103. *WALLICHIA DENSIFLORA* Mart. Phoenicaceae.

A low, usually caespitose palm found throughout the tropical Himalayas from Kumaon eastward. The pinnatisect leaves are 8 to 10 feet long, with linear-oblong segments, dentate, and white beneath. The dull-purple fruits are about one-half inch long.

For previous introduction see 94086.

111104 to 111123. DIGITARIA spp.
Poaceae. Fingergrass.

From the Union of South Africa. Plants purchased from Dr. I. B. Pole Evans, Division of Plant Industry, Department of Agriculture, Pretoria. Received May 17, 1935.

A collection of different strains of the fingergrass; introduced for Department specialists.

111104. DIGITARIA PENTZII Stent.

The true woolly fingergrass.

111105. DIGITARIA SERIATA Stapf.

Kuruman.

111106. DIGITARIA sp.

Port Elizabeth.

111107. DIGITARIA sp.

Inkruip.

111108. DIGITARIA SWAZILANDENSIS Stent.

Swaziland.

111109. DIGITARIA DECUMBENS Stent.

Low Veld.

For previous introduction see 106624.

111110. DIGITARIA sp.

Pangola River.

111111. DIGITARIA DIVERSINERVIS (Nees)
Stapf.

Unkomaas. From the Natal coast. A perennial grass with weak ascending stems up to 18 inches high and linear-lanceolate leaves 1 to 3 inches long. Native to the Cape of Good Hope.

111112. DIGITARIA sp.

Makarikari.

111113. DIGITARIA sp.

Vukwe River.

111114. DIGITARIA sp.

Pitsani.

111115. DIGITARIA sp.

Muden.

111116. DIGITARIA sp.

Koster strain.

111117. DIGITARIA sp.

Messina.

111118. DIGITARIA sp.

Slurry.

111119. DIGITARIA sp.

Molopo River.

111120. DIGITARIA PENTZII MINOR Stent.

P. P. Rust.

111121. DIGITARIA sp.

Olifants River strain.

111122. DIGITARIA sp.

Huhluwe strain.

111123. DIGITARIA sp.

Smutsii strain.

111104 to 111123—Continued.

111124. DIGITARIA sp.

Hertzogii.

111125. DIGITARIA sp.

Pretoria Small strain.

111126. DIGITARIA sp.

Mbabana strain.

111127. DIGITARIA sp.

Government House strain.

111128. DIGITARIA sp.

Milanfiana grass.

111129 to 111150.

From northern India. Seeds collected by the Asiatic Expedition. Received May 23, 1935.

A collection of medicinal seeds introduced for Department specialists.

111129. ANGELICA sp. Apiaceae.

No. 13.

111130. ANGELICA sp. Apiaceae.

No. 3.

111131 to 111134. CARDUUS spp. Astera-
ceae.

111131. CARDUUS sp.

No. 8.

111132. CARDUUS sp.

No. 7.

111133. CARDUUS sp.

No. 9.

111134. CARDUUS sp.

No. 15.

111135 to 111137. CIRSIUM spp. Astera-
ceae.

111135. CIRSIUM sp.

No. 6.

111136. CIRSIUM sp.

No. 4.

111137. CIRSIUM sp.

No. 5.

111138. GENTIANA sp. Gentianaceae.

No. 17.

111139. OCIMUM BASILICUM L. Mentha-
ceae. Common basil.

No. 16.

111140. PINUS sp. Pinaceae.

No. 22.

111141 to 111143. PLEUROSPERMUM spp.
Apiaceae.

111141. PLEUROSPERMUM sp.

No. 2.

111142. PLEUROSPERMUM sp.

No. 21.

111143. PLEUROSPERMUM sp.

No. 18.

111129 to 111150—Continued.

111144. *PTEROCARPUS* sp. Fabaceae.
No. 19.
111145. *RHEUM* sp. Polygonaceae.
No. 1.
111146. *RHEUM* sp. Polygonaceae.
No. 20.
- 111147 to 111149. *SAUSSUREA* spp. Asteraceae.
111147. *SAUSSUREA* sp.
No. 10.
111148. *SAUSSUREA* sp.
No. 11.
111149. *SAUSSUREA* sp.
No. 12.
111150. (Undetermined.)
No. 14.

111151 to 111153. *FESTUCA* spp. Poaceae. **Fescue.**

From New Zealand. Seeds presented by Wright, Stephenson & Co., Ltd., Wellington. Received May 27, 1935.

Introduced for Department specialists.

111151. *FESTUCA* sp.
111152. *FESTUCA* sp.
111153. *FESTUCA* sp.

111154 to 111196.

From the Union of Soviet Socialist Republics. Seeds presented by the Kazakstan Institute of Agriculture, Turkistan, through H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received May 20, 1935.

Introduced for Department specialists.

The field numbers are those of the Westover and Enlow series.

111154. *AEGILOPS CYLINDRICA* Host. Poaceae.
No. 1357. From southern Kazakstan.
For previous introduction see 108838.
111155. *AGRIOPHYLLUM ARENARIUM* Bieb. Chenopodiaceae.
No. 1356. From Alma Ata. An annual, native to the Caucasus region and Siberia.
111156. *AGROSTIS ALBA* L. Poaceae.
No. 1358. From Alma Ata.
For previous introduction see 109221.
111157. *ALOPECURUS PRATENSIS* L. Poaceae. **Meadow foxtail.**
No. 1390. From Alma Ata.
For previous introduction see 110352.
111158. *ALOPECURUS ARUNDINACEUS* Poir. Poaceae.
No. 1360. From Alma Ata. A perennial grass with creeping rhizomes and leafy stems over a foot high. Native to Europe and Asia.

111154 to 111196—Continued.

111159. *ANDROPOGON ISCHAEMUM* L. Poaceae.
No. 1363. From Alma Ata.
For previous introduction see 109460.
- 111160 to 111162. *ASTRAGALUS* spp. Fabaceae.
111160. *ASTRAGALUS SIEVERSIANUS* Pall.
No. 1362. From Alma Ata. An erect or ascending perennial, with oblong, hairy leaflets and axillary clusters of pale-yellow flowers. Native to central Asia.
For previous introduction see 110072.
111161. *ASTRAGALUS* sp.
No. 1364. From the mountains of southern Kazakstan.
111162. *ASTRAGALUS* sp.
No. 1365. From Alma Ata.
111163. *BRASSICA ELONGATA* Ehrh. Brassicaceae.
No. 1367. Tashkent. An annual herb native to south-central Europe.
For previous introduction see 67907.
- 111164 to 111166. *BROMUS* spp. Poaceae. **Bromegrass.**
111164. *BROMUS SQUARROSUS* L.
No. 1370. From southern Kazakstan.
For previous introduction see 108471.
111165. *BROMUS* sp.
No. 1368. From Alma Ata.
111166. *BROMUS* sp.
No. 1369. From southern Kazakstan.
111167. *CLAMAGROSTIS EPIGEIOS* (L.) Roth. Poaceae.
No. 1371. From Alma Ata. A stout perennial grass, native to Manchuria, where it grows on rather poor soil.
For previous introduction see 107662.
111168. *CERATOCARPUS ARENARIUS* L. Chenopodiaceae.
No. 1372. From southern Kazakstan. An annual, native to sandy situations in central Asia, with subulate, coriaceous leaves, and inconspicuous flowers.
111169. *CYNODON DACTYLON* (L.) Pers. Poaceae. **Bermuda grass.**
No. 1374. From Alma Ata.
For previous introduction see 109488.
111170. *DACTYLIS GLOMERATA* L. Poaceae. **Orchard grass.**
No. 1375. From southern Kazakstan.
For previous introduction see 110376.
111171. *ELYMUS CRINITUS* Schreb. Poaceae. **Wild rye.**
No. 1380. From Alma Ata. An annual grass over a foot high. Native to Asia Minor and the Transcaucasus region.
111172. *FERULA KARATAVICA* Regel and Schmalh. Apiaceae.
No. 1376. From the mountains of southern Kazakstan. A perennial herb 3 to 4 feet high, with broad biternate leaves.

111154 to 111196—Continued.

and umbels of flat ovate fruits. Native to Turkistan.

For previous introduction see 107536.

111173. FESTUCA ELATIOR ARUNDINACEA
(Schreb.) Wimm. Poaceae. **Fescue.**

No. 1377. From the mountains of southern Kazakstan.

For previous introduction see 110980.

111174. FESTUCA OVINA L. Poaceae.

No. 1378. From the mountains of southern Kazakstan.

111175. GLYCYRRHIZA TRIPHYLLA Fisch.
and Mey. Fabaceae. **Licorice.**

No. 1779. From southern Kazakstan. An erect perennial plant 1 to 2 feet high, with pinkish-white flowers. Native to Siberia.

For previous introduction see 61426.

111176. HEDYSARUM SONGARICUM Bong.
Fabaceae.

No. 1381. From Alma Ata. An erect herbaceous perennial a foot or more high, with several branched stems, small compound leaves, and pink flowers in spike-like clusters. Native to central Asia.

For previous introduction see 105473.

111177. HERACLEUM VILLOSUM Fisch. Api-
aceae.

No. 1382. From the mountains of southern Kazakstan. A tall stout biennial or triennial herb with pinnatifid leaves and large umbels of white flowers. Native to the Caucasus region.

111178. KOCHIA TRICHOPHYLLA Stapf. Che-
nopodiaceae. **Common summer cypress.**

No. 1383. From southern Kazakstan.

111179. LATHYRUS PRATENSIS L. Faba-
ceae. **Yellow vetchling.**

No. 1384. From Alma Ata.

For previous introduction see 110388.

111180. LEPIDIUM REPENS (Schrenk)
Boiss. Brassicaceae.

No. 1385. From southern Kazakstan. A stout perennial about a foot high, with oblong wavy-margined leaves and inconspicuous white flowers. Native to central Asia.

For previous introduction see 110080.

111181. LOTUS ANGUSTISSIMUS L. Faba-
ceae.

No. 1386. From Alma Ata. An upright, slender-stemmed, leguminous annual, about a foot high, with yellow flowers.

For previous introduction see 87466.

111182. MEDICAGO FALCATA L. Fabaceae.
Yellow-flowered alfalfa.

No. 1387. From Alma Ata.

For previous introduction see 109517.

111183. MELICA ALTISSIMA L. Poaceae.
Grass.

No. 1401. From Alma Ata.

For previous introduction see 84455.

111184. MELILOPUS ALBA Desr. Fabaceae.
White sweetclover.

111154 to 111196—Continued.

No. 1388. From Alma Ata.

For previous introduction see 109523.

111185. MELILOTUS OFFICINALIS (L.) Lam.
Fabaceae. **Sweetclover.**

No. 1389. From Alma Ata.

For previous introduction see 110392.

111186. ONOBRYCHIS PULCHELLA Schrenk.
Fabaceae.

No. 1391. From southern Kazakstan. An annual less than a foot high, with narrow leaflets and small pink flowers. Native to central Asia.

For previous introduction see 108939.

111187. NICANDRA PHYSALODES (L.)
Gaertn. Solanaceae.

No. 1396. From southern Kazakstan.

For previous introduction see 111070.

111188. PHELEUM PANICULATUM Huds.
aceae. **Timothy.**

No. 1392. From southern Kazakstan.

For previous introduction see 108946.

111189. PHYSLIS ALKEKENGII L. Solana-
ceae. **Strawberry groundcherry.**

No. 1397. From Alma Ata.

For previous introduction see 109347.

111190. PRANGOS UOPTERA DC. Apiaceae.

No. 1395. From southern Kazakstan. A tall herbaceous perennial with linear-lobed leaves and small yellow flowers in compound umbels. Native to central Asia.

111191. PSORALEA DRUPACEA Bunge. Faba-
ceae.

No. 1394. From Tashkent. A woody perennial about a foot high, with roundish dentate leaflets nearly an inch long and small white flowers in dense axillary racemes. Native to central Asia.

For previous introduction see 106896.

111192. PUCCINELLIA sp. Poaceae.

No. 1366. From Alma Ata.

111193. SOPHORA ALOPECUROIDES L. Faba-
ceae.

No. 1398. From Alma Ata. A semi-hardy, grayish, pubescent undershrub with upright branches and dense terminal racemes of yellow flowers. Native to western Asia.

For previous introduction see 60346.

111194. TRIGONELLA sp. Fabaceae.

No. 1399. From Alma Ata.

For previous introduction see 109392.

111195. TRIFOLIUM PRATENSE L. Faba-
ceae. **Red clover.**

No. 1400. From Alma Ata.

For previous introduction see 110428.

111196. VICIA sp. Fabaceae.

No. 1402. From Alma Ata.

111197. IPOMOEA PURPUREA (L.) Roth.
Convolvulaceae.

Common morning-glory.

111197—Continued.

From China. Seeds presented by the Director, Botanic Garden, the Sun Yat-Sen Tomb and Memorial Park Commission, Nanking. Received May 25, 1935.

Introduced for Department specialists.

For previous introduction see 24029.

111198. SPHAERALCEA MINIATA RHOMBI-FOLIA (Griseb.) Schum. Malvaceae.

From Argentina. Seeds presented by the Museo de la Plata, Buenos Aires, through Thomas H. Kearney, Bureau of Plant Industry. Received June 4, 1935.

A bushy shrub about 4 feet high, with lobed leaves and showy rose-colored flowers in few-flowered racemes. Native to Argentina.

111199 to 111206. LESPEDEZA spp. Fabaceae. Bushclover.

From France. Seeds presented by J. Dufrenoy, Station de Pathologie Végétale, La Grande Ferrade, Pont-de-la-Maye. Received May 25, 1935.

Introduced for Department specialists.

111199. LESPEDEZA MACROCARPA Bunge.

A variety with purple flowers.

For previous introduction see 92051.

111200. LESPEDEZA CAPITATA Michx. Roundhead bushclover.

111201. LESPEDEZA CYRTOBOTRYA Miquel.

A shrub about 6 feet high, resembling *Lespedeza bicolor* in habit, with oval-oblong leaflets and dense clusters of purple flowers. Native to Japan.

For previous introduction see 104066.

111202. LESPEDEZA DAURICA (Laxm.) Schindler.

A tall annual up to 3 feet high, with small white flowers.

For previous introduction see 110495.

111203. LESPEDEZA FORMOSA (Vogel) Koehne. Purple bushclover.

An erect semishrubby plant 6 to 12 feet high, with trifoliate leaves of oblong leaflets and racemes of rose-purple flowers. Native to Chosen.

For previous introduction see 104669.

111204. LESPEDEZA KIUSIANA Nakai.

A tall herbaceous perennial 6 to 9 feet high, with small deep-purple flowers in axillary racemes 1 to 3 inches long. Native to Japan and Chosen.

111205. LESPEDEZA HIRTA (L.) Hornem.

111206. LESPEDEZA TOMENTOSA (Thunb.) Sieb.

A rather coarse, tall *lespedeza* which seeds freely. Native to Japan.

111207 to 111214.

From Colombia. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received May 22, 1935.

Introduced for Department specialists.

111207 to 111214—Continued.

111207. ANTIGONON LEPTOPUS Hook. and Arn. Polygonaceae.

No. 3361. *Coralita*. From the Agricultural Experiment Station, Palmira, May 2, 1935. A large-flowered variety.

For previous introduction see 104252.

111208. ARISTOLOCHIA sp. Aristolochiaceae.

No. 3360. From the Agricultural Experiment Station, Palmira, May 2, 1935. A vine, cultivated as an ornamental.

111209. ARISTOLOCHIA ELEGANS Masters. Aristolochiaceae. Calicoflower.

No. 3359. From the Agricultural Experiment Station, Palmira, May 2, 1935. A slender vine, with long-stalked reniform leaves 2 to 3 inches across and solitary flowers with a yellow-green tube $\frac{1}{2}$ inches long, the limb 3 inches across, purple and white blotched and entirely devoid of any unpleasant odor. Native to Brazil.

111210. BARNADESIA SPINOSA L. Astera-ceae.

No. 3348. From the Salto de Tequendama, near Bogotá, April 22, 1935. A spiny, ornamental shrub with long arching branches and white flower heads which are pale pink at the base of the florets.

111211. CASSIA HIRSUTA L. Caesalpinia-ceae.

No. 3357. From near Cali, May 2, 1935. A shrub up to 2 feet high, covered throughout with long hairs. The compound leaves are made up of three to five pairs of ovate leaflets 2 to 3 inches long, and the small yellow flowers are borne in axillary racemes. Native to Brazil.

For previous introduction see 107156.

111212. CLEOME ANOMALA H. B. K. Cap-paridaceae.

No. 3347. From the Salto de Tequendama, near Bogotá, April 22, 1935. A hairy shrub up to 20 feet high, with digitate leaves, the lobes oblong-lanceolate, membranous. The small whitish flowers are in terminal racemes. Native to Colombia.

111213. BENTHAMANTHA CARIBAEA (Jacq.) Kuntze. Fabaceae.

No. 3341. From Tocaima, Finca Chucunday, Cundinamarca, April 19, 1935. An erect shrub up to 6 feet high, found in the shade near rivers and creeks. The odd-pinnate leaves are 2 to 5 inches long, and the large flowers, yellow striped with red, are in axillary racemes. Native to tropical America.

111214. TEPHROSIA sp. Fabaceae.

No. 3362. Collected on dry mountain sides near the Agricultural Experiment Station, Palmira. The plants are 4 to 5 feet high, with racemes of small white flowers.

111215 to 111217.

From Manchuria. Plants collected near Hailar by H. G. MacMillan and J. L. Stephens, Bureau of Plant Industry. Received October 5, 1934. Numbered in May, 1935.

Introduced for Department specialists.

111215 to 111217—Continued.

111215. (Undetermined.)

No. 2. An undetermined grass.

111216 and 111217. CALAMAGROSTIS EPIGIOS (L.) Roth. Poaceae. Grass.

For previous introduction and description see 111167.

111216. No. 3. 111217. No. 4.

111218. DIPTERYX ODORATA (Aubl.) Willd. (*Coumarouna odorata* Aubl.). Fabaceae. Tonka-bean.

From Venezuela. Seeds presented through P. Lorillard Co., New York City, N. Y. Received June 6, 1935.

Introduced for Department specialists.

For previous introduction see 39142.

111219. TEPHROSIA VOGELII Hook. f. Fabaceae.

From the Ivory Coast, Africa. Seeds presented by O. M. Freeman, Bureau of Plant Industry. Received in 1933. Numbered in June, 1935, for convenience in distribution.

A shrubby legume, native to tropical Africa; introduced for Department specialists.

For previous introduction see 98926.

111220. MANGIFERA INDICA L. Anacardiaceae. Mango.

From Haiti. Seeds presented by Pierre G. Syivain, Service National de la Production Agricole et de l'Enseignement Rural, Port-au-Prince. Received June 11, 1935.

Madame Francis; introduced for Department specialists.

111221. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

From Ecuador. Seeds presented by Enrique Malo, Cuenca. Received May 29, 1935.

Guaranda. A native variety introduced for Department specialists.

111222. ARACHIS HYPOGAEA L. Fabaceae. Peanut.

From Antigua, British West Indies. Seeds presented by the Ffryes Estate. Received June 4, 1935.

Introduced for Department specialists.

For previous introduction see 109840.

111223 to 111225. ALLIUM CEPA L. Liliaceae. Onion.

From Egypt. Seeds and bulbs presented by M. Stina, Heliopolis. Received June 6, 1935.

Introduced for Department specialists.

111223. *Beheiri*. (Bulbs.)111224. *Saidi*. (Bulbs.)

111225. Seeds.

111226 and 111227. PHAEDRANASSA spp. Amaryllidaceae.

From Ecuador. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received June 11, 1935.

111226 and 111227—Continued.

111226. PHAEDRANASSA LEHMANNI Regel.

A summer-blooming, bulbous plant with oblong-lanceolate leaves 6 to 8 inches long and an umbel of three or four nodding, bright-red flowers over an inch long on a scape. Native to Colombia at an altitude of 7,000 feet.

111227. PHAEDRANASSA VIRIDIFLORA Regel.

A Peruvian phaedaranassa with a single lanceolate leaf about 1 foot long and an umbel of about four nodding flowers, over an inch long, green at the tip and whitish toward the base, on a scape as long as the leaf.

111228 to 111235.

From the Union of South Africa. Seeds presented by the McGregor Museum, Kimberley. Received June 3, 1935.

111228. ACACIA DETINENS Burchell. Mimosaceae.

Zwart Haak (black thorn). A thorny shrub or small tree with small bifoliolate leaves and showy globular heads of small yellow flowers. Native to southern Africa.

For previous introduction see 48754.

111229. ALOE GLOBULIGEMMA Pole Evans. Liliaceae.

A stemless succulent with a rosette of erect-spreading, sword-shaped leaves 1 to 2 feet long, having cartilaginous wavy-toothed margins. The flower stalk, 3 to 4 feet high, carries a dense raceme a foot long of tubular flowers which are globular and red in the bud, becoming elongated and sulphur yellow tinged with red at the base. It is native to South Africa.

For previous introduction see 107275.

111230. ALOE GRANDIDENTATA Salm-Dyck. Liliaceae.

A short-stemmed, fleshy plant with a dense rosette of 12 to 20 bright-green lanceolate leaves a foot or more long, with crowded brown-tipped marginal teeth. The pale-red or reddish-yellow flowers are in three to seven racemes on a stout peduncle up to 2 feet long. Native to South Africa, where it is very robust and spreads rapidly.

For previous introduction see 81119.

111231. CARALLUMA LUTEA N. E. Brown. Asclepiadaceae.

Slang gaap. A dwarf leafless succulent with crowded purple-mottled green stems 4 inches long, sharply four-angled, and armed with stout horizontal teeth nearly half an inch long. The yellow flowers, in a cluster of 20 to 25, are 2 to 3 inches broad and most of them open at the same time. Native to South Africa.

For previous introduction see 78190.

111232. OLEA VERRUCOSA (Roem. and Schult.) Link. Oleaceae. Olive.

A tree up to 30 feet high, native to southern Africa, with linear-lanceolate leaves 3 inches long, covered with small yellow scales beneath, and short axillary panicles of inconspicuous flowers followed by small globose dry fruits.

For previous introduction see 99446.

111233. RHUS LANCEA L. f. Anacardiaceae. Sumac.

Karree-boom. A small bushy tree with gray bark and long-stalked leaves with

111228 to 111235—Continued.

linear-lanceolate leaflets 4 to 5 inches long. It is a valuable hardwood tree for regions of limited rainfall. Native to the Cape of Good Hope.

For previous introduction see 106813.

111234. *TRIRAPHIS FLECKII* Hack. Poa-Grass.

A suberect, annual grass up to a foot high; native to the Union of South Africa.

111235. *VERNONIA* sp. Asteraceae.

From Barberton, a low veld region of the Transvaal.

111236 to 111239. *PHLEUM PRATENSE* L. Poaceae. Timothy.

From Sweden. Seeds presented by the Swedish State Seed Testing Station, Stockholm. Received June 10, 1935.

Introduced for Department specialists.

111236 to 111238. Varieties developed by the Swedish Plant Breeding Institute of Svalöf.

111236. *Bore*.

111237. *Bottnia*.

111238. *Gloria*.

111239. *Kümpe II*, developed at the Weibullsholm Plant Breeding Institute.

111240 to 111245. *TRITICUM AESTIVUM* L. Poaceae. Common wheat.

From Turkey. Seeds presented by the Tobuna Islahi Institute, Istanbul, through H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received June 13, 1925.

The field numbers are those of the West-Enlow series.

Introduced for Department specialists.

111240. No. 1403. *Bursa*.

111241. No. 1404. *Bursa-Kocaleugd*.

111242. No. 1405. *Gebje-Darica*.

111243. No. 1406. *Kocaeli-Gebje*.

111244. No. 1407. *Edirv*.

111245. No. 1408. *Kirkklarele Damirgikoy*.

111246 to 111248. *PHLEUM PRATENSE* L. Poaceae. Timothy.

From Wales. Seeds presented by the Welsh Plant Breeding Station, Aberystwyth. Received June 12, 1935.

Introduced for Department specialists.

111246. No. S-48. A late flowering, leafy type, developed especially for permanent pastures.

111247. No. S-50. A relatively prostrate type with fine leaves; it is essentially a type for permanent pastures; derived from material collected from old British pastures.

111248. No. S-51. A late-flowering leafy type of lighter green color than usual; better as hay than for pasture.

111249 to 111331.

From Rumania. Seeds presented by the Jardin Botanique de l'Université de Cluj. Received May 28, 1935.

111249 to 111331—Continued.

Introduced for Department specialists.

111249. *AEGILOPS* sp. Poaceae. Grass.

111250. *AGROPYRON CRISTATUM* (L.) Gaertn. Poaceae. Wheatgrass.

111251. *AGROPYRON INTERMEDIUM* (Host) Beauv. Poaceae. Wheatgrass.

For previous introduction see 107481.

111252. *AGROSTIS ALBA* L. Poaceae. Redtop.

111253. *AGROSTIS* sp. Poaceae. Bentgrass.

111254. *AIRA* sp. Poaceae. Grass.

111255. *ALOPECURUS PRATENSIS* L. Poaceae. Meadow foxtail.

111256. *ANTHOXANTHUM ODORATUM* L. Poaceae. Sweet vernalgrass.

For previous introduction see 107887.

111257. *ARRHENATHERUM ELATIUS* (L.) Beauv. Poaceae. Tall oatgrass.

For previous introduction and description see 110703.

111258 to 111264. *AVENA* spp. Poaceae. Grass.

111258. *AVENA BARBATA* Brot.

An annual or biennial grass, up to 30 inches high. Native to southern Europe.

For previous introduction see 66004.

111259. *AVENA COMPRESSA* Heuff.

A perennial grass over a foot high. Native to central and southern Europe.

111260. *AVENA DECORA* Janka.

An annual grass about 2 feet high. Native to central Europe.

111261. *AVENA FATUA* L. Wild oats.

For previous introduction see 103326.

111262. *AVENA NUDA* Hoejer. Naked oats.

For previous introduction see 91319.

111263 and 111264. *AVENA SATIVA* L. Oats.

111265. *BECKMANNIA ERUCAEFORMIS* (L.) Host. Poaceae. Sloughgrass.

For previous introduction and description see 110358.

111266. *BOUTELOUA CURTIPENDULA* (Michx.) Torr. Poaceae.

For previous introduction see 106421.

111267. *BRACHYPODIUM PINNATUM* (L.) Beauv. Poaceae. Grass.

For previous introduction and description see 110359.

111268. *BRIZA MAXIMA* L. Poaceae. Big quaking grass.

An annual grass with erect or decumbent culms up to 2 feet high and large showy spikelets. Native to southern Europe.

111269. *BRIZA MEDIA* L. Poaceae. Quaking grass.

A low perennial grass with erect culms.

For previous introduction see 109043.

111249 to 111331—Continued.

111270 to 111279. *BROMUS* spp. Poaceae.
Brome-grass.

111270. *BROMUS ARVENSIS* L.

An annual grass with erect culms up to 2 feet high. Native to eastern Europe.

111271. *BROMUS CATHARTICUS* Vahl.

An annual or biennial grass up to 2 feet high, native to South America. A good forage grass.

111272. *BROMUS COMMUTATUS* Schrad.
Hairy chess.

An annual grass with tufted culms up to 2 feet tall. Native to central Europe.

111273 and 111274. *BROMUS INERMIS* Leyss.
Common brome-grass.

111275. *BROMUS MACROSTACHYUS LANUGINOSUS* (Poir.) Coss. and Dur.

For previous introduction see 64914.

111276. *BROMUS SECALINUS* L. Chess.

111277. *BROMUS STERILIS* L.

111278. *BROMUS TECTORUM* L.

111279. *BROMUS ERECTUS* Huds.

111280. *RHAPHIS GRYLUS* (L.) Desv. Poaceae.
Grass.

A grass which forms a good sod even on dry rocky hillsides.

For previous introduction see 109361.

111281. *COIX LACRYMA-JOBI* L. Poaceae.
Jobs-tears.

111282. *CORNUCOPIAE CUCULLATUM* L. Poaceae.
Grass.

An ornamental annual grass, native to the Mediterranean countries.

For previous introduction see 74200.

111283. *CYNOSURUS CRISTATUS* L. Poaceae.
Crested dogtail.

A tufted perennial 1 to 2 feet high with panicles 2 to 4 inches long.

For previous introduction see 109070.

111284. *CYNOSURUS ECHINATUS* L. Poaceae.
Grass.

For previous introduction see 88721.

111285. *DESCHAMPSIA CAESPITOSA* (L.) Beauv. Poaceae.

For previous introduction and description see 110878.

111286. *DESMAZERIA SICULA* (Jacq.) Dum. Poaceae.
Grass.

An annual bushy upright slender-stemmed grass usually about 8 inches high. Native to the Mediterranean countries.

For previous introduction see 74165.

111287. *ELEUSINE CORACANA* (L.) Gaertn. Poaceae.
Ragi.

For previous introduction see 104078.

111288. *ELYMUS CAPUT-MEDUSAE* L. Poaceae.
Grass.

An annual grass native to Europe.

For previous introduction see 108913.

111249 to 111331—Continued.

111289. *ELYMUS SABULOSUS* Bieb. Poaceae.
Wild rye.

A perennial grass 2 to 4 feet high; native to the Caucasus region.

For previous introduction see 20646.

111290 to 111294. *FESTUCA* spp. Poaceae.
Fescue.

111290. *FESTUCA ELATIOR ARUNDINACEA* (Schreb.) Wimm.

For previous introduction and description see 111173.

111291. *FESTUCA GIGANTEA* (L.) Vill.
Great fescue.

For previous introduction see 107917.

111292. *FESTUCA OVINA* L. Sheep fescue.

111293. *FESTUCA OVINA SULCATA* Hack.

For previous introduction and description see 110981.

111294. *FESTUCA* sp.

111295. *HYSTRIX PATULA* Moench. Poaceae.
Bottlebrush.

111296. *LAGURUS OVATUS* L. Poaceae.
Rabbittail grass.

111297. *LAMARCKIA AUREA* (L.) Moench. Poaceae.
Grass.

An annual grass with decumbent or erect stems 4 to 16 inches tall and soft flat leaves. Native to the Mediterranean region.

111298. *LOLIUM REMOTUM* Schrank. Poaceae.
Grass.

An annual grass, native to Europe, with stems over 2 feet high.

111299. *LOLIUM TEMULENTUM* L. Poaceae.
Darnel.

111300 and 111301. *MELICA ALTISSIMA* L. Poaceae.
Grass.

111302. *MUHLENBERGIA* sp. Poaceae.
Grass.

111303 to 111305. *PANICUM* spp. Poaceae.

111303. *PANICUM CAPILLARE* L.

111304 and 111305. *PANICUM MILIACEUM* L.
Broomcorn millet.

111306. *SETARIA VIRIDIS* L. Poaceae.

111307. *ECHINOCHLOA CRUSGALLI FRUMENTACEA* (Roxb.) W. F. Wight. Poaceae.
Japanese millet.

For previous introduction see 109825.

111308. *PASPALUM RACEMOSUM* Lam. Poaceae.

A tropical American grass with rather coarse tender stems and leaves, reaching a height of about 2 feet.

For previous introduction see 74169.

111309. *PENNISETUM GLAUCUM* (L.) R. Br. Poaceae.
Pearl millet.

For previous introduction see 81210.

111310. *PENNISETUM VILLOSUM* R. Br. Poaceae.
Grass.

For previous introduction see 88932.

111311 to 111313. *PHALARIS* spp. Poaceae.

111311. *PHALARIS CANARIENSIS* L.
Canary grass.

For previous introduction see 88725.

111249 to 111331—Continued.

111312. *PHALARIS MINOR* Retz.

For previous introduction see 109540.

111313. *PHALARIS PARADOXA* L.

An annual tufted grass over 2 feet high, native to the Mediterranean countries.

For previous introduction see 44697.

111314 to 111316. *PHLEUM* spp. Poaceae. Timothy.111314. *PHLEUM MICHELI* All.

Native to southern Europe.

For previous introduction see 30233.

111315 and 111316. *PHLEUM PRATENSE* L.111317 to 111320. *POA* spp. Poaceae. Bluegrass.111317. *POA ANNUA* L.

For previous introduction see 78802.

111318. *POA BADENSIS* Haenke.

A tufted perennial grass; native to central Europe.

111319. *POA* sp.111320. *POA* sp.111321. *POLYPOGON MONSPELIENSIS* (L.) Desf. Poaceae.

An annual European grass up to 2 feet high.

For previous introduction see 109143.

111322. *SECALE CEREALE* L. Poaceae. Rye.111323 to 111326. *SESLERIA* spp. Poaceae.111323 and 111324. *SESLERIA COERULEA* Arduino. Moor grass.

A hardy, blue-gray, perennial grass over a foot high, native to the British Isles.

For previous introduction see 53159.

111325 and 111326. *SESLERIA RIGIDA* Heuff. Grass.

A perennial grass, usually less than a foot high; native to central Europe.

111327. *SETARIA VIRIDIS* (L.) Beauv. Poaceae.111328. *SPOROBOLUS* sp. Poaceae.111329. *STIPA CAPILLATA* L. Poaceae. Feathergrass.

For previous introduction see 109376.

111330. *TRAGUS BERTERONIANUS* Schult. Poaceae. Grass.111331. *UNIOLA LATIFOLIA* Michx. Poaceae. Grass.111332 and 111333. *PHLEUM PRATENSE* L. Poaceae. Timothy.

From England. Seeds purchased from A. G. Leighton Ltd., Whitchurch, Shropshire. Received June 12, 1935.

Early varieties; introduced for Department specialists.

111332. No. S-48.

111333. No. S-50.

111334 to 111338.

From Mexico. Seeds and bulbs presented by Dr. C. A. Purpus, Huatusco, Vera Cruz. Received June 7, 1935.

111334 to 111336. *AECHMEA* spp. Bromeliaceae.111334. *AECHMEA BRACTEATA* (Sw.) Griseb.

For previous introduction and description see 110838.

111335. *AECHMEA MEXICANA* Baker.

For previous introduction and description see 110389.

111336. *AECHMEA NUDICAULIS* (L.) Griseb.

A species widely distributed in tropical America. The horny strap-shaped leaves, 2 to 3 feet long, are armed with small triangular marginal prickles, and the pale lemon-yellow flowers are in a lax drooping spike on a peduncle 1 to 2 feet long.

For previous introduction see 89440.

111337. *ZEPHYRANTHES* sp. Amaryllidaceae.

Bulbs of a variety with white flowers.

111338. *ZEPHYRANTHES* sp. Amaryllidaceae.

Bulbs of a variety with dark-red flowers.

111339 and 111340. *PINUS SYLVESTRIS* L. Pinaceae. Scotch pine.

From the Union of Soviet Socialist Republics. Seeds presented by G. N. Shlykov, Head of Department of New Cultures and Introduction, Lenin Academy of Agricultural Sciences, Leningrad. Received June 4, 1935.

Local varieties of Scotch pine from White Russia, Union of Soviet Socialist Republics; introduced for Department specialists.

111339. No. 2031.

111340. No. 2186. Received under the varietal name *rigensis*.111341. *DALBERGIA COCHINCHINENSIS* Pierre. Fabaceae.

From Cuba. Seeds presented by R. M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received June 4, 1935.

Originally from the Botanic Gardens, Saigon, Cochinchina. A large tropical evergreen tree with a maximum height of about 80 feet, pinnate leaves 6 to 8 inches long, and small white flowers in axillary panicles 3 to 6 inches long. Native to Cochinchina.

111342. *ULMUS AMERICANA* L. Ulmaceae. American elm.

From Canada. Cuttings presented by H. F. Roberts, Department of Botany, University of Manitoba, Winnipeg. Received June 19, 1935.

Winnipeg elm; introduced for Department specialists.

111343 to 111345.

From Ecuador. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received May 23, 1935.

Collected April 19 and 20, 1935, near Archidona, Napo Canton, Napo-Pastaza Province, at 2,000 feet altitude; introduced for Department specialists.

111343. *PASSIFLORA* sp. Passifloraceae.

No. 7284. *Granadilla de Quiso*. A vine found climbing over forest trees. The edible fruits have a thick leathery yellow skin.

111344. (Undetermined.)

No. 7262. *Aya muyo*. A vine with scarlet fruits, found climbing over small trees in open woods.

111345. (Undetermined.)

No. 7265. *Ti-caso*. A climbing shrub with attractive green six-lobed fruits. The vine is occasionally cultivated and the seeds used as food.

111346 and 111347. *SACCHARUM SPONTANEUM* L. Poaceae. Grass.

From New Guinea. Seeds presented by Percival H. Leigh, Port Moresby, Papua. Received June 20, 1935.

For previous introduction and description see 110506.

111346. From Eriama Swamp near Port Moresby, Papua.

111347. From near Rona Falls, 8 miles from Port Moresby.

111348. *TEPHROSIA VOGELII* Hook. f. Fabaceae.

From Africa. Seeds presented by Miss Margaret Haines, Bangassou, French Equatorial Africa. Received June 20, 1935.

Introduced for Department specialists.

For previous introduction and description see 111219.

111349 to 111401.

From China. Seeds presented by H. H. Chung, National Wu-Han University. Wu-chang, Hupeh. Received June 21, 1935.

Collected in Patung, Chiensih, and Enshih Districts of western Hupeh, and introduced for Department specialists.

111349. *CATALPA DUCLOUXII* Dode. Bignoniaceae.

No. 55. A small tree, native to central and western China, with ovate-cordate leaves 4 to 8 inches in length and rose-pink flowers, more than an inch long, borne in corymbose clusters.

For previous introduction see 100520.

111350. *CEPHALOTAXUS* sp. Taxaceae.

No. 11.

111351. *CLEMATIS APIIFOLIA OBTUSIDENTATA* Rehd. and Wils. Ranunculaceae.

No. 104. A handsome woody climber about 12 feet high, with trifoliate leaves, the leaflets coarsely dentate. The white flowers, less than an inch across, are in short dense axillary cymes. Native to western China.

111349 to 111401—Continued.

111352. *CLEMATIS* sp. Ranunculaceae.

No. 105.

111353. *CORNUS KOUSA CHINENSIS* Osborn. Cornaceae.

No. 63. A Chinese dogwood which becomes about 25 feet high, with dark-green, elliptic-ovate leaves nearly 6 inches long and showy white flowers 2 to 3 inches across, which appear in June after the leaves. The fruiting heads are globose, pinkish, and about an inch across.

For previous introduction see 77826.

111354. *COTONEASTER* sp. Malaceae.

No. 82.

111355. *EURYA CHINENSIS* R. Br. Theaceae.

No. 25. An evergreen shrub up to 12 feet high, with obovate leaves over an inch long and inconspicuous greenish flowers in small axillary clusters, followed by berrylike fruits. Native to southern China.

For previous introduction see 102397.

111356. *FRAXINUS GRIFFITHII* Clarke. Oleaceae.

No. 87. An ash about 30 feet high, with leaves composed of 5 to 11 leathery elliptic leaflets about 4 inches long and panicles of small white flowers. Native to western China and northeastern India.

111357. *GYMNOCLADUS CHINENSIS* Baill. Caesalpiaceae.

No. 23. A Chinese tree which closely resembles the Kentucky coffeetree, *Gymnocladus dioica*, but the oblong-obtuse leaflets are smaller and are pubescent on both sides. The lilac-purple flowers are borne in large panicles and appear before the leaves.

For previous introduction see 98373.

111358. *HOVENIA DULCIS* Thunb. Rhamnaceae. Raisintree.

No. 86. A deciduous tree with broadly ovate leaves, often 5 inches long, and inconspicuous white or greenish-white flowers. After flowering, the peduncles thicken and become edible, being brown, pulpy, and of a sweetish taste. Native to China; cultivated in Japan.

For previous introduction see 105319.

111359 and 111360. *ILEX MICROCOCCA* Maxim. Aquifoliaceae. Holly.

A large tree with deciduous, oblong leaves 3 to 4 inches long and very small red berries. Native to China and Japan.

For previous introduction see 100561.

111359. No. 18. 111360. No. 74.

111361. *LIGUSTRUM COMPACTUM* Hook. f. and Thoms. Oleaceae.

No. 95. A shrub or small tree sometimes 30 feet high, native to the mountains of southwestern China. The persistent leaves are 3 to 6 inches long, and the small white flowers in large panicles are followed by blue-black fruits.

For previous introduction see 103428.

111349 to 111401—Continued.

111362. *LIRIODENDRON CHINENSE* (Hemsl.) Sargent. Magnoliaceae.

Chinese tuliptree.

No. 90. An ornamental deciduous tree up to 50 feet high, native to central China. The leaves, 5 to 6 inches long, have four acute or acuminate lobes, rounded or slightly cordate at the base; the tuliplike flower is almost 2 inches long. This species is somewhat more tender than our native species, *Liriodendron tulipifera*.

For previous introduction see 105650.

111363. *LITSEA* sp. Lauraceae.

No. 19. The members of this genus are shrubs or small trees with alternate leathery leaves, small white or yellow flowers in umbellike clusters, and small usually black fruits.

111364. *BENZOIN GRANDIFOLIUM* Rehder. Lauraceae.

No. 59. An evergreen shrub or tree up to 60 feet high, with large oblong or oblanceolate lustrous leaves and umbels of numerous small yellow flowers appearing in March and April. Native to central China.

111365. *LITSEA* sp. Lauraceae.

No. 78.

111366. *LITSEA* sp. Lauraceae.

No. 80.

111367. *ORYZA SATIVA* L. Poaceae. Rice.

No. 53.

111368. *PTEROCARYA PALIURUS* Batalin. Juglandaceae.

No. 60. A deciduous tree up to 60 feet high, with large pinnate leaves and long drooping racemes of winged fruits. Native to central China.

111369. *PAULOWNIA TOMENTOSA* (Thunb.) Sieb. and Zucc. Scrophulariaceae.

Royal paulownia.

No. 57.

111370. *PINUS ARMANDI* Franch. Pinaceae. Armand pine.

No. 101.

For previous introduction see 105326.

111371. *PITOSPORUM GLABRATUM* Lindl. Pitosporaceae.

No. 37. An evergreen shrub or small tree, native to northeastern India and central China, with oblong-lanceolate leaves. The small, fragrant yellow flowers, produced in corymbs, are succeeded by orange fruits.

For previous introduction see 105027.

111372. *PRUNUS* sp. Amygdalaceae.

No. 6.

111373. *PYRACANTHA CRENATO-SERRATA* (Hance) Rehder. Malaceae. Firethorn.

No. 84. A handsome spiny evergreen shrub up to 7 feet tall, with corymbs of small white flowers and scarlet berries. Native to central and western China.

For previous introduction see 72814.

111374. *RHAMNUS UTILIS* Decaisne. Rhamnaceae. Buckthorn.

No. 24. A slender branched shrub up to 10 feet high, with narrow elliptic, yellowish-green leaves 3 to 5 inches long, small yellowish-green flowers, and small black fruits. Native to central and eastern China.

111349 to 111401—Continued.

lowish-green leaves 3 to 5 inches long, small yellowish-green flowers, and small black fruits. Native to central and eastern China.

For previous introduction see 76594.

111375. *RHAMNUS* sp. Rhamnaceae. Buckthorn.

No. 85.

111376. *RHUS* sp. Anacardiaceae.

No. 69.

111377. *RHUS SYLVESTRIS* Sieb. and Zucc. Anacardiaceae.

No. 83. An ornamental tree up to 30 feet high, with 7 to 12 ovate to ovate-oblong leaflets and loose axillary panicles of small brownish-yellow flowers. The handsome foliage turns dark red or scarlet in the autumn. Native to China and Japan.

111378. *STYRAX SUBERIFOLIA* Hook. and Arn. Styracaceae.

No. 48. An evergreen tree up to 30 feet high, with oblong-lanceolate leaves about 2 inches long and small white flowers in few-flowered simple racemes. Native to southeastern China.

111379. *CAMELLIA OLEOSA* (Lour.) Rehd. Theaceae.

No. 64. An evergreen tree up to 25 feet high, with elliptic lanceolate leaves. The flowers, about 1 inch across, are white and fragrant, and a sweet oil, expressed from the seeds, is much esteemed in cooking. Native to eastern China.

For previous introduction see 99229.

111380 to 111384. *VIBURNUM* spp. Caprifoliaceae.

111380. *VIBURNUM BUDDLEIFOLIUM* C. H. Wright. Woolly viburnum.

No. 16. A densely tomentose shrub, native to central China, closely related to *Viburnum veitchii*. It is 6 feet high, with oblong-lanceolate leaves 3 to 6 inches long and dense clusters about 3 inches across of small white flowers and ovoid black fruits.

For previous introduction see 78557.

111381. *VIBURNUM* sp.

No. 17.

111382. *VIBURNUM* sp.

No. 20.

111383. *VIBURNUM BETULIFOLIUM* Batalin.

No. 51. An upright shrub up to 10 feet high, with coarsely toothed leaves, white flowers in cymes 2 to 4 inches wide, and red fruits. Native to central and western China.

For previous introduction see 66609.

111384. *VIBURNUM PROPINQUUM* Hemsl.

No. 9. An evergreen shrub with short lustrous reddish-brown branchlets, elliptic to ovate-lanceolate, nearly entire leaves 2 to 4 inches long, and greenish-white flowers followed by globular blue-black fruits. Native to central and western China.

For previous introduction see 82382.

111349 to 111401—Continued.

111385. CINNAMOMUM PEDUNCULATUM (Thunb.) Presl. Lauraceae.

No. 10. A semitropical evergreen tree 30 to 40 feet high, with thick oblong-lanceolate leaves 3 to 5 inches long and small whitish flowers in axillary corymbs. Native to China and Japan.

111386. (Undetermined.)

No. 14.

111387. (Undetermined.)

No. 15.

111388. ILEX PURPUREA OLDHAMII (Miq.) Loes. Aquifoliaceae.

No. 21. An evergreen tree, about 30 feet tall, with shining-green, spineless leaves, rather more narrow than those of the type, and red berries. Native to southern China.

For previous introduction see 95236.

111389. ACANTHOPANAX sp. Araliaceae.

No. 28. A spiny shrub.

111390. MELIOSMA PANNOSA Hand.-Mazz. Sabiaceae.

No. 33. A small evergreen tree native to southwestern China, with cuneate-lanceolate leaves and large terminal panicles of small yellow fragrant flowers.

111391. ANTIDESMA DELICATULUM Hutch. Euphorbiaceae.

No. 34. A shrub up to 12 feet high, with papery oblong or oblong-lanceolate leaves about 3 inches long and small clusters of inconspicuous flowers followed by bright-red drupes. Native to western China.

111392. ENGELHARDTIA CHRYSOLEPIS Hance. Juglandaceae.

No. 35. A subtropical tree with leathery pinnate foliage resembling that of the walnut and small bracted nuts borne in attractive graceful catkinlike spikes more than a foot long. Native to Kwangtung, China.

111393. GARDENIA AUGUSTA (L.) Merril. Rubiaceae. Cape-jasmine.

No. 42. An evergreen bush 7 feet high, with flowers which resemble a double white camellia, but with most exquisite perfume. The yellowish fruits are used by the Chinese to produce an indelible yellow dye.

For previous introduction see 99174.

111394. DAPHNIPHYLLUM MACROPODIUM Miquel. Euphorbiaceae.

No. 50. An evergreen shrub with handsome elliptic-oblong, dark-green leathery leaves 5 to 8 inches long, inconspicuous flowers, and small ellipsoidal fruits in axillary racemes 3 inches long. Native to eastern Asia.

111395. DALBERGIA DYERIANA Prain. Fabaceae.

No. 52. A large shrubby climber with the branchlets sometimes hooked, pinnate leaves, and small whitish flowers in axillary panicles. Native to central and western China.

111396. MAGNOLIA OFFICINALIS Rehd. and Wils. Magnoliaceae.

No. 61. A deciduous magnolia up to 45 feet high, with obovate, pale yellow-

111349 to 111401—Continued.

ish-green leaves over a foot long and large white fragrant flowers produced in early summer at the end of the leafy young growth. Native to western China.

111397. IDESIA POLYCARPA Maxim. Flacourtiaceae.

No. 68.

111398. DAPHNIPHYLLUM GLAUDESCENS Blume. Euphorbiaceae.

No. 73. A tropical evergreen tree with entire, oblong-lanceolate leaves, inconspicuous flowers, and black fleshy drupes. The tree is valued for the ornamental character of its laurel-like foliage. Native to the East Indies.

111399. LIGUSTRUM sp. Oleaceae. Privet.

No. 92.

111400. POUPARTIA AXILLARIS (Roxb.) King and Prain. Anacardiaceae.

No. 94. A deciduous tree, native to western China, where it becomes 50 to 80 feet high with a gray-barked trunk often 3 feet in diameter near the base. The oval, yellow fruits, about an inch long, are eaten by the Chinese.

111401. (Undetermined.)

No. 96.

111402. CAPSICUM ANNUUM L. Solanaceae.

From Europe. Seeds collected by Dr. Edgar Anderson, Arnold Arboretum Balkan Expedition. Received June 15, 1935.

Croatian peppers; from Krahan, Zagreb, Yugoslavia. A sweet yellow pepper of very high quality; commonly grown in the northern Balkans.

111403. OURATEA AGROPHYLLA (V a n Tiegh.) Urb. Ochnaceae.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received June 20, 1935.

An evergreen shrub or small tree, native to Cuba, with thick shining, coarsely dentate, oval-oblong leaves, and showy yellow flowers in terminal panicles.

111404 to 111410.

From Panama. Seeds presented by Dr. Menalco Solis, Department of Agriculture and Industries, Panama. Received June 19, 1935.

Introduced for Department specialists.

111404. CAPSICUM ANNUUM L. Solanaceae. Redpepper.

Morrón.

111405 to 111409. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

111405. Ciruelo.

111406. Mercado.

111407. Monte Oscuro.

111408. Pacora.

111409. Soná.

111410. SOLANUM MELONGENA L. Solanaceae. Eggplant.

Calidad.

111411. ZEPHYRANTHES sp. **Amaryllidaceae.**

From Mexico. Seed and bulbs presented by Dr. C. A. Purpus, Huatusco, Vera Cruz. Received June 24, 1935.

Collected from the mountains near Huatusco.

111412 to 111414.

From Australia. Plants presented by George W. Althofer, Dripstone, New South Wales. Received June 25, 1935.

Introduced for Department specialists.

111412. AMYGDALUS PERSICA NECTARINA Ait. **Amygdalaceae.** **Nectarine.**
Irrewarra nectarine.

111413 and 111414. PRUNUS SALICINA Lindl. **Amygdalaceae.** **Japanese plum.**

111413. *Narrabeen.* A large flattish red plum with yellow dots. The yellow flesh is juicy and sugary, and the stone is small; a good cropper.

111414. *Wilson.* A medium large, round, bright-crimson plum with yellow flesh.

111415. BRASSICA RAPA L. **Brassicaceae.** **Turnip.**

From China. Seeds presented by Dr. J. F. Rock. Received June 20, 1935.

Introduced for Department specialists.

Rape turnip. A turnip grown by the Chinese tribes of southwestern China, as well as by the Tibetans. The young leaves, as well as the root, are used as a vegetable.

111416 and 111417.

From Siam. Seeds presented by Mrs. William Harris, Prince Royal College, Chiangmai. Received June 19, 1935.

111416. CASSIA sp. **Caesalpinaceae.**

A cassia which blooms in Siam from May through July. The deep-pink flowers and leaves appear at the same time.

111417. CASSIA sp. **Caesalpinaceae.**

A cassia with light-pink flowers that appear before the leaves. The flowering period in Siam is from 3 to 4 weeks, from late March to early April.

111418 and 111419. MACADAMIA TERNI-FOLIA F. Muell. **Proteaceae.**

Queensland-nut.

From Australia. Seeds purchased from S. M. Greer, Upper Dungary, Tweed River, New South Wales. Received June 25, 1935.

An evergreen tree up to 50 feet high, native to eastern Australia. It is cultivated for its edible nuts which have sweet white flesh with the flavor of chestnuts, incased in a shell which is typically very hard.

For previous introduction see 103735.

111418. A medium-sized nut with a thin shell.

111419. *Mammoth.* A variety with large nuts.

111420 and 111421. SOLANUM TUBEROSUM L. **Solanaceae.** **Potato.**

From Colombia. Tubers collected by W. A. Archer, Bureau of Plant Industry. Received June 26, 1935.

111420 and 111421—Continued.

Cultivated potatoes collected May 15, 1935, between Dos Rios and La Union, El Cauca; introduced for Department specialists.

111420. No. 3396. *Guata.*

111421. No. 3397. *Chaucha.*

111422. CITRUS GRANDIS (L.) Osbeck. **Rutaceae.** **Grapefruit.**

From Brazil. Budwood presented by João Dierberger, Jr., São Paulo. Received June 28, 1935.

Introduced for Department specialists.

Zambôa variety. Budwood from a tree growing on the farm of Dierberger & Cia, Fazenda Citra, Limeira.

111423. DIGITARIA LITTORALIS PROSTRATA Stent. **Poaceae.** **Grass.**

From the Union of South Africa. Seeds presented by D. Moses, African Explosives and Industries, Johannesburg. Received June 20, 1935.

Introduced for Department specialists.

A densely tufted grass with numerous runners rooting at the nodes.

For previous introduction see 91766.

111424 and 111425.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received June 17, 1935.

Originally from La Mortola, Ventimiglia, Italy; introduced for Department specialists.

111424. ALOE. **Liliaceae.**

A hybrid of *Aloe striata*; other parent unknown.

111425. DYCKIA FRIGIDA (Linden) Hook. f. **Bromeliaceae.**

A stemless succulent with a dense rosette of spiny, sword-shaped leaves up to 2 feet long, and a lateral ascending scape with a panicle about a foot long of showy yellow flowers. Native to Brazil.

111426 and 111427. ACTINIDIA CHINENSIS Planch. **Dilleniaceae.** **Yangtao.**

From New Zealand. Seeds presented by H. R. Wright, Avondale, Auckland. Received June 25, 1935.

Introduced for Department specialists.

For previous introduction see 99144.

111428. TROPAEOLUM TUBEROSUM Ruiz and Pav. **Tropaeolaceae.** **Nasturtium.**

From Colombia. Tubers collected by W. A. Archer, Bureau of Plant Industry. Received June 26, 1935.

No. 3398. *Cubios, cubia.* Collected between Dos Rios and La Union, El Cauca, May 11, 1935. A tuberous-rooted herbaceous climber, with red and yellow flowers, native to the highlands of northern South America, where the tubers are boiled and eaten as a vegetable. The plant is said to be able to withstand a slight frost.

For previous introduction see 99110.

111429 and 111430. ZEPHYRANTHES spp.
Amaryllidaceae. **Zephyrily.**

From Mexico. Bulbs purchased from Dr. C. Conzatti, Oaxaca de Juarez, Oaxaca. Received June 28, 1935.

111429. ZEPHYRANTHES CONZATTI Greenm.

A Mexican zephyranthes with a showy rose-colored or crimson-purple flower, on a scape about 7 inches high, appearing before the leaves. It thrives best on dry slopes.

111430. ZEPHYRANTHES SESSILIS Herb.

A Mexican zephyrily with three to six narrow linear leaves up to 1 foot long and an equally long scape bearing a showy white flower tinged with red.

111431 to 111465.

From Colombia. Material collected by W. A. Archer, Bureau of Plant Industry. Received June 20, 1935.

Introduced for Department specialists; unless otherwise stated, the material is seeds.

111431. HIPPEASTRUM EQUESTRE (L. f.)
Herb. Amaryllidaceae.

No. 3413. *Cebolleta*. From Moscoa, Comisario del Putumayo, May 21, 1935. Bulbs of a West Indian hippeastrum with six to eight strap-shaped leaves over a foot long, and an umbel of two to four red flowers over 4 inches long.

111442. BACCHARIS TRINERVIS RHEXIODES
(H. B. K.) Baker. Asteraceae.

No. 3411. From Moscoa, Comisario del Putumayo, May 21, 1935. A semiclambering lax herb 10 feet high, with narrow leaves about 3 inches long and yellow flower heads in dense panicles. Native to Brazil.

111433. STIGMAPHYLLON BOGOTENSE Tr. and
Planch. Malpighiaceae.

No. 3385. Collected near Popayan, May 10, 1935. A woody vine 20 feet high, with gummy buds and flowers. Native to Colombia.

111434 to 111438. BOMAREA spp. Amaryllidaceae.

The bomareas are a large genus of twining plants, native to tropical America. They have showy, often spotted flowers, usually in umbels.

111434. BOMAREA sp.

No. 3424. *Peca*. Sibundoy, Comisario del Putumayo, May 25, 1935. Tubers and rootstocks of a species with red flowers.

111435. BOMAREA sp.

No. 3384. Collected near Popayan, May 10, 1935. A form with orange-yellow flowers.

111436. BOMAREA OLIGANTHA Baker.

No. 3378. From the roadside between Popayan and Tambo, May 7, 1935.

111437. BOMAREA sp.

No. 3406. Collected in the Paramo del Tabano, Comisario del Putumayo, May 15, 1935. A vine 2 to 3 feet long with red flowers.

111431 to 111465—Continued.

111438. BOMAREA sp.

No. 3405. From the Paramo del Tabano, Comisario del Putumayo, May 15, 1935. Collected from plants growing in damp moss; the flower bracts were red and the flowers yellow.

111439. BUDDLEIA AMERICANA L. Loganiaceae.

No. 3421. From the mountains between Mocoa and Sibundoy, Comisario del Putumayo, May 24, 1935. A shrub 4 to 5 feet high with white flowers.

111440. CALEA GLOMERATA Klatt. Asteraceae.

No. 3376. *Chicharon*. Collected along the roadside between Popayan and Tambo, May 7, 1935. A clambering shrub 15 feet high with aromatic leaves. Native to Colombia.

111441 to 111444. CARICA CANDAMARCENSIS
Hook. f. **Papaya.**

A small papaya, the fruit less than 4 inches long, with very thin flesh which is highly acid and is used only in making preserves and sirups. The fruit is orange yellow when ripe, and the pale-yellow flesh has a spicy, aromatic flavor and fragrance, but is never eaten fresh.

For previous introduction see 106501.

111441. No. 3395. *Chilauca*. From the market at Pasto, May 15, 1935.

111442. No. 3417. From the mountains between Mocoa and Sibundoy, Comisario del Putumayo, May 19, 1935.

111443. No. 3372. *Higo*. From the market at Popayan, May 5, 1935. A form from the cold regions. The fruit is oval and smooth, i. e., not ribbed.

111444. No. 3371. *Higuillo*. From the market at Popayan, May 7, 1935. A form which grows in cold regions. The yellow fruits are five ribbed and slightly tapered towards the stem.

111445. CLEOME ANOMALA H. B. K. Capparidaceae.

No. 3420. *Mano de oso*. From Sibundoy, Comisario del Putumayo, May 18, 1935.

For previous introduction and description see 111212.

111446. GYNANDROPSIS GRACILIS (Tr. and
Planch.) Macbride. Capparidaceae.

No. 3423. From the mountains between Mocoa and Sibundoy, Comisario del Putumayo, May 24, 1935. An unarmed shrub with slender branches, ternate leaves, and orange-red flowers in long graceful terminal racemes. Native to Colombia.

111447. CLEOME sp. Capparidaceae.

No. 3427. From Mocoa, Comisario del Putumayo, May 19, 1935. An herb 3 to 4 feet high with greenish flowers.

111448. CLIBADIUM GLABRESCENS Blake.
Asteraceae.

No. 3415. From the mountains between Mocoa and Sibundoy, Comisario del Putumayo, May 19, 1935. A slender aromatic shrub 4 to 6 feet high.

111431 to 111465—Continued.

111449. *CORIARIA THYMIFOLIA* Humb. and Bonpl. Coriariaceae.

No. 3428. From near Santiago, Comisario del Putumayo, May 27, 1935. A clambering shrub about 10 feet high with black fruits. The bark and roots are said to be rich in tannin.

For previous introduction see 46224.

111450. *TEPHROSIA CINEREA* (L.) Pers. Fabaceae.

No. 3387. From El Bordo, Departamento El Cauca, May 10, 1935. An herb 6 to 10 inches high with pink flowers.

For previous introduction and description see 111034.

111451. *TEPHROSIA TOXICARIA* (Sw.) Pers. Fabaceae.

No. 3409. *Guaranga*. From Mocoa, Comisario del Putumayo, May 21, 1935.

111452 and 111453. *DIOCLEA SERICEA* H. B. K. Fabaceae.

For previous introduction and description see 110992.

111452. No. 3367. From Capinero, near Bogotá, April 26, 1935.

111453. No. 3391. *Juan Blanco*. From El Bordo, Departamento El Cauca, May 10, 1935.

111454. *EUPHORBIA COTINIFOLIA* L. Euphorbiaceae.

No. 3389. *Manzanillo*. From El Bordo, Departamento El Cauca, May 10, 1935. An unarmed shrub 10 to 15 feet high, with opposite, ovate, long-pointed leaves up to 2 inches long, and small inconspicuous flowers in terminal cymes. Native to the West Indies.

111455. *INDIGOFERA LESPEDEZIOIDES* H. B. K. Fabaceae.

No. 3381. *Barbasquilla*. From Gelina, near Popayan, May 9, 1935. A slender woody perennial, up to 3 feet high, with small leaflets and salmon-colored flowers in axillary racemes. Native to Mexico.

111456. *INDIGOFERA SUFFRUTICOSA* Mill. Fabaceae. Indigo.

No. 3392. *Tinta*. From Dos Rios, Departamento El Cauca, May 11, 1935.

111457. *LUPINUS* sp. Fabaceae.

No. 3400. *Chocho*. Near Pasto, May 15, 1935. A shrub 2 feet high.

111458. *LYCOSERIS OBLONGIFOLIA* Rusby. Asteraceae.

No. 3388. From El Bordo, Departamento El Cauca, May 10, 1935. A woody vine up to 30 feet long, with thick oblong leaves about 6 inches long and small solitary terminal heads of purple flowers. Native to Colombia.

111459. *NICOTIANA TABACUM* L. Solanaceae.

No. 3414. From Florencia, Comisario del Putumayo, May 1935.

111460 and 111461. *PASSIFLORA CUMBALENSIS* (Karst.) Harms. Passifloraceae.

A woody climber with trilobed leaves, the leaflets rhomboid, and solitary axillary pink flowers. Native to Colombia.

111431 to 111465—Continued.

111460. No. 3401. *Taosá*. From the Paramo del Tabano, Comisario del Putumayo, May 15, 1935.

111461. Collected in Guayaquil, Ecuador, June 1935.

111462. *SOLANUM* sp. Solanaceae.

No. 3407. *Culebrilla*. From Mocoa, Comisario del Putumayo, May 21, 1935. A shrub up to 3 feet high, with yellow flowers striped with brown and red fruits.

111463 and 111464. *SPIGELIA PEDUNCULATA* H. B. K. Loganiaceae.

Guambia. From Comisario del Putumayo. A herbaceous perennial about 4 feet high, with pink flowers. Native to Colombia.

111463. No. 3426. Collected May 23, 1935, at Sibundoy.

111464. No. 3419. Collected May 18, 1935, at San Francisco.

111465. *VIOLA TRICOLOR* L. Violaceae. Common pansy.

No. 3399. Collected near Pasto, Comisario del Putumayo, May 15, 1935. Seen several times, always near habitations.

For previous introduction see 28262.

111466 to 111470.

From British Honduras. Seeds purchased from William A. Schipp, Punta Gorda, Temash River. Received June 26, 1935.

Introduced for Department specialists.

111466. *CHAMAEDOREA GEONOMAIFORMIS* Wendl. Phoenicaceae. Palm.

A small graceful palm about 4 feet high, with deeply pinnatisect leaves about 9 inches long. Native to Guatemala.

For previous introduction see 50520.

111467. *CHAMAEDOREA OBLONGATA* Mart. Phoenicaceae. Palm.

An erect spineless palm with a slender trunk about 8 feet high, with large pinnate leaves of 10 to 14 narrow segments. Native to Brazil.

111468 to 111470. *GEONOMA* spp. Phoenicaceae. Palm.

111468. *GEONOMA* sp.

111469. *GEONOMA BINERVIA* Oerst.

A slender spineless palm up to 18 feet high, with pinnate leaves over 4 feet long and small black fruits. Native to Central America.

111470. *GEONOMA LONGEPETIOLATA* Oerst.

A slender palm, native to Central America, with a smooth trunk 8 feet high and pinnatisect leaves over a foot long.

111471 to 111473. *PHLEUM PRATENSE* L. Poaceae. Timothy.

From Sweden. Seeds presented by Dr. G. Nilsson Lissner, Swedish Plant Breeding Institute, Svalöf. Received June 28, 1935.

Varieties developed at the Plant Breeding Institute, Svalöf; introduced for Department specialists.

111471 to 111473—Continued.

111471. *Bors.*111472. *Bottmia.*111473. *Gloria.*111474 to 111476. *PHLEUM PRATENSE L.*
Poaceae. Timothy.

From the Union of Soviet Socialist Republics. Seeds presented by G. N. Shlykov, Department of New Cultures and Introduction, Institute of Plant Industry, Leningrad. Received June 27, 1935.

Introduced for Department specialists.

111474. No. 9862. From the Krasnie Experiment Station, Moscow region.

111475. No. 17799. From Kolbasi.

111476. No. 18180. From Morshansk.

111477 to 111585.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Plant Industry, Leningrad, through H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received June 20, 1935.

The field numbers are those of the Westover and Enlow series.

Introduced for Department specialists.

111477 to 111502. *AGROPYRON* spp. *Poaceae.* Wheatgrass.111477 to 111480. *AGROPYRON CRISTATUM* (L.) Gaertn. Crested wheatgrass.

111477. No. 1409. 111479. No. 1412.

111478. No. 1410. 111480. No. 1413.

111481. *AGROPYRON DESERTORUM* (Fisch.) Schult.

No. 1411.

111482 to 111484. *AGROPYRON RAMOSUM* (Trin.) C. Richt.

A perennial grass about a foot high, native to central Asia.

111482. No. 1414. 111484. No. 1416.

111483. No. 1415.

111485 to 111498. *AGROPYRON REPENS* (L.) Beauv. Quackgrass.

111485. No. 1417. 111492. No. 1424.

111486. No. 1418. 111493. No. 1425.

111487. No. 1419. 111494. No. 1426.

111488. No. 1420. 111495. No. 1427.

111489. No. 1421. 111496. No. 1428.

111490. No. 1422. 111497. No. 1430.

111491. No. 1423. 111498. No. 1431.

111499 to 111502. *AGROPYRON* spp.

111499. No. 1429. 111501. No. 1433.

111500. No. 1432. 111502. No. 1434.

111503 to 111513. *AGROSTIS ALBA* L. *Poaceae.* Redtop.

111503. No. 1435. 111509. No. 1444.

111504. No. 1436. 111510. No. 1445.

111505. No. 1437. 111511. No. 1446.

111506. No. 1440. 111512. No. 1447.

111507. No. 1442. 111513. No. 1441.

111508. No. 1443.

111477 to 111585—Continued.

111514 to 111517. *ALOPECURUS* spp. *Poaceae.*111514. *ALOPECURUS PRATENSIS* L.

No. 1448.

111515 to 111517. *ALOPECURUS ARUNDINACEUS* Poir.

111515. No. 1449. 111517. No. 1451.

111516. No. 1450.

111518. *ASTRAGALUS ONOBRYCHIS* L. *Poaceae.*

No. 1452.

For previous introduction see 101410.

111519. *ASTRAGALUS SEMIBILOULARIS* DC. *Fabaceae.*

No. 1453. An erect herbaceous perennial; native to Siberia.

111520. *BECKMANNIA SYZYGACHNE* (Steud.) Fern. *Poaceae.*

No. 1455.

111521 to 111534. *BROMUS* spp. *Poaceae.* Bromegrass.111521 to 111528. *BROMUS INERMIS* Leyss. Common bromegrass.

111521. No. 1457. 111525. No. 1461.

111522. No. 1458. 111526. No. 1462.

111523. No. 1459. 111527. No. 1463.

111524. No. 1460. 111528. No. 1464.

111529. *BROMUS TECTORUM* L.

No. 1465.

111530. *BROMUS TOMENTELLUS* Boiss.

No. 1456.

111531. *BROMUS SIBIRICUS* Drob.

No. 1466.

111532. *BROMUS INERMIS* Leyss. Common bromegrass.

No. 1467.

111533. *BROMUS* sp.

No. 1485.

111534. *BROMUS* sp.

No. 1487.

111535 to 111544. *DACTYLIS GLOMERATA* L. *Poaceae.* Orchard grass.

111535. No. 1469. 111540. No. 1474.

111536. No. 1470. 111541. No. 1475.

111537. No. 1471. 111542. No. 1476.

111538. No. 1472. 111543. No. 1477.

111539. No. 1473. 111544. No. 1478.

111545 and 111546. *DESCHAMPSIA CAESPITOSA* (L.) Beauv. *Poaceae.* Grass.

111545. No. 1438. 111546. No. 1439.

111547 to 111557. *ELYMUS* spp. *Poaceae.* Wild-rye.111547 and 111548. *ELYMUS DAHURICUS* Turcz.

111547. No. 1479. 111548. No. 1480.

111549 to 111553. *ELYMUS JUNCEUS* Fisch.

111477 to 111585—Continued.

111549. No. 1481. 111552. No. 1509.
 111550. No. 1507. 111553. No. 1510.
 111551. No. 1508.
 111554 and 111555. *ELYMUS DASYSTACHYS* Trin.
 111554. No. 1482. 111555. No. 1483.
 111556. *ELYMUS SIBIRICUS* L.
 No. 1484.
 111557. *ELYMUS* sp.
 No. 1486.
 111558 to 111567. *FESTUCA* spp. Poaceae.
 Fescue.
 111558 to 111560. *FESTUCA ELATIOR* L.
 Meadow fescue.
 111558. No. 1492. 111560. No. 1494.
 111559. No. 1493.
 111561 to 111564. *FESTUCA OVINA* L.
 Sheep fescue.
 111561. No. 1488. 111563. No. 1490.
 111562. No. 1489. 111564. No. 1491.
 111565 and 111566. *FESTUCA RUBRA* L.
 Red fescue.
 111565. No. 1495. 111566. No. 1496.
 111567. *FESTUCA* sp.
 No. 1497.
 111568 to 111572. *GALEGA* spp. Fabaceae.
 Goatsrue.
 111568 to 111571. *GALEGA ORIENTALIS*
 Lam.
 111568. No. 1498. 111570. No. 1500.
 111569. No. 1499. 111571. No. 1501.
 111572. *GALEGA* sp.
 No. 1502.
 111573 to 111575. *HEDYSARUM* spp. Fa-
 baceae.
 111573 and 111574. *HEDYSARUM HEDYSAR-
 OIDES* (L.) Stuntz.
 111573. No. 1503. 111574. No. 1504.
 111575. *HEDYSARUM POLYMORPHUM*
 Ledeb.
 No. 1505.
 For previous introduction see 60342.
 111576. *HIEROCHLOE ODORATA* (L.) Beauv.
 Poaceae. Sweetgrass.
 No. 1506.
 111577 and 111578. *KOELERIA GRACILIS*
 Pers. Poaceae. Grass.
 111577. No. 1511. 111578. No. 1512.
 111579 to 111581. *LATHYRUS PRATENSIS* L.
 Fabaceae. Yellow vetchling.
 111579. No. 1513. 111581. No. 1515.
 111580. No. 1514.
 111582. *LOTUS CORNICULATUS* L. Faba-
 ceae. Birdsfoot trefoil.
 No. 1517.
 For previous introduction see 91982.

111477 to 111585—Continued.

111583. *ORYZOPSIS* sp. Poaceae. Grass.
 No. 1468.
 111584. *PUCCINELLIA DISTANS* (L.) Parl.
 Poaceae. Grass.
 No. 1454.
 111585. *TRIFOLIUM* sp. Fabaceae. Clover.
 No. 1516.
 111586 to 111602.
 From Colombia. Seeds collected by W. A.
 Archer, Bureau of Plant Industry. Re-
 ceived in May and June 1935.
 Introduced for Department specialists.
 111586. *BACCHARIS MORITZIANA* Hieron.
 Asteraceae.
 No. 3375. *Almanga*. Collected May 7,
 1935, on the roadside between Popayan
 and Tambo. A clambering shrub from
 10 to 15 feet high. Native to northern
 South America.
 111587. *BRIZA MINOR* L. Poaceae.
 Little quaking grass.
 No. 3370. *Illusion*. From the market
 at Popayan, May 7, 1935. An erect an-
 nual grass up to 3 feet high; sold as an
 ornamental.
 For previous introduction see 109044.
 111588. *CESTRUM MUTISII* Willd. Solana-
 ceae.
 No. 3346. *Tinto*. From Salto de Te-
 quendama, near Bogota, April 22, 1935.
 For previous introduction see 110847.
 111589 and 111590. *CLIBADIUM SURINA-
 MENSE* L. Asteraceae.
 111589. No. 3356. Collected near Cali,
 May 2, 1935. A shrub up to 5 feet
 high.
 111590. No. 3374. *Pintadilla*. Col-
 lected along the road between Po-
 payan and Tambo, May 7, 1935. A
 shrub up to 10 feet high.
 111591. *TEPHROSIA TOXICARIA* (Sw.) Pers.
 Fabaceae.
 No. 3382. *Barbasco*. Collected near
 the railroad tunnel, at Helena, near Po-
 payan, May 9, 1935.
 111592. *BENTHAMANTHA CARIBAEA* (Jacq.)
 Kuntze. Fabaceae.
 No. 3341. From Tocaima, Finca Chu-
 cunday, Departamento Cundinamarca,
 May 19, 1935.
 For previous introduction and descrip-
 tion see 11213.
 111593. *EROSEMA VIOLACEA* (Aubl.) Don.
 Fabaceae.
 No. 3380. Collected at Helena, near
 Popayan, May 9, 1935. A slender un-
 branched herb, 3 feet high, with yellow
 flowers.
 For previous introduction see 97844.
 111594. *MYRCIA XILOPIOIDES* (H. B. K.)
 DC. Myrtaceae.
 No. 3366. *Namu*. From Cali, May 3,
 1935. A tropical evergreen shrub up to
 10 feet high, with lanceolate leaves and
 numerous small white flowers in axillary
 panicles. Native to Colombia.

111586 to 111602—Continued.

111595. *FICUS ARCHERI* Standley. Moraceae.

No. 3369. *Uvillo*. From Granja, Departamento de Cauca, Popayan, May 7, 1935.

111596. *PALICOUREA LINEARIFLORA* Wernham. Rubiaceae.

No. 3353. From Chapinero, near Bogotá, April 26, 1935. A slender shrub 10 to 15 feet high, with long drooping branches and pale greenish-cream flowers. Native to Colombia.

111597. *PASSIFLORA* sp. Passifloraceae.

No. 3368. *Triponas*. From the market at Cali, May 4, 1935. A small pale-yellow fruit overlaid with yellow mottling and stripes. The acid flavor resembles that of the grapefruit.

111598. *PETREA* sp. Verbenaceae.

No. 3358. From the Agricultural Experiment Station, Palmira, May 2, 1935. A small ornamental tree, cultivated for its blue flowers.

111599. *PHASEOLUS LATHYROIDES* L. Fabaceae.

No. 3363. From near Cali, May 2, 1935. A bean which is apparently indigenous. A semierect annual legume which makes a good growth on poor land. The dark-red flowers are very ornamental. It is cultivated as a cover crop.

For previous introduction see 106931.

111600. *TERAMNUS UNCINATUS* (L.) Sw. Fabaceae.

No. 3377. Along the roadside between Popayan and Tambo, May 7, 1935. A small vine with a fleshy taproot, native to tropical America. It is used as forage in Brazil and the Virgin Islands.

For previous introduction see 109986.

111601. *AMBROSIA* sp. Ambrosiaceae.

No. 3256. *Altamisa*. From the highway between Pamplona and Malaga, March 24, 1935.

111602. *AMBROSIA* sp. Ambrosiaceae.

No. 3219. *Altamisa*. Between Cucuta and Pamplona, March 20, 1935.

111603 to 111735.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Plant Industry, Leningrad, through H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received June 21, 1935.

Introduced for Department specialists.

The field numbers are those of the Westover and Enlow series.

111603. *BECKMANNIA ERUCAEFORMIS* (L.) Host. Poaceae. Sloughgrass.

No. 1629.

111604. *KOELERIA CRISTATA* (L.) Pers. Poaceae. Grass.

No. 1599.

111605 to 111685. *MEDICAGO* spp. Fabaceae.

111605 to 111617. *MEDICAGO FALCATA* L. Yellow-flowered alfalfa.

111605. No. 1518. 111612. No. 1525.

111603 to 111735—Continued.

111606. No. 1519. 111613. No. 1526.

111607. No. 1520. 111614. No. 1527.

111608. No. 1521. 111615. No. 1528.

111609. No. 1522. 111616. No. 1529.

111610. No. 1523. 111617. No. 1530.

111611. No. 1524.

111618. *MEDICAGO HEMICYCLA* Grossh.

No. 1531. A perennial alfalfa with ascending stems about 2 feet high. Native to the Transcaucasus region, at altitudes between 2,000 and 6,000 feet.

111619 to 111680. *MEDICAGO SATIVA* L. Alfalfa.

111619. No. 1532. 111650. No. 1563.

111620. No. 1533. 111651. No. 1564.

111621. No. 1534. 111652. No. 1565.

111622. No. 1535. 111653. No. 1566.

111623. No. 1536. 111654. No. 1567.

111624. No. 1537. 111655. No. 1568.

111625. No. 1538. 111656. No. 1569.

111626. No. 1539. 111657. No. 1570.

111627. No. 1540. 111658. No. 1571.

111628. No. 1541. 111659. No. 1572.

111629. No. 1542. 111660. No. 1573.

111630. No. 1543. 111661. No. 1574.

111631. No. 1544. 111662. No. 1575.

111632. No. 1545. 111663. No. 1576.

111633. No. 1546. 111664. No. 1577.

111634. No. 1547. 111665. No. 1578.

111635. No. 1548. 111666. No. 1579.

111636. No. 1549. 111667. No. 1580.

111637. No. 1550. 111668. No. 1581.

111638. No. 1551. 111669. No. 1582.

111639. No. 1552. 111670. No. 1583.

111640. No. 1553. 111671. No. 1584.

111641. No. 1554. 111672. No. 1585.

111642. No. 1555. 111673. No. 1586.

111643. No. 1556. 111674. No. 1587.

111644. No. 1557. 111675. No. 1588.

111645. No. 1558. 111676. No. 1589.

111646. No. 1559. 111677. No. 1590.

111647. No. 1560. 111678. No. 1591.

111648. No. 1561. 111679. No. 1592.

111649. No. 1562. 111680. No. 1593.

111681 to 111685. *MEDICAGO* spp.

111681. No. 1594. 111684. No. 1597.

111682. No. 1595. 111685. No. 1598.

111683. No. 1596.

111686. *MELICA CILIATA* L. Poaceae.

No. 1600.

111687 to 111694. *MELILOTUS* spp. Fabaceae. Sweetclover.

111687 to 111689. *MELILOTUS ALBA* Desf. White sweetclover.

111687. No. 1601. 111689. No. 1603.

111688. No. 1602.

111603 to 111735—Continued.

- 111690 to 111692. *MELILOLUS DENTATA* (Waldst. and Kit.) Pers.
 111690. No. 1604. 111692. No. 1606.
 111691. No. 1605.
- 111693 and 111694. *MELILOLUS OFFICINALIS* (L.) Lam.
 111693. No. 1607. 111694. No. 1608.
111695. *ONOBRYCHIS ARENARIA* DC. Fabaceae.
 No. 1609.
 For previous introduction see 108658.
111696. *ONOBRYCHIS VULGARIS* Hill. Fabaceae. **Sanfoin.**
 No. 1610.
- 111697 to 111700. *PHALARIS ARUNDINACEA* L. Poaceae. **Reed canary grass.**
 111697. No. 1611. 111699. No. 1613.
 111698. No. 1612. 111700. No. 1614.
- 111701 to 111708. *PHLEUM* spp. Poaceae. **Timothy.**
 111701 to 111706. *PHLEUM PHLEOIDES* (L.) Karst.
 111701. No. 1615. 111704. No. 1618.
 111702. No. 1616. 111705. No. 1619.
 111703. No. 1617. 111706. No. 1620.
- 111707 and 111708. *PHLEUM PRATENSE* L.
 111707. No. 1621. 111708. No. 1622.
- 111709 to 111720. *POA* spp. Poaceae. **Bluegrass.**
 111709 to 111716. *POA PRATENSIS* L. **Kentucky bluegrass.**
 111709. No. 1624. 111713. No. 1631.
 111710. No. 1626. 111714. No. 1623.
 111711. No. 1628. 111715. No. 1625.
 111712. No. 1630. 111716. No. 1627.
111717. *POA* sp.
 No. 1632.
111718. *POA* sp.
 No. 1633.
111719. *POA PRATENSIS* L. **Kentucky bluegrass.**
 No. 1634.
111720. *POA* sp.
 No. 1635.
- 111721 to 111734. *TRIFOLIUM* spp. Fabaceae. **Clover.**
 111721. *TRIFOLIUM REPENS* L. **White clover.**
 No. 1636.
- 111722 to 111731. *TRIFOLIUM PRATENSE* L. **Red clover.**
 111722. No. 1639. 111727. No. 1645.
 111723. No. 1640. 111728. No. 1646.
 111724. No. 1641. 111729. No. 1647.
 111725. No. 1642. 111730. No. 1648.
 111726. No. 1643. 111731. No. 1649.

111603 to 111735—Continued.

- 111732 to 111734. *TRIFOLIUM REPENS* L. **White clover.**
 111732. No. 1637. 111734. No. 1644.
 111733. No. 1638.
111735. *VICIA CRACCA* L. Fabaceae. **Cow vetch.**
 No. 1650.
111736. *AMARYLLIS* sp. **Amaryllidaceae.**
 From Brazil. Bulbs collected near Rio de Janeiro by Dr. Doris Cochran, United States National Museum. Received June 10, 1935.
 Collected about 50 yards from the sea-coast.
- 111737 to 111748.
 From Wales. Seeds collected in western China and presented by Lord Aberconway, Bodnant Gardens, Tal-y-Cafn, North Wales. Received June 26, 1935.
111737. *ALBIZZIA JULIBRISSIN MOLLIS* (Wall.) Benth. **Mimosaceae.**
 No. 86. A densely pubescent variety with broader, more leathery leaflets than the type. Native to Nepal.
111738. *DALBERGIA MIMOSOIDES* Franch. **Fabaceae.**
 No. 42. A shrub 12 to 18 feet high, with pinnate leaves about 3 inches long and numerous small white flowers in axillary panicles. Native to southwestern China.
111739. *EREMURUS CHINENSIS* O. Fedtsch. **Liliaceae.**
 No. 56. An eremurus about 2 feet high, with thin, flaccid, keeled, narrow leaves and flower spikes about 16 inches long. Native to western China.
111740. *GORDONIA CHRYSANDRA* Cowan. **Theaceae.**
 No. 153. An evergreen shrub or tree up to 35 feet high, with shiny elliptic-ovate leaves about 4 inches long and large white or creamy-white flowers, solitary or several in a raceme. Native to Yunnan, China, at altitudes between 5,000 and 9,000 feet.
111741. *INCARVILLEA LUTEA* Bur. and Franch. **Bignoniaceae.**
 No. 1. A perennial herb native to southwestern China at altitudes between 10,000 and 12,000 feet. The long-petioled radical leaves, 8 to 15 inches long, are pinnately divided into broad-lanceolate crenate segments, and the pendulous yellow flowers, 2 inches across, are borne in clusters of 6 to 20 on scapes 2 to 4 feet high.
 For previous introduction see 100194.
111742. *KETELEERIA DAVIDIANA* (Bertrand) Beissner. **Pinaceae.**
 No. 77. A coniferous tree, native to western China, closely allied to the firs. It sometimes becomes 100 feet tall, is of pyramidal habit, and has handsome glossy, green, firlike foliage.
 For previous introduction see 105669.

111737 to 111748—Continued.

111743. *PHOTINIA FRANCHETIANA* Diels. Malaceae.

No. 156. A small evergreen tree or shrub, with lustrous, obovate-elliptic or obovate leaves about 5 inches long and numerous panicles of small white flowers. Native to Yunnan, China, at about 7,000 feet altitude.

111744 to 111746. *RHODODENDRON* spp. Ericaceae.

111744. *RHODODENDRON BULLATUM* Franch.

No. 158. A loosely branched shrub up to 8 feet high, native to Yunnan, China. The branchlets are densely and softly woolly; the elliptic-ovate leaves, 2 to 4 inches long, are puckered above and loosely woolly pubescent beneath; and the broadly tubular pink-tinged white flowers, 2 to 3 inches long, are borne in terminal clusters.

For previous introduction see 103137.

111745. *RHODODENDRON CRASSUM* Franch.

No. 129. A shrub 8 feet high, found in southwestern China between 10,000 and 12,000 feet altitude. The dark-green, oval-oblong, acute leaves are greenish-brown punctate beneath; the white tubular flowers are up to 4 inches across.

For previous introduction see 84166.

111746. *RHODODENDRON HAEMATODES* Franch.

No. 131. A shrub up to 10 feet high, native to Yunnan, China. The oblong to obovate leaves, 2 to 4 inches long, are dark green above and densely rufous-woolly tomentose beneath. The fleshy, tubular-campinulate, crimson flowers, in umbels of 6 to 8, are 2 inches long.

For previous introduction see 97666.

111747. *SORBUS POTERIFOLIA* Hand-Mazz. Malaceae.

No. 136. A shrub up to 15 feet high, with pinnate leaves 2 to 4 inches long and corymbs of small crimson flowers. Native to southwestern China.

111748. *TERNSTROEMIA GYMNANTHERA* (Wight and Arn.) Sprague. Theaceae.

No. 150. An evergreen tree about 20 feet high, with oblong-ovate leaves and small, pale-yellow, fragrant flowers followed by yellow berries about the size of a cherry. Native to southeastern Asia.

111749 to 111760.

From Ecuador. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received June 25, 1935.

Introduced for Department specialists.

111749 to 111752. *BOMAREA* spp. Amaryllidaceae.

Collected near Baeza, Canton Napo, Province of Napo-Pastaza, at 6,000 feet altitude, May 5, 1935. Flowers not seen.

111749. *BOMAREA* sp.

No. 7345. A perennial herb found climbing among the undergrowth along the trail.

111749 to 111760—Continued.

111750. *BOMAREA* sp.

No. 7346. A clambering herb found in open forest.

111751. *BOMAREA* sp.

No. 7344. On the trail between Baeza and Papallacta. A herbaceous climber on undergrowth in open woods.

111752. *BOMAREA* sp.

No. 7347. A trailing plant found growing in light shade.

111753. *GRIAS LORETENSIS* R. Kunth. Lecythidaceae.

No. 7232. A slender-trunked tropical evergreen tree up to 45 feet high, with long narrow-lanceolate leaves and racemes of showy yellow flowers. Native to Peru.

111754. *GUAREA* sp. Meliaceae.

No. 7064.

111755. *JACARANDA* sp. Bignoniaceae.

No. 7295.

111756. *JUGLANS HONOREI* Dode. Juglandaceae.

No. 7338. *Tocte*. A wild walnut, native to the highlands of northern South America, which resembles closely the black walnut of the United States. The thick-shelled nut contains a kernel of mild pleasant flavor.

For previous introduction see 108822.

111757. *SOLANUM* sp. Solanaceae.

No. 7124.

111758. (Undetermined.)

No. 7240.

111759. (Undetermined.)

No. 7030.

111760. (Undetermined.)

No. 1240.

111761 to 111763.

From Africa. Seeds presented by the Experiment Station, Department of Agriculture, Southern Rhodesia, through H. S. Hering, Penacook, N. H. Received June 29, 1935.

Introduced for Department specialists.

111761. *AGROPYRON CRISTATUM* (L.) Gaertn. Poaceae. Crested wheatgrass.

Variety *Fairway*.

111762 and 111763. *CYNODON DACTYLON* (L.) Pers. Poaceae. Bermuda grass.

111762. Variety *Royal Cape*.

111763. Variety *Magennis*.

111764 to 111821.

From India. Seeds presented by A. H. Lee, Bandra, Kulu, Punjab, through Walter Koelz Grass Lake, Mich. Received June 24, 1935.

Introduced for Department specialists.

111764. *ALLIUM* sp. Liliaceae.

No. 44.

111764 to 111821—Continued.

111765. AMPHICOME ARGUTA Royle. Bigoniaceae.
No. 56. A perennial herb with pink flowers.
111766. BARLERIA sp. Acanthaceae.
No. 40. An evergreen shrub.
111767. CALAMINTHA sp. Menthaceae.
No. 70. A herbaceous perennial with pink or violet flowers.
111768. CHAEROPHYLLUM sp. Apiaceae.
No. 6. A tall herbaceous perennial with white flowers.
111769. CHRYSANTHEMUM sp. Asteraceae.
No. 18.
111770. CLEMATIS sp. Ranunculaceae.
No. 25.
111771. COTONEASTER sp. Malaceae.
No. 9.
111772. COTONEASTER sp. Malaceae.
No. 10.
111773. DEUTZIA sp. Hydrangeaceae.
No. 60.
111774. ELAEAGNUS sp. Elaeagnaceae.
No. 2.
111775. ERIGERON sp. Asteraceae.
No. 19.
111776. ERIGERON sp. Asteraceae.
No. 51.
111777. FESTUCA GIGANTEA (L.) Vill. Poaceae.
Great fescue.
No. 33.
111778. HYPERICUM sp. Hypericaceae.
No. 69.
111779. INDIGOFERA sp. Fabaceae.
No. 74.
111780. LACTUCA sp. Cichoriaceae.
No. 37.
111781. LATHYRUS sp. Fabaceae.
No. 71.
111782. LEPTODERMIS LANCEOLATA Wall. Rubiaceae.
No. 43. A spreading shrub 3 to 5 feet high, with lanceolate leaves 1 to 2 inches long and small white flowers in terminal heads. Native to the Himalayas from 4,000 to 10,500 feet altitude.
111783. PIERIS sp. Ericaceae.
No. 75.
111784. PRIMULA sp. Primulaceae.
No. 17.
- 111785 to 111789. PRUNUS spp. Amygdalaceae.
111785. PRUNUS sp.
No. 23.
111786. PRUNUS sp.
No. 3.

111764 to 111821—Continued.

111787. PRUNUS sp.
111788. PRUNUS sp.
No. 22.
111789. PRUNUS sp.
No. 4.
111790. RHUS sp. Anacardiaceae.
No. 61.
111791. RIBES sp. Grossulariaceae.
No. 34.
111792. RUMEX sp. Polygonaceae.
No. 66.
111793. RUMEX sp. Polygonaceae.
111794. ROSA sp. Rosaceae.
No. 68.
111795. SALVIA GLUTINOSA L. Menthaceae.
Sage.
No. 28. A perennial sage about 3 feet tall, glutinous hairy throughout, with ovate-oblong, dentate leaves up to 7 inches long and pale-yellow flowers an inch long in lax whorls. Native to Europe and Asia.
For previous introduction see 104587.
111796. SORBARIA Hindleyana Maxim. Rosaceae.
No. 54.
- 111797 to 111799. SENECIO spp. Astera-ceae.
111797. SENECIO sp.
No. 15.
111798. SENECIO sp.
No. 57.
111799. SENECIO sp.
No. 20.
111800. GYNURA ANGULOSA DC. Astera-ceae.
No. 41. A succulent herbaceous plant 3 to 10 feet high, with large sessile, acuminate stem leaves 6 to 12 inches long; the basal leaves are sometimes 2 feet long. The yellow or purplish flower heads are up to an inch in length. Native to the temperate regions of the Himalayas.
For previous introduction see 47690.
- 111801 to 111803. SOLANUM spp. Solanaceae.
111801. SOLANUM sp.
No. 47.
111802. SOLANUM sp.
No. 26.
111803. SOLANUM sp.
No. 11.
111804. SOPHORA MOLLIS (Royle) Grah. Fabaceae.
No. 1. A low shrub, with odd-pinnate leaves 6 inches long and small yellow flowers in numerous racemes 2 to 3 inches long. Native to the Himalayas at an altitude of about 4,000 feet.

111764 to 111821—Continued.

111805. VIBURNUM sp. Caprifoliaceae.
No. 21.
111806. (Undetermined.)
No. 7.
111807. (Undetermined.)
No. 59.
111808. BERBERIS sp. Berberidaceae.
No. 53.
111809. (Undetermined.)
111810. (Undetermined.)
No. 8.
111811. (Undetermined.)
No. 64.
111812. (Undetermined.)
No. 42.
111813. BERGENIA sp. Saxifragaceae.
No. 24.
111814. (Undetermined.)
No. 5.
111815. (Undetermined.)
111816. (Undetermined.)
No. 67.
111817. (Undetermined.)
No. 12.
111818. (Undetermined.)
111819. (Undetermined.)
No. 52.
111820. (Undetermined.)
No. 50.
111821. (Undetermined.)
No. 29.

111822 to 111825. PRUNUS spp. Amygdalaceae.

From Norway. Plants purchased from Prof. Olav Moen, Planteskolen, Norges Landbrukskøiskole, Ås. Received May 21, 1935.

Introduced for Department specialists.

- 111822 to 111824. PRUNUS AVIUM L. Sweet cherry.
111822. *Hedelfinger kjempe.*
111823. *White Spanish.*
111824. *Kronberg.*
111825. PRUNUS CERASUS L. Sour cherry.
Skyggekirsclear.

111826 to 111849.

From Australia. Plants purchased from L. P. Rosen & Son, Carlingford, New South Wales. Received May 23, 1935.

Introduced for Department specialists.

111826 to 111849—Continued.

- 111826 to 111839. AMYGDALUS spp. Amygdalaceae.
- 111826 to 111836. AMYGDALUS PERSICA L. Peach.
111826. *Bell's November.*
111827. *Braddock.*
111828. *Duchess of Cornwall.*
111829. *Early Silver.*
111830. *Manning.*
111831. *Marquis of Downshire.*
111832. *Royal George Cling.*
111833. *Royal George Slip.*
111834. *Watt's Early.*
111835. *Wiggins.*
111836. *Wooton.*
- 111837 and 111838. AMYGDALUS PERSICA NECTARINA Ait. Nectarine.
111837. *Masterpiece.*
111838. *River's Orange.*
111839. AMYGDALUS PERSICA L. Peach.
- 111840 to 111849. PRUNUS AVIUM L. Amygdalaceae. Sweet cherry.
111840. *Bedford Prolific.*
111841. *Belle d'Orleans.*
111842. *Eagles.*
111843. *Early Lyons.*
111844. *Early Purple Guigne.*
111845. *Florence.*
111846. *Noble.*
111847. *Precoce de Boppard.*
111848. *Ramen Oliva.*
111849. *St. Margaret.*

111850 to 111857. PRUNUS spp. Amygdalaceae.

From Sweden. Trees and scions purchased from Stensborgs Trädskolor, Karlstad. Received May 22, 1935.

Introduced for Department specialists.

- 111850 to 111855. PRUNUS AVIUM L. Sweet cherry.
111850. *Bigarra allmän gulröd.*
111851. *Brysselska brunkörsbär.*
111852. *Elton.*
111853. *Bigarra svart.*
111854. *Karlstads klarbär.*
111855. *Klarbär stora.*
- 111856 and 111857. PRUNUS CERASUS L. Sour cherry.
111856. *Ostheimer.*
111857. *Skuggmorell.*

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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 124



Washington, D. C.

Issued January, 1940

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, JULY 1 TO SEPTEMBER 30, 1935 (Nos. 111858 to 112306)

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INTRODUCTORY STATEMENT

This inventory, No. 124, records the plant material (Nos. 111858 to 112306) received by the Division of Plant Exploration and Introduction during the period from July 1 to September 30, 1935.

In order to assist Department pathologists who are attempting to develop disease-resistant tobacco varieties for the United States, W. A. Archer spent several months traveling through Mexico, collecting seeds of all available types of cultivated tobacco from many widely separated sections in that country.

A special collection of desert shrubs and perennials (Nos. 112043 to 112051) from the Repetek Sand Desert Station, sent in as the result of the agricultural explorations of H. L. Westover and C. R. Enlow, are for testing by specialists in the Soil Conservation Service of this Department.

Mrs. Ynes Mexia,¹ to whom the Department has been indebted for a number of rare plants from eastern Ecuador, was still carrying on botanical explorations in that country during the autumn of 1935. Included in four shipments of seeds sent in by Mrs. Mexia were two lots of local alfalfa varieties (*Medicago sativa*, Nos. 111968 and 112216) and several rare ornamentals.

Ten shipments of peanut varieties, introduced from Brazil, Uruguay, and the Union of South Africa, and representing local strains developed in those countries, are intended for the use of plant breeders who are attempting to develop better oil-producing varieties.

From Auckland, New Zealand, H. R. Wright sent in to the Department plants of 13 fruit varieties, including new local forms of peach,

¹ Died July 11, 1938.

apple, pear, oriental persimmon, and mandarin orange (Nos. 112053-112065). These, of course, are destined for trial in the Southern States and the Pacific coast, where some of Mr. Wright's earlier introductions have already become successfully established.

The tropical hibiscus, one of the characteristic ornamental plants of the warmer parts of both the Old World and the New World, succeeds outdoors throughout most of Florida, where it is one of the most popular dooryard plants. It is of special interest to Florida gardeners, therefore, to record the introduction of a collection of 28 hibiscus varieties from Puerto Rico (Nos. 111886-111913). These are the results of crosses made by T. B. McClelland while at the Puerto Rico Agricultural Experiment Station at Mayaguez.

The botanical determinations of seeds introduced have been made and the nomenclature determined by Paul Russell, who has had general supervision of this inventory.

B. Y. MORRISON,
Principal Horticulturist, in Charge.

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D. C., March 15, 1939.

INVENTORY²

111858. COFFEA ZANGUEBARIAE Lour.
Rubiaceae.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received July 15, 1935.

Introduced for Department specialists.

A small erect tree, 6 feet or more high, with ovate-lanceolate leaves and ovoid-oblong, red berries. Native to the Zanzibar coast and Mozambique, Africa.

111859. CORTADERIA SELLOANA (Schult.)
Aschers. and Graebn. Poaceae.
Pampasgrass.

From New Zealand. Plants presented by Alexander McClean, Weiteraruru, Hauraki Plains, Auckland, at the request of the Director-General of Agriculture, Wellington. Received July 24, 1935.

Introduced for Department specialists.

A perennial reedlike grass with stout culms; up to 10 feet high. Native to Brazil and Argentina.

111860. CITRUS LIMONIA Osbeck. Ruta-
ceae. Lemon.

From the Soviet Union. Seeds presented by the Dry Subtropical Station, Tashkent. Received August 2, 1935.

Introduced for Department specialists.

111861. EUPHORIA DIDYMA Blanco. Sa-
pindaceae.

From Puerto Rico. Seeds collected by H. P. Traub at the Agricultural Experiment Station, Mayaguez. Received August 1, 1935.

Introduced for Department specialists.

Alpay or *alupag*. A small attractive tree, up to 50 feet high, with pinnate leaves made

111861—Continued.

up of prominently veined, leathery, lanceolate leaflets and compact terminal clusters of green warty edible fruits. These are an inch in diameter with a shell-like rind and juicy sweet translucent pulp of good flavor, enclosing a large seed. Native to the Philippine Islands.

For previous introduction see 106101.

111862 to 111868. ARACHIS HYPOGAEA L.
Fabaceae. Peanut.

From the Union of South Africa. Seeds presented by Jacq. Seilschop, School of Agriculture and Experiment Station, Potchefstroom, through W. A. Carver, experiment station, Gainesville, Fla. Received July 23, 1935.

Introduced for Department specialists.

111862. *Java 15 AP.*

111863. *Natal Common*, a local variety.

111864. *Red × Rio de Janeiro.*

111865. *Rustenburg.*

111866. *Virginia bunch (71-4).*

111867. *Potchefstroom No. 570 (Yellow × Rio de Janeiro).*

111868. Native peanuts grown by the aborigines of the Transvaal.

111869. ZEPHYRANTHES SESSILIS Herb.
Amaryllidaceae. Zephyrilly.

From Mexico. Seeds and bulbs presented by Dr. José Figueroa, Instituto Biotecnico, Distrito Federal. Received July 26, 1935. Introduced for Department specialists.

A Mexican zephyrilly with three to six narrow linear leaves up to 1 foot long and an equally long scape bearing a showy white flower tinged with red.

For previous introduction see 111430.

² It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Plant Exploration and 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 seed samples or 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 identification, 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

111870 to 111875. EUCALYPTUS spp.
Myrtaceae.

From Australia. Seeds presented by F. H. Baker, Richmond, Victoria. Received July 23, 1935.

Introduced for Department specialists.

111870. EUCALYPTUS CAESIA Benth.

A small tree with the branches and foliage pale glaucous to nearly white. The ovate-lanceolate leaves are rather thick and generally about 3 inches long. Native to Western Australia.

111871. EUCALYPTUS CRUCIS Maiden.

A small tree 25 feet or less high, glaucous throughout, with small thick ovate to lanceolate leaves over an inch long. Native to Western Australia.

111872. EUCALYPTUS ERYTHROCORYS Muell.

Usually a shrub 8 to 10 feet high, but sometimes a tree up to 30 feet. The broadly linear, rigid leaves are 6 inches long, and the large flowers, in axillary clusters, have bright-red, fleshy caps over the buds; the long stamens are yellow. The ribbed, hemispherical fruits are 1 to 2 inches long. It is native to Western Australia.

For previous introduction see 106337.

111873. EUCALYPTUS MACROCARPA Hook.

A stout shrub or small tree up to 15 feet high, with thick rigid cordate glaucous leaves 6 inches long and large solitary, brilliant orange or crimson flowers. Native to Western Australia.

For previous introduction see 104169.

111874. EUCALYPTUS PREISSIANA Schauer.

A shrubby eucalyptus about 8 feet high, with rigid branchlets, shining-green, oblong-elliptic leaves nearly 4 inches long, and small yellowish flowers in axillary clusters. Native to Western and South Australia.

For previous introduction see 106342.

111875. EUCALYPTUS PYRIFORMIS Turcz.

Red Mallet. A shrub or small tree, found in Western and South Australia, where it attains a height of 8 to 10 feet. The very thick, narrow leaves are rarely more than 3 inches long, and the large flowers are red when fresh. The yellowish-white wood is hard, heavy, and durable.

For previous introduction see 106343.

111876. ASTREBLA LAPPACEA (Lindl.)
Domin. Poaceae.

Hook Mitchell grass.

From Australia. Seeds purchased from Arthur Yates & Co., Ltd., Sydney, New South Wales. Received July 23, 1935.

Introduced for Department specialists.

A tall perennial grass with broad succulent leaves. Native to Australia, where it is considered an excellent pasture grass.

For previous introduction see 75697.

111877. PHOENIX PALUDOSA Roxb. Phoenicaceae. Date palm.

From India. Seeds presented by the Royal Botanic Gardens, Sibpur, near Calcutta. Received July 26, 1935.

111877—Continued.

Introduced for Department specialists.

A small tree found in the estuarine regions along the coast of India from Bengal to Burma and in the Andaman Islands. It is a typical mangrove plant which forms alternating bands of associations with another mangrove palm, *Nipa fruticans*.

For previous introduction see 32822.

111878 and 111879.

From Puerto Rico. Seeds presented by Claud L. Horn, Agricultural Experiment Station, Mayaguez. Received July 26, 1935.

Introduced for Department specialists.

111878. AERIA ATTENUATA O. F. Cook.
Phoenicaceae. Palma de coyor.

Locally known also as the *coyore*. The tallest of the Puerto Rican palms, it reaches a height of 60 to 100 feet. Its pinnate foliage resembles that of the royal palm, but is shorter; the trunk never exceeds 6 to 8 inches in diameter. This palm is found only on limestone hills and usually feeds upon nothing but the humus collected in the cracks of these rocks. The large bunches of orange-red berries, which are the size of a small cherry, are very attractive and are fed to chickens and hogs.

For previous introduction see 39189.

111879. EUPHORIA DIDYMA Blanco. Sapindaceae.

For previous introduction and description see 111861.

111880 to 111885. ARACHIS spp. Fabaceae. Peanut.

From Brazil. Seeds presented by the Director, Instituto Agronomico, Campinas São Paulo. Received July 26, 1935.

Introduced for Department specialists.

111880 and 111881. ARACHIS HYPOGAEA L.

111880. *Amarello.*

111881. *Commum.*

111882. ARACHIS NAMBYQUARAE Hoehne.

Listed as *Arachis hypogaea* var. *Nhambiguara*; changed for taxonomic reasons. A native variety, cultivated by the Indians; seeds large and variable in color.

111883 to 111885. ARACHIS HYPOGAEA L.

111883. *Porto-Alegere.*

111884. *Rasteiro.*

111885. *Rozo.*

111886 to 111913. HIBISCUS. Malvaceae.

From Puerto Rico. Cuttings presented by Atherton Lee, Director, Puerto Rico Agricultural Experiment Station, Mayaguez. Received August 1, 1935.

A collection of hibiscus varieties, largely the results of crosses, many of them between varieties of hybrid or uncertain origin, made at Mayaguez by T. B. McClelland, formerly director of the Puerto Rico Agricultural Experiment Station.

Introduced for Department specialists.

111886. *Christine.* A dwarf, small-flowered yellow variety.

111886 to 111913—Continued.

111887. *Dr. N. L. Britton*. A pale-yellow flower, 6 inches or more in diameter, flushed with red in the center with a lighter reddish flush extending along the veins. The long silky, slightly narrow petals suggest those of a lily.
111888. *Flame*. A scarlet hibiscus, which is a cross between a red-centered yellow hybrid variety from St. Thomas, Virgin Islands, and the common large Puerto Rican red.
111889. *Jean Whittemore*. A carrot-red flower, 6 inches across, with full crinkly petals.
111890. *Lily*. A lilylike white flower with a pink center.
111891. *Mary McClelland*. A cross between a white with a red eye and a self-colored yellow. The flower is 5 inches across, with rounded petals of crepe-like texture, snow white in effect; the leaves are dark glossy green.
111892. *Minnie Troutman*. A self-colored yellow flower; a cross between a white flower with a red eye and a self-colored yellow.
111893. *P. R. No. 1142*. Female parent, a yellow with red center, from St. Thomas, Virgin Islands.
111894. *P. R. No. 1422*. Female parent, a yellow with red center, from St. Thomas, Virgin Islands.
111895. *P. R. No. 1435*. A soft pink flower with salmon shading; a cross between Hawaiian variety No. 205:2 and *Hibiscus schizopetalus*.
111896. *P. R. No. 1443*. A cross between Hawaiian variety No. 205:2 and *Hibiscus schizopetalus*.
111897. *P. R. No. 1929*. A beautiful lively pink flower; a cross between Hawaiian variety No. 205:2 and *Hibiscus schizopetalus*.
111898. *P. R. No. 1946*. One of the most attractive pinks obtained from the cross between Hawaiian variety No. 205:2 and *Hibiscus schizopetalus*.
111899. *P. R. No. 2029*.
111900. *P. R. No. 2030*.
111901. *P. R. No. 2130*.
111902. *P. R. No. 2228*. A cream-colored flower.
111903. *P. R. No. 2232*.
111904. *P. R. No. 2413*. Female parent, *Laurita Sherman*.
111905. *P. R. No. 2631*.
111906. *P. R. No. 2673*. Female parent, Hawaiian variety, No. 100:1.
111907. *P. R. No. 2968*. A cross between Hawaiian variety No. 205:2 and *Hibiscus schizopetalus*.
111908. *P. R. No. 2971*. A cross between Hawaiian variety No. 205:2 and *Hibiscus schizopetalus*.
111909. *P. R. No. 3160*.
111910. Hawaiian variety No. 205:2.
111911. *No. P-1*. A variety received in Puerto Rico from Panama.

111886 to 111913—Continued.

111912. *No. P-11*.
111913. A large-flowered, handsome pink flower with darker center. Origin unknown.
111914. *SACCHARUM SPONTANEUM L.*
Poaceae. Grass.
From New Guinea. Cuttings collected by Percival H. Leigh, Port Moresby, Papua. Received August 2, 1935.
A grass closely related to sugarcane; introduced for Department specialists.
For previous introduction see 111347.
111915. *LITCHI CHINENSIS Sonner.* Sapindaceae. Lychee.
From China. Seeds collected by a Mr. Lee in the market at Canton, and presented through Ira D. Condit, University of California. Received August 6, 1935.
Introduced for Department specialists.
A mixture of two varieties; mostly *Waaai Chi*, with a few *Chan Chi*. Received as seedlings.
For previous introduction see 109768.
- 111916 to 111931.
From Australia. Plants purchased from F. Ferguson & Son, Hurstville and Camden, New South Wales. Received August 7, 1935.
Introduced for Department specialists.
- 111916 to 111922. *AMYGDALUS PERSICA L.*
Amygdalaceae. Peach.
111916. *Camden Golden*.
111917. *Downing*.
111918. *Early Newington*.
111919. *George IV*.
111920. *Kirshler Prize*.
111921. *Lewis Cling*.
111922. *Newington*.
- 111923 to 111926. *AMYGDALUS PERSICA NECTARINA Ait.* Amygdalaceae. Nectarine.
111923. *Ben's Rick*.
111924. *Mrs. Dr. Chisholm*.
111925. *Newington*.
111926. *Precoce de Croncels*.
- 111927 and 111928. *PRUNUS ARMENIACA L.*
Amygdalaceae. Apricot.
111927. *Campbellfield's Seedling*.
111928. *Red Masculine*.
- 111929 to 111931. *PRUNUS AVIUM L.* Amygdalaceae. Sweet cherry.
111929. *Bigarreau Twyford*.
111930. *Burgdoff's Seedling*.
111931. *Chapman*.
- 111932 to 111934. *ARACHIS spp.* Fabaceae. Peanut.
From Brazil. Seeds presented by F. C. Hoehne, Chefe de Serviço Científico, Serviço de Botânica e Agronomia, São Paulo. Received August 8, 1935.

111932 to 111934—Continued.

Native varieties of peanuts introduced for Department specialists.

111932 and 111933. *ARACHIS HYPOGAEA* L.

111932. *Forma Grande*.

111933. *Forma Jumbo*.

111934. *ARACHIS NAMBYQUARAE* Hoehne.

A Brazilian relative of the peanut, which is a much-branched, prostrate or ascending plant. The pod is 2 to 3 inches long, with usually two seeds, which are edible and very oily.

For previous introduction see 68831.

111935 and 111936. *TRIFOLIUM SUBTERRANEUM* L. Fabaceae.

Subterranean clover.

From Australia. Seeds purchased from F. H. Brunning, Melbourne. Received August 2, 1935.

Introduced for Department specialists.

111935. *Dwalganup*. An extra early maturing strain.

111936. *Midseason* or *Mount Barker* strain.

111937. *BRASSICA RAPA* L. Brassicaceae.

Turnip.

From China. Seeds purchased from Dr. J. F. Rock, Yunnanfu, Yunnan. Received August 6, 1935.

Introduced for Department specialists.

Received under the varietal name "depressa," for which a place of publication has not been found.

111938 to 111940. *ARACHIS HYPOGAEA* L. Fabaceae.

Peanut.

From Brazil. Seeds presented by J. C. Bela Lisboa, Director, Escola Superior de Agricultura e Medicina Veterinaria, Vigosa, Minas Geraes. Received July 26, 1935.

Introduced for Department specialists.

111938. *Hespanhol*.

111939. *Porto-Alegre*.

111940. *Roxo*.

111941. *ARCHONTOPHOENIX ALEXANDRAE* (F. Muell.) Wendl. and Drude. Phoenicaceae.

Palm.

From Mexico. Plants collected by W. E. Sexton, of the McKee Jungle Gardens, Vero Beach, Fla., and presented through the Bureau of Entomology and Plant Quarantine. Received July 18, 1935.

For previous introduction see 110823.

111942. *CITRUS MYRTIFOLIA* Raf. Rutaceae.

From the Belgian Congo. Seeds presented by Rev. J. Gillet, Kisantu. Received July 26, 1935.

Introduced for Department specialists.

A small unarmed tree with narrow leaves that bears small, flattened, very sour oranges. Native to China.

111943. *ALLIUM CEPA* L. Liliaceae.

Onion.

From Australia. Seeds presented by Dr. H. Wenholz, Department of Agriculture, Syd-

111943—Continued.

ney, New South Wales. Received July 20, 1935.

Introduced for Department specialists.

McKimm strain of *Hunter River Brown*.

111944 to 111946. *IRIS* spp. Iridaceae.

From the Soviet Union. Roots presented by N. I. Sharapov, Head of the Department of New Cultures and Introduction, Leningrad, at the request of the Subtropical Introduction Garden, Sukhum, Transcaucasia. Received July 17, 1935.

111944. *IRIS LYCOTIS* Woron.

An iris of the *Oncocyclus* section, closely related to *Iris paradoxa*.

111945. *IRIS PARADOXA* Stev. Velvet iris.

A dwarf, linear-leaved *Oncocyclus* iris 2 to 6 inches high, with large lilac or white flowers. Native to northern Iran (Persia) and Asia Minor, where it grows in dry situations.

For previous introduction see 68166.

111946. *IRIS* sp.

Received under the name "vavilovii," for which a place of publication has not been found.

111947 and 111948. *PHOENIX* spp. Phoenicaceae.

Palm.

From Africa. Seeds collected by J. F. Ward and presented by the Agricultural Department of Samaru, Zaria, Northern Provinces, Nigeria. Received July 13, 1935.

The wild date is practically always confined to swamps and banks of streams and is commonly found in broad grassy swampy glades growing on old decomposed anthills. These hills, being raised above the surrounding level, do not get flooded. Introduced for Department specialists.

111947. *Wamba*, 624. From Wamba I, Southern Division, Plateau Province.

111948. *Ukum*, 623. From Ukum district of Tiv Division, Benue Province.

111949. *LITCHI CHINENSIS* Sonner. Sapindaceae.

Lychee.

From China. Seeds presented by the Lingnan University, Canton, at the request of Dr. G. Weidman Groff, and shipped by Ira J. Condit, visiting professor at Lingnan University, 1934-35. Received July 15, 1935.

Introduced for Department specialists.

111950 to 111956. *CITRUS* spp. Rutaceae.

From Spain. Budsticks presented by D. Manuel Herrero, Ingeniero-Director, Estación Naranja de Levante, Valencia. Received July 10, 1935.

Introduced for Department specialists.

111950 to 111954. *CITRUS SINENSIS* (L.) Osbeck. Orange.

111950. *Cadenera*.

111951. *Sangre Fina*.

111952. *Torregrosa*.

111953. *Valencia Comán*.

111954. *Washington Sangre*.

111950 to 111956—Continued.

111955. *CITRUS NOBILIS DELICIOSA* (Ten.) Swingle. Mandarin orange.

111956. *CITRUS LIMONIA* Osbeck. Lemon.

111957 to 111965. *ARACHIS* spp. Fabaceae. Peanut.

From Brazil. Seeds presented by A. Correa Meyer, Director, Estação Experimental de Cana de Assucar e Plantas Oleaginosas, Piracicaba, São Paulo. Received July 5, 1935.

A collection of peanut varieties, introduced for Department specialists.

111957 to 111963. *ARACHIS HYPOGAEA* L.

111957. *Comum.*

111958. *Jambo.*

111959. *Java Graúdo.*

111960. *Java Miúdo.*

111961. *Porto Alegre.*

111962. *Preto.*

111963. *Roxo.*

111964. *ARACHIS NAMBYQUARAE* Hoehne.

Nhambiquara.

111965. *ARACHIS HYPOGAEA* L.

Rasteiro. A prostrate perennial peanut, native to Brazil.

111966 to 111968.

From Ecuador. Seeds and bulbs collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received July 3, 1935.

Introduced for Department specialists.

111966. *URCEOLINA PERUVIANA* (Presl) Macbr. Amaryllidaceae.

No. 7355. Cerro del Panecillo, Quito, at 9,800 feet altitude. Seeds and bulbs of a tender plant, with wide oblong leaves 1 foot long and a solitary scape with an umbel of four to six nodding yellow to orange-red flowers. Native to the Andes of Peru.

111967. *LUPINUS* sp. Fabaceae.

No. 7357-A (Archer No. 3431). A shrub collected June 1, 1935, near Quito, Provincia Pinchincha, at about 10,000 feet altitude by W. A. Archer and sent in by Mrs. Mexia. Seeds.

111968. *MEDICAGO SATIVA* L. Fabaceae. Alfalfa.

No. 7356-A. From Hacienda La Chine, near Guaranda, Canton San Miguel, Provincia Bolivar. Seeds presented by Sr. Regulo de More, through Dr. Luis Boya.

111969 to 111981.

From the Soviet Union. Seeds presented by the Director, Botanical Garden of the Academy of Sciences, Leningrad. Received July 5, 1935.

Introduced for Department specialists.

111969 to 111977. *FESTUCA* spp. Poaceae. Fescue.

111969. *FESTUCA AMETHYSTINA* L.

111970. *FESTUCA ELATIOR* L.

Meadow fescue.

111969 to 111981—Continued.

111971. *FESTUCA ELATIOR ARUNDINACEA* (Schreb.) Wimm.

111972 and 111973. *FESTUCA OVINA* L. Sheep fescue.

111974. *FESTUCA OVINA GLAUCA* (Lam.) Koch.

111975. *FESTUCA OVINA SULCATA* Hack.

111976. *FESTUCA OVINA VALLESIIA* C A (Schleich.) Link.

111977. *FESTUCA* sp.

111978 to 111981. *IRIS* spp. Iridaceae.

111978. *IRIS SPURIA HALOPHILA* (Pall.) Dykes.

A variety from central Asia, distinguished by numerous relatively short stems and very narrow perianth segments. The flowers vary in color from white veined with yellow to dull yellow or gray purple.

For previous introduction see 76346.

111979. *IRIS PRISMATICA* Pursh. Cubeseed iris.

111980. *IRIS SPURIA HALOPHILA* (Pall.) Dykes.

See 111978 for description.

111981. *IRIS* sp.

111982 and 111983.

From Mexico. Seeds and plants presented by C. A. Purpus, Zacuapam, Huatusco, Veracruz. Received July 9, 1935.

Introduced for Department specialists.

111982. *DIOON* sp. Cycadaceae.

A plant received as *Dioon pinos*, for which a place of publication has not been found.

111983. *PRUNUS CAPULI* Cav. Amygdalaceae. Capulin.

Seeds of a small tree closely related to the wild black cherry of the eastern United States (*Prunus serotina* Ehrh.). It is native to the highlands of Mexico and South America, and the black globose cherries are usually about one-half inch in diameter.

For previous introduction see 98346.

111984. *PACHYRHIZUS TUBEROSUS* (Lam.) Spreng. Fabaceae. Jicama.

From Mexico. Seeds presented by Prof. A. L. Herrera, Laboratorio de Plasmogonia, Mexico, D. F. Received July 9, 1935.

A twining herbaceous vine up to 20 feet long, with a large edible tuberous root. Native to tropical America.

111985 and 111986. *AGROSTIS TENUIS* Sibth. Poaceae.

From New Zealand. Seeds presented by A. S. Patterson & Co., Ltd., Dunedin. Received July 10, 1935.

Introduced for Department specialists.

For previous introduction see 101101.

111985. *Blue, Certified Brountop.*

111986. *Harvey, Certified Brountop.*

- 111987. CASUARINA RUMPHIANA** Miquel.
Casuarinaceae.
From Java. Seeds presented by the Director, Botanic Garden, Buitenzorg. Received July 6, 1935.
Introduced for Department specialists.
A rather scraggly tree with very slender, delicate green, pendent branches and cones having few seeds. It is native to Java.
For previous introduction see 92374.
- 111988 to 111991. CASUARINA spp.** Casuarinaceae.
From Australia. Seeds presented by C. A. Gardner, Government Botanist, Perth, Western Australia. Received July 9, 1935.
Introduced for Department specialists.
- 111988. CASUARINA ACUARIA** F. Muell.
A leafless shrub with erect rigid branches and numerous deciduous branchlets; these are erect, slender, but rigid, and each consists of but two internodes. The cones, globular and solitary or in small clusters, are about 1 inch in diameter. Native to Western Australia.
For previous introduction see 105789.
- 111989. CASUARINA GREVILLEOIDES** Diels.
A low bushy shrub about 1 foot high, with the branches and branchlets much-jointed and the younger joints white tomentose. Native to Western Australia.
For previous introduction see 105795.
- 111990. CASUARINA HELMSII** Ewart and Gordon.
A Western Australian tree 5 feet high, with slender terete branchlets 4 to 5 inches long. The nearly smooth cones are 1 inch long and about half an inch in diameter.
For previous introduction see 93789.
- 111991. CASUARINA TRICHODON** Miq.
An erect leafless shrub about 8 feet high with branchlets usually pendulous; closely resembling *Casuarina stricta*. Native to rocky places in Western Australia.
- 111992. ARACHIS HYPOGAEA** L. Fabaceae. **Peanut.**
From Brazil. Seeds presented by the Director, Instituto de Biologia Vegetal, Rio de Janeiro. Received July 12, 1935.
Introduced for Department specialists.
- 111993. CITRUS SINENSIS** (L.) Osbeck. Rutaceae. **Orange.**
From Spain. Budsticks presented by D. Manuel Herrero, Ingeniero-Director, Estación Naranjera de Levante, Valencia. Received July 17, 1935.
Macetra. Introduced for Department specialists.
- 111994 to 111997. PHALARIS spp.** Poaceae. **Canary grass.**
From Australia. Seeds presented by the Waite Agricultural Research Institute, Adelaide University, Glen Osmond, South Australia. Received July 9, 1935.
Introduced for Department specialists.
- 111994. PHALARIS COERULESCENS** Desf. Gb. 414. A caespitose perennial grass.
- 111994 to 111997—Continued.**
For previous introduction see 88726.
- 111995 to 111997. PHALARIS TUBEROSA** L. Toowoomba canary grass.
A forage grass which has proved successful at the Waite Agricultural Research Institute.
For previous introduction see 104988.
111995. Gb. 299. 111997. Gb. 421.
111996. Gb. 409.
- 111998 and 111999. CARICA PAPAYA** L. Papayaceae. **Papaya.**
From California. Seeds presented by Col. James Stewart, Ardsheal Ranch, La Habra Heights. Received July 13, 1935.
Introduced for Department specialists.
- 111998. A Tahitian variety** with large fruit.
111999. A South African variety with smaller fruit.
- 112000 to 112012. PISTACIA VERA** L. Anacardiaceae. **Pistachio.**
From the Soviet Union. Seeds presented by the Dry Subtropical Station, Tashkent. Received August 3, 1935.
Introduced for Department specialists.
- 112000. No. O-2815. 112007. No. O-2822.**
112001. No. O-2816. 112008. No. O-2823.
112002. No. O-2817. 112009. No. O-2824.
112003. No. O-2818. 112010. No. O-2837.
112004. No. O-2819. 112011. No. O-2838.
112005. No. O-2820. 112012. No. O-2839.
112006. No. O-2821.
- 112013 to 112016. COIX LACRYMA-JOBI** L. Poaceae. **Jobs-tears.**
From the Philippine Islands. Seeds presented by the College of Agriculture, University of the Philippines, Los Baños, Laguna. Received August 5, 1935.
Introduced for Department specialists.
- 112013. A cultivated glutinous variety.**
112014. Lokfao. A cultivated variety.
112015. A wild variety.
112016. A wild variety.
- 112017. RUBUS MACROCARPUS** Benth. Rosaceae. **Colombian blackberry.**
From Colombia. Seeds collected by Guevera Amortegui Baltasar, Fusagasuga, and presented by Dr. W. E. Maxon, Smithsonian Institution, Washington, D. C. Received August 12, 1935.
Introduced for Department specialists.
For previous introduction see 74553.
- 112018 and 112019. PERSEA AMERICANA** Mill. Lauraceae. **Avocado.**
From Costa Rica. Budsticks presented by Dr. Oton Jiminez, San José. Received August 14, 1935.
Introduced for Department specialists.
- 112018. A large-fruited variety** with small seeds.
112019. A seedless variety.

112020. CITRUS GRANDIS (L.) Osbeck.
Rutaceae. **Grapefruit.**

From Plant Introduction Garden, Glenn Dale, Md. Plant growing under C. P. B. No. 10696; numbered August 19, 1935.

Song Ma Yau.

112021. ALLIUM SATIVUM L. Liliaceae.
Garlic.

From China. Bulblets presented by T. Y. Wang, Head of Horticultural Department, the Sun Yat-Sen Tomb and Memorial Park Commission, Nanking. Received August 20, 1935.

Introduced for Department specialists.

112022 to 112025. SOLANUM TUBEROSUM L. Solanaceae.

From Buenos Aires, Argentina. Tubers received August 20, 1935.

Introduced for Department specialists.

112022. *Bocha.*

112023. *Chaguena.*

112024. *Limon.*

112025. No. 1. *North American Blanco Larga.*

112026. GARCINIA MANGOSTANA L. Clusiaceae.
Mangosteen.

From the Canal Zone. Seeds presented by J. E. Higgins, Director, Canal Zone Experiment Gardens, Summit. Received August 20, 1935.

Introduced for Department specialists.

For previous introduction see 106110.

112027 and 112028. PHELUM PRATENSE L. Poaceae. **Timothy.**

From Sweden. Seeds presented by E. Akerberg, Weibullsholm Plant Breeding Institute, Landskrona. Received August 13, 1935.

Introduced for Department specialists.

112027. W: s. Orig. Kämpfe II.

112028. W: s. Orig. Kämpfe.

112029. MELINIS MINUTIFLORA Beauv. Poaceae. **Molasses grass.**

From Venezuela. Seeds presented by Ernesto Stelling, Valencia, through W. A. Archer, Bureau of Plant Industry. Received August 15, 1935.

Introduced for Department specialists.

No. 3112. *Yaragua.* A cultivated forage grass, collected on the farm of Ernesto Stelling, Valencia, February 26, 1935.

For previous introduction see 110192.

112030. DELPHINIUM LIKIANGENSE Franch. Ranunculaceae. **Larkspur.**

From China. Seeds collected by Dr. Joseph F. Rock, Yunnanfu, Yunnan. Received August 15, 1935.

One of the finest larkspurs, with stems 4 to 8 inches high, and dark-green, glossy leaves in cushionlike rosettes. The large rich-blue flowers are an inch across, and there are several spikes on a plant at one time. It is endemic in Yunnan and peculiar to the Likang Snow Range, where it grows in wet

112030—Continued.

gravelly soil at the foot of glaciers and in mountain meadows at 13,000 feet altitude.

For previous introduction see 103216.

112031. PRUNUS SIMONII Carr. Amygdalaceae. **Simon plum.**

From the Soviet Union. Scions presented by N. I. Sharapov, Head of Department of New Cultures and Introduction, Leningrad. Received March 8, 1935. Numbered in August 1935.

Introduced for Department specialists.

A locally grown variety from middle Asia.

For previous introduction see 91527.

112032 to 112040.

From India. Plants purchased from the Government Botanical Garden, Saharanpur. Received February 28, 1934. Numbered in August 1935.

Introduced for Department specialists.

112032 to 112035. AMYGDALUS PERSICA L. Amygdalaceae. **Peach.**

112032. *Saharanpur No. 1.*

112033. *Saharanpur No. 2.*

112034. *Saharanpur No. 6.*

112035. *Shanghai freestone.*

112036 to 112040. PRUNUS spp. Amygdalaceae.

112036. *Botanky plum.*

112037. *Dwarf early yellow plum.*

112038. *Early round plum.*

112039. *Katanky plum.*

112040. *Shirosumomo plum.*

112041. RUBUS GLAUCUS Benth. Rosaceae. **Andes raspberry.**

From Java. Seeds presented by A. M. Cramer, Wonosobo. Received June 1, 1934. Numbered in August 1935.

Introduced for Department specialists.

A red-fruited raspberry with canes 6 feet high.

For previous introduction see 101218.

112042. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From the Soviet Union. Plants presented by the Institute of Plant Industry, Leningrad. Received March 19, 1935. Numbered in August 1935.

No. 6. Introduced for Department specialists.

112043 to 112051.

From the Soviet Union. Seeds presented by the Repetek Sand Desert Station, Turkmenistan, through H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received August 15, 1935.

The field numbers are those of the Westover and Enlow series.

Introduced for Department specialists.

112043. ASTRAGALUS sp. Fabaceae.

No. 1651.

112043 to 112051—Continued.

112044 to 112047. CALLIGONUM spp. Polygonaceae.

112044. CALLIGONUM ARBORESCENS Litv.
No. 1652. A drought-resistant shrub
10 feet high.

For previous introduction see 108887.

112045. CALLIGONUM CAPUT - MEDUSAE
Schrenk.

No. 1654. A leafless shrub, native to
northern and central Asia, where it is
used as a sand binder.

112046. CALLIGONUM COMOSUM L'Her.

No. 1653. A densely branched shrub
10 to 15 feet high, with minute subulate
leaves and small ovate, densely spiny,
nutlike fruits. Native to the eastern
Mediterranean region.

For previous introduction see 108890.

112047. CALLIGONUM SETOSUM Litv.

No. 1655. A leafless shrub, native to
the Caspian region, where it is used as
a sand binder.

For previous introduction see 108893.

112048. FERULA LITWINOWIANA K.-Pol.
Apiaceae.

No. 1659. A low hairy herbaceous peren-
nial with numerous small triangular
pinnately cut leaves and inconspicuous
flowers in compound umbels. Native to the
Transcaspian region.

For previous introduction see 98214.

112049. JURINEA DERDERIOIDES C. Winkl.
Asteraceae.

No. 1662. A hardy herbaceous perennial
about 3 feet high, with gray oblong-lance-
olate leaves and small heads of purple
flowers. Native to Turkistan.

112050. RHEUM TURKESTANICUM Janischew.
Polygonaceae.

No. 1667. A wild rhubarb from the
Transcaspian region, over 2 feet high, with
a large thick rhizome and a short, thick-
ened, densely leafy stem. The cordate-
reniform leaves, up to 8 in number, are
about a foot wide.

For previous introduction see 108953.

112051. ULMUS FOLIACEA Gilib. Ulmaceae.
Smoothleaf elm.

No. 1668. A slender pyramidal tree with
corky branches. The leaves are obliquely
oval or ovate, doubly toothed, and up to 4
inches long. Native to Europe and west-
ern Asia.

For previous introduction see 38491.

112052. CARICA PAPAYA L. Papayaceae.
Papaya.

From California. Seeds presented by Col.
James Stewart, Ardsheal Ranch, La Habra
Heights. Received August 26, 1935.

Sandwich Island papaya; introduced for
Department specialists.

112053 to 112065.

From New Zealand. Plants presented by
H. R. Wright, Auckland. Received August
22, 1935.

Introduced for Department specialists.

112053 to 112065—Continued.

112053. ACTINIDIA CHINENSIS Planch. Dil-
leniaceae. Yangtao.

A form with very large fruits.

For previous introduction see 111427.

112054 and 112055. AMYGDALUS PERSICA L.
Amygdalaceae. Peach.

112054. *Gray's seedling*. An early semi-
cling with white flesh of superb flav-
or; an *Elberta* seedling.

112055. *Gus Friedrich*. A large, highly
colored peach of superb flavor.

112056. PRUNUS. Amygdalaceae.

A peach-plum hybrid which makes an
ornamental tree.

112057 to 112059. CITRUS spp. Rutaceae.

112057. CITRUS sp.

A new grapefruit, grapefruit-orange
hybrid, preferred to our New Zealand
grapefruit or *Poorman's* orange, being
less bitter.

112058. CITRUS GRANDIS (L.) Osbeck.
Grapefruit.

The Chinese pomelo, much prized by
white people in China.

112059. CITRUS NOBILIS DELICIOSA (Ten.)
Swingle. Mandarin orange.

Richard's Special Mandarin. The tree
produces an abundance of large fruits.

112060 and 112061. DIOSPYROS KAKI L. f.
Diospyraceae. Kaki.

112060. *Purple Splendor*. Fruit non-
astringent even when hard.

112061. *Tricolor*.

112062. MALUS SYLVESTRIS Mill. Malaceae.
Apple.

A red sport of *Cox Orange Pippin*.

112063. PRUNUS sp. Amygdalaceae.

A Japanese plum, *Lock's Purple*; a *Pur-
ple King* seedling.

112064 and 112065. PYRUS COMMUNIS L.
Malaceae. Common pear.

112064. *Garber* seedlings.

112065. *Packham Late*. A very large
and very late pear of fine flavor.

112066 to 112076.

From Puerto Rico. Plants collected by H.
P. Traub, Bureau of Plant Industry. Re-
ceived August 21, 1935.

Introduced for Department specialists.

112066. ANANAS COMOSUS (L.) Merr.
Bromeliaceae. Pineapple.

Mayaguez No. 1.

Nos. 112067 to 112076 were collected in
Luquillo National Forest.

112067. ANTHURIUM sp. Araceae.

112068. (Undetermined.)

112069. (Undetermined.)

A bromeliad.

112070. (Undetermined.)

A terrestrial orchid.

112071. (Undetermined.)

An orchid.

112066 to 112076—Continued.

112072. (Undetermined.)

An orchid.

112073. PIPER sp. Piperaceae.

112074. (Undetermined.)

A fern.

112075. (Undetermined.)

An ornamental grass.

112076. SELAGINELLA sp. Selaginellaceae.

112077 and 112078. ARACHIS HYPOGAEA
L. Fabaceae. Peanut.

From Uruguay. Seeds presented by the Director, Granja Modelo del Instituto Nacional de Agronomía. Received August 19, 1935.

Introduced for Department specialists.

112077. *Salteña No. 1.*112078. *Salteña No. 2.*112079. SACCHARUM. Poaceae.
Sugarcane.

From the Netherland East Indies. Cuttings presented by a Mr. Douglas. Received August 29, 1935.

Introduced for Department specialists.

112080. SEMIARUNDINARIA FASTUOSA
(Marl.) Makino. Poaceae.

Narihira bamboo.

Plants growing at the Barbour Lathrop Plant Introduction Garden, Savannah, Ga. Re-numbered August 1935.

One of the handsomest and hardiest of all bamboos; culms up to 20 feet or more in height are ultimately produced where the minimum temperature is not lower than about -3° F. The smaller culms are densely clothed from near the ground up with dark-green leaves borne on short ascending branches. Native to Japan. Previously carried under P. I. No. 38913, but as this bamboo is not the same species originally listed and described there, this new number is assigned. The original source of the plants is uncertain.

112081 to 112091.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received August 24, 1935.

112081. CALPURNIA AUREA (Lam.) Benth.
Fabaceae.

From Kenya Colony, Africa. A tall leguminous shrub, very rarely tree-like, with large, evergreen, odd-pinnate leaves and showy racemes of yellow flowers, much like those of *Laburnum*, but which appear in the winter.

For previous introduction see 42829.

112082. CASSIA SURATENSIS Burm. f. Caesalpinaceae.

From the Botanic Gardens, Buitenzorg, Java. A tropical leguminous shrub or small tree up to 15 feet high, with pale-green compound leaves and clusters of pale-yellow flowers. Native to the East Indies.

For previous introduction see 106918.

112081 to 112091—Continued.

Nos. 112083 to 112091 were collected by the Forest Department of Kenya Colony, Africa, and sent to the Atkins Institution.

112083. CASUARINA SUBEROSA Otto and Dietr. Casuarinaceae.

A species with very large fruits ($1\frac{1}{2}$ inches) and long coarse pendent branchlets, very distinct from *Casuarina equisetifolia*. It is native to Australia.

For previous introduction see 92485.

112084. CUPRESSUS GLABRA Sudw.
Pinaceae. Smooth cypress.

A tree from 25 to 30 feet high, with thin, smooth, dark purple-red bark, upright branches, and bright blue-green foliage. Native to southern Arizona.

For previous introduction see 41690.

112085. CUPRESSUS TORULOSA Don.
Pinaceae. Bhutan cypress.

A pyramidal tree up to 150 feet high, short horizontal branches, slender drooping branchlets, and bright-green or bluish-green leaves. Native to the Himalayas at altitudes ranging from 5,000 to 9,000 feet.

112086. DOYALIS ABYSSINICA (A. Rich.)
Warb. Flacourtiaceae.

A bushy shrub, 3 to 10 feet high, with ovate, glabrous leaves, small white flowers, and yellow edible astringent berries about 1 inch in diameter, with a sweetish taste resembling that of persimmons. Native to Ethiopia.

112087. DURANTA REPENS L. Verbenaceae.
Skyflower.

A shrub up to 15 feet high, armed with stiff sharp thorns. Its pale-blue flowers, borne in clusters 3 or 4 inches long, are followed by golden berries less than an inch in diameter. Native to the West Indies.

For previous introduction see 52575.

112088. MELALEUCA ARMILLARIS (Soland.)
J. E. Smith. Myrtaceae.

A tall shrub with gracefully drooping branchlets, narrowly linear leaves less than an inch long, and cylindrical spikes, 2 inches long, of small white flowers. It is native to Australia.

For previous introduction see 90712.

112089. MILETTIA OBLATA Dunn. Fabaceae.

A tree about 90 feet high, with large, pale-green leaves and showy lavender flowers in fascicled racemes. Native to eastern tropical Africa.

112090. SPATHODEA NILOTICA Seem. Bigoniaceae.

A shrubby tree up to 20 feet high; native to the northern part of tropical Africa. The leaves, which are opposite, are composed of 9 to 15 leathery leaflets and are covered, beneath with dense short hairs, and the scarlet flowers, about 3 inches long, are in short terminal clusters. Both the leaves and flowers resemble those of *Spathodea campanulata*.

For previous introduction see 102617.

112081 to 112091—Continued.

112091. *SYNCARPIA GLOMULIFERA* (J. E. Smith) Niedenzu. Myrtaceae.

A tall slender evergreen tree, native to Australia, with broadly ovate leaves 2 to 3 inches long, appearing as if in whorls from two pairs being close together. The small white flowers are in globular clusters of 6 to 10 on short peduncles at the base of the new shoots. The wood is valuable for posts and for underground construction work.

For previous introduction see 90861.

112092 to 112099.

From Jamaica Plain, Mass. Seeds collected by Dr. Edgar Anderson on the Arnold Arboretum Balkan expedition and presented by the Arnold Arboretum. Received August 22, 1935.

Introduced for Department specialists.

112092. *EPHEDRA DISTACHYA* L. Gnetaceae.
Common jointfir.

No. 72. From the Danube delta, Rumania. A low-growing, rigid, tufted shrub, with erect green leafless branches and small red fruits. Native to Europe and Asia.

For previous introduction see 77619.

112093. *FRAXINUS HOLOTRICHA* Koehne. Oleaceae. Ash.

A small tree with leaves about 8 inches long, composed of 9 to 13 leaflets; of unknown origin.

For previous introduction see 109409.

112094. *HESPERIS* sp. Brassicaceae.

No. 152.

112095 and 112096. *LIGUSTRUM VULGARE* L. Oleaceae. European privet.

Collected on the edge of the steppe in situations where practically no other shrubs can survive.

112095. From Cluj, Rumania.

112096. From Fanata, Cluj, Rumania.

112097 to 112099. *SORBUS AUCUPARIA* L. Malaceae. European mountain-ash.

For previous introduction see 98156.

112097 and 112098. From Sofia, Bulgaria.

112099. No. 66-35. From Mount Vitasha, near Sofia, Bulgaria.

112100. *CEROXYLON ANDICOLA* Humb. and Bonpl. Phoenicaceae. Wax palm.

From Ecuador. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received August 22, 1935.

No. 7501-A. *Palma de cera*. From Los Olivos, Canton Tulcan, Provincia Carchi, July 11, 1935.

112101. *ARACHIS HYPOGAEA* L. Fabaceae. Peanut.

From Brazil. Seeds presented by Mario Pereira Ramos, Sub-Assistente, Ministerio da Agricultura, Campo de Sementes de Fumo de S. Gonçalo dos Campos, Bahia.

Seeds from seedling plants, collected in the region of Bahia; introduced for Department specialists.

112102 to 112108. *SACCHARUM*. Poaceae. Sugarcane.

From Tabiti, Society Islands. Cuttings collected by E. W. Brandes, Bureau of Plant Industry. Received September 3, 1935.

Introduced for Department specialists.

112102. No. T-1. 112106. No. T-5.

112103. No. T-2. 112107. No. T-6.

112104. No. T-3. 112108. No. T-7.

112105. No. T-4.

112109 to 112112.

From India. Bulbs purchased from Mrs. P. Kohli, Baramulla, Kashmir. Received September 4, 1935.

Introduced for Department specialists.

112109. *COLCHICUM LUTEUM* Baker. Melanthiaceae.

A spring-blooming colchicum with few fleshy strap-shaped leaves about 9 inches long and one to three golden-yellow flowers over an inch across. Native to the temperate Himalayas from 4,000 to 7,000 feet altitude.

112110. *CROCUS SATIVUS* L. Iridaceae. Saffron.

Received as "cashmerianus," a geographic form.

For previous introduction see 47577.

112111. *LILIUM THOMSONIANUM* (D. Don) Lindl. Liliaceae. Thomson lily.

A lily of unusual appearance, suggesting in habit *Fritillaria*, *Ornithogalum*, and *Hosta*. The erect stem is over a foot high, and the narrow grasslike leaves are mostly crowded at the base of the stem. The pale-mauve or rosy bell-shaped drooping flowers with deep-purple anthers are over an inch long and in a terminal raceme containing 8 to 10 flowers. This lily is native to mild-wintered regions of the Himalayas from western China to northern India.

For previous introduction see 58490.

112112. *STERNBERGIA FISCHERIANA* (Herb.) Roem. Amaryllidaceae.

A spring-blooming *Sternbergia* with strap-shaped leaves about a foot long and one to four bright-yellow flowers, the segments over an inch long. Native to the Caucasus region.

112113 and 112114. *PISTACIA WEINMANIFOLIA* Poiss. Anacardiaceae.

From China. Seeds presented by Dr. J. F. Rock, Yunnanfu, Yunnan. Received September 4, 1935.

Introduced for Department specialists.

A handsome evergreen tree up to 60 feet high, with shining dark-green, pinnate leaves about 6 inches long and red fruits the size of peas. Native to southwestern China at altitudes of 3,000 to 5,000 feet.

112113. From Ta Ku district, Likiang, eastern slope of the northern end of the Likiang Snow Range, a hot dry place that in the summer gets plenty of rain.

112114. From the Yangtze Valley, a 3-day journey west of Likiang on the western slopes of the Likiang Snow Range.

112115. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

From Honduras. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received September 5, 1935.

Introduced for Department specialists.

Chichicaste. From Portillo Grande, Yorito, Departamento Yoro; June 1935 at 4,100 feet altitude.

112116. ULMUS PUMILA PILOSA Rehder. Ulmaceae. Chinese elm.

From China. Seeds presented by Dr. Albert N. Steward, College of Agriculture and Forestry, Nanking University, Nanking. Received April 28, 1934. Numbered in September 1935.

F. 110. From Chung Shen Park, Kwei Ling Kian. A variety of the Chinese elm with the young branchlets densely pilose and reddish brown and the leaves pubescent.

112117 to 112119.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received September 22, 1935.

Introduced for Department specialists.

112117. HARRISIA ERIOPHORA (Pfeiff.) Britton. Cactaceae.

A tall subcylindrical-stemmed cactus, native to Cuba. The large white flowers are nocturnal.

For previous introduction see 87512.

112118. KALANCHOE BLOSSFELDIANA Poellnitz. Crassulaceae.

Received from the Parks Department of Port Elizabeth, South Africa.

112119. STACHYTARPHETA INDICA (L.) Vahl. Verbenaceae.

Received from the Agri-Horticultural Society of Madras.

112120 to 112122.

From France. Seeds presented by R. Salgues, Directeur de Station Botanique de Brignoles. Received September 14, 1935.

Introduced for Department specialists.

112120. CALYCOTOME SPINOSA (L.) Link. Fabaceae.

A low spiny shrub, about 5 feet high, with trifoliate leaves, hairy beneath, and yellow flowers about three-fourths of an inch long. Native to the Mediterranean region.

For previous introduction see 101411.

112121. CENTAUREA CONIFERA L. Asteraceae.

A white-woolly perennial about 1 foot high, with large heads of purple or purplish-brown flowers. Native to southern Europe.

112122. DIANTHUS BALBISII Ser. Silenaceae.

A herbaceous perennial 2 feet or less in height, with flat straight linear-lanceolate leaves about 3 inches long and rosy or purple flowers in small heads. Native to southern Europe.

For previous introduction see 105016.

112123 to 112125. SACCHARUM. Poaceae. Sugarcane.

From the Cook Islands. Cuttings collected at Rarotonga Island by E. W. Brandes, Bureau of Plant Industry. Received September 16, 1935.

Introduced for Department specialists.

112123. No. T-1. **112125.** No. T-3.

112126 to 112194. NICOTIANA TABACUM L. Solanaceae. Tobacco.

From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received September 13, 1935.

Introduced for Department specialists.

112126 to 112128. Bonanza.

112126. No. 3438. Collected August 23, 1935, at Santiago Ixcuintla, Nayarit.

112127. No. 3443. Collected August 24, 1935, at El Nuevo, Nayarit.

112128. No. 3456. Collected August 31, 1935, at Santiago Ixcuintla, Nayarit.

112129. No. 3445. *Burley huero.* Collected August 24, 1935, at El Nuevo, Nayarit.

112130. No. 3447. *Burley negro.* Collected August 24, 1935, at El Nuevo, Nayarit.

112131. No. 3458. *Cash.* Collected August 31, 1935, at Santiago Ixcuintla, Nayarit.

112132 to 112165. Córdoba type tobacco, collected in August 1935. Furnished by El Aguila cigarette factory of Mexico City.

112132. No. 3457. From Santiago Ixcuintla, Nayarit.

Nos. 112133 to 112165 were collected in the State of Veracruz in August 1935.

112133. No. 3467. From Tecama.

112134. No. 3468. From Monte Blanco.

112135. No. 3469. *Mata de caña.* From San Juan de la Punta.

112136. No. 3470. From Hacienda La Capilla.

112137. No. 3471. From Tecamilla.

112138. No. 3472. From Tecama.

112139. No. 3473. From Cuautlapa.

112140. No. 3474. From Monte Blanco.

112141. No. 3475. From San Lorenzo.

112142. No. 3476. From Monte Blanco.

112143. No. 3477. From Coapichapa.

112144. No. 3478. From Hacienda Buenavista.

112145. No. 3479. From Cerro La Totola.

112146. No. 3480. From El Gallego.

112147. No. 3481. From Cerro La Totola.

112148. No. 3482. From Coapichapa.

112149. No. 3483. From Sumidero.

112150. No. 3484. From Cerro La Totola.

112151. No. 3485. From El Gallego.

112152. No. 3486. From Sumidero.

112153. No. 3487. From Lagunilla.

112126 to 112194—Continued.

112154. No. 3488. From Barrauca, San Miguel.
112155. No. 3489. From Tecamilla.
112156. No. 3490. From Sumidero.
112157. No. 3491. From Coapichapa.
112158. No. 3492. From La Cumbre, Escamela.
112159. No. 3493. From the Trapiche Mesa, San Juan de la Punta.
112160. No. 3494. From Dos Caminos, San Juan de la Punta.
112161. No. 3495. From San Juan de la Punta.
112162. No. 3496. From San Juan de la Punta.
112163. No. 3497. From San Juan de la Punta.
112164. No. 3498. From San Juan de la Punta.
112165. No. 3499. From San Juan de la Punta.
- 112166 and 112167. *Oriollo*, collected August 19, 1935, at La Piedad, Michoacan.
112166. No. 3433. 112167. No. 3435.
- 112168 to 112170. *Jamaica*. Collected in the State of Nayarit.
112168. No. 3441. From Santiago Ixcuintla, August 24, 1935.
112169. No. 3448. From El Nuevo, August 24, 1935.
112170. No. 3459. From Santiago Ixcuintla, August 31, 1935.
112171. No. 3466. *Negro aplador*. From San Antonio, Gutierrez-Zamora, Veracruz, August 29, 1935.
112172. No. 3444. *Orinoco*. Collected August 24, 1935, at El Nuevo, Nayarit.
112173. No. 3455. *Orinoco*. From Navolato, Sinaloa, August 30, 1935.
112174. No. 3439. *Orinoco blanco*. Collected August 23, 1935, at Santiago Ixcuintla, Nayarit.
112175. No. 3460. *Orinoco hoja ancha*. Collected August 31, 1935, at Santiago Ixcuintla, Nayarit.
112176. No. 3446. *Orinoco huero*. Collected August 24, 1935, at El Nuevo, Nayarit.
- 112177 and 112178. *Orinoco negro*. Collected August 23, 1935, at Santiago Ixcuintla, Nayarit.
112177. No. 3437. 112178. No. 3440.
112179. No. 3449. Cultivated at Tuxpan, Nayarit, August 26, 1935. A mixed sample containing *Orinoco negro*, *Vallejano*, *Cubano*, and perhaps others.
112180. No. 3462. *San Andres Tuxtla*. Collected August 29, 1935, at Los Tuxtlas, Veracruz.
112181. No. 3500. *Tabaco mulato*. Collected August 20, 1935, at San Juan de La Punta, Veracruz.
112182. No. 3436. *Tabaco corriente*. From Guadalajara, Jalisco, August 20, 1935.
112183. No. 3454. *Vallejano*. From Puerto Vallarta, Jalisco, August 30, 1935.

112126 to 112194—Continued.

- 112184 to 112186. *Vena amarilla*. Collected August 29, 1935, in the State of Veracruz.
112184. No. 3463. From Gutierrez-Zamora.
112185. No. 3464. From Joloapan.
112186. No. 3465. From Puerto Rico.
- 112187 to 112189. *Virginia*.
112187. No. 3442. Collected August 24, 1935, at Santiago Ixcuintla, Nayarit.
112188. No. 3450. Collected August 27, 1935, at Acaponeta, Nayarit.
112189. No. 3461. Collected August 31, 1935, at Cuicatlan, Oaxaca.
112190. No. 3451. Collected August 27, 1935, at Tecuala, Nayarit.
112191. No. 3432. A commercially cultivated variety, collected August 17, 1935, at Morelia, Michoacan.
112192. No. 3434. A volunteer plant from La Piedad, Michoacan, August 19, 1935.
- 112193 and 112194. Mixed samples of locally grown seed from Tecuala, Nayarit, August 27, 1935.
112193. No. 3452. 112194. No. 3453.
- 112195 and 112196. *EUPHORBIA INTISY* Drake. Euphorbiaceae.
- From Madagascar. Plants presented by Miss Bargyla Rateaver, Fort Dauphin. Received September 18, 1935.
- Introduced for Department specialists.
- An arborescent succulent about 12 feet high, native to southern Madagascar. It has gray bark, dichotomous or somewhat whorled branches, and minute scattered leaves. The small and inconspicuous greenish flowers are in very short cymes near the tips of the branches.
- For previous introduction see 99378.
- 112197 to 112199. *MEDICAGO SATIVA* L. Fabaceae. Alfalfa.
- From Italy. Seeds presented by Dr. E. Pantanelli, Director, Stazione Agraria Sperimentale, Bari. Received September 13, 1935.
- Introduced for Department specialists.
112197. *Bengasina*.
112198. *Emiliana C. R.*
112199. *Mohisana*.
- 112200 to 112209. *NICOTIANA TABACUM* L. Solanaceae. Tobacco.
- From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received September 17, 1935.
- Introduced for Department specialists.
112200. No. 3502. Cordoba type. Collected September 5, 1935, on the Hacienda Zonquimixtla, Teziutlan, Puebla.
- 112201 to 112203. Collected September 9, 1935, at Ojitlan, Oaxaca.
112201. No. 3509. *Oriollo*.
112202. No. 3508. *Habanero blanco*.
112203. No. 3510. *Habanero legitimo*.

112200 to 112209—Continued.

112204. No. 3504. *Valle nacional*. Collected August 31, 1935, at Tuxtepec, Oaxaca.
112205. No. 3501. *Vena amarilla*. From Martinez de La Torre, Veracruz, September 5, 1935.
112206. No. 3507. From Escamela, Veracruz, September 9, 1935.
112207. No. 3505. *Tlapacoyan*. From Martinez de La Torre, Veracruz, September 9, 1935.
112208. No. 3506. From Merida, Yucatan, September 9, 1935.
112209. No. 3503. From San Andres, Veracruz, September 9, 1935.

112210 to 112219.

From Ecuador. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received August 22, 1935.

Introduced for Department specialists.

112210. *ANAGALLIS ARVENSIENSIS CAERULEA* (Schreb.) Ledeb. Primulaceae.

No. 7397-A. From Ibarra Canton, Provincia Imbabura, June 30, 1935.

112211. *BOMAREA* sp. Amaryllidaceae.

No. 7431-A.

112212. *LADENBERGIA MACROCARPA* (Vahl) Klotzsch. Rubiaceae.

No. 7459-A. *Cascarilla amarilla*. July 11, 1935. From Los Olivos, Canton Tulcan, Provincia Carchi. A small tree related to the cinchonas, with leathery, oblong-elliptic leaves about 2 inches long and terminal panicles of small fragrant white flowers. Native to Colombia.

112213 and 112214. *LAPLACEA INTERMEDIA* Benth. Theaceae.

Roja. An evergreen shrub, allied to *Gordonia*, with obovate-elliptic leaves and white flowers about 1 inch across. Native to Ecuador.

112213. No. 7460.

112214. No. 7460-A.

112215. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

No. 7404-A. July 1, 1935. Near Salinas, Canton Ibarra, Provincia Imbabura, at 5,000 feet altitude. A wild tomato with small crimson fruits, the size of marbles, borne in clusters like grapes.

112216. *MEDICAGO SATIVA* L. Fabaceae. Alfalfa.

No. 7406-A. June 30, 1935. Ibarra, Canton Ibarra, Provincia Imbabura, at about 7,000 feet altitude. Locally grown alfalfa presented by José Felix Tamayo.

112217. *PASSIFLORA* sp. Passifloraceae.

No. 7405-A. *Taco*. June 28, 1935. Hacienda La Victoria, Canton Ibarra, Provincia Imbabura, at about 7,000 feet altitude. A granadilla with rose-pink flowers followed by oval yellow fruits.

112218. *URCEOLINA* sp. Amaryllidaceae.

No. 7450-A. Northeast of Angel, Canton Angel, Provincia Carchi, at about 7,000 feet altitude. An erect plant with orange flowers found growing among grass on the bank of a stream.

112210 to 112219—Continued.

112219. *OPUNTIA* sp. Cactaceae. No. 7380-A.

112220 and 112221. *SACCHARUM*. Poaceae. Sugarcane.

From South Africa. Cuttings presented by H. H. Dodds, South African Sugar Association, Mount Edgecombe, Received September 20, 1935.

Introduced for Department specialists.

112220. *Striped Uba*.

112221. *Striped Co. 281*.

112222. *ILEX* sp. Aquifoliaceae. Holly.

From China. Seeds presented by Dr. Albert N. Steward, College of Agriculture and Forestry, Nanking University, Nanking. Received April 28, 1934. Numbered in September 1935.

Introduced for Department specialists.

No. F. 47. From Ta Tseh Tsuen, Yung Hsien.

112223. *CLEMATIS BOJERI* Hook. Ranunculaceae.

From Madagascar. Plant presented by Miss Bargyla Rateaver, Fort Dauphin. Received September 18, 1935.

Introduced for Department specialists.

An erect herbaceous clematis with pinnate leaves or the upper ones ternate and large terminal creamy-white flowers, marked with violet red. Native to Madagascar.

112224. *CARYOCAR NUCIFERUM* L. Caryocaraceae. Sawarri nut.

From South America. Seeds presented by Dr. J. Stahel, Landbouw-Proefstation, Paramaribo, Surinam. Received September 16, 1935.

Introduced for Department specialists.

From the Nickerie district, Paramaribo. A lofty tree, eventually 100 feet high, with trifoliate leaves and large purple flowers with very numerous white stamens. The large fruit, several inches in diameter, contains two to four flat kidney-shaped nuts with edible white almondlike meat. Native to British Guiana.

For previous introduction see 106370.

112225. *NEOMAMMILLARIA* sp. Cactaceae.

From Mexico. Plants collected by Dr. Donald Reddick, Cornell University, and Max Souviron, Bureau of Plant Industry. Received November 19, 1930. Numbered in September 1935.

Collected southeast of Real del Monte. A globular cactus, about 2 inches in diameter, with three or four stout pale-brown central spines and about 20 bristly white radial spines from each areola.

112226 to 112231. *NICOTIANA* spp. Solanaceae. Tobacco.

From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received September 25, 1935.

Introduced for Department specialists.

112226 to 112231—Continued.

112225 to 112229. *NICOTIANA TABACUM* L.

Collected September 12 and 13, 1935, at Oaxaca, Oaxaca.

112226. No. 3511. A volunteer plant with white flowers.

112227. No. 3512. A volunteer plant 8 feet high with pink flowers.

112228. No. 3513. *Tabaquillo*. A wild tobacco used to make cigarettes, but of poor quality.112229. No. 3514. *Tabaquillo*. A volunteer plant 8 feet high; a common tobacco of this region; grows in gardens, waste places, or even on house-tops.112230. *NICOTIANA* sp.

No. 3515. September 12, 1935. Oaxaca, Oaxaca. Plants 6 to 8 inches high, growing in the streets of the city.

112231. *NICOTIANA* sp.No. 3516. *Tabaco monteís*. Mitla, Oaxaca, September 13, 1935. Plants 12 to 18 inches high, common in this section especially on Mitla ruins.112232. *PHLEUM PRATENSE* L. Poaceae.
Timothy.

From Sweden. Seeds presented by Dr. G. Nilsson Leissner, Allmänna Svenska Ut-sädesaktiebolaget, Svalöf. Received September 23, 1935.

Introduced for Department specialists.

Svalöf No. 968.112233. *CAPSICUM ANNUM* L. Solanaceae.
Common redpepper.

From Spain. Seeds purchased through Samuel R. Thompson, American consul, Valencia. Received September 23, 1935.

Introduced for Department specialists.

A large sweet Spanish pepper.

112234 to 112243. *NICOTIANA TABACUM* L. Solanaceae. Tobacco.

From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received September 26, 1935.

Introduced for Department specialists.

112234 and 112235. Collected August 29, 1935, at El Verde, Sinaloa.

112234. No. 3520. 112235. No. 3524.

112236. No. 3523. *Bonanza*. Collected August 14, 1935, at Santiago Ixcuintla, Nayarit.112237. No. 3521. *Cash*. Collected August 14, 1935, at Santiago Ixcuintla, Nayarit.112238. No. 3526. *Orinoco*. Collected August 30, 1935, at Acaponeta, Nayarit.112239. No. 3522. *Orinoco blanco*. Collected August 14, 1935, at Santiago Ixcuintla, Nayarit.112240. No. 3528. *Orinoco claro*. Collected September 7, 1935, at Puerto Vallarta, Jalisco.112241. No. 3525. *Orinoco negro*. Collected August 30, 1935, at Acaponeta, Nayarit.

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112242. No. 3529. *Orinoco oscuro*. Collected September 7, 1935, at Puerto Vallarta, Jalisco.112243. No. 3527. *Virginia*. Collected August 30, 1935, at Acaponeta, Nayarit.112244. *HEVEA BRASILIENSIS* (H. B. K.) Muell. Arg. Euphorbiaceae.

Para rubber tree.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received September 25, 1935.

Introduced for Department specialists.

112245. *PACHYRHIZUS EROSUS* (L.) Urban. Fabaceae. Yam bean.

From Mexico. Tubers collected by W. A. Archer, Bureau of Plant Industry. Received September 25, 1935.

Introduced for Department specialists.

No. 3519. *Jicamo*. From the market at Oaxaca de Juarez, Oaxaca, September 12, 1935.

For previous introduction see 22971.

112246. *TERMINALIA OKARI* C. T. White. Combretaceae. Okari nut.

From the Society Islands. Seeds presented by Harrison W. Smith, Papeari, Tahiti. Received September 23, 1935.

Introduced for Department specialists.

Collected in Sangara, Territory of Papua, Australia. A tall evergreen tree, native to New Guinea, with large reddish purple edible nuts that are said to be excellent, either raw or cooked.

112247 and 112248.

From Cuba. Seeds presented by F. G. Walsingham, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received September 7, 1935.

Introduced for Department specialists.

112247. *CEREUS HEXAGONUS* (L.) Mill. Cactaceae.

A tall columnar cactus up to 45 feet high, branching at the base, the joints usually six-angled. The flowers are 8 to 10 inches long, with the outer segments purple and the inner ones white. The ovoid edible fruits, 3 to 6 inches long, have white or pinkish pulp. It is native to the West Indies and the northern part of South America.

For previous introduction see 101491.

112248. *VERNONIA* sp. Asteraceae.

From the Horticultural Section, Giza, Egypt.

112249. *SESAMUM RADIATUM* Schum. Pedaliaceae.

From Africa. Seeds presented by the Director, Jardin Botanique D'Éala, Coquilhatville, Belgian Congo. Received September 20, 1935.

An erect oil-producing species, closely related to the sesame of commerce; introduced for Department specialists.

For previous introduction see 100991.

112250. ARACHIS HYPOGAEA L. Fabaceae. Peanut.

From Brazil. Seeds presented by the Director, Instituto de Biologia Vegetal, Jardim Botânico, Rio de Janeiro. Received September 27, 1935.

Amendoim; introduced for Department specialists.

112251. PHLEUM PRATENSE L. Poaceae. Timothy.

From Wales. Seeds purchased from the Welsh Plant Breeding Station, Aberystwyth. Received September 28, 1935.

S. 50, Extreme pasture strain; introduced for Department specialists.

112252 to 112257. CAMPANULA CARPATICA Jacq. Campanulaceae. Carpathian bellflower.

From England. Plants purchased from Prichard & Sons, Christ Church, Hants. Received September 30, 1935.

Introduced for Department specialists.

112252. *Elegant.*

112253. *Harmony.*

112254. *Harvest Moon.*

112255. *Princess.*

112256. *Viscountess Byng.*

112257. *White Star.*

112258 to 112262. ARACHIS HYPOGAEA L. Fabaceae. Peanut.

From Uruguay, South America. Seeds presented by the Director of the Jardin Botânico, Montevideo. Received September 28, 1935.

A collection of native varieties introduced for Department specialists.

112258. *Bunch.*

112259. *Jumbo.*

112260. From the Departamento de Rivera.

112261. From Brazil.

112262. *Valencia.*

112263. FEROCACTUS COVILLEI Britt. and Rose. Cactaceae.

From Arizona. Seeds presented by F. J. Crider, Boyce Thompson Arboretum, Superior. Received April 9, 1932. Numbered in September 1935.

Introduced for Department specialists.

A globular or short-cylindric cactus about 5 feet high, with 20 to 30 thin high ribs and stout straight or hooked annulate spines 2 to 3 inches long, varying from red to white. The flowers, about 3 inches long, vary in color from yellow to crimson. Native to the southwestern United States and northern Mexico.

112264 and 112265.

From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received September 25, 1935.

Introduced for Department specialists.

112264 and 112265—Continued.

112264. DAHLIA COCCINEA Cav. Asteraceae.

No. 3517. A wild dahlia, collected September 12, 1935, at Monte Albán, Oaxaca. A species with small single orange flowers.

112265. ZINNIA sp. Asteraceae.

No. 3518. A wild zinnia, collected September 12, 1935, at Monte Albán, Oaxaca.

112266. CALAMUS ORNATUS Blume. Phoenicaceae. Rattan.

From the Philippine Islands. Seeds presented by Arthur Fischer, Director of Forestry, Manila. Received September 26, 1935.

Introduced for Department specialists.

112267 to 112292.

From Manchuria. Seeds collected by the Asiatic Expedition. Received September 30, 1935.

Introduced for Department specialists.

112267 and 112268. ACONITUM KUSNEZOFFII Reichenb. Ranunculaceae. Monkshood.

An erect hardy herbaceous perennial, native to northeastern Asia, with terminal clusters of bluish flowers.

For previous introduction see 110479.

112267. No. 13. IV. From Barim, September 27, 1934.

112268. No. 14. IV. From Barim, September 30, 1934.

112269. ALLIUM SENESCENS L. Liliaceae. No. 7. IV. From Barim.

112270. ASTRAGALUS sp. Fabaceae.

No. 17. IV. September 4, 1934. Collected along the road from Hailar to Ganjour Monastery, Barga District.

112271 and 112272. CIMICIFUGA DAHURICA (Turcz.) Huth. Ranunculaceae.

From Barim. A tall hardy perennial with large decomposed leaves and paniculate racemes of small white flowers. Native to central Asia.

112271. No. 11. IV. September 28, 1934.

112272. No. 12. IV. October 1, 1934.

112273. CLEMATIS GLAUCA ANGUSTIFOLIA Ledeb. Ranunculaceae.

No. 10. IV. Barim, September 28, 1934. A slender woody climber with the leaflets three-parted into narrowly linear-lanceolate segments. The nodding, bell-shaped yellow flowers, 1 to 2 inches across, are borne in few-flowered, axillary cymes. Native to Mongolia.

For previous introduction see 92773.

112274. CONVALLARIA MAJALIS L. Convallariaceae. Lily-of-the-valley.

No. 2. IV. From Barim, October 2, 1934.

112275. CORYLUS HETEROPHYLLA Fisch. Betulaceae. Hazelnut.

No. 9. IV. From Barim, September 30, 1934. A hardy shrubby hazel up to 12 feet high, with nuts about one-fourth of an inch long. Native to northeastern Asia.

For previous introduction see 69884.

112267 to 112292—Continued.

112276. *EPHEDRA* sp. Gnetaceae.

No. 1. IV. August 8, 1934. From sand dunes, vicinity of Khankai-nur, Barga District.

112277. *HYPERICUM ASCYRON* L. Hypericaceae. St. Johnswort.

No. 20. IV. October 1, 1934. From the shore of the Yal River near Barim.

112278. *IRIS DICHOTOMA* Pall. Iridaceae. Vesper iris.

No. 8. IV. Near Barim, October 28, 1934. An iris with flower stems up to 2 feet tall and fugitive flowers which vary from white to lavender, produced freely in late summer.

For previous introduction see 90154.

112279 and 112280. *LILIUM CONCOLOR* Salisb. Liliaceae. Morningstar lily.

Collected near Barim.

For previous introduction see 69020.

112279. No. 5. IV. October 2, 1934.

112280. No. 6. IV. September 30, 1934.

112281. *LINUM PERENNE* L. Linaceae. Perennial flax.

No. 18. IV. Near Barim, September 29, 1934.

112282. *PARNASSIA PALUSTRIS* L. Saxifragaceae. Grass-of-Parnassus.

No. 15. IV. October 1, 1934, in the vicinity of Harbin.

112283. *PEDICULARIS* sp. Scrophulariaceae.

No. 22. IV. Near Barim, October 2, 1934.

112284. *PRUNUS PADUS* L. Amygdalaceae. European bird-cherry.

No. 16. IV. September 13, 1934. From the valley of the Bain-gol River along the road from Hailar to Khandagai.

112285. *RHAMNUS DAVURICA* Pall. Rhamnaceae. Dahurian buckthorn.

No. 19. IV. From Khandagai, Barga District, September 10, 1934. A large spreading shrub or small tree up to 20 feet high, with oblong leaves 2 to 4 inches long, greenish flowers, and black berries less than half an inch in diameter. Native to northeastern Asia.

For previous introduction see 69889.

112286. *SWERTIA DILUTA* (Turcz.) Benth. and Hook. f. Gentianaceae.

No. 21. IV. Near Barium, September 29, 1934. A low herbaceous perennial about a foot high, with lanceolate leaves and small pale-blue flowers in a dense fastigiate umbel. Native to eastern Asia.

112287 and 112288. *TARAXACUM* spp. Cichoriaceae.

Collected September 28 and 29, 1934, near Barim.

112287. No. 24. IV.

112288. No. 25. IV.

112289 and 112290. *VERATRUM NIGRUM* L. Melanthiaceae. False-hellebore.

112267 to 112292—Continued.

A hardy herbaceous perennial up to 3 feet high, with broad leaves about 1 foot long and small blackish-purple flowers in terminal panicles. Native to Europe and Asia.

112289. No. 3. IV. September 28, 1934, near Barim.

112290. No. 4. IV. September 30, 1934, near Barim.

112291. *VIBURNUM SARGENTI* Koehne. Caprifoliaceae. Sargent cranberrybush.

No. 23. IV. September 29, 1934. In the vicinity of Barim. A strong-growing shrub 12 to 15 feet high, somewhat resembling *Viburnum opulus*, with broadly ovate, three-lobed leaves and heavy clusters of attractive bright-red fruits.

For previous introduction see 101909.

112292. (Undetermined.)

No. 26. IV. Near Barim, October 1, 1934.

112293. *NIEREMBERGIA GRACILIS* Hook. Solanaceae.

From Egypt. Seeds presented by the Horticultural Section, Giza, through F. G. Walsingham, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba. Received September 7, 1935.

Introduced for Department specialists.

A tufted perennial with slender ascending stems about 6 inches high, small narrow linear leaves, and showy light-lavender flowers, darker near the center and yellow in the throat, about 1 inch across. Native to Argentina.

112294. *LITCHI CHINENSIS* Sonner. Sapindaceae. Lychee.

From China. Plants presented by Col. Clyde S. Ford, United States Postal Agency, Shanghai. Received July 24, 1923. Numbered in September 1935.

Introduced for Department specialists.

No. 10.

For previous introduction see 111949.

112295 to 112304.

From Colombia and Ecuador. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received September 18, 1935.

Introduced for Department specialists.

112295 to 112297. *BOMAREA* spp. Amaryllidaceae.112295. *BOMAREA* sp.

No. 7551-A. Near the village of Toño, on the north flank of the Volcan de Chiles, Departamento Nariño, Colombia, July 29, 1935, at 11,000 feet altitude. A vine found growing in hedgerows; flowers not seen.

112296. *BOMAREA* sp.

No. 7637-A. *Peca*. Along the road from Pun to Tulcan, Canton Tulcan, Provincia Carchi, Ecuador, August 15, 1935, at 9,800 feet altitude. A twining plant with crimson flowers, the inner segments shading to orange with no becks.

112295 to 112304—Continued.

112297. BOMAREA sp.

No. 7553—A. *Peca*. From Santa Rosa, Canton Espejo, Provincia Carchi, Ecuador, July 29, 1935, at 6,000 feet altitude. A twining plant growing over shrubs. The flowers are orange to yellow on the outside and pale yellow inside.

112298. CHAMAEDOREA sp. Phoenicaceae.

No. 7556—A. *Moquillan*. Along the trail from Mayasquer to Santa Rosa beside the Rio Chilma Canton Espejo, Provincia Carchi, Ecuador, July 29, 1935, at 6,500 feet altitude. A small palm about 10 feet high found growing in the undergrowth of dense forest on the mountain-side.

112299. LADENBERGIA MACROCARPA (Vahl) Klotzsch. Rubiaceae.

No. 7575—A. *Cascarilla cimarruna*. Along the trail from Mayasquer to Cascarilla to Tambo, Distrito Nariño, Colombia, in a forest at 10,000 feet altitude, August 12, 1935.

For previous introduction and description see 112212.

112300. DATURA ROSEI Safford. Solanaceae.

No. 7438—A. South of Angel, Canton Angel, Provincia Carchi, Ecuador, July 6, 1935. *Guanto*. A small tree or shrub found in hedgerows between fields. The flowers are dark red with green veins; commonly cultivated as an ornamental by the Indians of the highlands of Ecuador.

For previous introduction see 58362.

112295 to 112304—Continued.

112301. FUCHSIA UMBROSA Benth. Onagraceae.

No. 7561—A. Collected July 31, 1935, at Santa Rosa, Provincia Carchi, Ecuador.

112302. LAPLACEA INTERMEDIA Benth. Theaceae.

No. 7460—A. *Cascarilla rosa*. From Los Olivos, Canton Tulcan, Provincia Carchi, Ecuador, July 11, 1935.

For previous introduction and description see 112214.

112303. PHASEOLUS LUNATUS L. Fabaceae. Lima bean.

No. 7425—A. *Frejol torta*. From Hacienda La Victoria, Canton Barya, Provincia Imbabura, Ecuador, July 3, 1935. A vine with white flowers and spotted seeds, collected at 7,000 feet altitude.

112304. URCEOLINA sp. Amaryllidaceae.

No. 7450—A. From Ecuador. (Received without further notes.)

112305 and 112306.

From Africa. Seeds presented by R. Anderson, Yapata Estate, Kitale, Kenya Colony. Received September 23, 1935.

Introduced for Department specialists.

112305. ASCLEPIAS sp. Asclepiadaceae.

112306. GALACTIA sp. Fabaceae.

A vine with yellow flowers.



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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 125



Washington, D. C.

Issued April 1940

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, OCTOBER 1 TO DECEMBER 31, 1935 (Nos. 112307-113512)

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INTRODUCTORY STATEMENT

This inventory, No. 125, is a record of plant material received by the Division of Plant Exploration and Introduction from October 1 to December 31, 1935 (Nos. 112307 to 113512).

Particular mention should be made of the introduction from Oceania of 143 lots of sugarcane cuttings (Nos. 112861 to 113003). These were collected by E. W. Brandes, Bureau of Plant Industry, and represent distinct native strains developed in New Caledonia, New Hebrides, and other Pacific islands. This introduction is a continuation of a worldwide search for mosaic-resistant varieties that already has made possible the development of superior commercial varieties for Louisiana and western Puerto Rico, and in the past few years it has increased sugar production for those areas from 46,000 tons to about 500,000 tons per year.

A closely related project is one concerned with the genetics of the sugar beet. Additional source material for this project is recorded in the introduction through G. H. Coons, of the Bureau of Plant Industry, of 193 lots of beet varieties (*Beta* spp.; Nos. 112398 to 112590) from Portugal, Germany, and other parts of continental Europe, and from the Canary and Madeira Islands.

Several lots of seeds of cultivated tobacco were received from Colombia, where Raymond Stadelman of the Bureau of Plant Industry was engaged in collecting as many as possible of the local strains grown in the more isolated parts of that country. At the same time W. A. Archer, mentioned in the preceding inventory, continued to send in seed of tobacco varieties from Mexico. These introductions are intended, as has already been pointed out in Inventory No. 124, for the use of Department pathologists seeking to develop disease-resistant tobacco varieties for the United States.

Rice growers will note with interest the recording of a special collection of Korean varieties (Nos. 113418 to 113435), presented by the Laboratory of Plant Pathology at Fukuoka, Japan.

The botanical determinations of seeds introduced have been made and the nomenclature determined by Paul Russell, who has had general supervision of this inventory.

B. Y. MORRISON,

Principal Horticulturist, in Charge.

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D. C., April 13, 1939.

INVENTORY¹

112307 to 112316. NICOTIANA TABACUM
L. Solanaceae. Common tobacco.

From Colombia. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received October 17, 1935.

Introduced for Department specialists.

112307, No. 2. *Garcia*. September 18, 1935. From a small farm at Boquerón, on the highway south of Piedecuesta, at about 5,000 feet altitude.

112308, No. 3. Mixed varieties from the Villamizar plantations, Chaparro.

112309, No. 4. *Chocoa*. From the Villamizar plantations near Bimanga.

112310, No. 5. From the Villamizar plantations near Bimanga. A variety with a lighter leaf.

112311, No. 6. Mixed varieties from the plantation La Joya de Gustavo Ordoñez C., near Bucaramanga.

112312, No. 7. September 25, 1935. Collected from a single plant on the plantation La Joya, near Bucaramanga.

112313, No. 8. September 28, 1935. From Girón, Departamento Santander. Variety *Garcia*, presented by Jose Maria Marques.

112314, No. 9. September 28, 1935. American seed, presented by Carlos Uribe, Llano Grande, near Girón.

112315, No. 10. *Cubano*. Presented by Nicolas Gonzales, Girón.

112316, No. 11. *Chocoa*. September 29, 1935. From Carlos Uribe, Girón.

112317. TRITICUM AESTIVUM L. Poaceae. Common wheat.

From England. Seeds presented by Prof. F. L. Engledow, National Institute of Agricultural Botany, Cambridge. Received October 10, 1935.

Introduced for Department specialists.

Holdfast, a new wheat developed by Professor Engledow.

112318 and 112319. ARACHIS HYPOGAEA
L. Fabaceae. Peanut.

From Brazil. Seeds presented by Ministerio da Agricultura, Estação Experimental de Cana de Assucar, Campos, Rio de Janeiro. Received October 11, 1935.

Introduced for Department specialists.

112318. *Amendoim Commum*.

112319. *Amendoim Francez*.

112320 to 112331. NICOTIANA TABACUM
L. Solanaceae. Common tobacco.

From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received October 15, 1935.

Introduced for Department specialists.

112320, No. 3531. Collected September 20, 1935, at Xaltiangius, Guerrero.

112321, No. 3534. *Tobaco cimarrón*. A volunteer plant collected September 23, 1935, at Santa Maria, Moreles.

112322, No. 3542. Collected September 25, 1935, from a volunteer plant in the garden of the Colegio de las Vizcainas, Distrito Federal.

Nos. 112323 to 112326 were collected in the State of Guanajuato.

112323, No. 3543. Collected September 30, 1935, at León.

112324, No. 3544. *Lenguillo*. Collected September 20, 1935, at León.

112325, No. 3545. A mixed sample of *Chino*, *Negro*, *Virginia*, and *Lenguillo*. Collected September 30, 1935, at León.

112326, No. 3546. A mixed sample, collected October 1, 1935, at San Francisco de Rincon.

Nos. 112327 to 112330 were collected in the State of Jalisco.

112327, No. 3548. *Lenguillo*. Collected October 2, 1935, at San Juan de Los Lagos.

¹ It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Plant Exploration and 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 seed samples or 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 identification, 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

112320 to 112331—Continued.

112328. No. 3549. *Cuerna de cabra*. Collected October 3, 1935, at Encarnación.

112329. No. 3550. *Penia de maguey*. Collected October 2, 1935, at Encarnación.

112330. No. 3551. *Hoja ancha*. Collected October 3, 1935, at Encarnación.

112331. No. 3555. *Cuerna de borrego*. Collected October 5, 1935, at Fabellón. Aguascalientes.

112332 to 112335. *CHENOPODIUM* spp. Chenopodiaceae.

From Bolivia. Seeds presented by John J. Muccio, American consul, La Paz. Received October 9, 1935.

Introduced for Department specialists.

112332. *CHENOPODIUM HASTATUM* Phil.

A species grown only at very high altitudes. Both the plant and the seeds are much smaller than those of *Chenopodium quinoa*, and it is not grown as extensively.

For previous introduction see 41335.

112333 to 112335. *CHENOPODIUM QUINOA* Willd. Quinoa.

112333. *Quinoa dulce, blanca*.

112334. *Quinoa corriente*.

112335. *Quinoa real*.

112336. *TRIFOLIUM* sp. Fabaceae.

From England. Seeds presented by H. Gilbert-Carter, Director, Botanic Garden, Cambridge. Received October 1, 1935.

Introduced for Department specialists.

112337. *PENNISETUM OCCIDENTALE* Chase. Poaceae. Grass.

From Ecuador. Seeds presented by Ing. Nelson Márquez, Director, Milagro Model Farm, Guayaquil. Received October 9, 1935.

Introduced for Department specialists.

A tall perennial grass growing in large clumps in low ground. Native to Ecuador.

112338. *DERRIS PTEROCARPUS* (DC.) Kilip. Fabaceae.

From British Guiana. Root cuttings collected by W. A. Archer, Bureau of Plant Industry. Received November 11, 1934. Numbered in October 1935.

No. 2594. Collected in the Botanical Gardens, Georgetown, September 27, 1934. A climbing shrub, native to French Guiana, with trifoliolate leaves and racemes of rather large white flowers.

For previous introduction see 108577.

112339 to 112343. *SACCHARUM* spp. Poaceae.

From the Fiji Islands. Cuttings presented by the Nausori Mill, through Julius Matz, Bureau of Plant Industry. Received October 15, 1935.

112339 and 112340. *SACCHARUM* spp.

Received under the name "robustum," a name not properly published.

112339. *Nausori Native Cane* A.

112340. *Nausori Native Cane* B.

112339 to 112343—Continued.

112341 and 112342. *SACCHARUM OFFICINARUM* L. Sugarcane.

112341. 28 N. G. 11.

112342. 28 N. G. 223.

112343. *SACCHARUM SPONTANEUM* L.

Rarawai Native Cane C.

112344 and 112345. *TRITICUM AESTIVUM* L. Poaceae. Common wheat.

From England. Seeds presented by Gartons Ltd., Warrington. Received October 7, 1935.

Introduced for Department specialists.

112344. *Little Tich*. A distinct new short-strawed wheat.

112345. *Redman* wheat.

112346. *TEPHROSIA VOGELII* Hook. f. Fabaceae.

From Africa. Seeds presented by the Lieutenant Governor, Ivory Coast, through the Division of Insecticide Investigations, Bureau of Entomology and Plant Quarantine. Received July 20, 1933. Numbered in October 1935.

Introduced for Department specialists.

I. D. (Insecticide Division) No. 1776. A shrubby legume native to tropical Africa.

For previous introduction see 111348.

112347 to 112349. *BESSERA ELEGANS* Schult. f. Liliaceae. Coraldrops.

From Mexico. Bulbs presented by Prof. Guillermo Gándara, Universidad Nacional de Mexico, Mexico City, through Dr. Jose Figueroa, El Director del Instituto Biotecnico, D. F. Received October 2, 1935.

A bulbous squill-like plant with two to three narrow linear leaves about 18 inches long and equally long scapes having umbels of 4 to 20 vermilion flowers 1 inch long. Native to Mexico.

112350 to 112353. *ZEPHYRANTHES* spp. Amaryllidaceae. Zephyrily.

From Bermuda. Bulbs presented by John Bushell, through T. A. Russell, Acting Director of Agriculture, Paget East. Received October 3, 1935.

Introduced for Department specialists.

112350. *ZEPHYRANTHES CANDIDA* (Lindl.) Herb. Autumn zephyrily.

A subtropical, white-flowered species with linear leaves a foot long, appearing with the flowers; the flowers, about 2 inches long, are often rose tinted on the outside. Native to Argentina.

For previous introduction see 109910.

112351. *ZEPHYRANTHES CARINATA* Herb.

A bulbous perennial with linear leaves and a scape about a foot high, bearing a single rosy flower 3 to 5 inches across and 3 inches long. It is said to be the largest and choicest of the rosy-flowered zephyrilies and blooms in the summer. Native to the West Indies.

For previous introduction see 107145.

112350 to 112353—Continued.

112352. ZEPHYRANTHES ROSEA Lindl.

A tender autumn-blooming species, native to Cuba, with linear, bright-green leaves and rose-colored flowers an inch long, on a peduncle 4 to 6 inches long.

For previous introduction see 109912.

112353. ZEPHYRANTHES TEXANA Herb.

Aurea. A variety with bright-yellow flowers.

112354 to 112359. NICOTIANA spp. Solanaceae. Tobacco.

From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received October 4, 1935.

Introduced for Department specialists.

112354. NICOTIANA GLAUCA R. Grah. Tree tobacco.

No. 3535. Collected near Taxco, Morelos, September 23, 1935. The plants are from 6 to 20 feet high, with yellow flowers; grows commonly throughout Mexico.

112355 to 112359. NICOTIANA TABACUM L. Common tobacco.

112355. No. 3530. *Virginia*. Puente de Ixtla, Morelos, September 19, 1935.

112356. No. 3532. From Los Organos, Guerrero, September 22, 1935.

112357. No. 3533. From Kilometro Cuarenta, Guerrero, September 23, 1935.

112358 and 112359. Seed grown by Captain McClellan at Hacienda de Ixtapa, Puerto Vallarta, Jalisco, and presented September 20, 1935, through G. H. Winters, American consul at Guadalajara.

112358. No. 3536. *Orejón palmeño*.112359. No. 3537. *Virginia*.

112360 and 112361. LITCHI CHINENSIS Sonner. Sapindaceae. Lychee.

From China. Plants presented by Col. Clyde S. Ford, United States Postal Agency, Shanghai. Received July 24, 1923. Numbered in October 1935.

Introduced for Department specialists.

112360. No. 7.

112361. No. 8.

112362. SACCHARUM OFFICINARUM L. Poaceae. Sugarcane.

From New York, N. Y. Cuttings received through the Bureau of Entomology and Plant Quarantine, October 5, 1935.

112363 to 112367. BETA spp. Chenopodiaceae.

From France. Roots collected by G. H. Coons, Division of Sugar Plants, Bureau of Plant Industry. Received October 7, 1935.

Introduced for Department specialists.

112363 to 112366. BETA VULGARIS L. Common beet.

112363. Variety *Atriplicifolia*. Originally from La Hoya, near Lorca, Spain, grown for 3 months in the Museum of Paris Botanical Garden, Paris.

112363 to 112367—Continued.

112364. From Vanville, Normandie.

112365. From Ciotat, near Cherbourg, Normandie.

112366. From Landmere, near Cherbourg, Normandie.

112367. BETA TRIGYNA Waldst. and Kit.

From the Museum of Paris Botanical Garden, Paris.

112368. SOLANUM TUBEROSUM L. Solanaceae. Potato.

From Australia. Tubers presented by Richard P. N. Short, Department of Agriculture and Stock, Brisbane, Queensland. Received October 8, 1935.

Snowflake potatoes, grown by Bull Bros., Musk Creek, Victoria; introduced for Department specialists.

112369. BESSERA ELEGANS Schult. f. Liliaceae. Coraldrops.

From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received October 4, 1935.

No. 3541. September 19, 1935. Collected in rocky soil on bluffs near Dos Caminos, Guerrero.

For previous introduction and description see 112349.

112370 and 112371.

From Mexico. Seeds presented by F. W. Smith, Guasave, Sinaloa. Received October 7, 1935.

Introduced for Department specialists.

112370. CITRUS GRANDIS (L.) Osbeck. Rutaceae. Grapefruit.

A grapefruit with pink flesh.

112371. IPOMOEA sp. Convolvulaceae.

A plant with satin-sheen white flowers and peculiar hairy pods; tubers form on the roots. Received under the name "Ilicifolia," for which a place of publication has not been found.

112372. JUBAEOPSIS CAFFRA Beccari. Phoenicaceae. Palm.

From the Union of South Africa. Seeds presented by E. Percy Phillips, Principal Botanist, Department of Agriculture, Pretoria. Received October 4, 1935.

Introduced for Department specialists.

A low pinnate-leaved palm 20 feet or less in height, with leaves 12 to 15 feet long and small edible nuts about the size of walnuts. Native to the coast of the Cape of Good Hope.

112373. CARICA PAPAYA L. Papayaceae. Papaya.

From the West Indies. Seeds collected by Mrs. Aileen Ricker, Bureau of Plant Industry. Received October 15, 1935.

Introduced for Department specialists.

Collected at Kingston, Jamaica. A papaya of fine flavor.

112374 and 112375.

From Surinam. Root cuttings collected by W. A. Archer, Bureau of Plant Industry. Received January 11, 1935. Numbered in October 1935.

Introduced for Department specialists.

112374. *LONCHOCARPUS* sp. Fabaceae.

No. 2850. *Basra nekoe*, *Haiariballi*. Collected near Scotelweg, December 1, 1934. A small plant, 6 feet high, found growing in shade on fine rich silt.

112375. *MACHAERIUM* sp. Fabaceae.

No. 2869. *Fai faia noroko*. Collected at Vredenburg Weg, December 7, 1934. A plant with yellow flowers and slender pods. The wood becomes yellow after cutting.

112376 and 112377.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received October 11, 1935.

Introduced for Department specialists.

112376. *ARECA TRIANDRA* Roxb. Phoenicaceae. Palm.

A graceful spineless palm, ultimately about 25 feet high, usually with several trunks which bear crowns of pinnate leaves 4 to 6 feet in length. The fruits, about the size of an olive, are orange scarlet. Native to India.

For previous introduction see 103156.

112377. *PASSIFLORA FOETIDA* L. Passifloraceae. Passionflower.

A rapid-growing, trailing, climbing vine with small purple flowers and delicately flavored yellow fruits less than 1 inch in diameter. It is used as a cover crop for coconuts and rubber in the Philippine Islands, and should make an interesting ornamental in the warmer parts of Florida and California.

For previous introduction see 90783.

112378 and 112379.

From Africa. Seeds collected by Dr. Thomas Barbour, Director of the Museum of Comparative Zoology, Harvard University, Cambridge, Mass. Received October 14 1935.

Introduced for Department specialists.

112378. *GOSSYPIUM* sp. Malvaceae.

Wild cotton, collected July 27, 1935, at New Gullel in the tropical lowlands of southern Swaziland, South Africa.

112379. *IPOMOEA* sp. CONVOLVULACEAE.

Collected at Lourenço Marques, Mozambique.

112380. *VIOLA PATRINII* Ging. Viola-ceae. Violet.

From Germany. Seeds presented by the Botanic Garden, Berlin-Dahlem. Received March 27, 1934. Numbered in October 1935.

Introduced for Department specialists.

For previous introduction see 104603.

112381 to 112384.

From Surinam. Root cuttings collected by W. A. Archer, Bureau of Plant Industry. Received January 14, 1935. Numbered October 17, 1935.

Introduced for Department specialists.

112381 to 112383. *LONCHOCARPUS* spp. Fabaceae.112381. *LONCHOCARPUS NICOU* (Aubl.) DC.

No. 2936. Collected at Carolina on the Surinam River, December 18, 1934. A strong growing vine with three to five pinnate papery leaves. Native to northern South America.

112382. *LONCHOCARPUS* sp.

No. 2888. *Wiriri nekuru*. From Carolina on the Surinam River, December 13, 1934. A shrub or small tree 4 to 15 feet high with a slender single stem. The single enlarged root is soft, but the stem is extremely hard.

112383. *LONCHOCARPUS NICOU* (Aubl.) DC.

No. 2920. *Nan nekoe* or *reddi nekoe*. From Marshall Creek, 20 miles above Carolina on the Surinam River, December 16, 1934.

For previous introduction and description see 112381.

112384. *SOLANUM LEUCOCARPON* Dun. Solanaceae.

No. 2917. *Ababepau*. From Marshall Creek, 20 miles above Carolina on the Surinam River. A bushy shrub 6 to 10 feet high.

112385 to 112393. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

From Colombia. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received September to December 1935.

Introduced for Department specialists.

112385. No. 12. *Palmira*. September 29, 1935. From Eliseo Rodriguez, Girón.112386. No. 13. *Chocoa*. October 14, 1935. From Compania Colombiana de Tabaco, Baranquilla.112387. No. 14. *Cubita*. October 14, 1935. From Ovejas, Department Bolivar.

112388 and 112389. October 26, 1935. From La Pintada, Antioquia.

112388. No. 15. *Tachuela*, mixed with other varieties.112389. No. 16. *Tachuela*.

112390 and 112391. November 15, 1935. From Eduardo Villa, Barrio, Antioquia. Medellin.

112390. No. 27. *Cordoncillo*.112391. No. 28. *Zapatoca*.112392 and 112393. *Tachuela*, mixed with other varieties. November 15, 1935, from Bello, Antioquia.

112392. No. 29. Presented by Lino Taboro.

112393. No. 30. Presented by Aureliano Muriel.

112394 to 112396.

From Honduras. Seeds presented by N. J. Volk, Lancetilla Experiment Station, Tela, at the request of Wilson Popenoe. Received October 22, 1935.

Introduced for Department specialists.

112394. *DURIO ZIBETHINUS* Murr. Bombacaceae. Durian.

A large handsome pyramidal tree, native to the Malay Archipelago, and cultivated for the fruits which vary from round to oval in shape and from 5 to 10 pounds in weight. These are armed with formidable prickles less than an inch long; when ripe they become slightly yellow and have a very offensive odor. The cream-colored pulp surrounding the seed is the edible portion. The large seeds may be roasted and eaten like chestnuts. The tree is readily propagated by seed if sown fresh.

For previous introduction see 67642.

112395. *GARCINIA BENTHAMII* Pierre. Clusiaceae.

A small rapidly growing evergreen tropical tree closely related to the mangosteen (*Garcinia mangostana*), native to high altitudes in the Philippine Islands. The edible fruits are very similar to those of the mangosteen except that they are slightly smaller, bright red, and have very acid flesh.

For previous introduction see 81052.

112396. *NEPHELIUM LAPPACEUM* L. Sapindaceae. Rambutan.

An erect tropical tree up to 40 feet high, native to the Malay Archipelago. The compound leaves are composed of five to seven pairs of elliptic, obovate or oblong leaflets about 4 inches long, shining dark green above, paler beneath. The crimson or yellowish fruits, in clusters of 10 to 12, are oval, about 2 inches long, and covered with soft fleshy spines less than 1 inch long. The white translucent juicy flesh (aril) which adheres to the oblong flattened seed is acidulous in flavor.

For previous introduction see 108990.

112397. *AGAVE PARRYI* Engelm. Amaryllidaceae.

From Arizona. Seeds presented by F. J. Crider, Boyce Thompson Arboretum, Superior. Received April 9, 1932. Numbered in September 1935.

Introduced for Department specialists.

An agave with a rosette of 20 to 30 oblong-spatulate leaves about 1 foot long and a scape up to 12 feet high, with a showy panicle of large greenish-yellow flowers. Native to the southwestern United States.

112398 to 112590. *BETA* spp. Chenopodiaceae.

From Europe. Seeds collected by G. H. Coons, Division of Sugar Plants, Bureau of Plant Industry. Received October 21, 1935.

Introduced for Department specialists.

112398 to 112410. *BETA VULGARIS* L. Common beet.

112398. No. 1. From Lisbon, Portugal.

Nos. 112399 to 112410. From Moite, Portugal.

112399. No. 2. 112400. No. 3.

112398 to 112590—Continued.

112401. No. 4. 112406. No. 9.

112402. No. 5. 112407. No. 10.

112403. No. 6. 112408. No. 11.

112404. No. 7. 112409. No. 12.

112405. No. 8. 112410. No. 13.

112411 to 112422. *BETA VULGARIS MACROCARPA* (Guss.) Moq.

From Lavradio, Portugal.

112411. No. 14. 112417. No. 21.

112412. No. 15. 112418. No. 22.

112413. No. 16. 112419. No. 23.

112414. No. 17. 112420. No. 24.

112415. No. 19. 112421. No. 25.

112416. No. 20. 112422. No. 26.

112423 to 112440. *BETA VULGARIS* L.

Common beet.

From Lisbon, Portugal.

112423. No. 27. 112432. No. 36.

112424. No. 28. 112433. No. 37.

112425. No. 29. 112434. No. 38.

112426. No. 30. 112435. No. 39.

112427. No. 31. 112436. No. 40.

112428. No. 32. 112437. No. 41.

Red mangold. 112438. No. 42.

112429. No. 33. 112439. No. 43.

112430. No. 34. 112440. No. 44.

112431. No. 35.

112441. *BETA TRIGYNA* Waldst. and Kit.

No. 45. From the Botanical Garden, Polytechnic School, Lisbon, Portugal.

112442 to 112460. *BETA VULGARIS* L.

Common beet.

112442. No. 46. From the Botanical Garden of the Polytechnic School, Lisbon, Portugal.

Nos. 112443 to 112460. Collected on the Madeira Islands.

Nos. 112443 to 112459. Var. *Patula*.

112443. No. 50. 112452. No. 59.

112444. No. 51. 112453. No. 60.

112445. No. 52. 112454. No. 61.

112446. No. 53. 112455. No. 62.

112447. No. 54. 112456. No. 63.

112448. No. 55. 112457. No. 64.

112449. No. 56. 112458. No. 65.

112450. No. 57. 112459. No. 66.

112451. No. 58. 112460. No. 67.

112461 to 112464. *BETA PATELLARIS* Moq.

Collected west of Praia, Formosa, Madeira Islands.

112461. No. 68. 112463. No. 70.

112462. No. 69. 112464. No. 70-A.

112465 to 112491. *BETA VULGARIS* L.

Common beet.

112398 to 112590—Continued.

- Nos. 112465 to 112468. From Ponta de Cruz, Madeira Islands.
112465. No. 71. 112467. No. 73.
112466. No. 72. 112468. No. 74.
- Nos. 112469 to 112472. From Gorzulho, Madeira Islands.
112469. No. 75. 112471. No. 77.
112470. No. 76. 112472. No. 78.
112473. No. 80. From the garden of Ferroz de Silva, Funchal, Madeira Islands.
- Nos. 112474 to 112477 were presented by João Gomes, Ribiera, Madeira Islands.
112474. No. 81. 112476. No. 83.
112475. No. 82.
112477. No. 84. *Cycla* type.
- Nos. 112478 to 112482. From the Station Horticultura, Santa Cruz de Tenerife, Canary Islands.
112478. No. 85. 112481. No. 88.
112479. No. 86. 112482. No. 89.
112480. No. 87.
- Nos. 112483 to 112491. Var. *Procumbens*; from Funeta Martiñez, Puerta Cruz, Tenerife, Canary Islands.
112483. No. 90. 112488. No. 95.
112484. No. 91. 112489. No. 96.
112485. No. 92. 112490. No. 97.
112486. No. 93. 112491. No. 98.
112487. No. 94.
- 112492 to 112496. BETA PATELLARIS Moq.
From Bufudera, Santa Cruz de Tenerife, Canary Islands.
112492. No. 101. 112495. No. 104.
112493. No. 102. 112496. No. 105.
112494. No. 103.
- 112497 to 112502. BETA VULGARIS L.
Common beet.
From Porto de Madeira, below Tocaroute, Tenerife, Canary Islands.
112497. No. 106. 112498. No. 107.
Nos. 112499 to 112502. Var. *Procumbens*.
112499. No. 108. 112501. No. 110.
112500. No. 109. 112502. No. 111.
112503. BETA PATELLARIS Moq.
From Bojamar, Tenerife, Canary Islands.
No. 112. A variety with rotulate flowers.
112504. BETA VULGARIS L. Common beet.
From Bojamar, Tenerife, Canary Islands.
No. 113. Var. *Procumbens*.
- 112505 to 112507. BETA PATELLARIS Moq.
From Bojamar, Tenerife, Canary Islands.
112505. No. 114. 112507. No. 116.
112506. No. 115.

112398 to 112590—Continued.

- 112508 to 112512. BETA VULGARIS MACROCARPA (Guss.) Moq.
From Bojamar, Tenerife, Canary Islands.
112508. No. 117. 112511. No. 120.
112509. No. 118. 112512. No. 121.
112510. No. 119.
- 112513 to 112522. BETA PATELLARIS Moq.
Nos. 112513 to 112515. From Bojamar, Tenerife, Canary Islands.
112513. No. 122. 112515. No. 124.
112514. No. 123.
- Nos. 112516 and 112517. From Banderos, Grand Canary, Canary Islands.
112516. No. 125. 112517. No. 126.
112518. No. 127. From Questa de Silva, Grand Canary, Canary Islands.
112519. No. 128. From San Felipe, Grand Canary, Canary Islands.
112520. No. 129. From Questa de Silva, en route to San Filipe, Grand Canary, Canary Islands.
112521. No. 130. From San Filipe, Grand Canary, Canary Islands.
112522. No. 131. From Questa de Silva, Grand Canary, Canary Islands.
112523. BETA VULGARIS MACROCARPA (Guss.) Moq.
No. 132. From Banderos, Grand Canary Islands.
- 112524 to 112560. BETA VULGARIS L.
Common beet.
Nos. 112524 to 112527. From San Felipe, Grand Canary, Canary Islands.
112524. No. 133. 112525. No. 134.
112526. No. 135. Variety *Webbiana*.
112527. No. 136. Variety *Procumbens*.
- Nos. 112528 to 112530. Variety *Webbiana*; from northwest coast islets, Canary Islands.
112528. No. 137. 112530. No. 139.
112529. No. 138.
112531. No. 140. From San Filipe and coast islets of Grand Canary, Canary Islands. A mixed collection.
112532. No. 141. From Malega, Grand Canary, Canary Islands.
112533. No. 142. From Almeria, Grand Canary, Canary Islands.
- Nos. 112534 to 112539. From La Hoya, near Lorca, Canary Islands. Variety *Atriplicifolia*.
112534. No. 143. 112537. No. 146.
112535. No. 144. 112538. No. 147.
112536. No. 145. 112539. No. 148.
- Nos. 112540 to 112551. From Po di Levanti, Canary Islands.
112540. No. 149. 112543. No. 152.
112541. No. 150. 112544. No. 153.
112542. No. 151. 112545. No. 154.

112398 to 112590—Continued.

112546. No. 155. 112549. No. 158.
 112547. No. 156. 112550. No. 159.
 112548. No. 157. 112551. No. 160.
 112552. No. 161. Variety *Nana*. Grown
 in an alpine greenhouse, Botanic In-
 stitute, Berlin-Dahlem, Germany.
 112553. No. 162. Variety *Trigyna*. From
 Germany.

Nos. 112554 and 112555 were presented
 by Encet Yektay, Station de Selection
 de Semences, Eskichehir-Sazoya,
 Turkey.

112554. No. 163. 112555. No. 163-A.

Nos. 112556 to 112559. Variety *Pro-*
cumbens. From the Madeira Islands

112556. No. 164. 112558. No. 166.

112557. No. 165.

112559. No. 167. From Ponto de Cruz.

112560. No. 168. From Madeira.

112561. BETA TRIGYNA Waldst. and Kit.

No. 169. From the Botanic Garden,
 Budapest, Hungary.

112562. BETA VULGARIS MACROCARPA (Guss.)
 Moq.

No. 170. From Salinas do Lavradio,
 Portugal.

- 112563 to 112590. BETA VULGARIS L.
 Common beet.

Nos. 112563 to 112587. From Land-
 mere, France.

112563. No. 201. 112575. No. 216.

112564. No. 202. 112576. No. 217.

112565. No. 203. 112577. No. 218.

112566. Nos. 204
 and 205. 112578. No. 219.

112567. Nos. 206
 and 207. 112579. No. 220.

112568. Nos. 208
 and 209. 112580. No. 221.

112569. No. 210. 112581. No. 222.

112570. No. 211. 112582. No. 223.

112571. No. 212. 112583. No. 224.

112572. No. 213. 112584. No. 225.

112573. No. 214. 112585. No. 226.

112574. No. 215. 112586. No. 227.

Nos. 112588 and 112589. From Deau-
 ville, France.

112588. No. 230. 112589. No. 231

112590. No. 232. From Coitac, France.

112591 to 112595. NICOTIANA TABACUM
 L. Solanaceae. Common tobacco.

From Mexico. Seeds collected by W. A.
 Archer, Bureau of Plant Industry. Re-
 ceived October 22, 1935.

Introduced for Department specialists.

112591. No. 3547. *Lenguillo*. Collected
 October 1, 1935, at San Francisco de
 Rincon, Guanajuato.

166999—40—2

112591 to 112595—Continued.

112592. No. 3552. *Hoja ancha*. Collected
 October 2, 1935, at Encarnación de Díaz,
 Jalisco.

112593. No. 3554. *Negro*. Collected Octo-
 ber 5, 1935, at Pabellon, Aguascalientes.

112594. No. 3557. *Macuchi* (?). Collected
 October 10, 1935, at Torreón, Coahuila.

112595. No. 3558. Collected October 11,
 1935, at Torreón, Coahuila.

112596. NEOMAMMILLARIA KARWINSKI-
 ANA (Mart.) Britt. and Rose. Cacta-
 ceae.

From Mexico. Seeds collected by Paul Rus-
 sell and Max Souviron, Bureau of Plant
 Industry, in the Botanic Garden, Mexico
 City. Received September 20, 1930. Num-
 bered in November 1935.

Introduced for Department specialists.

A globular or cylindrical cactus about 3
 inches in diameter, with milky juice, spiral
 rows of terete tubercles, and solitary flowers
 half an inch across, the petals whitish with
 deep-pink central stripes. Native to south-
 ern Mexico.

112597. LILIUM POLYPHYLLUM D. Don.
 Liliaceae. Lily.

From India. Bulbs purchased from Mrs. P.
 Kohli, Baramula, Kashmir. Received No-
 vember 30, 1935.

Introduced for Department specialists.

For previous introduction see 110099.

112598 to 112600.

From Palestine. Bulbs purchased from Vester
 & Co., American Colony Stores, Jeru-
 salem. Received October 18, 1935.

Introduced for Department specialists.

112598. CYCLAMEN PERSICUM Mill. Primu-
 laceae.

For previous introduction see 26885.

112599. IRIS ANTILIBANOTICA Dinsm. Iri-
 daceae.

An *Oncocylus* iris with narrow, slightly
 falcate leaves 6 to 8 inches long and a
 leafy stem about 1 foot high. The flowers
 are purple with the standards lighter than
 the falls and veined with deeper purple.
 Native to Asia Minor at about 6,000 feet
 altitude.

112600. IRIS LORTEII Barbey. Iridaceae.
 Lebanon iris.

A hardy iris with stem less than a foot
 long, bearing two reduced leaves about the
 same length. The whitish outer segments
 of the flower are obovate, much reflexed,
 about 3 inches broad, and finely veined and
 spotted with red-brown, with a dark spot
 at the throat. The inner segments are pale
 gray with red-brown veins. Native to Leb-
 anon and Asiatic Turkey.

For previous introduction see 28452.

112601 and 112602. ACHRAS ZAPOTA L.
 Sapotaceae. Sapodilla.

From Costa Rica. Seeds presented by Alan
 Kelso, Chief of the Propagation Service,
 Department of Agriculture, Puntarenas.
 Received October 16, 1935.

Introduced for Department specialists.

112601 and 112602—Continued.

112601. A fruit with cedar-red colored flesh which weighs about 1 pound.

112602. A fruit with salmon-colored flesh which weighs about 1 pound.

112603. SACCHARUM OFFICINARUM L.
Poaceae. Sugarcane.

From New Guinea. Seeds presented by John L. Froggall, Director of Agriculture. Received October 22, 1935.

Introduced for Department specialists.

Collected from the Sepik River region.

112604 and 112605. (Undetermined.)

From Ecuador. Seeds and bulbs collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received October 18, 1935.

Introduced for Department specialists.

112604. No. 7673-A. Seeds of an undetermined amaryllid.

112605. No. 7673-A. Bulbs of an undetermined amaryllid. [Seeds of this plant introduced under P. I. 112604.]

112606. LYCOPERSICON ESCULENTUM Mill.
Solanaceae. Tomato.

From Manchuria. Seeds presented by L. Pritsin, Harbin. Received November 6, 1932. Numbered in October 1935.

A wild tomato; introduced for Department specialists.

112607 to 112609. PHLEUM PRATENSE L.
Poaceae. Timothy.

From Germany. Seeds presented by the Director, Kaiser Wilhelm Institut für Züchtungsforschung, Müncheberg. Received October 21, 1935.

Introduced for Department specialists.

112607. No. 1520. An early variety.

112608. No. 1522. A late variety.

112609. No. 1521. A late variety.

112610 to 112617.

From Ecuador and Colombia. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received October 18, 1935.

Introduced for Department specialists.

112610. BOMAREA sp. Amaryllidaceae.

No. 7670-A. September 13, 1935. Canton Quito, Provincia Pichincha, Ecuador; along the road from Nono to Guala. A vine with nodding flowers whose outer segments are scarlet and the inner ones red orange flecked with maroon.

112611. CHAMAESENNA VELUTINA Britt. and Killip. Caesalpinaceae.

No. 7686-A. Chalan. September 14, 1935. Canton Quito, Provincia Pichincha, Ecuador; collected near a stream along the trail from Nono to San Francisco at 8,800 feet altitude. A very handsome tree nearly 50 feet high, with pinnate leaves and large bright-yellow flowers in loose racemes.

112612. TEPHROSIA TOXICARIA (Sw.) Pers. Fabaceae.

No. 7714-A. *Barbasco chico*. September 24, 1935. Near Puyo, Provincia Napo-

112610 to 112617—Continued.

Pastau, Ecuador, at 1,100 feet altitude. A plant 4 feet high with whitish flowers.

For previous introduction see 111591.

112613. LUPINUS sp. Fabaceae.

No. 7709-A. *Chocho*. September 19, 1935. Canton Quito, Provincia Pichincha, Ecuador; collected on arid slopes at 10,000 feet altitude along the trail from Nono to Cotacallao. A spreading shrub about 4 feet high, with dark-blue flowers marked with white on the upper petal.

112614. PERNETTIA PROSTRATA PURPUREA (D. Don) Sleumer. Ericaceae.

No. 7642-A. *Moridera*. August 17, 1935. Collected on the road from Ipiales to Lojas, Departamento Narino, Colombia. A low bushy shrub with small lanceolate leaves, solitary white flowers, and purple fruits. Native to Peru.

112615. TROPAEOLUM DIGITATUM Karst. Tropaeolaceae.

No. 7691-A. September 14, 1935. Canton Quito, Provincia Pichincha, on the trail from Nono to San Francisco, Ecuador, at 9,000 feet altitude. A woody climber with peltate five- to seven-lobed leaves and yellow flowers an inch in diameter with a long red spur. Native to Venezuela.

112616. TROPAEOLUM TUBEROSUM Ruiz and Pav. Tropaeolaceae.

No. 7687-A. September 14, 1935. Canton Quito, Provincia Pichincha, Ecuador; collected along the trail from Nono to San Francisco at 8,800 feet altitude. A tuberous-rooted herbaceous climber with red and yellow flowers, native to the highlands of northern South America, where the tubers are boiled and eaten as a vegetable. The plant is said to be able to withstand a slight frost.

For previous introduction see 111428.

112617. (Undetermined.)

No. 7677-A. September 13, 1935. Canton Quito, Provincia Pichincha, Ecuador, along the road from Nono to Guala at 10,500 feet altitude. An ornamental vine with attractive crimson flowers.

112618. TRIPSACUM sp. Poaceae. Grass.

From Guatemala. Plants presented by the United Fruit Co., through J. H. Kempton, Bureau of Plant Industry. Received October 29, 1935.

Collected in the Lake Retanas region; introduced for Department specialists.

112619 to 112635. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received October 29, 1935.

Introduced for Department specialists.

112619. No. 3553. From Bóbedas, Aguascalientes.

112620. No. 3556. From Guerrero, Durango.

Nos. 112621 and 112622. Collected in the State of Nayarit, October 1, 1935.

112621. No. 3575. *Jamaica*.

112622. No. 3576. *Bonanza*.

112619 to 112635—Continued.

Nos. 112623 to 112625. Collected in the State of Durango, October 18, 1935.

112623. No. 3577. Turkish tobacco from Reymundo.

112624. No. 3578. *Virginia*, probably. From Aviles.

112625. No. 3579. *Lagunero*. From Aviles.

112626. No. 3580. *Cordoba* type. From Coscomatepec, Veracruz, September 29, 1935.

Nos. 112627 to 112635 were furnished through the courtesy of the Instituto Biotécnico, San Jacinto, Distrito Federal.

Nos. 112627 to 112631 were collected in the State of Guerrero in September 1935.

112627. No. 3581. From San Miguel Totolapan.

112628. No. 3582. From Pungarabato.

112629. No. 3583. From Pungarabato.

112630. No. 3584. From Tetipac.

112631. No. 3585. Place of collection not given.

Nos. 112632 to 112635 were collected in the State of Michoacan in September 1935.

112632. No. 3586. From Yurécara.

112633. No. 3587. From Huetamo de Nuñez.

112634. No. 3588. *Rustica* (cultivated). From La Piedad.

112635. No. 3589. From Tacambaro.

112636. *CHELONE OBLIQUA* L. Scrophulariaceae. Red turtlehead.

From the National Arboretum, Washington, D. C. Seeds collected by O. M. Freeman, Bureau of Plant Industry. Received October 31, 1935.

A herbaceous perennial up to 2 feet high, with showy rose-colored flowers in close terminal and axillary spikes. Native to damp shady localities in eastern North America.

112637 to 112640.

From the Union of South Africa. Seeds presented by the McGregor Museum, Kimberley. Received October 26, 1935.

Introduced for Department specialists.

112637. *CELTIS RHAMNIFOLIA* Presl. Ulmaceae.

A tree about 20 feet high, with smooth gray bark, ovate, abruptly acuminate leathery leaves, and inconspicuous flowers. Native to southern Africa.

For previous introduction see 106078.

112638. *CHILIANTHUS ARBOREUS* (L. f.) Benth. Loganiaceae.

An erect evergreen shrub 6 to 10 feet high, with four-angled or crisply winged branchlets and lanceolate leathery leaves 3 to 4 inches long, smooth above and gray-scurfy beneath. The small creamy-white flowers are in small clusters formed into a large lax panicle 8 inches across. It is native to southern Africa.

For previous introduction see 99406.

112637 to 112640—Continued.

112639. *COMBRETUM ERYTHROPHYLLUM* (Burch.) Sond. Combretaceae.

A tree up to 40 feet high, with unarmed spreading branches and ovate-acute leaves which turn crimson in autumn. Native to tropical Africa.

112640. *TARCHONANTHUS MINOR* Less. Asteraceae.

A strongly resin-scented shrub, native to southern Africa, with oblong to obovate, entire leaves up to 2 inches long and short racemes of small woolly flower heads. It is said to be a good stock feed and to be drought resistant.

For previous introduction see 106380.

112641 to 112656. *NICOTIANA* spp. Solanaceae.

From the State of Hidalgo, Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received October 30, 1935.

Seeds from volunteer plants collected near Jacalo, October 15, 1935; introduced for Department specialists.

112641. *NICOTIANA* sp.

No. 3571.

112642. *NICOTIANA* sp.

No. 3572.

112643. *NICOTIANA* sp.

No. 3573.

112644. *NICOTIANA* sp.

No. 3559.

112645. *NICOTIANA* sp.

No. 3560.

112646. *NICOTIANA* sp.

No. 3561.

112647. *NICOTIANA* sp.

No. 3563.

112648. *NICOTIANA* sp.

No. 3564.

112649. *NICOTIANA* sp.

No. 3566.

112650. *NICOTIANA* sp.

No. 3568.

112651. *NICOTIANA* sp.

No. 3562.

112652. *NICOTIANA* sp.

No. 3565.

112653. *NICOTIANA* sp.

No. 3567.

112654. *NICOTIANA* sp.

No. 3569.

112655. *NICOTIANA* sp.

No. 3570.

112656. *NICOTIANA* sp.

No. 3574.

- 112657 to 112662. FESTUCA RUBRA COM-MUTATA** Gaud. Poaceae.
Chewings fescue.
From New Zealand. Seeds presented by the Director, Plant Research Station, Palmerston North. Received October 25, 1935.
Introduced for Department specialists.
- 112657.** Ref. 35/10010 (99-2/96).
112658. Ref. 35/10073.
112659. Ref. 35/10075.
112660. Ref. 35/10077.
112661. Ref. 35/10547.
112662. Ref. 35/10548.
- 112663 to 112665. ARACHIS HYPOGAEA L.** Fabaceae. **Peanut.**
From Brazil. Seeds presented by the Director, Estação Experimental do Trigo, Ponta Grossa, Parana. Received November 1, 1935.
Introduced for Department specialists.
- 112666 to 112669. PRUNUS spp.** Amygdalaceae.
From England. Cuttings presented by Collingwood Ingram, The Grange, Benenden, Kent. Received January 31, 1930. Numbered in December 1935.
Introduced for Department specialists.
- 112666.** *PRUNUS SIEBOLDII* (Carr.) Wittmack.
Takasago; best strain.
- 112667 to 112669.** *PRUNUS SERRULATA* Lindl. Oriental cherry
112667. *Okiku-zakura.*
112668. *Tai Haku.*
112669. *Ingram No. 2.*
- 112670. SASA VEITCHII** (Carr.) Rehd. Poaceae. **Bamboo.**
From New Jersey. Plants presented by W. A. Manda, Inc., South Orange. Received November 6, 1935.
Introduced for Department specialists.
- 112671 and 112672.**
From the Irish Free State. Plants presented by J. W. Besant, Keeper, Botanic Garden, Glasnevin, Dublin. Received November 6, 1935.
Introduced for Department specialists.
- 112671.** *SEMPERVIVUM ERYTHRAEUM* Vel. Crassulaceae.
A hardy sempervivum with tufted rosettes of many small grayish-purple leaves and small reddish flowers on a leafy stem 10 inches or less in height. Native to Bulgaria at altitudes of 3,000 to 8,000 feet.
- 112672.** *SEMPERVIVUM MACEDONICUM* Prager. Crassulaceae.
A succulent perennial forming a loose mat of rosettes of small fleshy leaves, reddish about the older leaf tips and small red-purple flowers on a leafy stem about 6 inches high. Native to Macedonia.
- 112673. HORDEUM SP.** Poaceae. **Barley.**
From England. Seeds presented by a Mr. Beaven, Warminster, Wiltshire, through Dorothy Marlatt, Washington, D. C. Received November 4, 1935.
Introduced for Department specialists.
- 112674. TRITICUM AESTIVUM L.** Poaceae. **Common wheat.**
From Canada. Seeds presented by the University of Saskatchewan, Saskatoon. Received November 8, 1935.
No. 1703. *Apev*; introduced for Department specialists.
- 112675 and 112676.**
From Brownsville, Tex. Seeds collected by Peter Heinz near Tamazunchale, Mexico. Received November 12, 1935.
Introduced for Department specialists.
- 112675.** *BELOPERONE COMOSA* Nees. Acanthaceae.
A herbaceous perennial with oval leaves and showy yellowish flowers in axillary spikes, subtended by dusky scarlet bracts. Native to Mexico.
- 112676.** *OCIMUM MICRANTHUM* Willd. Menthaceae. **Wild basil.**
- 112677. AMYGDALUS PERSICA L.** Amygdalaceae. **Peach.**
From India. Plants purchased from the Botanic Garden, Saharanpur. Received March 5, 1934. Numbered in November 1935.
Saharanpur No. 5; introduced for Department specialists.
- 112678. SACCHARUM SP.** Poaceae.
From the Fiji Islands. Cuttings presented by the Colonial Sugar Refining Co., Ltd., Rarawai. Received November 14, 1935.
Introduced for Department specialists.
Received under the name "robustum," a name not properly published.
- 112679. ALEURITES TRISPERMA** Blanco. Euphorbiaceae. **Banucalag.**
From Florida. Seeds presented by Mrs. L. L. Bow, Homestead, through T. B. McClelland, United States Plant Introduction Garden, Coconut Grove. Received September 11, 1935.
Introduced for Department specialists.
This Philippine relative of the tung-oil tree (*Aleurites fordii*) is a tree 30 to 50 feet high, with heart-shaped leaves and rounded three-angled fruits about 2 inches in diameter. It is a tropical tree and withstands only a few degrees of frost. The oil obtained from the seeds resembles tung oil, but has a somewhat lower drying power.
For previous introduction see 65297.
- 112680 to 112682. NICOTIANA TABACUM L.** Solanaceae. **Common tobacco.**
From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received November 14, 1935.
Introduced for Department specialists.

112680 to 112682—Continued.

Tabaco montés. From Tehuantepec, State of Oaxaca.

112680. No. 3607. Collected October 3, 1935.

112681. No. 3608. Collected November 4, 1935.

112682. No. 3609. Collected November 4, 1935.

112683 to 112687. SACCHARUM. Poaceae. Sugarcane.

From Australia. Cuttings presented by the Colonial Sugar Refining Co., Macknade Mill, North Queensland, at the request of E. W. Brandes, Bureau of Plant Industry. Received November 15, 1935.

Introduced for Department specialists.

112683. 32 MQ 135, *Badila* × 31 MQ 720

|
Badila × 28 NG 251

112684. 32 MQ 478, P. O. J. 2878 × 31 MQ 1558

|
Korpi × 28 NG 251

112685. 32 MQ 579, P. O. J. 2878 × 28 NG 251

112686. 32 MQ 629, *Korpi* × 31 MQ 1351

|
Badila × 28 NG 253

112687. 32 MQ 657, *Korpi* × 31 MQ 1351

|
Badila × 28 NG 253

112688 to 112692. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

From the State of Oaxaca, Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received November 15, 1935.

Introduced for Department specialists.

Nos. 112688 to 112690 were collected at Valle Nacional, October 30, 1935.

112688. No. 3602. Cigar tobacco.

112689. No. 3603. A mixed sample; a fine grade of cigar tobacco.

112690. No. 3604. A mixed sample, including *Tlapacoya*.

Nos. 112691 and 112692 were collected at Tuxtepec, October 29, 1935.

112691. No. 3605. A mixed sample.

112692. No. 3606. Tobacco used for making cigarettes.

112693. DACRYDIUM FRANKLINII Hook. f. Taxaceae. Huon-pine.

From Tasmania. Seeds collected by Charles W. Fidler, along the Gordon River in February 1935 and presented through L. A. Evans, Sandy Bay, Hobart. Received November 8, 1935.

Introduced for Department specialists.

An evergreen tree of pyramidal form, up to 100 feet high, with dense spreading head, pendulous branchlets, and small scalelike leaves resembling those of cypress. Native to swampy places in Tasmania.

112694. HYMENOCALLIS TENUIFLORA Herb. Amaryllidaceae.

From the Philippine Islands. Bulbs presented by Dr. W. Dwight Pierce. Received July 23, 1930. Numbered November 1935.

Introduced for Department specialists.

A tender hymenocallis with an umbel of 10 to 12 sessile white flowers. The perianth tube is long and very slender, and the narrow segments are about 4 inches long. Native to Colombia.

112695. AMHERSTIA NOBILIS Wall. Caesalpiniaceae.

From the British West Indies. Plant presented by H. R. Britton-Jones, Imperial College of Tropical Agriculture, Trinidad. Received November 20, 1935.

Introduced for Department specialists.

For previous introduction see 105449.

112696 to 112699. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

From the State of Guerrero, Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received November 1, 1935.

Introduced for Department specialists.

112696. No. 3591.

112697. No. 3592. *Papantle*. From Ajhuiztla.

112698. No. 3593. *Putleco*. From Copala.

112699. No. 3594. *Mije*. From Ajhuiztla.

112700 to 112715.

From Uruguay. Seeds presented by Dr. R. Salgueiro Silveira, Chief, Sección Información y Enseñanza, Montevideo. Received November 11, 1935.

Introduced for Department specialists.

112700 to 112702. ARACHIS HYPOGAEA L. Fabaceae. Peanut.

112700. *Española*.

112701. *Nacional*.

112702. *Paraguaya*.

112703. GOSSYPIUM sp. Malvaceae.

112704. HELIANTHUS ANNUUS L. Asteraceae. Sunflower.

Girasol.

112705 and 112706. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

Nacional.

112707 and 112708. RICINUS COMMUNIS L. Euphorbiaceae. Castor-bean.

112707. The type.

112708. *Paraguayensis*.

112709. SOJA MAX (L.) Piper. Fabaceae. Soybean.

A forage variety.

112710 and 112711. SOLANUM TUBEROSUM L. Solanaceae. Potato.

112710. *Americana*. A disease-resistant type.

112711. *Chaqueña*. A disease-resistant type.

112700 to 112715—Continued.

- 112712 to 112715. *ZEA MAYS* L. Poaceae. Corn.
 112712. *Amargo*.
 112713. *Blanco forragero*.
 112714. *Oasilda*.
 112715. *Cuarenton*.

112716 to 112724.

From England. Bulbs and roots purchased from Hocker Edge Gardens, Cranbrook. Received November 15, 1935.

Introduced for Department specialists.

112716. *BEGONIA EVANSIANA* Andrews. Begoniaceae.

For previous introduction see 61904.

- 112717 to 112722. *IRIS* spp. Iridaceae.

112717. *IRIS BARNUMAE* Foster and Baker.

112718. *IRIS EWBANKIANA* Foster.

112719. *IRIS STOLONIFERA* Maxim.

112720. *IRIS PARADOXA* Stev. Velvet iris.

For previous introduction see 111945.

112721. *IRIS STOLONIFERA* Maxim.

For previous introduction see 112719.

112722. *IRIS URMIENSIS* Hoog.

112723. *LEUCOJUM VERNUM* L. Amaryllidaceae. Spring snowflake.

Carpaticum. A vigorous variety with yellow-tipped white flowers, usually two on a stem.

112724. *RHODOHYPOXIS BAURI PLATYPETALA* (Baker) Nel. Amaryllidaceae.

A charming little alpine with erect linear hairy leaves about 2 inches long and starry white flowers occasionally flushed pink, about 1 inch across on peduncles 2 to 3 inches long. Native to southern Africa at altitudes of 3,500 to 5,000 feet.

- 112725 and 112726. *TRITICUM AESTIVUM* L. Poaceae. Common wheat.

From China. Seeds presented by T. F. Yu, Plant Pathologist, Nanking University, Nanking. Received November 8, 1935.

Chinese wheat which has been found to be resistant to flag smut in the Nanking region; introduced for Department specialists.

112725. *Nanking* No. 5.

112726. *Nanking* No. 16.

112727 to 112743.

From Brazil. Seeds collected by Dr. Doris Cochran, United States National Museum, Washington, D. C. Received November 7, 1935.

Introduced for Department specialists.

112727. *ABELMOSCHUS ESCULENTUS* (L.) Moench. Malvaceae. Okra.

No. 29-B.

112728. *ANNONA SQUAMOSA* L. Annonaceae. Sugar-apple.

No. 3.

112729. *CASSIA* sp. Caesalpinaceae.

No. 7.

112727 to 112743—Continued.

- 112730 to 112732. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. Watermelon.

Collected at Perapora, State of Minas Geraes.

112730. No. 4. A long melon with a hooked neck, pale-green rind, and dark pink, rather thin flesh.

112731. No. 2. A small round melon with dark-green rind and pink flesh.

112732. No. 28.

112733. *CLEOME SPINOSA* Jacq. Capparidaceae.

No. 14. From Ouro Preto, Minas Geraes, March 1935.

112734. *CROTALARIA* sp. Fabaceae.

No. 19. From Nova Friburgo, State of Rio de Janeiro.

112735. *CUCUMIS ANGUIRIA* L. Cucurbitaceae. West Indian gherkin.

No. 29-A. From the market, Rio de Janeiro.

112736. *HIPPEASTRUM* sp. Amaryllidaceae.

No. 1. From Recreio dos Bandeirantes, Federal District, Rio de Janeiro, February 26, 1935.

112737. *IPOMOEA SETOSA* Ker. Convolvulaceae.

No. 9.

- 112738 to 112740. *MAURANDYA* spp. Scrophulariaceae.

112738. *MAURANDYA ERUBESCENS* (D. Don) Gray.

No. 10. From the State of Rio de Janeiro. A woody climber with triangular, serrate, alternate leaves with trumpet-shaped, rose-pink flowers. Native to Mexico.

For previous introduction see 106612.

112739. *MAURANDYA BARCLAIANA* Lindl. Barclay maurandia.

No. 22. From Lagoa Grande, near Bello Horizonte, Minas Geraes, March 19, 1935. A small vine 5 or 6 feet in height which forms a dense mat of foliage, with individual leaves about 1 inch in diameter. The funnel-shaped rich blue-purple flowers, about 1 inch in diameter, are produced in great profusion.

For previous introduction see 37883.

112740. *MAURANDYA* sp.

No. 27. From Nova Friburgo, State of Rio de Janeiro, May 13, 1935. A vine with lavender flowers.

112741. *QUAMOCLIT* sp. Convolvulaceae.

No. 26. From Lassance, Minas Geraes, March 21, 1935. A wild cypress vine with scarlet flowers.

112742. *SOLANUM MELONGENA* L. Solanaceae. Eggplant.

No. 29. May 1935. From the market at Rio de Janeiro.

112743. *ZEA MAYS* L. Poaceae. Corn.

No. 31. From Lassance, Minas Geraes, March 21, 1935.

112744. CHIMONOBAMBUSA QUADRANGULARIS (Fenzi) Makino. Poaceae.

Bamboo

From the Orient. Plants presented by Miss Genevieve Wimsatt, through the Bureau of Plant Quarantine. Received June 17, 1935. Numbered in November 1935.

A bamboo which produces angular culms, squarish in cross section. This character does not appear, however, in culms of very small diameter. The maximum height attained is uncertain, possibly 25 or 30 feet. The species has proved difficult to propagate.

For previous introduction see 93225.

112745 to 112751.

From England. Bulbs purchased from W. A. Constable Ltd., Tunbridge Wells. Received November 21, 1935.

Introduced for Department specialists.

112745. LEUCOJUM AESTIVUM L. Amaryllidaceae.

Gravetye Giant. A variety with large pendulous heads of white flowers with green tips, in late spring.

112746 to 112751. LILIUM spp. Liliaceae.

Lily.

112746. LILIUM DUCHARTREI Franch.

A lily of the Martagon section, native to alpine and subalpine regions of western China. The stems are 2 to 5 feet high, the scattered lanceolate leaves are 2 to 4 inches long, and the fragrant, nodding, marble-white flowers, 3 inches across, spotted and lined with vinous-purple, are borne in umbels of 1 to 12.

For previous introduction see 99891.

112747. LILIUM DUCHARTREI FARRERI (Turr.) Grove.

A slender graceful lily, 2 to 3 feet high, bearing on long pedicels up to 5 recurved white flowers which are slightly spotted with purple on the inside.

For previous introduction see 90526.

112748. LILIUM POLYPHYLLUM D. Don.

For previous introduction see 112597.

112749. LILIUM SUTCHUENENSE Franch.

A lily from Szechwan, western China, with a stem 3 to 5 feet high, the underground portion running horizontally. The thickly scattered leaves are linear and deep green, and the pendulous flowers, up to 20 in number, have reflexed orange-red segments spotted with purplish black, and red anthers.

For previous introduction see 95491.

112750. LILIUM WALLICHIANUM Schult. f.

Wallich lily.

A lily 4 to 6 feet high, with linear leaves 6 to 9 inches long and, usually, solitary waxy, creamy-white, fragrant flowers 9 inches long, which are golden yellow at the base inside and green outside. Native to the Himalayas from Nepal to northern Burma.

For previous introduction see 111062.

112751. LILIUM WARDII W. W. Smith.

A very fragrant Martagon lily with stems about 3 feet high, oblong to linear-lanceolate leaves, and 12 to 20 or more pink flowers with purple spots. Native to Tibet at altitudes between 8,000 and 10,000 feet.

112752. PASSIFLORA FOETIDA HASTATA (Bertol.) Mast. Passifloraceae.

Passionflower.

From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received November 14, 1935.

Introduced for Department specialists.

No. 3977. November 2, 1935. Papaloapan, Vera Cruz. A variety with hastate, hirsute leaves.

112753 to 112755.

From China. Seeds and cuttings collected by Peter Liu and forwarded by Fred J. Rositter, acting agricultural commissioner, American consulate, Shanghai. Received November 21, 1935.

Introduced for Department specialists.

112753. CASTANEA SEGUINII Dode. Fagaceae.

Small wild chestnuts from near Erh Shih Pa Tu, in Gi Wu district.

For previous introduction see 108555.

112754. TRIPTERYGIUM sp. Celastraceae.

Lei Kung Teng. Cuttings from near Erh Shih Pa Tu, in Gi Wu district.

112755. TRIPTERYGIUM sp. Celastraceae.

Cuttings secured near Shih Hsia K'ou in Chuki district.

112756 to 112759.

From Peru. Bulbs collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received November 21, 1935.

Introduced for Department specialists.

112756. AMARYLLIS sp. Amaryllidaceae.

No. 7752. October 18, 1935, Distrito Lima, on the road from Chosica to Matucana at 700 feet altitude. A plant about 2 feet high, found on an arid rocky bank. The flowers are reddish orange.

112757. HYMENOCALLIS AMANCAES (Ruiz and Pav.) Nichols. Amaryllidaceae.

Spiderlily.

No. 7755. October 18, 1935, near Lima, at 700 feet altitude. A tender bulbous plant about 2 feet high, with large bright yellow flowers. Native to Peru and Chile.

For previous introduction see 93769.

112758. ZEPHYRANTHES FLAMMEA (Ruiz and Pav.) Baker. Amaryllidaceae.

No. 7754. October 18, 1935, near Lima, at the Escuela Nacional de Agricultura, at 700 feet altitude. A Peruvian zephyranthes with about 5 linear leaves 1 foot long and erect flame-red flowers. Allied to *Zephyranthes aurea*.

112759. ZEPHYRANTHES sp. Amaryllidaceae.

No. 7753. October 20, 1935. On the road from Lima to Chosica, about 600 feet altitude. A plant with bright-orange flowers; found in a cultivated field. Received under the name "igneus" for which a place of publication has not been found.

112760 to 112765.

From the Union of South Africa. Seeds presented by Dr. J. D. J. Hofmeyr, Research Horticulturist, Subtropical Horticultural Research Station, Nelspruit. Received November 21, 1935.

112760 to 112765—Continued.

Introduced for Department specialists.

112760. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. Watermelon.

Ihabha.

112761. *CUCUMIS MELO* L. Cucurbitaceae. Muskmelon.

Bucoge.

112762. *CUCUMIS MYRIOCARPUS* Naudin. Cucurbitaceae.

Joti. An annual vine native to southern Africa.

112763 and 112764. *CUCURBITA MOSCHATA* Duchesne. Cucurbitaceae. Cushaw.

112763. *Amatanga.* 112764. *Lipati.*

112765. *LAGENARIA LEUCANTHA* (Duchesne) Rusby. Cucurbitaceae. Calabash gourd.

Itanga.

112766. *PERSEA* SP. Lauraceae.

From Guatemala. Seeds collected by J. H. Kempton, Bureau of Plant Industry, and Wilson Popenoe, United Fruit Co. Received November 25, 1935.

Introduced for Department specialists.

Collected above Tecpan at 9,000 feet altitude.

112767 to 112775. *PHASEOLUS VULGARIS* L. Fabaceae. Common bean.

From Germany. Seeds presented by Dr. Karl Stapp, Biologischen Reichsanstalt für Land und Forstwirtschaft, Berlin-Dahlem. Received November 20, 1935.

Introduced for Department specialists.

112767. No. 12. 112772. No. 89.

112768. No. 16. 112773. No. 100.

112769. No. 27. 112774. No. 125.

112770. No. 38. 112775. No. 196.

112771. No. 82.

112776 to 112794. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

From the State of Chiapas, Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received November 26, 1935.

Introduced for Department specialists.

112776. No. 3610. Collected in the market at Tuxtla Gutierrez, November 7, 1935. Grown by the Indians of this region.

Nos. 112777 to 112779 were collected November 8, 1935, at Simajovel.

112777. No. 3611. Probably *Arcial*, a strong tobacco used for cigars.

112778. No. 3612. *Bajero.*

112779. No. 3613. *Arcial.*

112780. No. 3614. *La Candón.* Collected. November 9, 1935, at Santa Catarina, near Simajovel.

Nos. 112781 to 112784 were collected November 9 and 10, 1935, at Simajovel.

112781. No. 3615. *El Colorado.*

112782. No. 3616. *Arcial chico.*

112783. No. 3617.

112784. No. 3618. *Habanero.*

112776 to 112794—Continued.

Nos. 112785 to 112789 were collected at Huitiupán, November 10, 1935.

112785. No. 3619. *Colorado fuerte.*

112786. No. 3620. *Huimanguillo.*

112787. No. 3621. *Tobaco blanco.*

112788. No. 3622. *La Candón.*

112789. No. 3623. *Chenelmo.*

Nos. 112790 to 112794 were collected at Villa Flores, November 11-12, 1935.

112790. No. 3624. Probably *Corjalero.*

112791. No. 3625. *Hoja blanca.*

112792. No. 3626. Mixed sample, *Hoja blanca* and *Hoja tupida.*

112793. No. 3627. *Hoja larga.*

112794. No. 3628. Mixed sample.

112795 to 112802. *IRIS* spp. Iridaceae.

From the Netherlands. Bulbs purchased from C. G. Van Tubergen Ltd., Zwanenburg Nurseries, Haarlem. Received November 27, 1935.

Introduced for Department specialists.

112795. *IRIS HOOGIANA* Dykes. Redbeard iris.

For previous introduction see 65057.

112796 to 112798. *IRIS KOROLKOWI* Regel. Redvein iris.

112796. The type.

112797. *Concolor.*

112798. *Violacea.*

112799. *IRIS LORTETHI* Barbey. Lebanon iris.

For previous introduction and description see 112600.

112800. *IRIS HELENÆ* Barbey.

For previous introduction see 106259.

112801 and 112802. *IRIS STOLONIFERA* Maxim.

112803 to 112812. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

From the Departamento Antioquia, Colombia. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received November 29, 1935.

Introduced for Department specialists.

112803. No. 17. *Zapatoca.* Collected at Bolivar, October 31, 1935.

112804. No. 20. *Cubano.* From Pedro Antonio Restrepo, November 4, 1935.

112805. No. 21. *Zapatoca.* Collected near Remolino, November 6, 1935.

Nos. 112806 to 112810 were collected at Bolivar, November 7, 1935.

112806. No. 22. *Zapatoca.*

112807. No. 23. *Girón.*

112808. No. 24. *Zapatoca.*

112809. No. 25. *Tabaco de olor* from the hacienda "Tebaida."

112810. No. 26. *Cordoncillo.*

Nos. 112811 and 112812 were collected in the Andes, November 3, 1935.

112803 to 112812—Continued.

112811. No. 18. *Zapatoca*.
112812. No. 19. *Cordoncillo*.

112813 to 112817. *ARACHIS HYPOGAEA* L.
Fabaceae. Peanut.

From Brazil. Seeds presented by the Ministerio da Agricultura, Departamento Nacional da Producao Vegetal, Rio de Janeiro. Received November 23, 1935.

Introduced for Department specialists.

112818. *BALSAMOCITRUS DAWEI* Stapf.
Rutaceae.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received November 25, 1935.

Introduced for Department specialists.

Seeds originally from the Forest Department, Uganda, Africa.

112819. *CITRUS* sp. Rutaceae.

From Colombia. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received November 22, 1935.

Introduced for Department specialists.

From Andes, Departamento de Antioquia, November 5, 1935.

112820 to 112831. *NICOTIANA TABACUM* L.
Solanaceae. Common tobacco.

From Mexico and Guatemala. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received December 3, 1935.

Introduced for Department specialists.

Nos. 112820 and 112821 were collected at Huixtla, Chiapas, Mexico.

112820. No. 3633. November-13, 1935.

112821. No. 3634. November 14, 1935.

Nos. 112822 to 112829 were collected November 15, 1935, at Retalhuleu, Guatemala.

112822. No. 3635. A mixed sample, said to be *Copán* and *Punta de tanza*.

112823. No. 3636. *Copán*, perhaps.

112824. No. 3637. *Copán*, perhaps.

112825. No. 3638. *Punta de tanza*.

112826. No. 3639. *Virginia*.

112827. No. 3640. *Cubano*.

112828. No. 3641.

112829. No. 3642. *Tabaco cimarrón*.

Nos. 112830 and 112831 were collected November 4, 1935, at Encarnación de Diaz, Jalisco.

112830. No. 3643. A mixed sample containing *Hoja ancha*, *Cuerna de cabra*, and others.

112831. No. 3644.

112832 to 112851.

From Guatemala and Mexico. Seeds collected by J. H. Kempton, Bureau of Plant Industry. Received November 26, 1935.

Introduced for Department specialists.

112832 to 112851—Continued.

- 112832 to 112834. *EUCHLAENA MEXICANA* Schrad. Poaceae. Teosinte.

For previous introduction see 107435.

112832. From Huehuetenango, Guatemala; presented by Rudolf Apel.

112833. Collected October 19, 1935, on Lake Retana, Guatemala, by J. H. Kempton and Wilson Popenoe.

112834. Collected near Jutiapa, Guatemala, October 21, 1935.

112835. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

From Huehuetenango, Guatemala, October 26, 1935. A wild tomato.

112836. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

Collected November 9, 1935, at San Cristobal, Chiapas, Mexico, at 7,000 feet altitude.

112837. *RUBUS* sp. Rosaceae.

Moro. From Los Escuentos, Quetzaltenango, Guatemala, October 26, 1935, at 9,500 feet altitude. Collected by Messrs. Kempton and Popenoe.

112838. *TRIPSACUM* sp. Poaceae.

From San Pedro, Chiapas, Mexico, at 5,600 feet altitude.

- 112839 to 112851. *ZEA MAYS* L. Poaceae. Corn.

Nos. 112839 to 112847 were collected in Guatemala.

112839. From San Sebastian, October 27, 1935.

112840. From Lake Retana, October 19, 1935.

112841. From near Jutiapa, October 18, 1935.

112842. From Nojoyá, November 1, 1935.

112843. From near Jutiapa, October 18, 1935. Said to be 60-day corn.

112844. From near Jutiapa, October 18, 1935.

112845. From Democracia, October 30, 1935.

112846. From Chanquejelve, November 3, 1935; 40-day corn.

112847. From Lake Retana, October 19, 1935.

Nos. 112848 and 112849 were collected in San Cristobal, Mexico, November 7, 1935.

112848. 112849.

112850. From San Antonio Huista, Guatemala, October 31, 1935.

112851. From San Cristobal, Mexico, November 7, 1935.

112852. *TEPHROSIA* sp. Fabaceae.

From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received November 26, 1935.

No. 3632. November 6, 1935. From Arriaga, Chiapas, Mexico; introduced for Department specialists.

112853 to 112856.

From the Union of Soviet Socialist Republics. Bulbs and roots presented by the Botanical Institute, Ashkhabad, Turkistan. Received December 2, 1935.

Introduced for Department specialists.

112853. ALLIUM CRISTOPHEI Trautv. Liliaceae.

An allium of the Molium section, with a large dense umbel of deep-lilac flowers. Native to Turkistan.

112854. EMINIUM LEHMANNI (Bunge) Kuntze. Araceae.

An herb resembling an arisaema, with fleshy, radical narrow-lanceolate leaves about 1 foot long and a solitary scape about as long, with a green spathe and a purple-black spadix. Native to central Asia.

112855. EREMURUS OLGAE Regel. Liliaceae.

A hardy herbaceous perennial with white flowers produced in a dense raceme. Native to Turkistan.

For previous introduction see 107527.

112856. LEONTICE EVERSMANNI Bunge. Berberidaceae.

A herbaceous perennial about 1 foot high, with pinnatisect leaves and terminal racemes of small yellow flowers. Native to Turkistan.

For previous introduction see 108931.

112857. LILIUM TSINGTAUENSE Gilg. Liliaceae.

From England. Bulbs purchased from W. A. Constable, Southborough, Tunbridge Wells. Received December 5, 1935.

Introduced for Department specialists.

A lily of the Pseudolirion group, up to 3 feet high, with scattered and whorled oblong-oblancheolate leaves, and one to six inodorous orange flowers, the segments about 2 inches long. Native to Shantung, China, and Chosen.

112858. SALVIA CAMPANULATA Wall. Menthaceae. Sage.

From Scotland. Seeds presented by Prof. W. Wright Smith, Regius Keeper, Royal Botanic Gardens, Edinburgh. Received February 8, 1933. Numbered in December 1935.

Introduced for Department specialists.

A stout perennial, 2 to 3 feet high, with ascending hirsute stems and ovate, cordate-crenate leaves on long petioles. The large flowers, yellow with purple dots, are in axillary or terminal racemes. Native to the Himalayas at altitudes between 9,000 and 13,000 feet.

For previous introduction see 42627.

112859. STYRAX OFFICINALIS L. Styracaceae. Snowbell.

From England. Seeds presented by Collingwood Ingram, The Grange, Benenden, Kent. Received November 20, 1935.

Introduced for Department specialists.

For previous introduction see 109578.

112860. ZEPHYRANTHES sp. Amaryllidaceae.

From Central America. Bulbs collected at Retalhuen, Guatemala, by W. A. Archer, Bureau of Plant Industry. Received December 3, 1935.

No. 3645. Introduced for Department specialists.

112861 to 113003.

From Oceania. Cuttings collected by E. W. Brandes, Bureau of Plant Industry. Received December 7, 1935.

Introduced for Department specialists.

112861 to 113000. SACCHARUM spp. Poaceae. Sugarcane.

112861 to 112998. SACCHARUM OFFICINARUM L.

From New Caledonia.

112861. N. C. No. 2. *Gaa*.

112862. N. C. No. 3. *Grivayio*.

112863. N. C. No. 4. *Quimoïn*.

112864. N. C. No. 5. *Necrapati*.

112865. N. C. No. 6. *Muta*.

112866. N. C. No. 7. *Doumou*.

112867. N. C. No. 8. *Moumouze*.

112868. N. C. No. 9. *M'be*.

112869. N. C. No. 10. *M'Burati*.

112870. N. C. No. 11. *Kavarengri*.

112871. N. C. No. 12. *M'Burati*.

112872. N. C. No. 13. *Necrapati*.

112873. N. C. No. 14. *Domou*.

112874. N. C. No. 15. *Niaïcoïcin*.

112875. N. C. No. 16. *Hei*.

112876. N. C. No. 17. *Kimoi*.

112877. N. C. No. 18. *Ti Meuri*.

112878. N. C. No. 19. *Domu-poa*.

112879. N. C. No. 20. *Ti-ma*.

112880. N. C. No. 21. *Wee muru*.

112881. N. C. No. 22. *Unituta*.

112882. N. C. No. 23. *M'de*.

112883. N. C. No. 24. *Ti Degalct*.

112884. N. C. No. 25. *Ti-Oue Mato*.

112885. N. C. No. 26. *Ti-Ouiji*.

112886. N. C. No. 27. *Ti Kula*.

112887. N. C. No. 28. *Ti Eti*.

112888. N. C. No. 29. *Ti Belecure*.

112889. N. C. No. 30. *Ti-Javeu*.

112890. N. C. No. 31. *Domu meuri*.

112891. N. C. No. 32. *Demboara*.

112892. N. C. No. 33. *Moirate pouara*.

112893. N. C. No. 34. *Ouepoa*.

112894. N. C. No. 35. *Candi-boue*.

112895. N. C. No. 36 (101) *Calc*.

112896. N. C. No. 37. *Pochuj*.

112897. N. C. No. 38. *Popo*.

112861 to 113003—Continued.

112898. N. C. No. 39. *Bereouto*.
 112899. N. C. No. 40. *Bouiredé*.
 112900. N. C. No. 41. *Kouira*.
 112901. N. C. No. 42. *Monda*.
 112902. N. C. No. 43. *Tya*.
 112903. N. C. No. 44. *Cande*.
 112904. N. C. No. 45. *Ouc-mere*.
 112905. N. C. No. 46. *Mouda*.
 112906. N. C. No. 47. *Fonclesien*.
 112907. N. C. No. 48. *Gah-ee*.
 112908. N. C. No. 49. *Poulehava*.
 112909. N. C. No. 50. *Poe*.
 112910. N. C. No. 51. *Ouere*.
 112911. N. C. No. 52. *Kaza*.
 112912. N. C. No. 53. *Dimehoue*.
 112913. N. C. No. 54. *Poe magere*.
 112914. N. C. No. 55. *Boare*.
 112915. N. C. No. 56. *Kasia*.
 112916. N. C. No. 57. *Kamae mevere*.
 112917. N. C. No. 58. *Pidarra*.
 112918. N. C. No. 59. *Deusereu*.
 112919. N. C. No. 60. *Dioumoa*.
 112920. N. C. No. 61. *Devoro*.
 112921. N. C. No. 62. *Poe me*.
 112922. N. C. No. 63. *Mida*.
 112923. N. C. No. 64. *Dieumeka*.
 112924. N. C. No. 65. *Debranaona mi*.
 112925. N. C. No. 66. *Rereande*.
 112926. N. C. No. 67. *Deonerea mi*.
 112927. N. C. No. 68. *Debrouona*.
 112928. N. C. No. 69. *Poe*.
 112929. N. C. No. 70. *Ranvu*.
 112930. N. C. No. 71. *Secinmba*.
 112931. N. C. No. 72. *Commissaire*.
 112932. N. C. No. 73. *Dekare*.
 112933. N. C. No. 74. *Dekare*.
 112934. N. C. No. 75. *Ware Bouke*.
 112935. N. C. No. 76. *Boare mi*.
 112936. N. C. No. 77. *St. Louis*.
 112937. N. C. No. 78. *Deouerea*.
 112938. N. C. No. 79. *Ranvu me*.
 112939. N. C. No. 80. *Mejdoikue*.
 112940. N. C. No. 81. *Reurenkadi*.
 112941. N. C. No. 82. *Ranvubeuhe*.
 112942. N. C. No. 83. *Degare*.
 112943. N. C. No. 84. *Piradakoue*.
 112944. N. C. No. 85. *Pirada*.
 112945. N. C. No. 86. *Deouacoue*.
 112946. N. C. No. 87. *Ravukouerivara*.
 112947. N. C. No. 88. *Ouereghenini*.
 112948. N. C. No. 89. *Tiavi*.
 112949. N. C. No. 90. *Ranranwari*.

112861 to 113003—Continued.

112950. N. C. No. 91. *Reanvo*.
 112951. N. C. No. 92. *Me cou*.
 112952. N. C. No. 93. *Bouai*.
 112953. N. C. No. 94. *Eveu*.
 112954. N. C. No. 95. *Dioumoi*.
 112955. N. C. No. 96. *Meauvoire*.
 112956. N. C. No. 97. *Taijama*.
 112957. N. C. No. 98. *Rerein*.
 112958. N. C. No. 99. *Dewoie*.
 112959. N. C. No. 101. *Covopoilahon*.
 112960. N. C. No. 102. *Mivahgiti*.
 112961. N. C. No. 103. *Kiboit*.
 112962. N. C. No. 104. *Kavoalan*.
 112963. N. C. No. 105. *Ti livi*.
 112964. N. C. No. 106. *Bourail*.
 112965. N. C. No. 107. *Pereda*.
 112966. N. C. No. 108. *Tribu Bagu-
anda*.
 112967. N. C. No. 109. *Tribu Ouene*.
 112968. N. C. No. 110. *Tribu de
Ouemba*.
 112969. N. C. No. 111. *Tribu de
Tieta*.
 112970. N. C. No. 112. *Tribu de
Tieta*.
 112971. N. C. No. 113. *Tribu de Tieta*.
 112972. N. C. No. 114. *Tribu de Tieta*.
 112973. N. C. No. 115. *Tribu de
Ouengo*.
 112974. N. C. No. 116. *Tribu de Uoyen*.
 112975. N. C. No. 117. *Tribu de
Temata*.
 112976. N. C. No. 118. *Tribu de Oue-
lisse*.
 112977. N. C. No. 119. *Tribu de Oue-
lisse*.
 112978. N. C. No. 120. *Tribu de
Ounjo*.
 112979. N. C. No. 121. *Tribu de
Ounjo*.
 112980. N. C. No. 122. *Daou*.
 112981. N. C. No. 123. *Phibane*.
 112982. N. C. No. 124. *Thabou No. 1*.
 112983. N. C. No. 125. *Djischa*.
 112984. N. C. No. 126. *Thiboudjane*.
 112985. N. C. No. 127. *Tascani*.
 112986. N. C. No. 128. *Zhakumane*.
 112987. N. C. No. 129. *Xalome*.
 112988. N. C. No. 130. *Ocamoa*.
 112989. N. C. No. 131. *Dekare*.
 From Efate, New Hebrides,
 112990. N. H. No. 2. *Karamu*.
 112991. N. H. No. 3. *Ti Memelu*.
 From Tongatabu, Tonga Islands,
 112992. Tonga No. 1. *To Heleveka*.
 112993. Tonga No. 2. *To Aukula*.

112861 to 113003—Continued.

112994. Tonga No. 3. *To Pupuho*.
 112995. Tonga No. 4. *To M'Gata pule pule*.
 112996. Tonga No. 5. *To Toufau*.
 112997. Tonga No. 6. *To M'Gata hina*.

From Raiatea, Society Islands.

112998. Raiatea No. 2.

112999. SACCHARUM sp.

No. *N. H. 1. Nassa-u*. From Efate, New Hebrides. Received under the name "robustum," a name not properly published.

113000. SACCHARUM SPONTANEUM L.

No. 1. From New Caledonia. A wild cane.

113001 to 113003. ERIANTHUS MAXIMUS Brongn. Poaceae.

A perennial reedlike grass closely related to sugarcane and native to Polynesia.

113001. No. 100. From New Caledonia.

113002. No. 132. From New Caledonia.

113003. No. 1. From Raiatea, Society Islands.

113004. HABRANTHUS CARDINALIS (C. H. Wright) Sealy. Amaryllidaceae.

From the Bahama Islands. Bulbs purchased from Miss Violet Brace, Nassau, New Providence. Received December 10, 1935.

Introduced for Department specialists.

A low bulbous plant with shining green, strap-shaped leaves 6 inches long. The cardinal-red, funnel-shaped flowers, 2 to 3 inches long, are borne on cylindrical scapes which are red at the base and green above. Native to tropical America.

For previous introduction see 99642.

113005. BAUHINIA GALPINI N. E. Brown. Caesalpiniaceae.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, through F. G. Walsingham, Soledad, Cienfuegos. Received December 4, 1935.

Introduced for Department specialists.

For previous introduction see 106915.

113006 to 113270.

From China. Seeds collected in Suiyuan Province by the Asiatic Expedition. Received November 13, 1935.

Introduced for Department specialists.

113006 to 113049. AGROPYRON spp. Poaceae. Wheatgrass.

113006 to 113025. AGROPYRON CRISTATUM (L.) Gaertn.

Nos. 113006 and 113007 were collected at Shiretu Obo, August 6, 1935.

113006. No. 1. 113007. No. 3.

Nos. 113008 to 113010 were collected at Khara Sair, August 7, 1935.

113008. No. 4. 113010. No. 6.

113009. No. 5.

113006 to 113270—Continued.

Nos. 113011 and 113012 were collected at Naran Obo, August 8, 1935.

113011. No. 7. 113012. No. 8-A.

Nos. 113013 and 113014 were collected at Bayin Obo, August 9, 1935.

113013. No. 10. 113014. No. 16.

113015. No. 19. From Bulugin Ama, August 10, 1935.

Nos. 113016 to 113021 were collected August 11, 1935.

113016. No. 21. From the steppe near Darkhan Wang Fu.

113017. No. 22. From Bulugin Ama.

113018. No. 25. From the steppe near Darkhan Wang Fu.

113019. No. 27. From Bulugin Ama.

113020. No. 30. From the steppe near Darkhan Wang Fu.

113021. No. 31. From the steppe near Darkhan Wang Fu.

113022. No. 32. From Shara Muren, August 15, 1935.

Nos. 113023 to 113025 were collected August 18, 1935; from the steppe near Darkhan Wang Fu.

113023. No. 35-A. 113025. No. 58.

113024. No. 57.

113026. AGROPYRON GMELINI (Griseb.) Scribn. and Smith.

No. 39-A. Collected August 22, 1935, from the mountains northeast of Batu Khalkha.

For previous introduction see 98527.

113027. AGROPYRON SEMICOSTATUM Nees. No. 60.

113028 to 113049. AGROPYRON SIBIRICUM (Willd.) Beauv.

Nos. 113028 to 113030 were collected August 9, 1935, at Bayin Obo.

113028. No. 9. 113030. No. 12.

113029. No. 11.

Nos. 113031 and 113032 were collected August 9, 1935, at Batu Khalkhin Gol.

113031. No. 13. 113032. No. 14.

Nos. 113033 to 113035 were collected August 9, 1935, at Bayin Obo.

113033. No. 15. 113035. No. 18.

113034. No. 17.

Nos. 113036 to 113040 were collected August 11, 1935, from the steppe near Darkhan Wang Fu.

113036. No. 20. 113039. No. 28.

113037. No. 23. 113040. No. 29.

113038. No. 24.

113041. No. 35-B. August 18, 1935, from Khara Sair.

113042. No. 36-A. August 19, 1935, from the steppe near Darkhan Wang Fu.

113006 to 113270—Continued.

- Nos. 113043 to 113046 were collected September 1, 1935, at Batu Khalkhin Gol.
113043. No. 48. 113045. No. 51.
113044. No. 50. 113046. No. 52.
113047. No. 54. From Mu Usu, September 2, 1935.
113048. No. 59.
113049. No. 254. From Peiyin Obo, August 9, 1935.
- 113050 to 113055. *ALLIUM* spp. Liliaceae.
113050. No. 214. Collected August 21, 1935, at Naran Obo.
113051. No. 215. Collected August 23, 1935, at Khara Sair.
113052. No. 216. Collected August 24, 1935, at Darkhan Wang Fu.
113053. No. 217. Collected August 25, 1935.
113054. No. 218. Collected August 25, 1935, at Batu Khalkha.
113055. No. 219. Collected August 27, 1935, at Khara Sair.
113056. *ALYSSUM* sp. Brassicaceae.
No. 251. Collected August 25, 1935, at Shara Muren.
- 113057 to 113061. *AMYGDALUS* spp. Amygdalaceae.
- Nos. 113057 and 113058 were collected in the vicinity of Batu Khalkha.
113057. No. 228. August 22, 1935.
113058. No. 229. August 24, 1935.
113059. No. 230. August 25, 1935, from Naran Obo.
113060. No. 231. August 28, 1935, from Chimiste Ula.
113061. No. 232.
113062. *ANEMARRHENA ASPHODELOIDES* Bunge. Liliaceae.
No. 260. August 7, 1935. From Temur Hada. A herbaceous perennial 2 to 3 feet high, with a short thick rhizome, numerous grasslike leaves, and small lilac flowers in a spike-like raceme on a scape about as long as the leaves. Native to northeastern China.
- 113063 to 113069. *ASPARAGUS* spp. Convallariaceae.
113063. No. 238. From Pai Ling Miao, August 5, 1935.
113064. No. 239. From Temur Hada, August 7, 1935.
113065. No. 240. From Naran Obo, August 8, 1935.
113066. No. 241. From Temur Hada, August 18, 1935.
113067. No. 242. From Naran Obo, August 20, 1935.
113068. No. 243. From Khara Sair, August 27, 1935.
113069. No. 244. From Temur Hada, August 27, 1935.

113006 to 113270—Continued.

- 113070 to 113084. *ASTRAGALUS MELILOTOIDES* Pall. Fabaceae.
- Nos. 113070 to 113072 were collected near Temur Hada.
113070. No. 151. August 7, 1935.
113071. No. 153. August 11, 1935.
113072. No. 154. August 13, 1935.
113073. No. 155. From Khara Sair, August 19, 1935.
113074. No. 158. From Naran Obo, August 20, 1935.
113075. No. 159. From Khara Sair, August 23, 1935.
113076. No. 160. From Batu Khalkha, August 24, 1935.
- Nos. 113077 to 113080 were collected at Temur Hada, August 25, 1935.
113077. No. 161. 113079. No. 163.
113078. No. 162. 113080. No. 164.
- Nos. 113081 to 113084 were collected at Naran Obo, August 31, 1935.
113081. No. 165. 113083. No. 167.
113082. No. 166. 113084. No. 167-A.
113085. *ASTRAGALUS* sp. Fabaceae.
No. 187.
113086. *BERBERIS* sp. Berberidaceae.
No. 261. From Batu Khalkha, August 22, 1935.
113087. *BERBERIS* sp. Berberidaceae.
No. 203. From Chimiste Ula, August 3, 1935.
113088. *CALAMAGROSTIS PSEUDOPHRAGMITES* (Hall. f.) Koel. Poaceae. Reedgrass.
No. 247. From Khara Sair, August 14, 1935.
- 113089 to 113091. *CARAGANA* spp. Fabaceae.
113089. No. 183. From Pai Ling Miao, August 5, 1935.
113090. No. 184. From the steppe near Shara Muren, August 7, 1935.
113091. No. 186. From Temur Hada, July 30, 1935.
113092. *CLEMATIS* sp. Ranunculaceae.
No. 248. From the vicinity of Temur Hada, August 21, 1935.
113093. *CLEMATIS* sp. Ranunculaceae.
No. 249. From Khara Sair, August 23, 1935.
- 113094 to 113101. *COTONEASTER* spp. Malvaceae.
113094. *COTONEASTER RACEMIFLORA* (Desf.) Koch.
No. 227.
- Nos. 113095 to 113100 were collected at Batu Khalkha.
113095. *COTONEASTER* sp.
No. 220. Collected August 22, 1935.

113006 to 113270—Continued.

113096. *COTONEASTER* sp.
No. 221. Collected August 22, 1935.
113097. *COTONEASTER* sp.
No. 222. Collected August 24, 1935.
113098. *COTONEASTER* sp.
No. 223. Collected August 25, 1935.
113099. *COTONEASTER* sp.
No. 224. Collected August 26, 1935.
113100. *COTONEASTER* sp.
No. 225. Collected August 26, 1935.
113101. *COTONEASTER* sp.
No. 226. From Chimiste Ula, August 29, 1935.
- 113102 to 113153. *ELYMUS* spp. Poaceae.
- 113102 to 113123. *ELYMUS* *ANGUSTUS* Trin.
113102. No. 61. From Temur Hada, September 4, 1935.
Nos. 113103 to 113106 were from Bulugin Ama, September 4, 1935.
113103. No. 63.
113104. No. 64.
113105. No. 65.
113106. No. 68.
Nos. 113107 to 113111 were collected August 9, 1935.
113107. No. 70. From Ulan Obo.
113108. No. 71. From Olon Sumu.
113109. No. 72. From Ulan Obo.
113110. No. 73. From Ulan Obo.
113111. No. 74. From Ulan Obo.
113112. No. 76. From Khara Sair, August 13, 1935.
113113. No. 78. From Temur Hada, August 13, 1935.
113114. No. 80. From Bulugin Ama, August 19, 1935.
- Nos. 113115 to 113117 were collected at Khara Sair.
113115. No. 87—A. August 31, 1935.
113116. No. 83. August 23, 1935.
113117. No. 84. August 23, 1935.
113118. No. 266. From Ulan Obo, August 9, 1935.
113119. No. 33. From Bulugin Ama, August 15, 1935.
113120. No. 37. From Naran Obo, August 20, 1935.
113121. No. 39. From Batu Khalkha, August 22, 1935.
113122. No. 41. From Darkhan Wang Fu, August 28, 1935.
113123. No. 45. From Naran Obo, August 29, 1935.
113124. *ELYMUS* *DAHURICUS* Turcz.
No. 86. From Bulugin Ama, August 29, 1935.

113006 to 113270—Continued.

113125. *ELYMUS* *DASYSTACHYS* Trin.
[Received without notes.]
- 113126 to 113153. *ELYMUS* *PSEUDO-AGROPYRON* Trin.
113126. No. 36. From Bulugin Ama, August 19, 1935.
113127. No. 61—A. From Naran Obo, July 24, 1935.
- Nos. 113128 to 113131 were from Bulugin Ama, August 4, 1935.
113128. No. 62. 113130. No. 67.
113129. No. 66. 113131. No. 69.
113132. No. 77. From Khara Sair, August 13, 1935.
113133. No. 79. From Temur Hada, August 13, 1935.
113134. No. 82. From Naran Obo, August 22, 1935.
113135. No. 88. From Batu Khalkhin Gol, September 1, 1935.
113136. No. 2. From Shiretu Obo, August 6, 1935.
113137. No. 8. From Naran Obo, August 8, 1935.
113138. No. 26. From Darkhan Wang Fu, August 11, 1935.
113139. No. 34. From Hai Pa Tzu, August 16, 1935.
113140. No. 35. From Khara Sair, August 17, 1935.
113141. No. 38. From Naran Obo, August 21, 1935.
113142. No. 40. From Naran Obo, August 22, 1935.
113143. No. 40—A. From Khara Sair, August 23, 1935.
113144. No. 42. From Darkhan Wang Fu, August 27, 1935.
- Nos. 113145 and 113146 were from Mu Usu, August 27, 1935.
113145. No. 43. 113146. No. 44.
- Nos. 113147 and 113148 were from the steppe near Darkhan Wang Fu, August 30, 1935.
113147. No. 46. 113148. No. 47.
113149. No. 49. From Batu Khalkha, September 1, 1935.
- Nos. 113150 to 113152 were from Mu Usu, September 2, 1935.
113150. No. 53. 113152. No. 56.
113151. No. 55.
113153. [No number.] From the steppe near Olon Sumu, September 2, 1935.
- 113154 to 113156. *EPHEDRA* spp. Gneta-ceae.
113154. No. 200. From Naran Obo, August 11 and 12, 1935.
113155. No. 201. From Temur Hada, August 12, 1935.
113156. No. 202. From Shara Muren, August 14, 1935.

113006 to 113270—Continued.

113157 to 113164. *ERAGROSTIS* spp. Poaceae.

Nos. 113157 to 113162 were from Temur Hada.

113157 to 113159. *ERAGROSTIS PILOSA* (L.) Beauv.

113157. No. 102. August 21, 1935.

113158. No. 103. August 22, 1935.

113159. No. 106. August 27, 1935.

113160 to 113164. *ERAGROSTIS POAEIODES* (L.) Beauv.

113160. No. 101. August 21, 1935.

113161. No. 104. August 22, 1935.

113162. No. 105. August 22, 1935.

113163. No. 107. From Darkhan Wang Fu, August 27, 1935.

113164. No. 108. From Temur Hada. August 28, 1935.

113165. *FESTUCA* sp. Poaceae.

No. 129. From the vicinity of Pai Ling Miao, August 8, 1935.

113166 to 113168. *HORDEUM BREVISUBULATUM* (Trin.) Link. Poaceae.

A perennial grass native to Siberia.

113166. No. 126. From Batu Khalkha, August 8, 1935.

113167. No. 127. From Olon Sumu, August 9, 1935.

113168. No. 128. From Ulan Obo, August 9, 1935.

113169 and 113170. *HYOSCYAMUS NIGER* L. Solanaceae. Henbane.

Collected August 27, 1935, at Khara Sair.

113169. No. 269. 113170. No. 270.

113171. *INDIGOFERA* sp. Fabaceae.

No. 185. From Ulan Obo, August 25, 1935.

113172 to 113187. *IRIS* spp. Iridaceae.

113172 to 113180. *IRIS VENTRICOSA* Pall.

An Apogon iris with thick linear leaves about 1 foot long and a stem with usually two pale blue flowers, the falls narrow, with an obovate blade and lanceolate standards. Native to central Asia.

113172. No. 190. From Temur Hada. August 4, 1935.

113173. No. 191. From Pai Ling Miao, August 5, 1935.

113174. No. 192. From Darkhan Wang Fu, August 6, 1935.

113175. No. 194. From Naran Obo. August 16, 1935.

113176. No. 195. From Batu Khalkha, August 15-17, 1935.

113177. No. 196. From Mu Usu, August 27, 1935.

113178. No. 197. From Mu Usu, August 27, 1935.

113179. No. 198. From Batu Khalkha, August 28, 1935.

113006 to 113270—Continued.

113180. No. 199. From Darkhan Wang Fu, August 6, 1935.

113181. *IRIS* sp.

No. 184-A. From Darkhan Wang Fu, August 1935. A broad-leaved species.

Nos. 113182 to 113186; broad-leaved species collected at Bulugin Ama.

113182. *IRIS* sp.

No. 185-A. August 4, 1935.

113183. *IRIS* sp.

No. 186-A. August 10, 1935.

113184. *IRIS* sp.

No. 187-A. August 10, 1935.

113185. *IRIS* sp.

No. 188-A. August 10, 1935.

113186. *IRIS* sp.

No. 189. August 11, 1935.

113187. *IRIS* sp.

No. 193. From Darkhan Wang Fu, August 11, 1935.

113188 to 113191. *KOELERIA GRACILIS* Pers. Poaceae.

Nos. 113188 to 113191 were collected in the mountains near Batu Khalkha, August 15, 1935.

113188. No. 119. 113190. No. 121.

113189. No. 120. 113191. No. 122.

113192. *LONICERA* sp. Caprifoliaceae.

No. 252. From Chimiste Ula, August 3, 1935.

113193 and 113194. *MELICA SCABROSA* Trin. Poaceae.

113193. No. 90. From Pai Ling Miao, August 5, 1935.

113194. No. 100. August 28, 1935.

113195 to 113203. *MELICA VIRGATA* Turcz. Poaceae.

A perennial grass native to Siberia.

113195. No. 91. From Naran Obo, August 23, 1935.

Nos. 113196 to 113198 were collected at Batu Khalkha, August 24, 1935.

113196. No. 92. 113198. No. 94.

113197. No. 93.

113199. No. 95. From Naran Obo, August 25, 1935.

113200. No. 96. From Temur Hada, August 25, 1935.

113201. No. 97. From Batu Khalkha, August 25, 1935.

113202. No. 98. From Khara Sair, August 27, 1935.

113203. No. 99. From Naran Obo, August 28, 1935.

113204 to 113207. *MELILOTUS* spp. Fabaceae.

113204. No. 152. From Temur Hada, August 7, 1935.

113205. No. 154-A. From Shara Muren, August 15, 1935.

113006 to 113270—Continued.

- Nos. 113206 and 113207; from Khara Sair, August 19, 1935.
113206. No. 156. 113207. No. 157.
113208. *ONOBRYCHIS* sp. Fabaceae.
- No. 255. From a sandy slope beside the river road, August 7, 1935.
- 113209 and 113210. *PLANTAGO* spp. Plantaginaceae.
113209. No. 245. From Batu Khalkha, August 24, 1935.
113210. No. 246. From Temur Hada, August 24, 1935.
- 113211 to 113224. *POA* spp. Poaceae.
Bluegrass.
- 113211 to 113215. *POA SPHONDYLODES* Trin.
113211. No. 130. From Khara Sair, July 23, 1935.
- Nos. 113212 and 113213; from Darkhan Wang Fu, August 13-14, 1935.
113212. No. 131. 113213. No. 132.
- Nos. 113214 and 113215; from Batu Khalkha, August 15, 1935.
113214. No. 133. 113215. No. 134.
113216. *POA COMPRESSA* L.
- No. 135. From Naran Obo, August 16, 1935.
- 113217 to 113221. *POA SPHONDYLODES* Trin.
113217. No. 136. From Temur Hada, August 20, 1935.
113218. No. 137. From Naran Obo, August 21, 1935.
113219. No. 138. From Temur Hada, August 22, 1935.
- Nos. 113220 and 113221; from Batu Khalkha, August 22, 1935.
113220. No. 139. 113221. No. 140.
113222. *POA COMPRESSA* L.
- No. 141. From Batu Khalkha, August 24, 1935.
113223. *POA SPHONDYLODES* Trin.
- No. 142. From Naran Obo, August 25, 1935.
113224. *POA SUBFASTIGIATA* Trin.
- No. 143. From Naran Obo, August 25, 1935. A creeping perennial grass with stems over a foot high. Native to Siberia and Mongolia.
- 113225 to 113231. *PUCCINELLIA DISTANS* (L.) Parl. Poaceae.
- Nos. 113225 to 113229 were collected at Batu Khalkha.
113225. No. 143-A. August 29, 1935.
113226. No. 144. August 29, 1935.
113227. No. 145. August 9, 1935.
113228. No. 146. August 12, 1935.
113229. No. 147. August 12, 1935.
113230. No. 148.
113231. No. 149.

113006 to 113270—Continued.

- 113232 to 113234. *RHAMNUS* spp. Rhamnaceae.
- From Temur Hada.
113232. No. 233. August 29, 1935.
113233. No. 234. August 29, 1935.
113234. No. 235. September 2, 1935.
- 113235 to 113237. *RIBES* spp. Grossulariaceae.
113235. *RIBES* sp.
- No. 267. From Batu Khalkha, August 25, 1935.
113236. *RIBES* sp.
- No. 236. From Batu Khalkha, August 28, 1935.
113237. *RIBES* sp.
- No. 237. From Chimiste Ula, August 29, 1935.
- 113238 to 113247. *ROSA* spp. Rosaceae.
Rose.
- From Chimiste Ula, September 29, 1935.
113238. *ROSA* sp. 113243. *ROSA* sp.
- No. 204. No. 209.
113239. *ROSA* sp. 113244. *ROSA* sp.
- No. 205. No. 210.
113240. *ROSA* sp. 113245. *ROSA* sp.
- No. 206. No. 211.
113241. *ROSA* sp. 113246. *ROSA* sp.
- No. 207. No. 212.
113242. *ROSA* sp. 113247. *ROSA* sp.
- No. 208. No. 213.
113248. *RUMEX* sp. Polygonaceae.
- No. 265. Collected along the Batu Khalkha River near Temur Hada, August 12, 1935.
113249. *SETARIA VIRIDIS* (L.) Beauv. Poaceae.
- No. 150. From Khara Sair, August 27, 1935.
- 113250 to 113252. *SILENE* spp. Silenaceae.
113250. *SILENE* sp.
- No. 253. From Temur Hada, August 7, 1935.
- 113251 and 113252. *SILENE APRICA* Turcz.
113251. No. 264. From Temur Hada, August 25, 1935.
113252. No. 268. From Khara Sair, August 27, 1935.
- 113253 to 113265. *STIPA* spp. Poaceae.
Feathergrass.
- 113253 and 113254. *STIPA SIBIRICA* Lam.
- From Naran Obo, August 28 and 29, 1935.
113253. No. 113. 113254. No. 116.
- 113255 to 113262. *STIPA SPLENDENS* Trin.
- Nos. 113255 and 113256; from Naran Obo, August 20, 1935.
113255. No. 109. 113256. No. 110.

113006 to 113270—Continued.

113257. No. 111. From Temur Hada, August 21, 1935.
113258. No. 112. From Darkhan Wang Fu, August 25, 1935.
113259. No. 114. From Darkhan Wang Fu, August 28, 1935.
113260. No. 115. From Naran Obo, August 29, 1935.
113261. No. 117. From Darkhan Wang Fu, September 2, 1935.
113262. No. 118. From Bulugin Ama, September 4, 1935.
- 113263 to 113265. *STIPA* spp.
From Naran Obo.
113263. No. 123, August 20, 1935.
113264. No. 124, August 19, 1935.
113265. No. 125, August 25, 1935.
113266. *TRIPOGON CHINENSIS* (Franchet) Hack. Poaceae.
No. 263. From Batu Khalkha, August 25, 1935. A perennial grass up to 2 feet high. Native to northern China.
113267. *VICIA* sp. Fabaceae.
No. 258. From Bulugin Ama, August 10, 1935.
113268. *XANTHOCERAS SORBIFOLIA* Bunge. Sapindaceae.
- No. 262. From Shara Muren, August 20, 1935.
113269. (Undetermined.)
No. 250. From Batu Khalkha, August 25, 1935.
113270. (Undetermined.)
No. 256. From Khara Sair, August 23, 1935.

113271 to 113273. *FESTUCA* spp. Poaceae. Fescue.

From the Netherlands. Seeds presented by Dr. W. C. de Leeuw, Conservator. Botanisch Laboratorium, Leiden. Received November 29, 1935.

Introduced for Department specialists.

113271. *FESTUCA MARITIMA* L.
113272. *FESTUCA OVINA* L. Sheep fescue.
113273. *FESTUCA VARIA* Haenke.

113274. *TERMINALIA MUELLERI* Benth. Combretaceae.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received December 9, 1935.

A native Australian species which, under favorable conditions, becomes a large tree with leathery, obovate leaves usually about 4 inches long, loose spikes of small white flowers, and small, ovoid, black fruits.

For previous introduction see 88324.

113275 to 113280.

From Manchuria. Seeds collected by the Asiatic Expedition. Received November 27, 1935.

Introduced for Department specialists.

113275 to 113280—Continued.

Nos. 113275 to 113279 were collected in August 1935 from the valley of the Gad River, Barga District.

113275 and 113276. *ELYMUS PSEUDO-AGROPYRON* Trin. Poaceae.

113275. No. 1. IV. From Mankou.

113276. No. 2. IV.

113277. *HEMEROCALLIS* sp. Liliaceae.

No. 5. IV.

113278. *IRIS DICHOTOMA* Pall. Iridaceae.
Vesper iris.

No. 3. IV.

For previous introduction see 112278.

113279. *IRIS ORIENTALIS* Mill. Iridaceae.

No. 4. IV.

113280. *MELILOTUS SUAVEOLENS* Ledeb. Fabaceae.
Sweetclover.

No. 6. IV. September 10, 1935, from Harbin.

113281 to 113288.

From Africa. Seeds presented by R. Andersen, Yapata Estate, Kitale Kenya Colony. Received November 30, 1935.

Introduced for Department specialists.

113281 and 113282. *CROTALARIA* spp. Fabaceae.

Upright plants found growing in grass plains.

113281. *CROTALARIA* sp.

113282. *CROTALARIA* sp.

113283. *ERIOSEMA* sp. Fabaceae.

113284. *INDIGOFERA* sp. Fabaceae.

113285. *TERAMNUS LABIALIS* (L.) Spreng. Fabaceae.

A plant found climbing over high grass.

For previous introduction see 99006.

113286. *VIGNA* sp. Fabaceae.

A slender vine found in open grass plains.

113287. (Undetermined.)

A leguminous vine.

113288. (Undetermined.)

A leguminous vine found among rocks in high grass.

113289. *PINUS EDULIS* Engelm. Pinaceae. Nut pine.

From Mexico. Seeds presented by Victor Riverole, Mexico City. Received December 4, 1935.

Introduced for Department specialists.

For previous introduction see 104162.

113290 to 113299. *HELENIUM* spp. Asteraceae.

From Germany. Plants purchased from Karl Foerster, Bornim-Potsdam-Saessouci. Received December 11, 1935.

Introduced for Department specialists.

113290. *HELENIUM BIGELOVII* A. Gray.

Superbum, a large brown-flowered variety.

113290 to 113299—Continued.

113291. HELENIUM.
Chipperfeld orange. A tall hybrid with long-blooming orange flowers.
113292. HELENIUM.
Coccineum bruneum. A tall hybrid with deep reddish-brown flowers.
113293. HELENIUM.
Crimson Beauty. A short hybrid with bronze-carmine flowers.
113294. HELENIUM.
Goldene Jugend. A tall hybrid with yellow flowers.
113295. HELENIUM.
Baronin Linden. A tall hybrid with golden-brown flowers.
113296. HELENIUM.
Moerheim Beauty. A dwarf hybrid with bright red-brown flowers.
113297. HELENIUM.
Peregrina. A tall hybrid with dark-brown flowers.
113298. HELENIUM AUTUMNALE L.
Pumilum magnificum. A dwarf variety with golden-yellow flowers.
113299. HELENIUM.
Wyndley. A dwarf hybrid with brown flowers.

113300 to 113391.

From China. Seeds collected in Suiyuan Province by the Asiatic Expedition. Received November 15, 1935.

Introduced for Department specialists.

Nos. 113300 to 113391 were collected as cultivated plants in August and September 1935.

113300. ABRUS PRECATORIUS L. Fabaceae.
Rosary-pea.
No. 281 [62].
113301. ALLIUM FISTULOSUM L. Liliaceae.
Welsh onion.
No. 331.
113302. ALLIUM sp. Liliaceae.
No. 329.
113303. AMARANTHUS PANICULATUS L. Amaranthaceae.
Tassel amaranth.
No. 301. The seed is roasted or popped, ground into meal, and made into sweet cakes; the meal is also eaten with sugar and milk.
For previous introduction see 97713.
113304. APIUM GRAVEOLENS L. Apiaceae.
Celery.
No. 287 [41].
113305. AVENA NUDA Hoejer. Poaceae.
Naked oats.
No. 340 [5].
113306. BETA VULGARIS L. Chenopodiaceae.
Common beet.
No. 323 [59].
- 113307 to 113314. BRASSICA spp. Brassicaceae.
113307. BRASSICA CHINENSIS Jusl.
No. 312 [35]. A variety which does not form a head.
For previous introduction see 80580.

113300 to 113391—Continued.

113308. BRASSICA PEKINENSIS (Lour.) Rupr.
No. 303 [37].
- 113309 to 113314. BRASSICA spp.
113309. No. 309 [38].
113310. No. 311 [13].
113311. No. 314 [39].
113312. No. 327 [36].
113313. No. 335 [60].
113314. No. 342 [40].
113315. CANNABIS SATIVA L. Moraceae.
No. 337 [11].
113316. CAPSICUM ANNUM L. Solanaceae.
Common redpepper.
No. 325 [53].
- 113317 to 113324. CARAGANA spp. Fabaceae.
113317. No. 169.
Nos. 113318 to 113323; from Shara Murten, August 15, 1935.
113318. No. 174. 113321. No. 177.
113319. No. 175. 113322. No. 178.
113320. No. 176. 113323. No. 179.
113324. No. 182. From Batu Khalkha, August 31, 1935.
113325. CHRYSANTHEMUM CORONARIUM L. Asteraceae.
Crowndaisy.
No. 286 [63]. An edible chrysanthemum, the leaves of which are used as a garnish, as flavoring, and also cooked as spinach.
For previous introduction see 80651.
113326. CITRULLUS VULGARIS Schrad. Cucurbitaceae.
No. 289 [26].
113327. CORIANDRUM SATIVUM L. Apiaceae.
Coriander.
No. 295 [58].
For previous introduction see 109057.
- 113328 to 113333. CUCUMIS MELO L. Cucurbitaceae.
Muskmelon.
113328. No. 283 [30].
113329. No. 288 [25].
113330. No. 294 [33].
113331. No. 300-a [29].
113332. No. 320 [27].
113333. No. 334 [28].
113334. CUCUMIS SATIVUS L. Cucurbitaceae.
Cucumber.
No. 344 [34].
113335. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae.
Cushaw.
No. 300 [31].
113336. CUCURBITA PEPO L. Cucurbitaceae.
Pumpkin.
No. 302 [32].
- 113337 and 113338. DAUCUS CAROTA L. Apiaceae.
Carrot.
113337. No. 304 [48].
113338. No. 336 [49].

113300 to 113391—Continued.

- 113339 to 113343. *ELYMUS* spp. Poaceae.
 113339 and 113340. *ELYMUS* *ANGUSTUS* Trin.
 113339. No. 27. From Darkhan Wang Fu, August 31, 1935.
 113340. No. 29. From Darkhan Wang Fu, September 1, 1935.
 113341. *ELYMUS* *DASYSTACHYS* Trin.
 No. 15. From Bulugin Ama, August 12, 1935.
 113342. *ELYMUS* *ANGUSTUS* Trin.
 No. 21. From Bulugin Ama, August 19, 1935.
 113343. *ELYMUS* *PSEUDO-AGROPYRON* Trin.
 No. 25. From Darkhan Wang Fu, August 24, 1935.
 113344 and 113345. *FAGOPYRON* *ESCULENTUM* Moench. Polygonaceae. Buckwheat.
 113344. No. 278. From the village of Hai Pa Tzu, August 15, 1935.
 113345. No. 297.
 113346. *FOENICULUM* *VULGARE* Hill. Apiaceae. Fennel.
 No. 292 [56].
 113347. *HELIANTHUS* *ANNUUS* L. Asteraceae. Sunflower.
 No. 280 [61].
 113348. *HORDEUM* *DISTICHON* *NUDUM* L. Poaceae. Two-rowed barley.
 No. 332 [2].
 113349 and 113350. *INDIGOFERA* spp. Fabaceae.
 From Ulan Obo, August 8, 1935.
 113349. No. 171 [739].
 113350. No. 172 [739].
 113351 to 113353. *LACTUCA* *SATIVA* L. Cichoriaceae. Garden lettuce.
 113351. No. 315.
 113352. No. 316.
 113353. No. 333 [45].
 113354 and 113355. *LENS* *ESCULENTA* Moench. Fabaceae. Lentil.
 113354. No. 276. From Hai Pa Tzu, August 15, 1935.
 113355. No. 339-A.
 113356. *LINUM* *USITATISSIMUM* L. Linaceae. Flax.
 No. 341.
 113357. *MEDICAGO* *SATIVA* L. Fabaceae. Alfalfa.
 No. 318 [64].
 113358. *NITRARIA* *SCHOBERI* L. Zygophyllaceae.
 No. 271 [803]. From Darkhan Wang Fu, August 22, 1935.
 113359. *ONOBRYCHIS* sp. Fabaceae.
 No. 173. From Shara Muren, August 15, 1935.
 113360. *ORYZA* *SATIVA* L. Poaceae. Rice.
 No. 310.

113300 to 113391—Continued.

- 113361 to 113364. *PANICUM* *MILIACEUM* L. Poaceae. Millet.
 113361. No. 275. From Hai Pa Tzu, August 15, 1935.
 113362. No. 285 [3].
 113363. No. 307.
 113364. No. 319 [4].
 113365 to 113368. *PHASEOLUS* spp. Fabaceae.
 113365. *PHASEOLUS* *ANGULARIS* (Willd.) W. F. Wight. Adzuki bean.
 No. 284 [23].
 113366. *PHASEOLUS* *AUREUS* Roxb. Mung bean.
 No. 321 [19].
 113367. *PHASEOLUS* *VULGARIS* L. Common bean.
 No. 305.
 113368. *PISUM* *SATIVUM* L. Fabaceae. Pea.
 No. 338 [22].
 113369 to 113371. *PSORALEA* spp. Fabaceae.
 From Shara Muren, August 1935.
 113369. No. 183. 113371. No. 170.
 113370. No. 168.
 113372 to 113376. *RAPHANUS* *SATIVUS* L. Brassicaceae. Radish.
 113372. No. 282 [46].
 113373. No. 293 [50].
 113374. No. 296 [47].
 113375. No. 298 [51].
 113376. No. 299 [52].
 113377 and 113378. *RHAMNUS* spp.
 113377. No. 272. 113378. No. 273.
 113379. *SECALE* *CEREALE* L. Poaceae. Rye.
 No. 274. From Hai Pa Tzu, August 15, 1935.
 113380. *SESAMUM* *ORIENTALE* L. Pedaliaceae. Sesame.
 No. 343 [14].
 113381 and 113382. *SOJA* *MAX* (L.) Piper. Fabaceae. Soybean.
 113381. No. 313 [17].
 113382. No. 317 [18].
 113383. *SOLANUM* *MELONGENA* L. Solanaceae. Eggplant.
 No. 326 [55].
 113384. *SORGHUM* *VULGARE* Pers. Poaceae. Sorghum.
 No. 291 [15].
 113385. *SPINACIA* *OLERACEA* L. Chenopodiaceae. Common spinach.
 No. 290 [42].
 113386 and 113387. *TRITICUM* *AESTIVUM* L. Poaceae. Common wheat.
 113386. No. 277.
 113387. No. 324 [1].

113300 to 113391—Continued.

113388. *VICIA FABA* L. Fabaceae. Broadbean.
No. 308 [16].
113389. *VICIA* sp. Fabaceae.
No. 181. From Naran Obo, August 28, 1935.
113390. *VIGNA SINENSIS* (Torner) Savi. Fabaceae. Cowpea.
No. 322 [21].
113391. *ZEA MAYS* L. Poaceae. Corn.
No. 339 [8].
- 113392 to 113398. *TRITICUM* spp. Poaceae. Wheat.

From England. Seeds presented by Dr. John Percival, University College, Reading. Received December 4, 1935.

Introduced for Department specialists.

113392. *TRITICUM* sp.
No. 1N1. Received as *orientale insigne*, a homonym.
113393. *TRITICUM* sp.
No. 2N4. Received as *orientale notabile*, a homonym.
113394. *TRITICUM* sp.
No. 4P1. Received as *pyramidale capticum*, a homonym.
113395. *TRITICUM* sp.
No. 5P4. Received as *pyramidale pseudo-capticum*, a homonym.
113396. *TRITICUM* sp.
No. 7P1. Received as *pyramidale ptolomaeum*, a homonym.
113397. *TRITICUM* sp.
No. 1P1. "White Saidi." Received as *pyramidale recognitum*, a homonym.
113398. *TRITICUM* sp.
No. 1P2. Received as *pyramidale recognitum*, a homonym.

113399 and 113400. *CYNARA SCOLYMUS* L. Asteraceae. Artichoke.

From New York. Seeds presented by Carmelo Caporaso, Brooklyn, N. Y., through W. R. Beattie, Bureau of Plant Industry. Received December 9, 1935.

Introduced for Department specialists.

113399. No. 1. *Globe* artichoke.
113400. No. 2. *Villarosa* artichoke, a variety which is said to come true from seed.

113401 to 113403. *VITIS VINIFERA* L. Vitaceae. European grape.

From Italy. Cuttings presented by Prof. G. Delmaso, R. Stazione Sperimentale di Viticolo-Enologica, Conegliano. Received December 16, 1935.

Introduced for Department specialists.

113401. *Aglianico*. 113403. *Grillo*.
113402. *Grignolino*.

113404 to 113415. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.

From Canada. Scions presented by Dr. W. H. Upshall, Vineland Station, Ontario. Received December 16, 1935.

Scions from crosses between trees of McIntosh and Spy and from open-pollinated trees of Spy; introduced for Department specialists.

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| 113404. 3-35-3. | 113410. 3-31-7. |
| 113405. 3-33-4. | 113411. 9-3-28. |
| 113406. 9-4-35. | 113412. 9-3-10. |
| 113407. 9-4-30. | 113413. 9-3-34. |
| 113408. 9-3-6. | 113414. 3-35-15. |
| 113409. 3-35-7. | 113415. 3-31-11. |

113416. *VERNONIA JAVANICA* (Blume) DC. Asteraceae.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received December 12, 1935.

Introduced for Department specialists.

Seeds presented to the Atkins Institution by the Botanic Gardens, Singapore, Straits Settlements. A tropical tree with elliptic, long-petioled leaves and numerous small purple flower-heads in terminal corymbs. Native to Java.

113417. *ASPARAGUS PSEUDOSCARBER* Grecescu. Convallariaceae.

From Germany. Seeds purchased from Wilhelm Pfitzer, Stuttgart. Received December 10, 1935.

Introduced for Department specialists.

A hardy ornamental asparagus similar to *Asparagus plumosus nanus*. Native to Rumania.

113418 to 113435. *ORYZA SATIVA* L. Poaceae. Rice.

From Japan. Seeds presented by K. Nakata, Kyushu Imperial University, Department of Agriculture, Laboratory of Plant Pathology, Fukuoka. Received December 5, 1935.

Local strains from Chosen; introduced for Department specialists.

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| 113418. No. 380. <i>Seikinso</i> . |
| 113419. No. 383. <i>Ko-so</i> . |
| 113420. No. 385. <i>Pori-be</i> . |
| 113421. No. 389. <i>Tata-so</i> . |
| 113422. No. 394. <i>Pappe</i> . |
| 113423. No. 397. <i>Rozinto</i> . |
| 113424. No. 402. <i>To-so</i> . |
| 113425. No. 404. <i>Ryokuto-to</i> . |
| 113426. No. 415. <i>Hakuso-to</i> . |
| 113427. No. 417. <i>Shichisho-to</i> . |
| 113428. No. 456. <i>Chakalbe</i> . |
| 113429. No. 468. <i>So-tei-so</i> . |
| 113430. No. 518. <i>Zai-rai Sekizanso</i> . |
| 113431. No. 519. <i>Pulpe</i> . |

113418 to 113435—Continued.

113432. No. 543. *Mochi-mai*.
 113433. No. 547. *Oh-natsume-so*.
 113434. No. 554. *Butamochi-to*.
 113435. No. 557. *Nishikimochi*.

113436 to 113440.

From New Zealand. Seeds presented by A. S. Paterson & Co., Ltd., Dunedin. Received December 5, 1935.

Introduced for Department specialists.

113436 to 113439. *LOLIUM PERENNE* L. Poaceae. Perennial ryegrass.

113436. No. HB-356B; certified Mother Ryegrass.

Nos. 113437 to 113439; certified Permanent Pasture Ryegrass.

113437. No. CO-5-S1.

113438. No. 2833.

113439. No. 2874.

113440. *TRIFOLIUM REPENS* L. Fabaceae. White clover.

No. HB-690. Certified white clover.

113441 to 113448. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

From Colombia. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received December 18, 1935.

Collected in the Departamento de Antioquia; introduced for Department specialists.

113441. No. 31. *Medellin*. From Damascus. November 16, 1935.

113442. No. 32. *Tachuelo*. From Santa Barbara, November 17, 1935.

113443. No. 33. *Tachuelo* or *Caucano* (?) From Santa Barbara, November 18, 1935.

113444. No. 34. From Medellin, November 20, 1935.

113445. No. 36. *Zapatoca*. From Amagá, November 26, 1935.

113446. No. 37. *Zapatoca*. From Amagá, November 26, 1935.

113447. No. 38. *Boliviano*. From Amagá, November 26, 1935.

113448. No. 39. *Cordoncillo*. From Amagá, November 26, 1935.

113449 and 113450. *GOSSYPIUM* SPP. Malvaceae. Cotton.

From Colombia. Seeds presented by the American consul, Buenaventura. Received December 16, 1935.

Wild cotton from Colombia; introduced for Department specialists.

113449. *GOSSYPIUM EVERTUM* O. F. Cook and J. W. Hubbard.

113450. *GOSSYPIUM TRIDENS* O. F. Cook and J. W. Hubbard.

113451 to 113462.

From the Union of Soviet Socialist Republics. Plants presented by the Institute of Plant Industry, Leningrad. Received December 18, 1935.

113451 to 113462—Continued.

Introduced for Department specialists.

113451 to 113458. *AMYGDALUS* spp. Amygdalaceae.

113451. *AMYGDALUS DAVIDIANA* (Carr.) Zabel. Chinese wild peach.
 No. 02117.

113452 to 113456. *AMYGDALUS PERSICA* L. Peach.

113452. No. 453. *Rogani-gov*.

113453. No. 343. *Blindchatyi*, *Fiat peach*.

113454. No. 1355. *Ferganensis* 59.

113455. No. 02446. *Ferganensis*, white-fleshed.

113456. No. 808. *Ferganensis*, yellow-fleshed.

113457 and 113458. *AMYGDALUS PERSICA NECTARINA* Ait. Nectarine.

113457. No. 595. A red nectarine.

113458. No. 597.

113459. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.

No. 838.

113460. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

No. 595. *Badam*.

113461. \times *PRUNUS DASYCARPA* Ehrh. Amygdalaceae. Plum-apricot.

113462. *AMYGDALUS COMMUNIS* \times *PERSICA*. Amygdalaceae.

No. 895. An almond \times peach hybrid.

113463. *HYACINTHUS ORIENTALIS* L. Liliaceae. Common hyacinth.

From India. Bulbs purchased from Mrs. P. Kohli, Baramula. Received December 24, 1935.

Introduced for Department specialists.

For previous introduction see 14790.

113464 to 113466. *TULIPA* SPP. Liliaceae. Tulip.

From India. Bulbs presented by Mrs. P. Kohli, Baramula. Received December 24, 1935.

Introduced for Department specialists.

113464. *TULIPA CHRYSANTHA* Boiss.

A dwarf tulip with strap-shaped leaves and a stem about 8 inches high, bearing a star-shaped flower, yellow within, flushed red without. Native to central Asia.

113465. *TULIPA LANATA* Regel.

For previous introduction see 107589.

113466. *TULIPA STELLATA* Hook.

This species from the temperate Himalayas is almost a counterpart of the common *Tulipa clusiana*, differing chiefly in the yellow basal star.

For previous introduction see 51113.

113467 to 113484. *MALUS* spp. Malaceae.

From Canada. Scions presented by N. B. Davis, Dominion Horticulturist, Central Experimental Farm, Ottawa. Received December 24, 1935.

113467 to 113484—Continued.

Introduced for Department specialists.

- 113467 to 113470. *MALUS BACCATA* (L.) Moench. Siberian crab apple.
 113467. C. E. F.
 113468. No. 28-53 (N. 7525).
 113469. No. 28-54 (N. 7526).
 113470. No. 10-11 (N. 2648).

113471. *MALUS* sp.
 No. 10-7 (2749).

113472 to 113481. *MALUS SYLVESTRIS* Mill. Apple.

113472. No. 41-1. *Anis*.
 113473. No. 44-4. *Antonovka*.
 113474. No. 37-13. *Hibernal*.
 113475. No. 0-22086. *Niobe*.
 113476. No. 0-22089. *Roslin*.
 113477. No. 3-26. *Rupert*.
 113478. No. 3a-30. *Sandow*.
 113479. No. 7-3. *Spilaw*.
 113480. No. 13-15. *Spiretta*.
 113481. No. 0-22137. *Thurso*.

113482 to 113484. *MALUS* spp.

113482. No. 2-21. *Columbia*, a crab apple.
 113483. No. 35-30. *McPrince*, a crab apple.
 113484. No. 1-95. *Osman*, a crab apple.

113485 to 113494. *TRITICUM AESTIVUM* L. Poaceae. Common wheat.

From Australia. Seeds presented by H. Wenzholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received December 10, 1935.

Introduced for Department specialists.

113485. *Baldwin*, No. C. 6398.
 113486. *Bencubbin*.
 113487. *Bordan*.
 113488. *Daphne*.
 113489. *Gular*.
 113490. *Minflor*, No. C. 5654.
 113491. *Numba*.
 113492. *Sultan*.
 113493. *Sword*.
 113494. *Totadgin*.

113495 to 113501. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

From Colombia. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received December 26, 1935.

Introduced for Department specialists.

113495. No. 35. *Zapatoca*. From Amagá, Antioquia, November 25, 1935.
 113496. No. 40. *Girón*. Received December 9, 1935, from Garrucha, Manizales.

113495 to 113501—Continued.

113497. No. 41. *Puntelanza*. Received December 9, 1935, from Farraliso, Manizales.
 113498. No. 42. Piño. Received December 5, 1935, from Farraliso, Manizales.
 113499. No. 43. *Zapatoca*. Received December 9, 1935, from Cabaña, Manizales.
 113500. No. 44. *Punta da lanza*. Received December 9, 1935, from La Loma, Salamina, Caldas.
 113501. No. 45. A mixed sample of *Repollo* and *Brazo negro*. Received December 9, 1935, from Chamberí, Salamina, Caldas.

113502. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

From Mexico. Seeds presented by A. S. Sharpton, District of Ciudad del Maiz, San Luis Potosi, at the request of W. A. Archer, Bureau of Plant Industry, through Edmund B. Montgomery, American consul, San Luis Potosi. Received December 28, 1935.

Introduced for Department specialists.

113503 to 113505.

From Ibarra Province, Ecuador. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received November 22, 1935.

Introduced for Department specialists.

113503 and 113504. *JUBAEA CHILENSIS* (Molina) Baill. Phoenicaceae. Sirup palm.

A slow-growing, ornamental Chilean palm, 40 feet high, with a very robust trunk 4 or 5 feet in diameter, thriving in open places and enduring long periods of drought. The pinnate leaves are 6 to 12 feet long, and the seeds, like small coconuts, an inch in diameter with an edible kernel, have become important in recent years as an article of export.

For previous introduction see 110612.

113503. No. 7383.

113504. No. 7395.

113505. *PARAJUBAEA COCIDES* Burret. Phoenicaceae. Palm.

No. 7385. A rather large handsome palm, first described in 1930, somewhat resembling *Jubaea*, but more slender and graceful, the trunk a foot or more in diameter at base, straight and erect, tapering slightly, the leaves closely and regularly pinnate, and the nuts, larger than those of *Jubaea*, have thicker, rougher shells, pointed at the end and contain oily edible kernels.

113506 and 113507.

From France. Seeds presented by A. Gerard, La Fosse par Montoire sur Loir, Loir-et-cher. Received December 24, 1935.

Introduced for Department specialists.

113506. *ABIES VENUSTA* (Douglas) K. Koch. Pinaceae. Fir.113507. *DAVIDIA INVOLUCRATA* VILMORINIAN, (Dode) Hemsl. Cornaceae. Dovetree.

For previous introduction see 95372.

113508. ANNONA RETICULATA L. Annonaceae.
Custard-apple.

From Siam. Seeds presented by Mrs. W. Harding Kneeder, Chieng Mai. Received December 17, 1935.

Introduced for Department specialists.

An excellent variety with a thin skin, which makes it a poor shipper.

For previous introduction see 102623.

113509. TRICHILIA HIRTA L. Meliaceae.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received December 23, 1935.

An evergreen tree up to 60 feet high, with pinnately compound leaves of 11 to 21 obliquely ovate, glabrous leaflets and panicles 9 inches long of small greenish-white flowers. It is native to Mexico and the West Indies.

For previous introduction see 104665.

113510 and 113511. MYRCIARIA CAULIFLORA (Mart.) Berg. Myrtaceae.

Jaboticaba.

From Brazil. Seeds purchased from Dierberger & Co., São Paulo. Received December 26, 1935.

Introduced for Department specialists.

113510. Variety *Paulista*.

113511. Variety *Sabará*.

113512. PROSOPIS CHILENSIS VELUTINA (Wooton) Standl. Mimosaceae.

Mesquite.

From Arizona. Seeds presented by C. J. King, United States Cooperative Testing Station, Sacaton. Received October 10, 1935.

Introduced for Department specialists.

A shrub or tree up to 18 feet high, usually distinguishable from the type by the small pubescent leaflets. Native to the southwestern United States and Mexico.

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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 126



Washington, D. C.

Issued June 1940

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, JANUARY 1 TO MARCH 31, 1936 (Nos. 113513-114313)

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INTRODUCTORY STATEMENT

This inventory, No. 126, records the plant material received by the Division of Plant Exploration and Introduction during the period from January 1 to March 31, 1936 (Nos. 113513 to 114313).

The botanical determinations of seeds have been made and the nomenclature determined by Paul Russell, who has had general supervision of this inventory.

B. Y. MORRISON,
Principal Horticulturist, in Charge.

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D. C., June 24, 1939.



INVENTORY¹

NOTE.—This inventory is a historical record of plant material introduced for Department and other specialists. It is not to be considered as a list of plant material for distribution.

113513. PINNELLIA TERNATA (Thunb.) Brent. Araceae.

From China. Bulbs collected by Peter Liu, near Peiping. Received January 7, 1936.

A hardy bulbous perennial closely related to the arums, with three-parted leaves; the oblong-elliptic leaflets are about 3 inches long. Native to eastern China.

113514 to 113516.

From Egypt. Seeds presented by the Horticultural Section, Ministry of Agriculture, Giza. Received January 7, 1936.

Native Egyptian types.

113514. *APIUM GRAVEOLENS* L. Apiaceae.
Celery.

113515. *DAUCUS CAROTA* L. Apiaceae.
Carrot.

113516. *LYCOPERSICON ESCULENTUM* Mill.
Solanaceae. Tomato.

113517 to 113519.

From the Union of Soviet Socialist Republics. Seeds presented by the Department of New Cultures and Introduction, Institute of Plant Industry of the Lenin Academy of Agricultural Sciences, Leningrad. Received January 7, 1936.

113517. *AGROPYRON SIBIRICUM* (Willd.)
Beauv. Poaceae. Grass.

No. 1141. From Kazakstan, Turkistan.

113518. *CAREX PHYSODES* Bieb. Cyperaceae.

No. 141031. From Turkistan.

113517 to 113519—Continued.

113519. *IXIOLIRION TATARICUM* (Pall.) Herbert. Amaryllidaceae.

No. 141576. From Repetek, Turkistan. A bulbous perennial, native from the Caucasus through central Asia, with awl-shaped leaves and terminal umbels of deep-blue or violet lilylike flowers, which are borne in the spring.

For previous introduction see 107935.

113520 to 113523. TRITICUM AESTIVUM L. Poaceae. Common wheat.

From Hungary. Seeds presented by Dr. Bela Husz, Budapest. Received January 9, 1936.

A collection of winter wheats.

113520. No. B-1201. 113522. No. B-1205.

113521. No. B-1005. 113523. *Prolific*.

113524 to 113534.

From the Soviet Union. Plants presented by the Department of New Cultures and Introduction, Institute of Plant Industry of the Lenin Academy of Agricultural Science, Leningrad. Received January 10, 1936.

113524 to 113533. *PRUNUS ARMENIACA* L.
Amygdalaceae. Apricot.

113524. *Arzami*.

113525. *Badami*.

113526. *Badem-Erik*.

113527. *Baradjali*.

113528. *Geogdjanabad*.

¹ It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Plant Exploration and 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 seed samples or 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

113524 to 113534—Continued.

113529. *Kandak*.113530. *Khurma*.113531. *Kisil-mirsandjali*.113532. *Mirsandjali*.113533. *Spitak*.113534. × *PRUNUS DASYCARPA* Ehrh.
Amygdalaceae. Plum-apricot.No. 2489. *Flor Tsiran*.113535. *CITRUS GRANDIS* (L.) Osbeck.
Rutaceae. Grapefruit.

From Mexico. Bud sticks presented by F. W. Smith, Guasave, Sinaloa. Received January 13, 1936.

A pink-fleshed variety.

113536. *GOSYPIUM*. Malvaceae.
Cotton.

From Puerto Rico. Seeds presented by a Mr. McCubbin, San Juan. Received January 3, 1936.

113537 and 113538. *PASSIFLORA* spp.
Passifloraceae.

From Australia. Seeds presented by J. Haseley, Punchbowl, New South Wales. Received January 10, 1936.

113537. *PASSIFLORA EDULIS* Sims.
Purple granadilla.

From Norfolk Island, New South Wales. This is the principal commercial passion fruit of the island, but it is killed back to the roots by temperatures of 24° to 17° F.

113538. *PASSIFLORA MOLLISSIMA* (H. B. K.)
Bailey. Softleaf passionflower.

A climbing plant that produces ovate, pointed, yellow acid fruits of excellent quality.

For previous introduction see 106448.

113539. *EUPHORBIA LOPHOGONA* Lam.
Euphorbiaceae.

From Madagascar. Plants presented by Miss Beryla Rafeaver. Received September 24, 1935. Numbered in January 1936.

A small erect spineless succulent with persistent stipules on the stem which is woody at the base, deep-green obovate leaves up to 8 inches long, and cymes with small white to pinkish bracts. Native to Madagascar.

113540 to 113542. *RIBES* spp. Grossu-
lariaceae.

From the Soviet Union. Plants presented by the Minchurinsk Experiment Station. Received January 6, 1936.

113540 and 113541. *RIBES PETRAEUM ATRO-
PURPUREUM* (C. A. Mey.) Jancz.

A variety with red or blackish purple fruit. Native to central Asia.

113540. No. 2. 113541. No. 3.

113542. *RIBES CYATHIFORME* Pojark.

No. 116-R. A wild black currant native to the mountains of central Asia.

113543 and 113544. *TRIPTYERYGIUM* spp.
Celastraceae.

From China. Cuttings collected by Peter Liu, in Chekiang Province. Received January 2, 1936.

Lei Kung T'eng. A handsome shrub conspicuous chiefly for its large bright-green foliage, contrasting well with the reddish brown stems terminated in July and August by conspicuous panicles of small, whitish, fragrant flowers.

113543. From near Erh Shih Pa Tu in Yi Wu District.

113544. From near Shih Hsia K'ou in Chuki District.

113545. *PINANGA* sp. Phoenicaceae.

From the Philippine Islands. Seeds presented by David Barry & Co., Los Angeles, Calif. Received January 6, 1936.

113546 to 113549. *FRAGARIA VESCA* L.
Rosaceae. Alpine strawberry.

From England. Plants purchased from George Bunyard & Co., Ltd., the Royal Nurseries, Maidstone. Received January 2, 1936.

113546. *Alpine Improved Red*.113547. *Belle De Meaux*.113548. *Bush White*.113549. *Common White*.113550 and 113551. *SOLANUM* spp. Sol-
anaceae.

From the Union of South Africa. Seeds presented by Dr. A. P. D. McLean, Natal Herbarium, Durban. Received January 10, 1936.

113550. *SOLANUM DUPLO-SINUATUM* Klotzsch.

A spiny shrub 3 to 6 feet high, with large sinuate leaves and few-flowered cymes of bell-shaped blue flowers about 1½ inches across. Native to tropical Africa.

113551. *SOLANUM INCANUM* L.

A tender evergreen shrub up to 5 feet high, with ovate to ovate-elliptic leaves and showy, nodding purple flowers, solitary or few-clustered. Native to eastern Africa and southern Asia.

113552. *TRIFOLIUM REPENS* L. Fabaceae.
White clover.

From England. Seeds presented by Gartons Ltd. Warrington. Received January 11, 1936.

Kent Wild white clover.113553 and 113554. *PHALARIS* spp. Po-
aceae.

From South Australia. Seeds presented by the Waite Agricultural Research Institute, Glen Osmond. Received January 2, 1936.

113553. *PHALARIS COERULESCENS* Desf.
Canary grass.113554. *PHALARIS TUBEROSA* L.
Toowoomba canary grass.

113555 to 113558.

From Hungary. Seeds presented by Dr. Bela Husz, Budapest. Received January 8, 1936.

113555 and 113556. *LINUM USITATISSIMUM* L. Linaceae. Flax.

113555. Oil flax.

113556. Fiber flax.

113557 and 113558. *TRITICUM AESTIVUM* L. Poaceae. Wheat.

113557. No. 5512. Winter wheat.

113558. No. 5542. Winter wheat.

113559 to 113563. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

From Colombia. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received January 21, 1936.

Collected in the Departamento Tolima, January 11, 1936.

113559. No. 59. A sample containing *Costillo negro*, *Costillo blanco*, and *Pina*, from Armero.

113560. No. 60. A sample containing *Costillo negro*, *Costillo blanco*, *Pina*, and others, from Rastrojos.

113561. No. 61. A field sample containing *Costillo negro*, *Costillo blanco*, *Pina*, and others from Rastrojos.

113562. No. 62. *Ambalema*. From Estación Agrícola de Armero.

113563. No. 63. *Ambalema*. From Estación Agrícola de Armero.

113564. *XYLOSMA FLEXUOSA* (H. B. K.) Hemsl. Flacourtiaceae.

From Texas. Seeds presented by Peter Heinz, Brownsville. Received January 17, 1936.

Hutchichitelmel. A shrub or small tree up to 20 feet high, with glabrous leaves and numerous fragrant flowers followed by small dark-red fruits, about one-fourth inch in diameter. The fruits are very conspicuous and numerous, covering the entire plant, making a more attractive appearance than holly. This plant is cultivated as an ornamental in San Luis Potosi, Mexico.

113565 to 113578.

From the Union of South Africa. Seeds purchased from the Winton Nurseries, Bonnie Vale, Cape Province. Received January 13, 1936.

113565. *ANTHERICUM FALCATUM* L. f. Liliaceae.

A herbaceous perennial with linear radical leaves about 1 foot long and many small white vanilla-scented flowers in lax racemes. Native to South Africa.

113566. *FERRARIA OBTUSIFOLIA* Sweet. Iridaceae.

A densely bunched bulbous plant about 1 foot high, with short, sword-shaped leaves and a corymb of showy brownish-purple, fringed flowers. Native to South Africa.

113567. *GLADIOLUS BLANDUS* Ait. Iridaceae.

A South African gladiolus with sword-shaped leaves somewhat shorter than the stem, which is from 6 to 24 inches in

113565 to 113578—Continued.

height and which bears 3 to 10 white or reddish tinted scentless flowers, each over an inch long.

For previous introduction see 106737.

113568. *GLADIOLUS CALLISTUS* Bolus f. Iridaceae.

A plant 30 to 40 inches high, with 4 to 7 narrow sword-shaped leaves 1 to 2 feet long and 2 stem leaves. The flowers, white suffused with pink and 9 to 12 in number, are produced on 1 to 3 branches.

For previous introduction see 105286.

113569. *IXIA PANICULATA TENUIFLORA* (Vahl) Baker. Iridaceae.

A South African ixia with several linear basal leaves up to 18 inches long and many creamy-white flowers, the segments about 1 inch long. The lax erect spikes on stems 1 to 3 feet high are sometimes branched.

113570 to 113574. *GLADIOLUS* spp. Iridaceae.

113570. *GLADIOLUS GRACILIS* Jacq.

A plant with about three rigid, subterete leaves a foot or less long and very slender stems up to 2 feet high, bearing two to six pale-lilac, scentless flowers in a lax second spike. Native to South Africa.

For previous introduction see 105288.

113571. *GLADIOLUS GRANDIS* Thunb.

Closely related to *Gladiolus tristis*, this has three strongly terete leaves 12 to 18 inches long and a slender stem up to 2 feet high. The purplish, brown-tinted flowers are 2 to 3 inches long, in a lax second spike. Native to the Cape of Good Hope.

For previous introduction see 105289.

113572. *GLADIOLUS PERMEABILIS* Delar.

A South African gladiolus of the Hebea group, with firm narrow-linear or subterete leaves up to a foot long, and a slender flexuose stem about as long bearing 6 to 12 pale-pink or lilac flowers in lax simple or branched spikes.

113573. *GLADIOLUS PULCHELLUS* Klatt.

A South African gladiolus with a simple or branched stem about 1 foot high and 4 to 8 pinkish-purple, highly scented flowers in a lax spike, the upper segments long clawed.

113574. *GLADIOLUS UNDULATUS* Jacq.

A bulbous plant with a stem a foot high, including the spike and several sword-shaped leaves about a foot long. The four to six flowers are milk white marked with red and are produced in a very lax spike. Native to South Africa.

For previous introduction see 44728.

113575. *HESPERANTHA* sp. Iridaceae.

A species with white, star-shaped flowers.

113576. *HOMERIA ELEGANS* (Jacq.) Sweet. Iridaceae.

A bulbous plant with a single linear leaf about 1 foot long and a stem about as long, with one to four clusters of showy bright-yellow flowers, the outer segments heavily blotched with a maroon or greenish mark in the center. Native to South Africa.

113565 to 113578—Continued.

113577. *LAPEYROUSIA FISSIFOLIA* (Jacq.) Ker-Gawl. Iridaceae.

A summer-flowering bulbous plant with a short stem, flat linear leaves, and showy dark-violet to whitish flowers on a leafy spike. Native to South Africa.

113578. *TULBAGHIA CEPACEA* L. f. Liliaceae.

A herbaceous perennial with 4 to 6 narrow-linear radical garlic-scented leaves and a scape a foot high, bearing an umbel of 6 to 12 small lilac flowers. Native to South Africa.

113579 to 113590. *NICOTIANA TABACUM* L. Solanaceae.

From Guatemala. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received January 22, 1936.

113579. No. 3646. Volunteer plants collected November 23, 1935, at Patzún, Departamento Chimaltenango.

113580 to 113583. Collected November 24, 1935, at Santa Cruz Quiche, Departamento Quiche.

113580. No. 3647. *Criollo*.

113581. No. 3648. *Criollo*.

113582. No. 3649. *Bobo*.

113583. No. 3650. *Virginia*.

113584. No. 3651. Collected November 25, 1935, at Tecpan, Departamento Chimaltenango.

113585. No. 3652. Cultivated tobacco; collected November 25, 1935, near Patzicia, Departamento Chimaltenango.

113586 to 113588. Cultivated tobacco; collected November 26, 1935, at Guatemala City.

113586. No. 3653. *Olopo*.

113587. No. 3654. *Punta de Lanzo*.

113588. No. 3655. *Cubano*.

113589. No. 3656. A mixed sample of cultivated tobacco collected January 5, 1936, at Zacapa.

113590. No. 3658. *Punta de Lanza*. Cultivated tobacco collected January 6, 1936, at Zacapa.

113591 and 113592. *MALUS* spp. Malaceae.

From Canada. Scions presented by R. M. Wilson, Department of Agriculture, Dominion Experimental Farm, Indian Head, Saskatchewan. Received January 23, 1936.

Locally grown crab apple varieties.

113591. *MALUS* sp.

Pioneer.

113592. *MALUS* sp.

Robin.

113593. *GOSSYPIUM* sp. Malvaceae.

From Mexico. Seeds collected by F. W. Smith, Guasave, Sinaloa. Received January 13, 1936, via Nogales, Arizona.

A semiwild, perennial cotton, which is only slightly affected by the diseases and insects that work much damage to cultivated cotton.

113594 and 113595. *TRITICUM AESTIVUM* L. Poaceae. Common wheat.

From Australia. Seeds presented by H. Wenholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received January 9, 1936.

113594. *Calare*; from the Senora Experiment Farm.

113595. *Felia*; from the Senora Experiment Farm.

113596 to 113604. *ZEA MAYS* L. Poaceae. Corn.

From Australia. Seeds presented by the Department of Agriculture and Stock, Brisbane, Queensland. Received January 15, 1936.

113596. *Line 2*. 113601. *Line 36*.

113597. *Line 12*. 113602. *Line 39*.

113598. *Line 20*. 113603. *Line 50*.

113599. *Line 26*. 113604. *Line 61*.

113600. *Line 29*.

113605 to 113619. *ORYZA SATIVA* L. Poaceae. Rice.

From Japan. Seeds presented by the South Korean branch station, Agricultural Experiment Station, Government-General of Chosen. Received January 15, 1936.

Grown at the Rice Experiment Station, Rici, Chosen.

113605. No. 39. From Nansen Station No. 10.

113606. No. 42. From Nansen Station No. 13.

113607. No. 43. Station No. 14.

113608. No. 46. Station No. 17.

113609. No. 50. Station No. 21.

113610. No. 38. *Aikoku*.

113611. No. 327. *Taikyuso*.

113612. No. 329. *Odashiro*.

113613. No. 334. *Kamenco*.

113614. No. 337. *Ninode*.

113615. No. 348. *Nishiki No. 72*.

113616. No. 351. *Kokuryo-Miyako*.

113617. No. 352. *Sekizaruso*.

113618. No. 353. *Tamanishiki*.

113619. No. 355. *Yinboyu*.

113620 to 113622.

From India. Seeds presented by I. D. Mahendru, Divisional Forest Officer, Silva Research Forest Division, Lahore, Punjab. Received January 20, 1936.

Nos. 113620 and 113621 were collected near the Tibetan border at 9,000 feet altitude at Chini, Bashafr State.

113620. *EPHEDRA GERARDIANA* Wall. Gnetaceae.

A stiff erect leafless shrub 2 to 4 feet high, native to India, with green branches, inconspicuous flowers, and bright-red fruits.

For previous introduction see 107620.

113620 to 113622—Continued.

113621. *EPHEDRA INTERMEDIA* Schrenk and Mey. Gnetaeace.

A shrubby leafless plant with a creeping rootstalk and a short woody stem 3 to 4 inches high, simple or with a few branches. It is native to Sungaria.

For previous introduction see 101454.

113622. *PHOENIX OUSELEYANA* Griffith. Phoenicaceae. Dwarf date palm.

From the bank of the Beas River, Kangra Valley, Mandi State, at 2,600 feet altitude. A spiny palm with a short stem up to 12 feet in height and 9 inches in diameter, densely covered with the stumps of leafstalks. The edible fruits are orange colored until fully ripe when they become black. The pinnate leaves are 4 to 8 feet long, with pliable clustered leaflets more or less four ranked. Native to the southern slopes of the Himalayas and to the East Indies.

For previous introduction see 54767.

113623. *DERRIS* sp. Fabaceae.

From Guatemala. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received January 22, 1936.

No. 3657. *Palo de Zope*. Presented by the Director of Agriculture.

113624 to 113636. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

From Colombia. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received January 27, 1936.

Nos. 113624 to 113630 were collected in the vicinity of Espinal Tolima, December 31, 1935.

113624. No. 46. *Costillo negro*.

113625. No. 47. *Costillo negro*.

113626. No. 48. *Costillo Habana*.

113627. No. 49. *Pina*.

113628. No. 50.

113629. No. 51. *Colon*.

113630. No. 52. *Costillo Habana*.

113631. No. 53. *Palmira*. From the vicinity of Espinal, Tolima, January 1, 1936.

Nos. 113632 to 113636 were collected in the vicinity of Guamo, Tolima, January 4, 1936.

113632. No. 54. *Habana* and *Palmira*, a mixed sample.

113633. No. 55. *Costillo negro*.

113634. No. 56. *Costillo negro*.

113635. No. 57. *Habana* and *Palmira*, a mixed sample.

113636. No. 58. *Habana*, *Costillo negro*, *Carolino*, a mixed sample.

113637 to 113645. *VITIS VINIFERA* L. Vitaceae. European grape.

From France. Plants purchased from the Richters Nurseries, Montpellier. Received January 17, 1936.

113637. *Aramon novi* × 3309.

113638. *Caralicante* × R-57.

113639. *Carignane* × 3309.

113637 to 113645—Continued.

113640. *Chasselas doré* × 3309.

113641. *Mourastel Bouschet* × 3309.

113642. *Muscat de Frontignan* × 3309.

113643. *Syrah (Petite Syrah)* × 3309.

113644. *Sauvignon Blanc* × 3309.

113645. *Saint Emilion* × 3309.

113646. *TRIFOLIUM PRATENSE* L. Fabaceae. Red clover.

From the Soviet Union. Seeds presented by Dr. N. I. Vavilov, Director, Institute of Plant Industry, Leningrad. Received January 21, 1936.

From Riisk District, Transcaspian Republic.

113647 and 113648. *SOLANUM TUBEROSUM* L. Solanaceae. Potato.

From Argentina. Tubers presented by the Ministry of Agriculture, Buenos Aires. Received January 28, 1936.

113647. *Blanca*. 113648. *Chayuenta*.

113649. *ZEPHYRANTHES* sp. Amaryllidaceae.

From El Salvador. Bulbs collected by W. A. Archer, Bureau of Plant Industry. Received January 28, 1936.

No. 3659. January 10, 1936, from San Salvador.

113650 and 113651.

From Italy. Plants and cuttings presented by Dr. Mario Calvino, Stazione Sperimentale di Floricoltura, San Remo. Received January 28, 1936.

113650. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.

Plants of *Pollardi*.

113651. *FICUS CARICA* L. Moraceae.

Cuttings of the *Pissalutto* fig.

113652 to 113657. *CASTANEA MOLLIS-SIMA* Blume. Fagaceae. Hairy chestnut.

From China. Scions collected by Peter Liu, in Chekiang Province. Received January 30, 1936.

Nos. 113652 to 113654 were collected near the village of Chuan Tzu in the district of Hsiao Shan.

113652. No. 1. *Hung Pan Lee*, red-skin chestnut. A grafted chestnut, one of the best varieties.

113653. No. 2. *Hei Pan Lee*, black-skin chestnut. A very sweet, grafted chestnut.

113654. No. 3. *Tsao Lee*, grass chestnut. A seedling chestnut that produces very small nuts, but the tree is used as a stock on which to graft the better varieties.

113655. No. 4. *Kuei Hua Lee Tzu*, cassia chestnut. Collected near Chi Lung Shan, Kok Nest Mountains, near Hang Chow. This variety is abundantly planted in this region. The fruits ripen in the latter part of September. When they first begin to ripen the cassia is in bloom; hence the name.

113652 to 113657—Continued.

113656. No. 5. *Kuei Hua Lee Tzu*, cassia chestnut; collected in the vicinity of Fa Yun Hung near Hang Chow. The same as No. 4 (P. I. 113655).

113657. No. 7. *Ta Tzu Lee*, large purple chestnut, from near An Men, Tung Yang District. A grafted chestnut that produces very large nuts.

113658. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

From Mexico. Seeds forwarded by the American embassy, Mexico City, at the request of W. A. Archer, Bureau of Plant Industry. Received January 31, 1936.

Seed grown in the Autlán District, State of Jalisco, southwest coast of Mexico.

113659. CYCLAMEN sp. Primulaceae.

From the Soviet Union. Bulb presented by E. Stepanov, Soviet Union Plant Quarantine Board, Sukhum, Abkhasia, Transcaucasus. Received May 20, 1935. Numbered in January 1936.

113660. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. Japanese chestnut.

From Japan. Scions purchased from the Yokohama Nursery Co., Yokohama. Received January 30, 1936.

Boji chestnut.

113661 to 113669. CASTANEA spp. Fagaceae. Chestnut.

From China. Seeds collected by Peter Liu, in Chekiang Province. Received January 30, 1936.

113661 and 113662. *CASTANEA HENRYI* (Skan) Rehd. and Wils.

Chen Lee, pearl chestnut.

113661. From Hsiao Feng.

113662. From near Feng Chiao, Chuchi District.

113663 to 113669. *CASTANEA MOLLISSIMA* Blume. Hairy chestnut.

113663. *Fen shui*, large chestnut; a seedling variety common in Chekiang.

113664. *Hei Pan Lee*, black-skin chestnut; collected at Chian Tzu, Hsiao Shan District. A decidedly sweet grafted chestnut; one of the best varieties.

113665. *Hung Pan Lee*, red-skin chestnut; obtained at Chian Tzu Hsiao Shan District. Considered one of the best varieties in Chekiang.

113666. *Tsao Lee*, grass chestnut. From the village of Chian Tzu, Hsiao Shan District. A variety used as a stock.

113667. North China chestnuts; bought in Chin Chi Chan, Tientsin, but shipped in from Po Cheng, southeast of San Tun Ying, Chien An District.

113668. *Ta Hung Lee*, large bright chestnut. Bought in a fruit and nut store in Taian, Sbantung.

113669. *Ta Tzu Lee*, the large purple chestnut of An Mei, Tung Yang District. This grafted chestnut is the largest in south China.

113670 to 113673. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

From Colombia. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received January 31, 1936.

113670. No. 64. *Pina*. January 6, 1936. From Miranda, Cauca. Received through the courtesy of the Colombian Tobacco Co., Espinal.

Nos. 113671 to 113673 were presented January 17, 1936, by Rafael Gonzales, Director, Estación Agrícola de Palmira, Valle del Cauca.

113671. No. 65. *Pina*.

113672. No. 66. *Nacional No. 2*.

113673. No. 67. *Nacional No. 12*.

113674 to 113679. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. Japanese chestnut.

From Japan. Seeds purchased from the Yokohama Nursery Co., Yokohama. Received January 31, 1936.

113674. *Sandoguri*. From Izutayama.

113675. *Sasaguri*. Medium-sized seeds from Fukuoka-ken.

113676. *Sasaguri*. Small seeds from Fukuoka-ken.

113677. *Sasaguri*. From Ohita-ken.

113678. From the Koyasan Temple "Forest."

113679. From Iwate-ken.

113680 to 113687.

From Germany. Plants presented by D. W. Mohrenweiser, Baumschule Mohrenweiser, Altenweddingen, Bezirk, Magdeburg. Received February 3, 1936.

113680 to 113685. *CORYLUS* spp. Betulaceae. Filbert.

113680. *Bollwoeller Riesen*.

113681. *Braunschweiger Riesen*.

113682. *Fertille*.

113683. *Friihe Frauendorfer*.

113684. *Friihe lange Zellernuss*.

113685. *Minnas Zellernuss*.

113686. *RUBUS* sp. Rosaceae. *Deutschland* raspberry.

113687. *RUBUS* sp. Rosaceae. *Preussen* raspberry.

113688 to 113690.

From Africa. Seeds presented by R. Andersen, Yapata Estate, Kitale, Kenya Colony. Received January 27, 1936.

Seeds from plants grown on the slopes of Mount Elgon, where the average rainfall is 40 inches.

113688. *TEPHROSIA* sp. Fabaceae.

A leguminous plant which becomes a small tree.

113689. *VIGNA* sp. Fabaceae.

113690. *VIGNA* sp. Fabaceae.

113691. HAPLOPHYTON CIMEIDUM DC.
Apocynaceae.

From Mexico. Seeds presented by Dr. C. Conzatti, Oaxaca de Juarez, Oaxaca. Received January 28, 1936.

Hierba de la cucaracha. A dense woody perennial with small opposite, narrowly ovate leaves and terminal, pale-yellow flowers nearly 1 inch across. Native to the mountains of south-central Mexico.

113692 to 113694. CITRULLUS VULGARIS
Schrad. Cucurbitaceae. **Watermelon.**

From Japan. Seeds presented by the Japan Seed & Plant Co., Tokyo. Received January 31, 1936.

113692. Daisen. A late melon that keeps well. The dark-green fruits have sweet red flesh and sometimes weigh 25 pounds.

113693. Early Sugar. A globular melon that weighs up to 11 pounds and is about 20 percent sweeter than ordinary melons.

113694. Miyako. Resembles Sweet Japanese, but the flesh is lighter in color and firmer.

113695 to 113698.

From Manchuria. Seeds purchased from L. Pitsin, Harbin. Received January 30, 1936.

113695. RUBUS CRATAEGIFOLIUS Bunge.
Rosaceae. **Hawthorn raspberry.**
No. 75. A wild form.

113696. RUBUS IDAEUS L. Rosaceae.
Raspberry.
No. 73. A cultivated Manchurian raspberry.

113697. RUBUS sp. Rosaceae.

No. 74. A cultivated Manchurian raspberry which ripens early.

113698. VITIS AMURENSIS Rupr. Vitaceae.
Amur grape.

A wild grape.

113699 to 113702. ORYZA SATIVA L. Poaceae.
Rice.

From Japan. Seeds presented by K. Nakata, Kyushu Imperial University, Department of Agriculture, Fukuoka. Received January 27, 1936.

113699. Aikoku-shinjô, No. 7. II.

113700. Kameji. II.

113701. Mubô-aikoku. II.

113702. Sensho. I.

113703 to 113706.

From England. Scions presented by W. H. M. Roberson, Cheltenham, Gloucestershire. Received February 10, 1936.

113703. MALUS SYLVESTRIS Mill. Malaceae.
Apple.

Crimson Bramley. A large attractive apple, crimson on the sunny side; described as an excellent cooking and storage apple.

113703 to 113706—Continued.

113704. MALUS SYLVESTRIS Mill. Malaceae.
Apple.

Nine-Square. A medium-sized cooking apple of delicious flavor; color crimson mingled with green.

113705. PYRUS COMMUNIS L. Malaceae.
Pear.

Chissel. A dessert pear about the size of a medium-sized plum; color, yellowish green when ripe.

113706. PYRUS COMMUNIS L. Malaceae.
Pear.

True Chissel. A little larger than the ordinary *Chissel* and much sweeter; color, yellowish green when ripe.

113707. PINUS CANARIENSIS C. Smith.
Pinaceae. **Canary pine.**

From the Canary Islands. Seeds presented by Antonio Gonzalez, Director, Estación Experimental de Horticultura y Jardinería de Santa Cruz de Tenerife y Orotava. Received February 8, 1936.

A pine, native to the Canary Islands, which thrives in warm temperate climates. It is suited to nearly all soils and has a straight trunk and a broad, round-topped head. The wood of this pine, known in the Canary Islands as "tea," is very hard, very difficult to work, but unequaled for duration and building purposes.

For previous introduction see 68300.

113708 to 113710. SACCHARUM SPONTANEUM L. Poaceae.

From the Soviet Union. Seeds presented by the Director, Institute of Dry Sub-tropics, Tashkent. Received February 5, 1936.

Wild sugarcane.

113708. No. 59. From the vicinity of Parhar village, Upper Painj (Amu-Darya).

113709. No. 60. From the vicinity of Parhar village, Upper Painj (Amu-Darya).

113710. No. 61. From the vicinity of Chinas on the Syr-Darya River.

113711. CASTANOPSIS sp. Fagaceae.

From China. Seeds presented by Peter Liu, Peiping. Received February 11, 1936.

Hsi Lee, slender chestnut, from Hang Chow. A sweet chestnut.

113712 to 113722. NICOTIANA TABACUM L.
Solanaceae. **Common tobacco.**

From Honduras. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received February 14, 1936.

Nos. 113712 to 113717 were collected at Danli, Departamento El Paraiso, January 22, 1936, from a grower.

113712. No. 3660. Deli. A pure strain, originally from Sumatra.

113713. No. 3661. Java. A pure strain, originally from Sumatra.

113714. No. 3662. Copan. A pure strain.

113715. No. 3663. Habana. A pure strain.

113716. No. 3664. Salvador.

113712 to 113722—Continued.

113717. No. 3665. *Santa Rosa de Copan*. A pure strain.

113718. No. 3666. *Deli*. A pure strain, originally from Sumatra, but different from No. 3660 [P. I. 113712]. The plant is also much larger.

113719. No. 3667. January 24, 1936. A volunteer tobacco collected at El Rodeo, 40 km. west of Tegucigalpa.

Nos. 113720 to 113722 were collected January 24, 1936, at Siguatepeque, Departamento Comayagua.

113720. No. 3668. Cultivated tobacco.

113721. No. 3669. *Pina*.

113722. No. 3670. A mixed sample of *Pina*, *Cubano*, and other varieties.

113723 to 113733.

From South America. Material collected by W. A. Archer, Bureau of Plant Industry. Received in 1934 and 1935. Numbered for convenience in distribution, February 1936.

113723. *ARISTOLOCHIA* sp. Aristolochiaceae.

No. 2889. *Loangoe tetei*. Cuttings collected December 13, 1934, at Carolina, Surinam River, Surinam.

113724. *ARISTOLOCHIA* sp. Aristolochiaceae.

No. 3412. *Tigre guasca*. Cuttings collected May 21, 1935, at Mocoa, Comisario del Puntumayo, Colombia.

113725. *BANISTERIOPSIS QUIZENSIS* (Ndzu.) Morton. Malpighiaceae.

No. 3361-A. *Yaje*. Roots collected May 2, 1935, at Leticia, Colombia. A woody climber with ovate-lanceolate leaves 2 to 4 inches long and small yellow flowers in terminal clusters. Native to Ecuador.

For previous introduction see 107821.

113726. *DIOSCOREA* sp. Dioscoreaceae.

No. 2460. *Urucab*. Roots of a vine with hooked bulbils on the stems, collected August 8, 1934, near Mazaruni Station, British Guiana.

113727. *ERIOSEMA CRINITUM* (H. B. K.) G. Don. Fabaceae.

No. 2824. Root cuttings collected November 11, 1934, near Sandrij I, Surinam. A low herbaceous perennial with an enlarged storage root, trifoliate leaves, and racemes of small pale-yellow flowers. Native to tropical America.

113728. *ESCOBEDIA SCABRIFOLIA* Ruiz and Pav. Scrophulariaceae.

No. 3383. *Roiz de color*. Cuttings collected May 9, 1935, at Gelina, near Popayan, Colombia. An erect herbaceous perennial with oblong leaves about 4 inches long and large white solitary flowers. Native to western South America, where the roots are used for dyeing.

113729. *CARYOPHYLLUS MALACCENSIS* (L.) Stokes. Myrtaceae.

No. 2856. *Pommarac*. Seeds collected December 5, 1934, at Vredenburg Weg, Surinam. A tree with large, handsome, glossy leaves and masses of flowers an inch or more across, filled with hundreds of beautiful deep-rose or pink stamens; the edible fruit, 2 to 3 inches long, has bright

113723 to 113733—Continued.

red skin and dry white flesh like a cranberry. Introduced from the Malay Archipelago by the Javanese.

113730. *LONCHOCARPUS SERICEUS* (Poir.) H. B. K. Fabaceae.

No. 3354. *Garrapato*. April 28, 1935. Root cuttings of a large tree collected at Tocsimis, Finca Chucunday, Departamento Cundinamarca, Colombia. The name refers to the peculiar galls always present on the leaves.

113731. *LONCHOCARPUS NICOU* (Aubl.) DC. Fabaceae.

No. 3408. *Bavbasco trueno*. Cuttings collected May 21, 1935, at Mocoa, Comisario del Putumayo, Colombia.

113732. *PHYLANTHUS PISCATORUM* H. B. K. Euphorbiaceae.

No. 3416. *Tinta bavbasco*. Cuttings of a shrub 10 feet high, collected at Mocoa, Comisario del Putumayo, May 22, 1935.

113733. *SERJANIA PAUCIDENTATA* DC. Sapindaceae.

No. 2887. Root cuttings collected December 13, 1934, at Carolina, Surinam River, Surinam.

For previous introduction see 106495.

113734. *AMYGDALUS BUCCHARICA* Korsh. Amygdalaceae.

From the Soviet Union. Seeds presented by Dr. Boris Fedtschenko, Botanic Institute of the Academy of Sciences, Leningrad. Received February 10, 1936.

A wild almond, native to the hot dry regions of Turkistan, with fruits about 1 inch long.

For previous introduction see 106838.

113735 to 113738.

From the Soviet Union. Seeds presented by the Institute of Plant Industry, Leningrad. Received February 10, 1936.

Seeds collected by a Mr. Dessiatkin in the Altai Mountain region, Turkistan.

113735. *ALLIUM FISTULOSUM* L. Liliaceae. Welsh onion.

A very hardy wild strain; the bulbs and young leaves are edible.

For previous introduction see 113301.

113736. *HIPPOPHAE RHAMNOIDES* L. Elaeagnaceae. Common sea-buckthorn.

A large-fruited variety with high sugar content.

For previous introduction see 109295.

113737. *RIBES HISPIDULUM* (Jancz.) Pojarkova. Grossulariaceae.

A wild red currant, native to Turkistan.

113738. *RIBES PETRAEUM* Wulf. Grossulariaceae.

A large-fruited, frost-resistant red currant.

113739 to 113748. *ZEA MAYS* L. Poaceae. Corn.

From Australia. Seeds presented by the Department of Agriculture and Stock, Brisbane, Queensland. Received February 14, 1936.

113739 to 113748—Continued.

113739. Line No. 2. 113744. Line No. 46.
 113740. Line No. 12. 113745. Line No. 61.
 113741. Line No. 16. 113746. Line No. 64.
 113742. Line No. 21. 113747. Line No. 66.
 113743. Line No. 30. 113748. Line No. 68.

113749. *ERLANGEA MARGINATA* (O. and H.) S. Moore. Asteraceae.

From Africa. Seeds presented by J. B. H. Lejeune, Director, Government Experimental Station, Kisozi, Ruanda-Urundi Territory, Belgian Congo. Received January 10, 1934. Numbered in January 1936.

An erect perennial, native to tropical Africa, with dark-green, narrow-ovate leaves, up to 3 inches long, silky white beneath. The small heads of pink flowers in dense terminal clusters and on short pedicels in the axils of the leaves, have a long blooming season.

113750. *BOUSSINGAULTIA* sp. Basella-ceae.

From Venezuela. Bublils collected by W. A. Archer, Bureau of Plant Industry. Received February 16, 1935. Numbered in February 1936.

No. 2988. Collected near Caracas, January 27, 1935. A vine whose aerial tubers contain a soapy substance used by the natives to wash clothing.

113751 to 113756.

From Honduras. Seeds presented by the Research Department of the Tela Railroad Co., Tela. Received February 8, 1936.

113751. *ARECA ALICAE* F. Muell. Phoenicaceae. Palm.

An Australian cluster palm with graceful shining-green pinnate leaves 3 to 6 feet long. The handsome oblong scarlet fruits, three-fourths of an inch long, make this one of the most attractive of all door-yard palms.

For previous introduction see 104680.

113752. *GUILIELMA UTILIS* Oerst. Phoenicaceae. Pejibaye.

A pinnate-leaved palm, native to tropical regions of the Western Hemisphere. Its straight, slender stem, about 6 inches in diameter and 60 feet high, is armed from the ground upward with stiff, very sharp black spines about 2 inches long. The racemes, 18 to 24 inches long, of small sessile, yellow-white flowers, are produced from the trunk of the palm immediately below or among the lower leaves and are protected by erect spathe. The raceme of mature fruit weighs over 25 pounds, and there are often five or six such racemes produced in a single crop. The individual fruits are conical or ovoid, vary from 1 to 2 inches in length, and have dry mealy flesh of a pale-orange or yellow color. It is one of the important food plants of the Tropics.

For previous introduction see 103739.

113753. *LICUALA* sp. Phoenicaceae. Palm.

Received as *Licuala peltata*, but the seeds do not agree with that species. The licualas are showy, dwarf, fan-leaved palms.

113751 to 113756—Continued.

113754. *OENOCARPUS* sp. Phoenicaceae. Palm.

A tall, very handsome ornamental palm with a terminal crown of pinnatisect leaves.

113755. *THRINAX* sp. Phoenicaceae. Palm. An ornamental fan-leaved palm.113756. *TILMIA CARYOTAEOFOLIA* (H. B. K.) O. F. Cook (*Martinezia caryotaefolia* H. B. K.).

A slender, spiny-trunked, pinnate-leaved palm with bright orange-red fruits borne in drooping racemes. Native to Colombia.

For previous introduction see 103172.

113757 and 113758. *ARACHIS HYPOGAEA* L. Fabaceae. Peanut.

From Uruguay. Seeds presented by the Facultad de Agronomia Universidad de la Republica. Montevideo. Received February 15, 1936.

113757. A small white Spanish type with short cylindrical pods; a promising variety.

113758. A Valencia type with the usual red kernels.

113759 to 113778.

From Australia. Seeds presented by F. J. Rae, Director, Melbourne Botanic Gardens and National Herbarium, South Yarra, Victoria. Received February 15, 1936.

A collection of native Australian plants.

113759. *CALLISTEMON RIGIDUS* R. Br. Myrtaceae.

A tall shrub, sometimes 30 feet high, native to New South Wales. The narrowly linear leaves are 2 to 5 inches long, and the scarlet flowers, with dark-red stamens an inch long, are borne in large dense spikes.

For previous introduction see 101349.

113760. *CASSIA EREMOPHILA* A. Cunn. Caesalpiniaceae.

A handsome shrub 5 feet high, with leaves made up of two pairs of narrow leaflets and yellow flowers. The leaves and pods are said to be eaten by stock.

For previous introduction see 90851.

113761. *CHORIZEMA DIVERSIFOLIUM* A. DC. Fabaceae.

A tender shrub about 3 feet high, with weak, slender, often twining branches, ovate to narrow lanceolate leaves about 2 inches long, and many showy orange flowers in loose racemes.

113762. *DCDONAEA TRIQUETRA* Wendl. Sapindaceae.

A tall erect glabrous shrub with oval-elliptic leaves 2 to 4 inches long and very smooth shining brown seeds in medium-sized capsules.

For previous introduction see 50400.

113763. *DRACOPHYLLUM SECUNDUM* R. Br. Eupacridaceae.

A shrub resembling a monocot with the branching stems covered by the sheathing bases of the linear-striated leaves 2 to 4

113759 to 113778—Continued.

inches long. The branches are terminated by long compound, one-sided racemes of pure white tubular flowers.

For previous introduction see 76937.

113764. ENTELEA ARBORESCENS R. Br. Tiliaceae.

A shrub or small tree up to 20 feet high, with the growing parts covered with soft stellate hairs. The alternate cordate leaves, nearly a foot across, are on petioles 8 inches long; the white flowers, an inch in diameter, are in erect cymes, and the globose pods are covered with long rigid bristles.

For previous introduction see 103006.

113765. EUCALYPTUS MICROTHECA F. Muell. Myrtaceae.

A tree up to 80 feet high, found in arid as well as tropical regions of Australia. It is said to be resistant to extreme heat and drought and to also endure a temperature as low as 18° F.

For previous introduction see 75638.

113766. GELJERA PARVIFLORA Lindl. Rutaceae.

Wilga. A tall evergreen shrub or small 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.

For previous introduction see 90853.

113767. HAKEA VITTATA R. Br. Proteaceae.

An evergreen shrub or small tree up to 20 feet high, with needlelike leaves up to 3 inches long. Native to South Australia.

113768. KENNEDIA COMPTONIANA (Andr.) Link. Fabaceae.

A vine with single lanceolate leaflets and terminal and axillary racemes of pea-shaped flowers, ranging from white through rose to purple.

For previous introduction see 98164.

113769. KENNEDIA NIGRICANS Lindl. Fabaceae.

A large twining vine from Western Australia. The broad ovate leaflets, 2 to 3 inches long, are often only one to each leaf. The deep violet-purple flowers are about 1 inch in length and are borne in racemes shorter than the leaves.

For previous introduction see 45791.

113770. KUNZEA PEDUNCULARIS F. Muell. Myrtaceae.

A heathlike evergreen shrub 8 to 15 feet high, allied to the callistemons. The small white flowers, with conspicuous stamens, are borne in the upper axils as short corymbs or long leafy racemes. Native to southeastern Australia.

113771. LASIOPETALUM DASYPHYLLUM Sieber. Sterculiaceae.

A tall shrub with rusty tomentose branches, coriaceous cordate to lanceolate leaves 4 inches long, and dense axillary clusters of small brownish flowers.

For previous introduction see 76939.

113759 to 113778—Continued.

113772. LEPTOSPERMUM SCOPARIUM Forst. Myrtaceae.

Variety *grandiflorum roseum*. A form with large pink flowers.

113773. LIBERTIA IXIOIDES (Forst. f.) Spreng. Iridaceae.

A herbaceous perennial, native to New Zealand, with a short creeping rhizome, which forms a compact clump like a beardless iris. It has rigid coriaceous linear leaves a foot long and large panicles of small white flowers on a stem 2 feet high.

For previous introduction see 81490.

113774. OLEARIA PANNOSA Hook. Asteraceae.

An evergreen shrub up to 4 feet high, with broadly ovate-cordate to oblong leaves about 3 inches long and large white terminal or axillary flower heads. Native to South Australia.

113775. ORTHOSANTHUS MULTIFLORUS Sweet. Iridaceae.

An irislike plant with a short perennial rhizome and flat, grasslike radical leaves up to 2 feet in length. The blue flowers are in a several-flowered oblong spike borne on a stem 1 to 2 feet high.

For previous introduction see 67087.

113776. PULTENAEA DAPHNOIDES Wendl. Fabaceae.

An erect evergreen shrub about 6 feet high, with cuneate-oblong leaves less than 2 inches long and small yellow flowers in large dense terminal heads. Native to southern Australia.

113777. SIDEROXYLON AUSTRALE (R. Br.) Benth. and Hook. Sapotaceae.

An evergreen tree, eventually about 80 feet high, with elliptic-oblong leaves 3 to 4 inches long. The globose purplish fruits, about 2 inches in diameter, are edible, although of coarse texture and insipid flavor. The dark-colored timber is used for cabinet work.

113778. TEMPLETONIA RETUSA (Vent.) R. Br. Fabaceae. Melbourne coralbush.

A tall evergreen shrub 4 to 8 feet high, with angular sulcate glaucous branchlets, simple leathery broadly ovate leaves about 1 inch in length, and axillary red or white flowers 1 inch long, solitary or in clusters of two or three.

113779 and 113780.

From the Netherlands. Plants presented by F. J. Grootendorst & Sons, Boskoop, through the Skylands Nursery, Sterlington, N. Y. Received February 15, 1936.

113779. ABIES LASIOCARPA ARIZONICA (Merriam) Lemm. Pinaceae.

A variety with yellowish-white, corky bark and smaller cones. Native to Arizona and New Mexico.

113780. ABIES BALSAMEA (L.) Mill. Pinaceae.

Hudsonia. A dwarf form.

113781. PHOENIX RECLINATA Jacq. Phoenicaceae. Senegal date palm.

From Sierra Leone, Africa. Seeds presented by W. T. Swingle, Bureau of Plant Industry. Received February 18, 1936.

113782 to 113789.

From India. Seeds presented by the forest botanist, Forest Research Institute, Dehra Dun, through F. J. Crider, Soil Conservation Service, United States Department of Agriculture. Received February 14, 1936.

113782. *ACER STERCULIACEUM* Wall. Aceraceae. Maple.

A handsome tree with gray bark, native to the northwestern parts of the Himalayas at altitudes of 7,000 to 9,000 feet. It sometimes reaches a height of 80 feet. The thin shining-green leaves are occasionally used for fodder, and the white, closely grained wood is beautifully mottled.

For previous introduction see 56399.

113783. *BERBERIS CHITRIA* Lindl. Berberidaceae. Barberry.

A spiny half-evergreen shrub, 6 feet or less high, with oblong leaves 1 to 3 inches long, deep yellow or reddish flowers in long stemmed panicles, and ovoid purple berries. Native to the Himalayas.

For previous introduction see 92491.

113784. *BERBERIS LYCIUM* Royle. Berberidaceae. Barberry.

A half-evergreen shrub 10 feet high, with narrow bright-green leaves and pale-yellow flowers followed by ovoid violet berries. Native to northern India.

For previous introduction see 81147.

113785. *CARPINUS VIMINEA* Lindl. Betulaceae.

A rather small tree with slender pendulous branches and ovate, caudate, doubly serrate leaves 3 to 4 inches long. Native to the temperate Himalayas at altitudes of 5,000 to 7,000 feet.

113786. *ERIANTHUS RUFIPILUS* (Steud.) Griseb. Poaceae. Plumegrass.

A perennial grass from the temperate Himalayas, where it grows at altitudes of 5,000 to 7,000 feet.

For previous introduction see 93210.

113787. *LILIUM GIGANTEUM* Wall. Liliaceae. Giant lily.

113788. *VIBURNUM COTINIFOLIUM* D. Don. Caprifoliaceae.

A shrub 6 to 12 feet high, closely allied to *Viburnum lantana*, and native to the Himalayas from Bhutan to Baluchistan. The young branchlets, the under surface of the leaves, and the flower stalks are clothed with a dense gray down. The white, pink-tinged, broadly funnel-shaped flowers are produced in rounded cymes, 2 to 3 inches across. The red, ultimately black, fruits are up to one-half inch long.

For previous introduction, see 53744.

113789. *VITIS TRIFOLIA* L. Vitaceae.

A slender herbaceous tuberous-rooted vine, covered throughout when young with a short dense pubescence. The long-stalked, trifoliolate leaves are 2 to 6 inches long, and the small black fruits are two to four seeded. Native to the tropical Himalayas and the hotter parts of India.

113790. *TRIPTYERYGIUM* sp. Celastraceae.

From China. Cuttings collected by Peter Liu, Peiping. Received February 25, 1936.

Lei Kung Teng. From Erh Shih Pa Tu, Yi Wu District, Chekiang Province.

113791 to 113795. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

From Palestine. Trees presented by A. Grosovsky, Chief Horticultural Officer, Department of Agriculture and Forests, Jerusalem. Received February 26, 1936.

113791. *Alawi*.

113792. *Baladi*.

113793. *Hamawi*.

113794. *Karassia*.

113795. *Klabi*, seedling.

113796 to 113810.

From the Soviet Union. Plants presented by the Nikita Botanic Garden, Yalta, Crimea, through the Institute of Plant Industry, Leningrad. Received February 25, 1936.

113796 to 113808. *AMYGDALUS COMMUNIS* L. Amygdalaceae. Almond.

113796. Crimée No. 337.

113797. Crimée No. 1590.

113798. Crimée No. 341.

113799. Crimée No. 2678.

113800. Crimée No. 2661.

113801. Crimée No. 335.

113802. Crimée No. 2669.

113803. Crimée No. 339.

113804. Crimée No. 396.

113805. Crimée No. 2674.

113806. Crimée No. 2664.

113807. Crimée No. 348.

113808. Crimée No. 2678.

113809 and 113810. *PRUNUS DOMESTICA* L. Amygdalaceae. Plum.

113809. Crimée No. 2669-A. From Alma Hara.

113810. Crimée No. 2669-B. From Alma Hara.

113811 to 113821. *RUBUS* spp. Rosaceae.

From China. Seeds presented by the Director, Botanic Garden, Dr. Sun Yat-Sen's Memorial Park, Nanking. Received February 21, 1936.

113811. *RUBUS AMPELINUS* Focke.

A prostrate shrub similar to *Rubus lambertianus*, with slender stems about 3 feet long, broad-ovate leaves about 2 inches long, and terminal clusters of few small flowers. Native to central China.

113812. *RUBUS BUERGERI* Miq.

A creeping rubus, common in the region of Nagasaki, Japan. The red fruits are of good flavor but not large.

For previous introduction see 48739.

113813. *RUBUS CHROOSEPALUS* Focke.

A Chinese bramble with glabrous cordate leaves, white tomentose beneath, and small purplish flowers followed by black fruits. Native to Hupeh Province.

For previous introduction see 53536.

113814. *RUBUS COREANUS* Miq.

Korean raspberry.

A deciduous shrub 8 to 10 feet high, native to China and Chosen, with erect

113811 to 113821—Continued.

or arching, stout biennial stems. The pinnae leaves, 6 to 10 inches long, are usually composed of seven ovate, dark lustrous-green, coarsely toothed leaflets. The fruit, varying in color from red to nearly black, is edible but small and of poor flavor.

For previous introduction see 104649.

113815. *RUBUS ICHANGENSIS* Hemsl. and Kuntze.

A straggling plant with white flowers, found in thickets between 2,000 and 4,000 feet altitude in central and western China. The small red fruits are of good flavor.

For previous introduction see 26272.

113816. *RUBUS LAMBERTIANUS* Seringe.

A bramble with long slender square evergreen stems, simple or three-lobed to five-lobed leaves, bright green above and lighter beneath, terminal clusters of small white flowers, and red or yellow fruits. Native to China.

For previous introduction see 91831.

113817. *RUBUS MESOGAEUS* Focke.

A bramble native to central China, with slender climbing stems 12 to 15 feet long, rather small flowers, and small globose berries.

For previous introduction see 50299.

113818. *RUBUS OCCIDENTALIS* L.
Common blackcap.

For previous introduction see 92795.

113819. *RUBUS PARVIFOLIUS* L.

A hardy raspberry with edible red fruits, which are somewhat acid, not particularly juicy, but of good flavor. Native to China and Japan.

For previous introduction see 93977.

113820. *RUBUS SETCHUENENSIS* Bureau and Franch.

A deciduous straggling shrub about 2 feet high, with deeply-lobed, mallowlike leaves, and many small purple flowers in dense panicles followed by black fruits of good flavor. Native to western China.

113821. *RUBUS TEPHRODES* Hance.

A straggling shrub with branches about 15 feet long, terminal clusters of small pink flowers, and rather large black fruits. Closely related to *Rubus chroosepalus*. Native to Kiangsi Province, China.

113822 to 113835. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.

From Canada. Scions presented by W. R. Leslie, Superintendent, Morden, Manitoba, Experimental Farm. Received February 27, 1936.

113822. *Angus*.113823. *Elkhorn*.113824. *Godfrey*.113825. *Gretna*.113826. *Manitoba* (Duchess seedling.)113827. *Manitoba Spy* (Duchess seedling).113828. *Manitof* (Tetofsky seedling).113829. *Mantet* (Tetofsky seedling).113830. *Manton*.

113822 to 113835—Continued.

113831. *Ostem* (M-316).113832. *Osman*.113833. *Patricia*.113834. *Rosilda*.113835. *Trail*.113836. *EUCHLAENA MEXICANA* Schrad. Poaceae. Teosinte.

From Guatemala. Seeds presented by Manuel Velasquez, Departamento de Huehuetenango. Received February 21, 1936.

113837 to 113844.

From Africa. Seeds purchased from the Mount Elgon Nurseries, Kitale, Kenya Colony. Received January 31, 1936.

Seeds of plants indigenous to eastern Africa.

113837. *BAUHINIA FASSOGLENSIS* Kotschy. Caesalpinaceae.

A scandent shrub with large suborbicular, leathery leaves, the leaflets connate, and numerous large yellow flowers in rather lax racemes.

113838. *CLEMATIS INCISO-DENTATA* A. Rich. Ranunculaceae.

A woody climber, with pinnatisect leaves and many large white flowers in long axillary panicles.

113839. *CROTALARIA LACHNOCARPOIDES* Engl. Fabaceae.

A shrubby plant up to 4 feet high, with lanceolate or linear-oblong leaflets 1 to 2 inches long and small, compact racemes of orange-colored flowers. It is similar to *Crotalaria lachnocarpa*, but has smaller flowers.

113840 to 113842. *DELPHINIUM* spp. Ranunculaceae. Larkspur.113840. *DELPHINIUM CANDIDUM* Hemsl.

A dwarf perennial delphinium, with palmately five-lobed leaves up to 5 inches across and large white, sweet-scented flowers.

113841. *DELPHINIUM MACROCENTRUM* Oliver.

A perennial delphinium up to 6 feet high bearing numerous blue-green to deep-blue flowers.

113842. *DELPHINIUM* sp.

From Ethiopia.

113843. *GLORIOSA VIRESCENS* Lindl. Melanthiaceae. Glorylily.

A vinelike perennial which supports itself by the tendril-bearing tips of the oblong-lanceolate leaves 3 to 6 inches long. The yellow and red flowers, 1 to 3 inches across and borne in a lax terminal corymb, are reflexed and slightly undulate.

For previous introduction see 102790.

113844. *PENTAS LANCEOLATA* (Forsk.) Schum. Rubiaceae.

An erect evergreen shrub 2 to 3 feet high, with linear-lanceolate, acuminate leaves 2 to 4 inches long and pink flowers over 1 inch long in dense terminal cymes. Native to Mount Kilimanjaro, Kenya, at 5,000 feet altitude.

113845. PASSIFLORA LIGULARIS JUSS.
 Passifloraceae. Sweet granadilla.

From Honduras. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received February 26, 1936.

For previous introduction see 110602.

113846. TRIFOLIUM PRATENSE L. Faba-
 ceae. Red clover.

From the Soviet Union. Seeds purchased from the Kungur Interregional Control Station, Ural Province, through the Institute of Plant Industry, Leningrad. Received February 26, 1936.

113847. NEOMAMMILLARIA ELONGATA
 (DC.) Britt. and Rose. Cactaceae.

From Mexico. Seeds collected by Paul Russell and Max Souviron, Bureau of Plant Industry. Received September 20, 1930. Numbered in February 1936.

No. 13. From the Botanic Garden, Mexico City, September 11, 1930; originally from Hidalgo. An erect cactus 6 to 7 inches high and 1 to 2 inches in diameter, with short tubercles having 16 to 18 yellow radial spines. The small flowers are white or yellowish. Native to central Mexico.

For previous introduction see 81178.

113848 to 113854. TRITICUM AESTIVUM
 L. Poaceae. Common wheat.

From Australia. Seeds presented by H. Wenholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received February 14, 1936.

A collection of rust-resistant varieties of wheat.

113848. Argentine H-31. (C-8681.) Originally from Argentina.

113849. Minor. (C-9142.)

113850. Portugal. (C-9895.) Originally from Portugal.

113851. Preparateur Etienne. (C-6141.) Originally from France.

113852. Puror. (C-9141.)

113853. Saisette. (C-6149.) Originally from France.

113854. Varonne. (C-6146.) Originally from France.

113855 to 113865. RUBUS spp. Rosa-
 ceae.

From the Soviet Union. Seeds presented by N. I. Sharapov, Department of New Cultures and Introduction, Institute of Plant Industry, Leningrad. Received February 26, 1936.

A collection of Rubus from the Maikop section.

113855. RUBUS SANCTUS Schreb.

No. 104. A very variable species related to *Rubus rhannifolius* and *R. gratus*, with strong arched shoots, leaves composed of five leaflets, and elongate racemes of white or pale-rose colored flowers.

For previous introduction see 42787.

113856 to 113859. RUBUS CAESIUS L.
 Dewberry.

A deciduous shrub with slender, creeping, prickly stems. The white flowers are

113855 to 113865—Continued.

in small clusters, and the fruit, composed of a few large carpels, is covered with a blue-white bloom when ripe. Common throughout Europe and northern Asia.

For previous introduction see 92293.

113856. No. 135. 113858. No. 192.

113857. No. 155. 113859. No. 1068.

113860. RUBUS CAESIUS TURKESTANICUS
 Regel.

No. 191. A variety with narrow-petaled flowers and shining black fruits. Native to Turkistan.

113861. RUBUS CAUSICUS Focke.

No. 1067. An evergreen bramble with small white flowers and small black fruits. It is closely related to *Rubus platyphyllus*. Native to the Caucasus region.

113862. RUBUS TOMENTOSUS Borckh.

No. 1069. A low shrub with thick leaves and small black fruits. Native to central Europe.

For previous introduction see 30185.

113863. RUBUS sp.

No. 134.

113864. RUBUS sp.

No. 100.

113865. RUBUS LINKIANUS Ser.

No. 102. A cultivated species of unknown origin, with more or less double white flowers 1 inch across.

113866 to 113868. CITRUS spp. Rutaceae.

From Costa Rica. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received February 27, 1936.

113866. CITRUS AURANTIFOLIA (Christm.)
 Swingle. Lime.

No. 3692. February 22, 1936. From the market at San José. An extremely good variety.

113867. CITRUS GRANDIS (L.) Osbeck.
 Grapefruit.

No. 3691. *Toranja*. From San José, February 22, 1936. The thick peel of this fruit is used for crystallizing; the seedlings are used as stock for other types of citrus.

113868. CITRUS LIMONIA Osbeck. Lemon.

No. 3693. From San José, February 22, 1936. A sweet variety, used in Costa Rica for beverages.

113869 to 113876.

From the Soviet Union. Seeds presented by G. N. Shlykov, head of the Department of New Cultures and Introduction, Institute of Plant Industry, Leningrad. Received February 28, 1936.

From the Botanic Garden, University of Middle Asia, Tashkent.

113869. ALLIUM AFLATUNENSE B. Fedtsch.
 Liliaceae.

A large allium with broad-oblong leaves and umbels of purple flowers on a scape up to 4 feet high. Native to Turkistan.

For previous introduction see 110686.

113869 to 113876—Continued.

113870. *INCARVILLEA OLGAB* Regel. *Bigoniaceae*.

An erect biennial 3 to 4 feet high, with opposite pinnate leaves, the leaflets linear, oblong and acute. The bell-shaped purple flowers are about an inch long. Native to Turkistan.

For previous introduction see 107550.

113871 to 113873. *IRIS* spp. *Iridaceae*.

113871. *IRIS KOLPAKOWSKIANA* Regel.

An iris of the Xiphium group with 4 to 6 narrow linear-subterete leaves and a short, one-flowered scape. The outer perianth segments are deep violet purple with a beardless, bright-yellow keel, and the inner ones are pale lilac. Native to the mountains of Turkistan.

113872. *IRIS NARBUTI* O. Fedtsch.

A dwarf iris of the Juno section with lanceolate curved leaves and one to three showy flowers with yellow falls and violet standards. Native to Turkistan.

113873. *IRIS SONGARICA* Schrenk.

A densely tufted Apogon iris about a foot high, with narrow-linear, strongly ribbed leaves up to a foot in length and two to three lilac-colored flowers over an inch long. Native to central Asia.

For previous introduction see 110982.

113874. *IXIOLIRION TATARICUM* (Pall.) Herbert. *Amaryllidaceae*.

For previous introduction and description see 113519.

113875. *TULIPA KOROLKOVII* Regel. *Liliaceae*.

A low crimson-flowered tulip from Turkistan, 4 to 6 inches high, with narrowly lanceolate leaves exceeding the flowers.

For previous introduction see 109799.

113876. *TULIPA TURKESTANICA* Regel. *Liliaceae*.

A tulip with two or rarely three linear-lanceolate leaves and yellow flowers, violet within, on a scape 3 to 12 inches high. Native to Turkistan.

For previous introduction see 107592.

113877. *DIANTHUS* sp. *Silenaceae*.

From Costa Rica. Plants collected by W. A. Archer, Bureau of Plant Industry. Received March 4, 1936.

No. 3708. *Clavel lila*. From San Isidro de Coronado, February 26, 1936. A plant with lavender-colored flowers; common in the State of Puebla, where it has been cultivated for generations.

113878 to 113888.

From Poland. Seeds presented by the Kórnik Gardens and Arboretum, Kórnik. Received February 24, 1936.

113878 to 113881. *ALLIUM* spp. *Liliaceae*.

113878. *ALLIUM CANADENSE* L.

Meadow garlic.

For previous introduction see 110766.

113878 to 113888—Continued.

113879. *ALLIUM KARATAVIENSE* Regel. **Onion.**

An onion native to Turkistan, with very ornamental broad leaves of a striking blue-green color and dense umbels of dull-pink flowers.

For previous introduction see 82013.

113880. *ALLIUM MONTANUM* F. W. Schmidt.

A rather variable species distributed from eastern Europe through Siberia in dry rocky places. It is usually a low plant with narrow leaves and a hemispherical head of blue-purple flowers.

For previous introduction see 58876.

113881. *ALLIUM SATIVUM* L. **Garlic.**

113882 to 113888. *FESTUCA* spp. **Poaceae.**

113882 and 113883. *FESTUCA OVINA* L. **Sheep fescue.**

113884. *FESTUCA OVINA ALPINA* (Sut.) Wimm. and Grab.

A variety with stems about 4 inches high. Native to Europe.

113885. *FESTUCA OVINA GLAUCA* (Lam.) Koch.

For previous introduction see 111974.

113886. *FESTUCA OVINA VALLESIAICA* (Schleich.) Link.

For previous introduction see 111976.

113887. *FESTUCA RUBRA* L. **Red fescue.**

113888. *FESTUCA RUBRA HETEROPHYLLA* (Lam.) Mutel.

113889 to 113892. *SOLANUM TUBEROSUM* L. **Potato.**

From Scotland. Tubers presented by Dr. George Cockerhan, Scottish Society for Research in Plant Breeding, Craigs House, Corstorphine. Received February 26, 1936.

113889. *Cardinal*.

113890. *Chance*.

113891. *Kepplestone Kidney*.

113892. *Shamrock*.

113893 to 113895. *COIX LACRYMA-JOBI* L. **Jobs-tears.**

From the Philippine Islands. Seeds presented by the Economic Garden, Los Baños, Laguna. Received February 27, 1936.

113893. *Lukfao*.

113894. A glutinous variety of adlay.

113895. A native variety of adlay.

113896. *ARISTOLOCHIA RINGENS* Vahl. **Aristolochiaceae.**

From Florida. Seeds presented by W. Paul Phillips, Orlando. Received February 29, 1936.

A tall slender twining glabrous plant with broadly orbicular-reniform leaves, dull green above and glaucous below. The flowers are 7 to 10 inches long, pale green, marbled and reticulated with black purple. Native to tropical America.

For previous introduction see 97533.

113897. PHELEUM PRATENSE L. Poaceae.
Timothy.

From Scotland. Seeds presented by William Robb, Director of Research, Scottish Society for Research in Plant Breeding, Craigs House, Corstorphine. Received March 3, 1936.

Diploid timothy.

113898 to 113901. MALUS SYLVESTRIS Mill. Malaceae. Apple.

From the Union of South Africa. Plants purchased from H. E. V. Pickstone & Son, Groot Drakenstein, Cape of Good Hope. Received July 30, 1934. Numbered in March 1936.

113898. *Ohinemuri*.

113899. *Rokewood*.

113900. *Wemmer's Hoek*.

113901. *William Anderson*.

113902. VITIS VINIFERA L. Vitaceae.
European grape.

From Japan. Cuttings presented by Rev. A. P. Hassell, the Japan Mission of the Presbyterian Church of the United States, Tokushima. Received March 7, 1936.

Okayama grape (Campbell Early).

113903. BRUNFELSIA AMERICANA L. Solanaceae. Franciscan nightshade.

From Trinidad, British West Indies. Seeds presented by the curator, Royal Botanic Gardens, Port-of-Spain. Received February 28, 1936.

A tropical American plant of dwarf habit, with slender branches and elliptic-ovate, glabrous leaves. The pure white, solitary flowers, shading to pure-yellow with age, are in axillary or terminal panicles and are very fragrant.

For previous introduction see 97903.

113904. CROTALARIA sp. Fabaceae.

From Africa. Seeds presented by R. Anderson, Yapata Estate, Kitale, Kenya Colony. Received February 29, 1936.

113905 to 113910.

From Norway. Seeds presented by the Director, Botanic Garden, Oslo. Received March 3, 1936.

113905. ALLIUM MULTIBULBOSUM Jacq. Liliaceae. Onion.

An onion closely resembling *Allium nitrum*, but differing in the numerous spherical bulblets, its broader and shorter leaves, and in certain floral characters. The flowers, entirely white or with a reddish central stripe in the petals, are in a dense globular cluster. Native to meadows in central Europe.

For previous introduction see 95357.

113906 to 113908. FESTUCA spd. Poaceae. Fescue.

113906. *FESTUCA OVINA L.* Sheep fescue.

113907. *FESTUCA PANCICIANA (Hack.) Richt.*

A perennial grass, native to Europe.

113905 to 113910—Continued.

113908. FESTUCA SPECTABILIS Jan.

A grass native to the mountainous regions of central Europe.

For previous introduction see 25211.

113909. IRIS POLAKII Stapf. Iridaceae.

An Iranian iris of the *Pumila* group with narrow linear leaves and a one-flowered stem up to 4 inches high, with a large violet-veined lilac flower.

113910. IRIS TRIDENTATA Pursh. Iridaceae.

A slender Apogon iris with rather firm, narrow-linear leaves over a foot long and a one- to three-flowered stalk about 2 feet high. The fragrant flowers are bright lilac. Native to the southeastern United States.

113911 and 113912.

From the Soviet Union. Seeds presented by the Director, Government Botanical Garden, Nikita, Yalta, Crimea. Received March 4, 1936.

113911. IRIS ENSATA Thunb. Iridaceae. Russian-iris.

For previous introduction see 110131.

113912. LALLEMANTIA IBERICA (Bieb.) Fisch. and Mey. Menthaceae.

A blue-flowered herbaceous perennial, native to semiarid regions in Asia Minor and Syria, whose seeds yield an oil said to be a high-grade drying oil.

For previous introduction see 99344.

113913 to 113941. TRITICUM AESTIVUM L. Poaceae. Common wheat.

From Australia. Seeds presented by the plant breeder at the Cowra Experiment Farm, through H. Wenzholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received March 3, 1936.

113913. *Apollo*. C. 4661.

113914. *Carrabin*. C. 4991.

113915. *Caliph*. C. 2708.

113916. *Currawa*. C. 9220.

113917. *Dart's Imperial*. C. 339.

113918. *Flora*. C. 3995.

113919. *Florence*. C. 8808.

113920. *Florida*. C. 3998.

113921. *Florida* × *Warren*. C. 8977.

113922. *Ghurka*. C. 9234.

113923. *Heine's Kolben*. C. 5137.

113924. *Jindera*. C. 3994.

113925. *Kenya* × *Baringa*. 668-5-E₁-2-C₄.

113926. *Kenya* × *Florence*. G₁-1-E₁-1-C₃.

113927. *Kenya* × *Gular*. G-22-1-N₂-C₄.

113928. *Kenya* × *Gular*. G₂₂-2-N₁-C₃.

113929. *Kenya* × *Gular*. C-34-2-E₂-1-C₄.

113930. *Kenya* × *Gular*. G-22-2-N₃-C₄.

113931. *Kenya* × *Gular*. G-41-4-E₁-2-C₃.

113932. *Kenya* × *Gular*. G-6-2-E₁-2-C₄.

113933. *Klein 38 M. A.* C. 9656.

113913 to 113941—Continued.

113934. *Mallan*. C. 4889.
 113935. *Mortey*. C. 5211.
 113936. (*Nabawa* × *Federation* × *Martin* × *Sonora* × *Sonora*)^e.
 113937. *Penny Selection*. C. 2728.
 113938. *Tueta*. C. 4199.
 113939. *Warden*. C. 3230.
 113940. *Warden* × *Forge*. C. 5556.
 113941. *Wardfir* × *Major*. C. 6182.

113942 to 113967. TRITICUM spp. Poaceae. Wheat.

From the Soviet Union. Seeds presented by Dr. N. I. Vavilov, Director, Institute of Plant Industry, Leningrad. Received February 25, 1936.

113942 to 113960. TRITICUM AESTIVUM L. Common wheat.

113942. No. 8547. *Ukrainka 0246* (original). From the Mironovsk Experiment Station.
 113943. No. 23667. *Ersp. 2411*. From the Moscow Experiment Station.
 113944. No. 21680. *Hostianum 237*. From Alexandr. Experiment Station.
 113945. No. 28116. *Saruba*. From Saratov Experiment Station.
 113946. No. 22233. *Caesium 0111*. From the Omsk Experiment Station.
 113947. No. 21859. *Lut. 0329*. From the Saratov Experiment Station.
 113948. No. 11389. *Kooperatorke*. From the Odessa Experiment Station.
 113949. No. 21841. *Stepniatschka*. From the Odessa Experiment Station.

Nos. 113950 to 113960 were from Transjordan.

113950. No. 17403. 113956. No. 17418.
 113951. No. 17404. 113957. No. 17421.
 113952. No. 17405. 113958. No. 17422.
 113953. No. 17407. 113959. No. 17428.
 113954. No. 17413. 113960. No. 17429.
 113955. No. 17417.

113961 to 113963. TRITICUM MACHA Dekapr. and Men.

113961. No. 28170. From Georgia.
 113962. No. 28175. From Georgia.
 113963. No. 28177. From Georgia.

113964. TRITICUM sp.

No. 17425. From Transjordan.

113965 to 113967. TRITICUM THAOU DAR Reut.

113965. No. 29533. From Armenia.
 113966. No. 15901. From Palestine.
 113967. No. 27134. From Asia Minor.

113968 to 113970. SOJA MAX (L.) Piper. Fabaceae. Soybean.

From India. Seeds presented by the agricultural inspector, Khasi and Jaintia Hills, at the request of the economic botanist, Department of Agriculture, Jorhat, Assam. Received March 5, 1936.

113968 to 113970—Continued.

A collection of late-maturing Indian varieties of soybeans.

113968. *Nepali*; a large variety.
 113969. *Spotted Khasi*.
 113970. *White Khasi*.

113971. CHRYSANTHEMUM ERUBESCENS Stapf. Asteraceae.

From England. Plants presented by Sir Arthur W. Hill, Director, Royal Botanic Gardens, Kew, Surrey. Received March 14, 1936.

113972. SOLANUM TUBEROSUM L. Solanaceae. Potato.

From Uruguay. Tubers presented by the Instituto Fitotecnico y Semillero Nacional, La Estanzuela, Montevideo. Received March 12, 1936.

Chaquena.

113973. PYRUS COMMUNIS L. Malaceae. Pear.

From Portugal. Scions presented by Silveira da Cunha, Direcção Geral dos Serviços Agrícolas, Ministério de Agricultura, Lisbon, at the request of Parker W. Buhman, American consul general, Lisbon. Received March 23, 1936.

Pera Rocha, a red pear.

113974. HYPTIS SUAVEOLENS (L.) Poit. Menthaceae.

From Costa Rica. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received March 6, 1936.

Chan. (No. 3695?) From San José. A rigid annual of the mint family, which grows to a height of 2 or 3 feet, has a hairy stem, exceedingly variable leaves, and second flower heads. The seeds are used in Costa Rica to make an agreeable beverage. Native to tropical America.

113975 to 113980. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

From Guatemala. Seeds obtained through the American consul, Guatemala City, at the request of W. A. Archer, Bureau of Plant Industry. Received March 11, 1936.

From the Departamento Quiché.

113975. From Canton La Estancia, Jurisdicción Joyabaj.

113976. From Chiché.

113977. From Chichicastenango.

113978. From Canton Lencua, Jurisdicción Joyabaj.

113979. From Cunen.

113980. From Zacualpa.

113981 to 113983. PHLEUM PRATENSE L. Poaceae. Timothy.

From Sweden. Seeds presented by Algot Holmberg & Sons, Norrköping. Received March 10, 1936.

A collection of strains developed by Algot Holmberg & Sons.

113981. No. 1. A strain with moderately tall stems, very leafy, dark green.

113981 to 113983—Continued.

113982. No. 3. A strain with moderately tall stems, very leafy, medium green.

113983. *Ostgota*.

113984 and 113985. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

From Ceylon. Seeds presented by the economic botanist, Department of Agriculture, Colombo, through Robert L. Buell, American consul, Colombo. Received March 11, 1936.

113984. *Dumbara*. 113985. *Jaffna*.

113986 to 113988. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.

From Syria. Trees and scions purchased from Selim Challah, Damascus. Received March 12, 1936.

113986. *Ajami*. A sweet, firm-fleshed white apricot.

113987. *Baladi*. A red apricot, rich in flavor.

113988. *Hamwi*. A white, soft-fleshed apricot.

113989. GOSSYPIUM BARBADENSE L. Malvaceae. Sea-island cotton.

From Puerto Rico. Seeds presented by F. A. Lopez Dominguez, Director, Experiment Station, Rio Piedras. Received March 16, 1936.

113990. JUBAEA CHILENSIS (Molina) Baill. Phoenicaceae. Sirup palm.

From Chile. Seeds collected by Mrs. Ynes Mexia, collaborator, Bureau of Plant Industry. Received March 12, 1936.

For previous introduction see 113504.

113991 to 114027. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

From Costa Rica and Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received March 18, 1936.

Collected in February and March 1936, and, unless otherwise stated, the material was collected in Costa Rica.

113991. No. 3673. From San José. Volunteer plants.

113992. No. 3674. From San Pedro. Cultivated plants.

113993. No. 3700. From San Josecito de Alajuela. Volunteer plants.

113994. No. 3701. From San Pedro de Barba. Volunteer plants with narrow leaves and cerise-red flowers.

113995. No. 3702. From San Pedro de Barba. Volunteer plants with white flowers.

113996. No. 3703. From Barrio Jesús de Santa Barbara. Volunteer plants.

113997. No. 3705. *Colorado*. From Turrialba. Cultivated.

113998. No. 3706. *Chiricano*. From Turrialba. Cultivated.

113999. No. 3709. From Cachi. Cultivated.

Nos. 114000 to 114005 were from El Paraiso. Cultivated.

113991 to 114027—Continued.

114000. No. 3711.

114001. No. 3712. *Chiricano*.

114002. No. 3713.

114003. No. 3714.

114004. No. 3715. *Cacho Chivo*.

114005. No. 3716.

114006. No. 3718. From Ujarrás. A cultivated strain with large leaves, found in an old field.

114007. No. 3719. From Cachi. A volunteer plant with small leaves and pink flowers.

114008. No. 3721. From El Paraiso. Cultivated plants.

Nos. 114009 to 114014 were from Palmares, near El General. Cultivated tobacco.

114009. No. 3724. *Virginia*.

114010. No. 3725. *Largo*.

114011. No. 3726. *Criollo* (probably).

114012. No. 3727. *Kentucky negro*.

114013. No. 3728. *Largo*.

114014. No. 3729. *Criollo*.

114015. No. 3730. *Palmira*. Cultivated plants from Alajuela.

114016. No. 3731. *Kentucky*. Cultivated plants from Alajuela.

114017. No. 3732. From Turrialba. Cultivated tobacco.

114018. No. 3733. From Encarnación, Jalisco, Mexico.

114019. No. 3734. *Tabaco blanco*. From Turrialba. Cultivated plants.

114020. No. 3735. *Itzetepeque*. From Paso Ancho de San Sebastian. Cultivated tobacco.

Nos. 114021 and 114022. *Itzetepeque*. From Palmares, Province Alajuela.

114021. No. 3749.

114022. No. 3750. Selected seed, probably a pure strain.

114023. No. 3751. *Criollo*. From San Joaquin de Heredia. Cultivated plants with pale-pink flowers.

114024. No. 3696. *Copan*. From Escazu. Cultivated plants.

114025. No. 3697. From Santa Rosa. Volunteer plants with pale-pink flowers.

114026. No. 3698. A mixed sample from San Josecito de Alajuela.

114027. No. 3699. *Itzetepeque* (hybrid). Volunteer plants from Santa Rosa.

114028 and 114029.

From the Soviet Union. Seeds presented through N. I. Sharapov, Head, Department of New Cultures and Introduction, Institute of Plant Industry, Leningrad. Received March 12, 1936.

114028. PRUNUS JAPONICUS Thunb. Amygdalaceae. Chinese bush cherry.

114029. PRUNUS TOMENTOSA Thunb. Amygdalaceae. Manchou cherry.

For previous introduction see 92057.

114030 to 114035.

From Iraq. Seeds presented by M. S. Radi, Director of Agriculture, Baghdad. Received March 14, 1936.

114030. *ALLIUM CEPA* L. Liliaceae. Onion.
A round white onion.

114031. *ALLIUM PORRUM* L. Liliaceae. Leek.
Egyptian leek.

114032. *BRASSICA RAPA* L. Brassicaceae. Turnip.

114033. *LACTUCA SATIVA* L. Cichoriaceae. Garden lettuce.

114034. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

114035. *SOLANUM MELONGENA* L. Solanaceae. Eggplant.

114036 to 114055.

From Costa Rica and Honduras. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received March 10, 1936.

114036. *CUPRESSUS BENTHAMII* Endl. Pinaceae. Bentham cypress.

No. 3677. From San Pedro, Costa Rica, February 20, 1936. A cypress of elegant habit often up to 90 feet high, with regularly pinnate flattened branchlets. Native to southern Mexico and Central America at altitudes of 4,000 to 10,000 feet.

114037. *HYPTIS SUAVEOLENS* (L.) Poit. Menthaceae.

No. 3695. *Chan.* From the market at Alajuela, Costa Rica, February 22, 1936.

For previous introduction and description see 113974.

114038. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

No. 3671. From Santa Rosa de Copan, Honduras, February 1, 1936.

114039. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

No. 3672. From Veracruz, Departamento Copan, Honduras, February 1, 1936. Cultivated tobacco.

114040. *POLAKOWSKIA TACACO* Pittier. Cucurbitaceae.

No. 3690. *Tacaco.* From San José, Costa Rica, February 21, 1936. A perennial climber, related to the chayote, *Sesquium edule*, native to Costa Rica. The fleshy fruits, about 2 inches long, are cooked and eaten as a vegetable.

114041 to 114054. *PHASEOLUS* spp. Fabaceae.

A collection of cultivated beans from Costa Rica.

114041. *PHASEOLUS CALCARATUS* Roxb. Rice bean.

No. 3689. *Frijoles de arroz.* From the market at San José, February 21, 1936.

114042. *PHASEOLUS COCCINEUS* L. Scarlet runner bean.

No. 3676. Cuba. From San José, February 16, 1936.

114043 to 114054. *PHASEOLUS VULGARIS* L. Common bean.

114043. No. 3680. *Bayos.* From San Pedro, February 20, 1936.

114036 to 114055—Continued.

114044. No. 3694. *Bayos.* From Alajuela, February 22, 1936.

Nos. 114045 to 114047 were collected at San Pedro, February 20, 1936.

114045. No. 3681. *Blanco.*

114046. No. 3686. *Carnes.*

114047. No. 3687. *Chilenos.*

114048. No. 3688. *Chimbolos.* From the market at San José, February 21, 1936.

Nos. 114049 to 114054 were collected in San Pedro, February 20, 1936.

114049. No. 3678. *Guarías.*

114050. No. 3682. *Jamíaqueños.*

114051. No. 3679. *Morados.*

114052. No. 3683. *Múñeco.*

114053. No. 3685. *Pisques.*

114054. No. 3684. *Porotos.*

114055. *SORGHUM VULGARE* Pers. Poaceae. Sorghum.

No. 3675. *Millo.* From San José, Costa Rica, February 16, 1936. Grains popped like popcorn for candy; also used for poultry feed.

114056. *QUERCUS* sp. Fagaceae. Oak.

From France. Plants purchased from Leopold Level, Martel (Lot). Received March 18, 1936.

Truffle oak.

114057 to 114065.

From Costa Rica. Bulbs collected by W. A. Archer, Bureau of Plant Industry. Received March 17, 1936.

Nos. 114057 and 114058 were collected at San Rafael de Coronado, February 26, 1936.

114057. (Undetermined.)

No. 3744. *Nardo.*

114058. *HIPPEASTRUM* sp. Amaryllidaceae.

No. 3742. *Nardo.*

114059. (Undetermined.)

No. 3704. *Resurrección.* Collected at San Rafael de Coronado, February 23, 1936. A cultivated ornamental.

114060. *GLADIOLUS* sp. Iridaceae.

No. 3741. *Lluvia de oro.* From San José, March 2, 1936.

114061. *HIPPEASTRUM* sp. Amaryllidaceae.

No. 3743. *Nardo.* From San Rafael de Coronado, February 28, 1936. A variety with white flowers marked with pink.

114062. *HIPPEASTRUM* sp. Amaryllidaceae.

No. 3745. *Nardo.* From Cartago, February 21, 1936.

Nos. 114063 to 114065 were collected at San José, February 28, 1936.

114063. *ZEPHYRANTHES* sp. Amaryllidaceae.

No. 3738. *Lagrimas de María.* A strain with white flowers.

114057 to 114065—Continued.

114064. ZEPHYRANTHES sp. Amaryllidaceae.

No. 3739. *Lagrimas de Maria*. Flowers pink.

114065. ZEPHYRANTHES sp. Amaryllidaceae.

No. 3740. *Lagrimas de Maria*. Flowers pink; said to be native.

114066. RUBUS MACROCARPUS Benth. Rosaceae. Colombian blackberry.

From Colombia. Seeds presented by Alexander M. Allen, Ibaguè. Received March 16, 1936.

The Colombian berry or Mora.

For previous introduction see 112017.

114067 to 114073. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

From Colombia and Ecuador. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received March 19, 1936.

Nos. 114067 and 114068. *Ambalema*, were collected at Rozo, Palmira, Valle, Colombia.

114067. No. 68. 114068. No. 69.

114069. No. 70. *Pina*. Collected Janu- collected at Rozo, Palmira, Valle, Colombia.

Nos. 114070 to 114073 were collected in Ecuador.

114070. No. 71. *Shairi*. Collected February 24, 1936, at Ibarra, Imbabura. Petiolated tobacco.

114071. No. 72. From Quito.

114072. No. 73. "Tallo-Blanco-500." Argentina. From Quito.

114073. No. 74. *Tobacco común*. From San Pedro, Imbabura, February 23, 1936.

114074. PRUNUS SIBIRICA L. Amygdalaceae. Siberian apricot.

From Manchuria. Seeds purchased from L. Pittsin, Harbin. Received March 18, 1936.

A wild Siberian apricot collected on the western shore of Lake Delai Nor, Barga District.

114075 to 114080. ASTER spp. Astera- ceae.

From the Netherlands. Plants purchased from B. Ruys Ltd., Royal Moerheim Nurseries, Dedemsvaart. Received March 24, 1936.

114075. ASTER ACRIS L.

A showy slender-branched perennial aster up to 3 feet high, with large blue- flower heads. Native to southern Europe.

114076. ASTER.

Lady Henry Maddocks, a hybrid with pale-pink flowers.

114077. ASTER.

Ronald. A hybrid 12 inches high with bright lilac-pink flowers.

114078. ASTER AMELLUS L.

Rud Goethe. A form with lavender- blue flowers.

114075 to 114080—Continued.

114079. ASTER AMELLUS L.

Sonia. A late-blooming form with bright rose-pink flowers.

114080. ASTER NOVI-BELGI L.

Col. F. R. Durham. A form over 3 feet high, with dark-green feathery foliage and many double purple-blue flowers.

114081. TEPHROSIA TOXICARIA (Sw.) Pers. Fabaceae.

From Ecuador. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received March 19, 1936.

Collected near Guayaque (Carolina), Province of Imbabura, February 24, 1936.

114082 to 114088. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

From Costa Rica. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received March 24, 1936.

114082. No. 3710. Volunteer tobacco from Los Angeles.

114083. No. 3720. Volunteer tobacco from Los Angeles.

114084. No. 3753. *Itzetepeque*. From San José.

114085. No. 3759. *Itzetepeque*. From San Miguel de Naranjo.

114086. No. 3760. From San Miguel de Naranjo.

114087. No. 3762. *Chiricano*. From Gerardo.

114088. No. 3765. From Santiago de Purisael.

114089 and 114090.

From Africa. Seeds purchased from the Mount Elgon Nurseries, Kitale, Kenya Colony. Received March 30, 1936.

114089. GLORIOSA ROTHSCILDIANA O'Brien. Melanthiaceae.

Lutea. A branching gloriosa with bright-green, oblong-acuminate leaves and large yellow flowers with brown markings. Native to tropical Africa.

114090. PENTAS LANCEOLATA (Forsk.) Schum. Rubiaceae.

A soft-wooded shrub 2 feet high, native to tropical Africa. The ovate-lanceolate leaves are 3 to 6 inches long, and the brilliant carmine flowers are in terminal heads. The plant must have partial shade.

For previous introduction see 99615.

114091 to 114107. ASTER spp. Astera- ceae.

From the Netherlands. Plants purchased from B. Ruys Ltd., Royal Moerheim Nurseries, Dedemsvaart. Received March 25, 1936.

114091. ASTER ACRIS L.

For previous introduction and description see 114075.

114092 to 114095. ASTER.

114092. *Countess of Dudley*, a hybrid with clear pink flowers.

114093. *Marjorie*, a hybrid with bright rose-pink flowers.

114091 to 114107—Continued.

114094. *Nancy*, a hybrid with pale flesh-pink flowers.

114095. *Victor*, a hybrid 6 inches high with clear pale-lavender flowers.

114096 to 114106. *ASTER AMELLUS* L.

A collection of dwarf varieties about 24 inches high, which bloom in August and September.

114096. *Blaustern*, flowers very early, violet.

114097. *Elisabeth Liemann*, deep-pink flowers.

114098. *Friquet*, delicate pale-pink flowers.

114099. *Heinrich Seibert*, extra large pink flowers.

114100. *King George*, bluish-violet flowers.

114101. *Madame Besnard*, compact, large pink flowers.

114102. *Mignon*, dark-blue flowers with narrow petals.

114103. *Moerheim Gem*, very large, brilliant, deep dark-purple flowers.

114104. *Rosa von Ronsdorf*, pure-pink flowers.

114105. *Rotfeuer*, deep-red flowers.

114106. *Schönste von Eisenach*, deep-pink, very large, well-formed flowers; an excellent pink novelty.

114107. *ASTER NOVI-BELGII* L.

Charles Wilson, a lovely cerise pink of a quite new rare shade; a great improvement of the variety *Red Rover*.

114108. *AMMIOCHARIS COCCINEA* Pax. Amaryllidaceae.

From the Union of South Africa. Seeds presented by the McGregor Museum, Kimberley. Received March 21, 1936.

A bulbous amaryllid, with many strap-shaped leaves and a dense umbel, over 6 inches in diameter, of large bright-crimson flowers. Native to southern Africa.

114109. *GOSSYPIUM*. Malvaceae.

Cotton.

From Argentina. Seeds presented by the Estación Experimental Agrícola, Tucuman. Received November 27, 1935. Numbered in March 1936.

Chaco cotton.

114110. *GOSSYPIUM HIRSUTUM* L. Malvaceae. Upland cotton.

From Mexico. Seeds collected in Chiapas by J. H. Kempton, Bureau of Plant Industry. Received November 26, 1935. Numbered in March 1936.

Acala cotton.

114111. *SACCHARUM*. Poaceae.

Sugar cane.

From Egypt. Cuttings presented by A. H. Rosenfield, Sugar Technologist, Department of Agriculture, Giza. Received March 26, 1935. Numbered in March 1936.

E No. 12.

114112 to 114121. *VITIS VINIFERA* L. Vitaceae. European grape.

From the Soviet Union. Cuttings presented by A. Popov, head of Department of New Cultures and Introduction, Institute of Plant Industry, Leningrad. Received March 26, 1936.

114112. *Black Kishmish*.

114113. *Hassaine*.

114114. *Houssaine*.

114115. *Katia Kurgan*.

114116. *Nimrang*.

114117. *Saidi-Gulami*.

114118. *Sultana*.

114119. *Tcharas*.

114120. *Toif*.

114121. *Tshilaci*.

114122 to 114140.

From Costa Rica and Honduras. Seeds and bulbs collected by W. A. Archer, Bureau of Plant Industry. Received in March 1936.

114122 to 114136. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

Nos. 114122 to 114128 were collected in Costa Rica.

114122. No. 3717. From Crosi. Volunteer tobacco.

114123. No. 3722. From San Isidro del General.

114124. No. 3723. From San Isidro del General.

114125. No. 3754. From San Isidro de San Ramon.

114126. No. 3755. From San Isidro de San Ramon.

114127. No. 3757. *Goludo*. From San Miguel de Naranjo.

114128. No. 3761. *Cacho de Chivo*. From Gerardo.

Nos. 114129 to 114136 were collected in Honduras.

114129. No. 3766. From Trinidad de Copan.

114130. No. 3767. From Dolores de Copan.

114131. No. 3768. From Veracruz de Copan.

114132. No. 3769. From Florida de Copan.

114133. No. 3770. From Concepcion de Copan.

114134. No. 3771. *Sumatra Dehli prima*. From El Paraiso.

114135. No. 3772. *Sumatra Dehli segunda*. From El Paraiso.

114136. No. 3773. *Sumatra Java prima*. From El Paraiso.

114137. *HIPPEASTRUM* SP. Amaryllidaceae. No. 3764. Bulbs collected at San José, Costa Rica, March 8, 1936.

114138. *ABELMOSCHUS ESCULENTUS* (L.) Moench. Malvaceae. Okra.

No. 3736. *Cajé de Mocha*. From San José, Costa Rica, February 28, 1936. The green fruits are used as a vegetable; the seeds are dried and used as coffee.

114122 to 114140—Continued.

114139. *IPOMOEAE* sp. Convolvulaceae.

No. 3737. *Campanula*. From San José, Costa Rica, February 29, 1936. A native ornamental with large sky-blue flowers.

114140. *SENECIO* sp. Asteraceae.

No. 3747. Collected near El Paraiso, Costa Rica, February 27, 1936. An ornamental composite with dark red-orange flowers.

114141 and 114142. *GOSSYPIUM*. Malvaceae. Cotton.

From Haiti. Seeds collected by H. D. Barker, Bureau of Plant Industry, at the Agricultural Experiment Station, Port-au-Prince. Received March 27, 1936.

114141. Selection of Forbes-Barker cotton, 36-8-34-5.

114142. Selection of Forbes-Barker cotton, R-6-8-29.

114143 to 114149.

From Rumania. Seeds presented by Prof. M. Vladescu, Director, Botanic Garden of the University of Bucharest, Bucharest. Received March 20, 1936.

114143 to 114146. *DELPHINIUM* spp. Ranunculaceae. Larkspur.

114143. *DELPHINIUM CONSOLIDA* L. Field larkspur.

An erect hairy annual over a foot high, with blue or white flowers in loose panicles. Native to Europe.

For previous introduction see 104951.

114144. *DELPHINIUM LAXIFLORUM* DC.

A hardy herbaceous perennial about 3 feet high, with three- to seven-lobed leaves and blue flowers in lax racemes. Native to Siberia.

114145. *DELPHINIUM SULPHUREUM* Boiss. and Haussk.

A tuberous-rooted delphinium up to 2 feet high. The dark-green leaves have several narrow linear lobes, and the large light-yellow flowers are in long racemes. Native to Iran (Persia).

114146. *DELPHINIUM ILIENSE* Huth.

An erect perennial about 3 feet high, with much-divided leaves and many pale-blue flowers in long racemes. Native to Turkistan.

114147. *DIANTHUS GLACIALIS* Haenke. Sileneaceae.

A tufted perennial up to 4 inches high, similar to *Dianthus alpinus*. The small odorless red-purple flowers are borne singly or up to three in a cluster. Native to the mountains of southern Europe.

114148. *RUBUS CAESIUS* L. Rosaceae. Dewberry.

For previous introduction and description see 113859.

114149. *RUBUS ROSAEFOLIUS* J. E. Smith. Rosaceae. Roseleaf raspberry.

A raspberry native to southeastern Asia and evergreen in the Tropics. The hairy stems are 3 to 6 feet high, the pinnately compound leaves are made up of two to seven pairs of ovate sharply serrate leaflets, and the white flowers, 1 to 2 inches across, are in small clusters and are fol-

114143 to 114149—Continued.

lowed by erect, bright-red, thimble-shaped fruits nearly 2 inches long, edible but insipid.

For previous introduction see 99706.

114150 to 114188.

From the Netherlands. Seeds presented by the Director, Botanic Garden, Leyden. Received March 25, 1936.

114150 to 114159. *CUCURBITA* spp. Cucurbitaceae.

114150. *CUCURBITA FICIFOLIA* Bouche. Alcollota.

A melon, native to Ecuador, where it is cultivated extensively and used as food for man as well as for stock feed. The melons weigh 20 to 30 pounds each; when completely ripe the shell is very hard, the flesh white and the seeds black. There are two varieties—the white-shelled and the green and white striped.

For previous introduction see 76092.

114151 and 114152. *CUCURBITA MAXIMA* Duchesne. Squash.

114153 to 114159. *CUCURBITA PEPO* L. Pumpkin.

114153. The common type.

114154. Variety *Aurantiaca*.

114155. Variety *Citriformis*.

114156. Variety *Maliformis*.

114157. Variety *Ovifera*.

114158. Variety *Pyriformis*.

114159. Variety *Verrucosa*.

114160 to 114166. *DELPHINIUM* spp. Ranunculaceae. Larkspur.

114160. *DELPHINIUM ELATUM* L. Bee larkspur.

A European species 2 to 6 feet high, bearing blue flowers with dark-violet petals.

For previous introduction see 53143.

114161. *DELPHINIUM CONSOLIDA* L. Field larkspur.

For previous introduction and description see 114143.

114162. *DELPHINIUM GEYERI* Greene.

A perennial delphinium up to about 2 feet high, with rather large, deep-blue flowers in a compact raceme. Native to the high plains of Wyoming and Colorado.

114163. *DELPHINIUM MAACKIANUM* Regel.

An erect, perennial delphinium up to 3 feet high, with three- to five-parted leaves and many blue flowers in racemes. It is closely related to *Delphinium elatum*.

114164. *DELPHINIUM TATSIIENSE* Franch.

A larkspur from western China with slender stems and hairy leaves divided into three to five deep sections. The deep-blue flowers are in a large loose raceme.

For previous introduction see 104851.

114150 to 114188—Continued.

114165. DELPHINIUM TRISTE Fisch.

A perennial larkspur with three- to five-parted leaves and lax racemes of dark reddish-tan flowers. Native to Siberia.

For previous introduction see 104953.

114166. DELPHINIUM sp.

114167. PHASEOLUS COCCINEUS L. Fabaceae.
Scarlet runner bean.114168 and 114169. PISUM SATIVUM L. Fabaceae.
Pea.114170 to 114177. RHEUM spp. Polygonaceae.
Rhubarb.

114170. RHEUM AUSTRALE Don.

For previous introduction see 110582.

114171. RHEUM FRANZENBACHII Muenster.

A rapidly growing species, native to temperate Asia. It is a striking ornamental, suitable for borders and possibly useful for breeding purposes.

For previous introduction see 110625.

114172. RHEUM MACROPERUM Mart.

A plant with handsome foliage and striking clusters of flowers and seeds, valuable perhaps for borders or breeding purposes. Country of origin unknown.

For previous introduction see 110626.

114173. RHEUM MOORCROFTIANUM Royle.

A stout stemless plant with large, thick, orbicular leaves, all radical. Native to the western Himalayas.

For previous introduction see 31042.

114174. RHEUM OFFICIANALE Baill.

A stout perennial with a short branching stem and very large round-oval leaves 1 to 3 feet across. The flower stems, 3 to 10 feet high, bear the numerous greenish flowers in a large feathery panicle. This is the medicinal rhubarb found throughout western China.

For previous introduction see 110627.

114175. RHEUM RHAPONTICUM L.
Common rhubarb.

114176. RHEUM RIBES L.

A herbaceous perennial up to 5 feet high, with large cordate to reniform leaves and panicles of small blood-red, narrow-winged fruits. Native to the mountains of southwestern Asia.

114177. RUBUS CAESIUS L. Rosaceae.
Dewberry.

For previous introduction and description see 113859.

114178 to 114188. SOLANUM spp. Solanaceae.

114178. SOLANUM ARGENTEUM Dun.

A shrub about 6 feet high, with ovate-oblong leaves about 4 inches long and small white flowers. Native to Brazil.

114179. SOLANUM AVICULARE Forst. f.
Nightshade.

A bushy shrub 6 to 8 feet high, with lacinate leaves 10 inches long, small cymes of large dark-purple flowers, and

114150 to 114188—Continued.

yellowish fruits an inch in diameter, which are used for making marmalade.

For previous introduction see 110658.

114180. SOLANUM CAPSICASTRUM Link.
False Jerusalem-cherry.

For previous introduction see 110762.

114181 and 114182. SOLANUM DULCAMARA L.
Bitter nightshade.

For previous introduction see 110812.

114183 and 114184. SOLANUM MELONGENA L.
Eggplant.

For previous introduction see 114035.

114185 and 114186. SOLANUM NIGRUM L.
Bitter nightshade.

For previous introduction see 110590.

114187. + SOLANUM PROTEUS Winkl.

A graft hybrid (*Lycopersicon esculentum* × *Solanum nigrum*).

114188. SOLANUM TUBEROSUM L. Potato.

114189 and 114190. ZEPHYRANTHES spp.
Amaryllidaceae.

From Mexico. Bulbs collected at Tapachulo, Chiapas, by W. A. Archer, Bureau of Plant Industry. Received March 26, 1936.

114189. ZEPHYRANTHES sp.

No. 3774. Collected March 14, 1936. A species with white flowers.

114190. ZEPHYRANTHES ROSEA Lindl.
Pink zephyrilly.

No. 3775. Collected March 14, 1936. A tender autumn-blooming species, native to Cuba, with linear, bright-green leaves and rose-colored flowers an inch long on a peduncle 4 to 6 inches long.

For previous introduction see 112352.

114191. SACCHARUM SPONTANEUM L.
Poaceae.

From Japan. Cuttings presented by Dr. T. Miyake, Department of Agriculture, Government Research Institute, Taihoku, Formosa.

114192 to 114203. TRICYRTIS spp. Melanthiaceae.

From Japan. Plants purchased from K. Wada, Hakoneya Nurseries, Numazu-shi. Received March 31, 1936.

114192. TRICYRTIS FLAVA Maxim.

A dwarf tricyrtis with oblong-lanceolate leaves and large yellow campanulate flowers in racemes. Native to Japan.

114193. TRICYRTIS FORMOSANA Baker.

A herbaceous perennial with flexuous stems up to 10 inches high, sessile lanceolate leaves 4 to 5 inches long, and showy blended spotted, red- and blue-purple flowers in lax few-flowered corymbs. Native to Taiwan.

114194. TRICYRTIS HIRTA Hook.

Variety *Albida*. A form with pure-white flowers.

114195. TRICYRTIS LATIFOLIA Maxim.

A tricyrtis with zigzag stems up to 3 feet high, broadly oblong or ovate leaves, and a terminal corymb of whitish flowers with small purple spots. Native to Japan.

114192 to 114203—Continued.

114196. *TRICYRTIS MACRANTHA* Maxim.

A *tricyrtis* with large, pendent, campanulate, sulfur-yellow flowers. Native to Japan.

114197. *TRICYRTIS OHSUMIENSIS* Masamune.

A *tricyrtis* over a foot high with pubescent, oblong leaves up to 5 inches long, and large yellow axillary flowers. Closely allied to *Tricyrtis flava*. Native to Japan.

114198. *TRICYRTIS STOLONIFERA* Matsum.

A herbaceous perennial with a stoloniferous base and stems about 1 foot high, which are hairy when young and later become glabrous. The elliptic-lanceolate leaves 2 to 4 inches long, narrowed to a sheathing base, have dark blotches and sunken nerves, and the pale-purple flowers are indistinctly blotched with deeper purple. Native to Japan.

114199. *TRICYRTIS YATABEANA* Masamune.

A herbaceous perennial with leafy stems about a foot high, oblong-lanceolate leaves, and showy, yellow, bell-shaped flowers with dark purple spots. Native to Japan.

114200. *TRICYRTIS* sp.

114201. *TRICYRTIS FORMOSANA* × *HIRTA*.

Hekium, a hybrid with large panicles of bluish-pink flowers.

114202. *TRICYRTIS FORMOSANA* × *HIRTA*.

Toun, a hybrid similar in habit to *hirta*. The flowers, borne on a terminal open panicle, are variable in color; some thickly speckled and blotched with rich red purple on a ground of pale pink; others similarly marked with blue purple on a light-blue base.

114203. *TRICYRTIS* sp.

Received under the name "ohsimanense," for which a place of publication has not been found.

114204 to 114291.

From India. Seeds collected in the Spiti District, Punjab, by the Asiatic Expedition. Received March 2, 1936.

114204 to 114208. *AGROPYRON* spp. Poaceae. Grass.

114204. *AGROPYRON DENTATUM* Hook. f.

No. 7. From Wangtoo, Bashahr. A perennial grass allied to *Agropyron repens*. Native to Kashmir and western Tibet at altitudes of 9,000 to 14,000 feet.

114205. *AGROPYRON INTERMEDIUM* (Host) Beauv.

No. 15. From Kyibar, September 28, 1935.

For previous introduction see 111251.

114206. *AGROPYRON LONGEARISTATUM* Boiss.

No. 4. From Losar, September 22, 1935. A perennial grass with ascending stems up to 3 feet high. Native to Iran (Persia).

114207. *AGROPYRON LONGEARISTATUM* Boiss.

No. 34. From Losar, September 24, 1935.

114204 to 114291—Continued.

114208. *AGROPYRON SEMICOSTATUM* Nees.

No. 16. From Kyibar, September 27, 1935. A perennial fibrous rooted grass with erect stems and narrowly linear leaves; native to Asia from Afghanistan to Manchuria.

For previous introduction see 109808.

114209 and 114210. *AGROSTIS ALBA* L. Poaceae. Redtop.

114209. No. 14. From the Kaza Pin Valley, September 29, 1935.

114210. No. 14-A. From the Kaza Pin Valley, October 1, 1935.

114211. *ALLIUM* sp. Liliaceae.

No. 61. From Kyibar, September 28, 1935.

114212. *ARABIS TIBETICA* Hook. f. and Thoms. Brassicaceae.

No. 48. From Kioto, September 25, 1935. A perennial herb with numerous leafy stems about 6 inches high; obovate to lanceolate or spatulate leaves and numerous small white or pink flowers in racemes. Native to the Himalayas at altitudes of 9,000 to 16,000 feet.

114213. *ARNEBIA* sp. Boraginaceae.

No. 57. From Kyibar, September 27, 1935. A good fodder plant.

114214. *ARTEMISIA PARVIFLORA* Buch.-Ham. Asteraceae.

No. 52. From Kyuling, October 2, 1935. A perennial herb with ascending stems. Native to the temperate Himalayas at altitudes of 5,000 to 9,000 feet.

114215 to 114218. *ASTRAGALUS* spp. Fabaceae. Milkvetch.

114215. *ASTRAGALUS PEDUNCULARIS* Royle.

No. 40. From Chikkim, September 28, 1935, at 13,000 feet altitude. A tall herbaceous perennial, native to north-eastern India; common on dry slopes.

114216. *ASTRAGALUS* sp.

From Dahl, Kulu, at 10,000 feet altitude, September 1935.

114217. *ASTRAGALUS* sp.

No. 41. From Kyibar, September 27, 1935. An herb with woolly pods.

114218. *ASTRAGALUS* sp.

No. 42. From Pin Valley, October 2, 1935.

114219. *AVENA ASPERA* Munro. Poaceae. Grass.

No. 8. From Losar, Bashahr, September 21, 1935. A tall slender perennial grass. Native to Ceylon.

114220 to 114223. *BROMUS* spp. Poaceae. Grass.

114220. *BROMUS GRACILLIMUS* Bunge.

No. 26. From Losar, September 25, 1935. An annual grass with erect stems about 1 foot high. Native to southeastern Asia.

114221. *BROMUS MACROSTACHYS* Desf.

No. 19. From Kyuling, Pin Valley, October 2, 1935. An erect annual grass up to 2 feet high. The narrow compact panicle consists of a few large

114204 to 114291—Continued.

spikelets. It is native to the Mediterranean region and is sometimes cultivated as an ornamental.

For previous introduction see 107503.

114222. *BROMUS RAMOSUS* Huds.

No. 10. From Kyuling, Pin Valley, October 4, 1935, at 13,000 feet altitude. A perennial grass with erect stems, sometimes 6 feet high. Native to Europe.

114223. *BROMUS SQUARROSUS* L.

No. 9. From Wangtoo, Bashahr, October 8, 1935.

For previous introduction see 111164.

114224 to 114228. *CALAMAGROSTIS* spp. Poaceae.114224. *CALAMAGROSTIS COMPACTA* (Munro) Hack.

No. 25. From Losar, September 24, 1935. A densely tufted perennial alpine grass with stems 6 to 18 inches high. Native to the Himalayan region.

114225 to 114227. *CALAMAGROSTIS NEPALENSIS* Nees.

A perennial grass, native to the Himalayan region.

114225. No. 9. From Kyibar, September 27, 1935, at 13,400 feet altitude.

114226. No. 9-A. From Kioto, September 28, 1935.

114227. No. 9-B. From Pin Valley, October 8, 1935.

114228. *CALAMAGROSTIS* sp. No. 30-A.114229. *CARDUUS* sp. Asteraceae.

No. 51. From Kioto, September 25, 1935.

114230 to 114233. *CAREX* spp. Cyperaceae. Sedge.114230. *CAREX REMOTA* L.

No. 4. From Kara, Bashahr, October 5, 1935. A sedge with slender clustered stems sometimes over 2 feet high. Native to north temperate regions.

114231. *CAREX* sp.

No. 12. From Kyibar, September 27, 1935.

114232. *CAREX* sp.

No. 31. From Losar, September 23, 1935.

114233. *CAREX* sp.

No. 8. From Losar, October 5, 1935.

114234. *CHENOPODIUM FOLIOSUM* (Moench) Aschers. Chenopodiaceae.

No. 60. From Kyibar, September 2, 1935.

114235. *CHRISTOLEA CRASSIFOLIA* Cambess. Brassicaceae.

No. 49. From Kyibar, September 28, 1935. A bushy perennial about 1 foot high, with obovate-cuneate leaves deeply notched at the tip and loose racemes of very small yellow flowers. Native to northeastern India.

114204 to 114291—Continued.

114236. *CICER SONGARICUM* Steph. Fabaceae.

No. 37. From Losar, September 24, 1935. A widespreading annual with wiry stems and thick leaves about 4 inches long, the 10 to 12 pairs of ovate leaflets gradually growing smaller upwards. Native to central Asia.

114237. *CYNODON DACTYLON* (L.) Pers. Poaceae. Bermuda grass.

No. 1. From Wangtoo, Bashahr, October 8, 1935, at 9,000 feet altitude.

114238. *DACTYLIS GLOMERATA* L. Poaceae. Orchard grass.

No. 2. From Kara, Bashahr, October 5, 1935, at 12,500 feet altitude.

114239. *DANTHONIA CACHEMYRIANA* Jaub. and Spach. Poaceae. Grass.

No. 28. From Kaze, September 29, 1935. A perennial grass with stems up to 2 feet high, ascending from a stout woody stock, densely tufted or creeping below. Native to the temperate and alpine Himalayas and western Tibet at altitudes of 10,000 to 14,000 feet.

For previous introduction see 49629.

114240. *DIGITARIA SANGUINALIS* (L.) Scop. Poaceae.

No. 3. From Bashahr, September 22, 1935.

114241 to 114243. *ELYMUS* spp. Poaceae.114241. *ELYMUS DASYSTACHYS* Trin.

No. 3. From Losar, October 8, 1935.

For previous introduction see 113125.

114242. *ELYMUS SIBIRICUS* L.

No. 11. From Kyibar, September 27, 1935.

114243. *ELYMUS SIBIRICUS* L.

No. 13. From Losar, September 23, 1935.

114244. *EPHEDRA GERARDIANA* Wall. Gnetaeae.

No. 59. From Pin Valley, October 2, 1935.

For previous introduction and description see 113620.

114245. *FERULA* sp. Apiaceae.

No. 55. From Siling, Pin Valley, October 2, 1935.

114246 to 114253. *FESTUCA* spp. Poaceae. Fescue.114246 to 114249. *FESTUCA CUMMINII* Stapf.

A perennial grass with tufted stems up to about 1 foot high. Native to the Himalayan region at altitudes of about 11,000 feet.

114246. No. 2. From Losar, September 22, 1935.

114247. No. 2-A. From Pin Valley, September 2, 1935.

114248. No. 2-B. From Pin Valley, October 4, 1935.

114249. No. 29. From Pin Valley, October 4, 1935.

114204 to 114291—Continued.

114250. *FESTUCA LUCIDA* Stapf.
No. 6. From Losar, October 5, 1935. A perennial grass with tall rather stout stems. Native to the Himalayan region.
114251. *FESTUCA RUBRA LANUGINOSA* Mert. and Koch.
No. 7. From Losar, September 24, 1935.
114252. *FESTUCA* sp.
From Kulu, August 10, 1935, at 10,000 feet altitude.
114253. *FESTUCA* sp.
From Kulu, August 28, 1935, at over 10,000 feet altitude.
114254. *HYSSOPUS OFFICINALIS* L. Mentha-
ceae. Hyssop.
No. 43. From Kyuling, October 2, 1935. An aromatic herbaceous perennial with blue flowers rich in nectar.
For previous introduction, see 32238.
114255. *JUNCUS* sp. Juncaceae.
No. 23. From Losar, September 24, 1935.
114256. *LACTUCA ORIENTALIS* Boiss. Cl-
choriaceae.
No. 50. From Pin Valley, October 1, 1935. A shrubby perennial about 1 foot high, with small heads of yellow flowers. Native to eastern Asia.
114257. *LEPIDIUM LATIFOLIUM* L. Brassi-
caceae.
No. 47. From Pin Valley, October 2, 1935.
- 114258 and 114259. *LINUM PERENNE* L. Lin-
aceae. Perennial flax.
114258. No. 56. From Kyibar, October 3, 1935.
114259. No. 56-A. From Kyibar, Sep-
tember 28, 1935.
114260. *ASTRAGALUS* sp. Fabaceae.
From Ryelang, Lahul.
114261. *MEDICAGO* sp. Fabaceae.
No. 38. From Kyuling, October 2, 1935.
114262. *MELICA CUPANI* Guss. Poaceae.
No. 17. From Kioto, September 25, 1935.
114263. *MENTHA LONGIFOLIA* (L.) Huds. Men-
thaceae.
No. 44. From Kyuling, October 2, 1935.
114264. *NEPETA DISCOLOR* Royle. Mentha-
ceae.
No. 45. From Kyibar, September 28, 1935. A procumbent herb with small broad-ovate leaves and spikes of many small white or pale-blue flowers. Native to the Himalayas at altitudes of 10,000 to 15,000 feet.
114265. *ORYZOPSIS AEQUIGLUMIS* Duthie. Po-
aceae.
No. 18. From Losar, September 2, 1935. A tall stout perennial grass, native to the temperate Himalayas.

114204 to 114291—Continued.

114266. *ORYZOPSIS LATERALIS* Stapf. Poa-
ceae. Grass.
No. 22. From Losar, September 21, 1935. A densely tufted perennial grass, native to the Himalayas at altitudes of 12,000 to 14,000 feet.
- 114267 to 114269. *PENNISETUM* spp. Poa-
ceae.
114267. *PENNISETUM FLACCIDUM* Griseb.
No. 20. From Kyuling, October 2, 1935.
114268. *PENNISETUM FLACCIDUM* Griseb.
No. 20-A. From Kyibar, September 28, 1935.
114269. *PENNISETUM ORIENTALE* L. Rich.
No. 17-A. From Kioto, September 25, 1935.
114270. *PHRAGMITES COMMUNIS* Trin.
No. 33. From Kyuling, October 3, 1935.
- 114271 to 114274. *POA* spp. Poaceae. Bluegrass.
114271. *POA PERSICA* Trin.
No. 35. From Losar, September 25, 1935.
114272. *POA PRATENSIS* L. Kentucky bluegrass.
No. 32. From Pin Valley, October 4, 1935.
114273. *POA STERILIS* Bieb.
No. 5. From Losar, September 23, 1935. A tufted perennial grass, native to the Caucasus region.
114274. *POA* sp.
No. 6. From Bashahr, September 22, 1935.
114275. *PODOPHYLLUM EMODI* Wall. Ber-
beridaceae. Himalayan mayapple.
From Emodi.
For previous introduction see 105902.
114276. *POLYGONUM* sp. Polygonaceae.
From Lahul, August 1935.
114277. *RUMEX* sp. Polygonaceae.
No. 62. From Kyuling, October 2, 1935.
114278. *SAUSSUREA JACEA* (Klotzsch) C. B. Clarke. Asteraceae.
No. 53. From Pin Valley, October 1, 1935. An erect leafy perennial up to 4 feet high, with ovate to oblong-obtuse leaves about 3 inches long and purple flower heads, solitary or in terminal corymbs. Native to the Himalayan region.
114279. *SCROPHULARIA LUCIDA* L. Scrophu-
lariaceae.
No. 58. From Kyibar, September 28, 1935. A herbaceous perennial up to 3 feet high, with pinnatisect leaves and few-flowered cymes of small dark-purple flowers. Native to southern Europe and Asia.
114280. *SISYMBRIUM* sp. Brassicaceae.
No. 46. From Kioto, September 25, 1935.
- 114281 to 114284. *STIPA* spp. Poaceae. Feathergrass.

114204 to 114291—Continued.

114281. *STIPA JACQUEMONTII* Jaub. and Spach.

No. 21. From Kyibar, September 28, 1935. A very slender, densely tufted perennial grass about 1 foot high; native to the Himalayan region.

114282 and 114283. *STIPA ORIENTALIS* Trin.

A densely tufted perennial grass with stems up to a foot high; native to Asia.

114282. No. 27—A. From Kyibar, September 27, 1935.

114283. No. 27—B. From Losar, September 23, 1935.

114284. *STIPA PENNATA* L.

No. 1. From Losar, September 21, 1935, at 13,395 feet altitude.

114285. *THEMEDA ANATHERA* (Nees) Hack. Poaceae. Grass.

No. 5. From Wangtoo, Basbahr, October 8, 1935. A tall perennial grass native to India.

114286 and 114287. *TRIGONELLA EMOIDI* Benth. Fabaceae.

A diffuse, much-branched, herbaceous annual, native to the Himalayas at altitudes of 4,000 to 10,000 feet.

114286. No. 39. From Kyuling, October 2, 1935.

114287. No. 39—A. From Kyibar, September 27, 1935.

114288 to 114290. *TRISETUM SPICATUM* (L.) Richter. Poaceae. Grass.

An erect tufted grass.

For previous introduction see 52889.

114288. No. 24. From Kyuling, October 3, 1935.

114289. No. 36. From Pin Valley, October 1, 1935.

114290. No. 30. From Kyibar, September 27, 1935.

114291. (Undetermined.)

No. 54. From Kioto, September 27, 1935.

114292 to 114294.

From Costa Rica. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received March 24, 1936.

114292. *ARACHIS HYPOGAEA* L. Fabaceae. Peanut.

No. 3748. From San Ramon.

114293. *TEPHROSIA* sp. Fabaceae.

No. 3746. From El Paraiso, February 27, 1936.

114294. *PASSIFLORA EDULIS* Sims. Passifloraceae. Purple granadilla.

No. 3763. *Granadillo morado*. From San José, March 7, 1936.

114295 to 114302.

From Chile. Seeds presented by Emanuel Elgueta, Estación Experimental de la Sociedad Nacional de Agricultura, Santiago. Received March 25, 1936.

114295 to 114302—Continued.

114295. *HORDEUM DISTICHON* L. Poaceae. Barley.

Plumarcher.

114296. *HORDEUM VULGARE* L. Poaceae. Barley.

Oruzat.

114297 to 114302. *TRITICUM AESTIVUM* L. Poaceae. Common wheat.

114297. *Florence*.

114298. *Oregon*.

114299. *Richelle*.

114300. *No. 1053*.

114301. *No. 1069*.

114302. *Australiano*.

114303. *PHASEOLUS VULGARIS* L. Fabaceae. Common bean.

From Costa Rica. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received March 30, 1936.

Turtle soup beans.

114304 to 114307.

From Honduras. Seeds presented by the research department, at Tela, of the United Fruit Co. Received March 9, 1936.

114304. *ASTEROGYNE* sp. Phoenicaceae.

114305. *ASTROCARYUM MEXICANUM* Liebm. Phoenicaceae.

A Mexican palm with a cylindrical spiny stem up to 6 feet high and large pinnate leaves with straight black spines on both sides.

114306. *LICUALA* sp. Phoenicaceae.

No. 381.

114307. *THRINAX* sp. Phoenicaceae.

Spineless fan palms of medium height, with terminal orbicular leaves.

114308. *CHLOROPHYTUM* sp. Liliaceae.

From Madagascar. Plant presented by Miss Barygia Rateaver, Fort Dauphin. Received September 18, 1935. Numbered in March 1936.

114309 and 114310.

From Canada. Seeds presented by Prof. John Davidson, Department of Botany, University of British Columbia, Vancouver. Received March 30, 1936.

114309. *DELPHINIUM MENZIESII* DC. Ranunculaceae.

A hardy perennial with simple, slender stems over a foot high, small three- to five-parted leaves, and blue flowers in conical racemes. Native to the northwestern United States and British Columbia.

114310. *RUBUS PARVIFLORUS* Nutt. Rosaceae. White flowering raspberry.

An upright shrub 6 to 8 feet high, with reniform three- to five-lobed leaves 4 to 8 inches across, dense corymbs of small white flowers one-fourth inch in diameter, and red fruits more than half an inch in diameter. Native to western North America.

For previous introduction see 92298.

114311. *MEDICAGO SATIVA* L. Fabaceae.

Alfalfa.

From Germany. Seeds secured by Charles J. Brand, through Albert Eisenhauer, Tauberbischofsheim, Baden. Received March 27, 1936.

Old German Franconian alfalfa.

114312 and 114313.

From South America. Seeds collected by Mrs. Ynes Mexia, collaborator, Bureau of Plant Industry. Received March 31, 1936.

114312 to 114313—Continued.

114312. *CINCHONA* sp. Rubiaceae.

No. 7804. From La Paz, Bolivia, December 7, 1935.

114313. *ERAGROSTIS PERUVIANA* (Jacq.) Trin. Poaceae. Grass.

No. 7774-A. From Peru, Distrito Arequipa, Provincia Islay, south of Mollendo, November 17, 1935. A spreading annual grass with decumbent stems to about 1 foot high. Native to Peru.

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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 127



Washington, D. C.

Issued March 1941

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, APRIL 1 TO JUNE 30, 1936 (NOS. 114314-116965)

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INTRODUCTORY STATEMENT

This inventory, No. 127, records the plant material (Nos. 114314-116965) received by the Division of Plant Exploration and Introduction during the period from April 1 to June 30, 1936.

More than 2,600 introductions mark this second quarter of 1936; a large percentage of these are the result of the activities of three agricultural explorers who were in the field at that time.

Walter Koelz was traveling in India from Ceylon north through the Bombay Presidency and the United Provinces to the Punjab and the North West Frontier Province, with the definite object of collecting material for the fruit- and vegetable-breeding projects of the Bureau. He visited many villages and small towns, collecting from native markets and local garden plots seeds of all available types of fruits and vegetables, with notes of their special characteristics and local uses.

In Mexico, W. A. Archer covered the territory from the southeastern State of Tabasco through Veracruz and northward to the State of Durango, collecting seeds of local strains of tobacco. At the same time Raymond Stadelman was carrying on a similar type of exploration in Peru and Ecuador, where he collected not only common tobacco but also closely related species of *Nicotiana* which have since proved of unusual interest to our plant breeders working for disease-resistant tobacco strains.

Through the courtesy of the Royal Botanic Gardens at Kew, England, 111 lots of cowpeas (*Vigna sinensis*, Nos. 115666 to 115776), representing native strains from Ceylon, Mauritius, and Africa, were received. These have proved of interest chiefly from the genetical standpoint. The African forms came originally from the Anglo-

Egyptian Sudan, Kenya Colony, Egypt, Rhodesia, Nigeria, and other parts of tropical Africa.

Two large shipments from central and southwestern China, presented by the Botanic Garden Division of the Sun Yat-Sen Tomb and Memorial Park Commission, Nanking (Nos. 114700-114823; 116115-116157), were recorded during this period. These represent seeds of 166 species, largely trees and shrubs, many of which are being introduced for the first time. In climatic requirements these range from subtropical to north temperate, coming as they do from widely differing regions, and for that reason will be tested in various parts of the South and the Southwest.

Rice breeders will benefit from the introduction of 121 lots of seeds (*Oryza sativa*, Nos. 116332-116452) presented by the Rice Research Station, Department of Agriculture, Yanco, New South Wales. These represent recent promising crosses made at that station.

The Department is indebted to the Union of Soviet Socialist Republics for several shipments of plant material, among which three deserve special mention. The Zhitomir Plant Breeding Station presented roots of 22 special types of hops (*Humulus lupulus*, Nos. 115107-115128); these are to be tested in the Northwestern States for disease-resistance and for comparison with commonly grown types. The Director of the Botanic Garden at Samara sent in seeds of 149 Russian varieties of vegetables, including beets, peppers, cucumbers, watermelons, tomatoes, beans, and peas (Nos. 115141-115289). These have been developed in regions of low winter temperatures, so will be particularly useful to our government plant breeders. The third shipment, presented by the Institute of Plant Industry at Leningrad (Nos. 115320-115416), consists of local selections of forage plants, including both leguminous plants and grasses, obtained originally from all parts of the Soviet Union.

The botanical determinations of seeds introduced have been made and the nomenclature determined by Paul Russell, who has had general supervision of this inventory.

B. Y. MORRISON,

Principal Horticulturist, in Charge.

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D. C., March 7, 1940.

INVENTORY¹

NOTE.—This inventory is a historical record of plant material introduced for Department and other specialists. It is not to be considered as a list of plant material for distribution.

114314 to 114316. NICOTIANA TABACUM L. Solanaceae.

Common tobacco.

From Nicaragua. Seeds presented by Cia Tabacalera de Nicaragua, Managua. Received April 17, 1936.

114314. Seeds from plants that were originally grown from imported Virginia seed.

114315. *Jalapa* variety.

114316. *Chilcagre*. A native strain.

114317 to 114320. MALUS SYLVESTRIS Mill. Malaceae. Apple.

From Denmark. Scions presented by Neils Esbjerg, Director, Statens forsogsstation Blangsted, Odense. Received April 10, 1936.

114317. *Ildrod Pigeon*.

114318. *Ingers*.

114319. *Marieable Era Njorthholm*.

114320. *Speiltsby Pigeon*.

114321 and 114322. NICOTIANA TABACUM L. Solanaceae.

Common tobacco.

From El Salvador. Seeds presented by C. S. Whitehead, Cigarrerfa Morazan, through William P. Cochran, Jr., American vice consul, San Salvador. Received April 9, 1936.

114321. Type *Ilopango*; from Ilopango.

114322. Type *Ilopango*; from Tonacatepeque.

114323 to 114325. ALLIUM spp. Liliaceae.

From Ceylon. Bulbs collected by Walter Koelz, Bureau of Plant Industry. Received April 6, 1936.

114323. ALLIUM CEPA L. Onion.

No. 93. From the Kandy market, February 25, 1936. A red onion up to 2½ inches in diameter. Said to have come from Bombay.

114324. ALLIUM ASCALONICUM L. Shallot.

No. 33. *Rata-lumu*. A small onion collected in the Colombo market, February 20, 1936.

114325. ALLIUM SATIVUM L. Garlic.

No. 15. *Sudu lunu; vella vengayam*. From the Colombo market, February 20, 1936; said to have been imported from India. Commonly used in native cookery.

114326 to 114331.

From Sweden. Seeds presented by the Director, Botanic Garden, Upsala. Received April 2, 1936.

114326. ALLIUM HYMENORRHIZUM Ledeb. Liliaceae.

A moisture-loving species with linear leaves and purplish-violet flowers. Native to the Soviet Union.

For previous introduction see 78982.

114327 to 114329. DELPHINIUM spp. Ranunculaceae. Larkspur.

¹ It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Plant Exploration and 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 seed samples or 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

114326 to 114331—Continued.

114327. *DELPHINIUM CHEILANTHUM* Fisch.

A hardy perennial delphinium with simple or branching stems up to 3 feet high and racemes of dark-blue or sometimes yellowish flowers. Native to Siberia.

114328. *DELPHINIUM OCHROLEUCUM* Stev.

A perennial delphinium about 2 feet high, with simple dense elongate racemes of yellow flowers. Native to the Caucasus region.

114329. *DELPHINIUM TRISTE* Fisch.

A perennial delphinium with simple or branching stems up to 2 feet high, three- to five-parted leaves, and lax racemes of large dark-purple flowers. Native to southern Siberia.

114330. *SOLANUM DULCAMARA* L. Solanaceae. Bitter nightshade.

For previous introduction see 114182.

114331. *SOLANUM NIGRUM* L. Solanaceae. Black nightshade.

114332 to 114337.

From Mexico. Bulbs and seeds collected by W. A. Archer, Bureau of Plant Industry. Received April 3, 1936.

114332. *HIPPEASTRUM* sp. Amaryllidaceae.

No. 3777. Collected March 18, 1936, at Huimanguillo, Tabasco. A bulbous plant with double, salmon-colored flowers.

114333 to 114337. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

114333. No. 3788. From Oluta, Veracruz.

114334. No. 3789. From San Juan Evangelista, Veracruz.

114335. No. 3781. From Ocuapan, near Huimanguillo, Tabasco.

114336. No. 3786. From Oluta, Veracruz.

114337. No. 3787. From Oluta, Veracruz.

114338 and 114339.

From Japan. Seeds presented by the Japan Seed & Plant Co., Tokyo. Received April 1, 1936.

114338. *ALLIUM CEPA* L. Liliaceae. Onion.

Marutane mammoth. A bunching onion which does not form a bulb but a pencil-like shaft like a leek. The flavor is mild, and the silver-white stem, about 2 feet long, remains tender a long time.

114339. *CUCUMIS SATIVUS* L. Cucurbitaceae. Cucumber.

Manchuko wonder. A new drought-resistant cucumber. The fruits are long, straight, and of dark-green color, measuring about 7 inches in length and over an inch in diameter. The flesh is snow white, very crisp, and has a delicious flavor.

114340 to 114343.

From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received April 3, 1936.

114340 to 114343—Continued.

114340. *ARACHIS HYPOGAEA* L. Fabaceae. Peanut.

No. 3776. From Villahermosa, Tabasco, March 17, 1936. Cultivated peanuts.

114341. *CARICA CAULIFLORA* Jacq. Papayaceae.

No. 3780. Collected near Huimanguillo, Tabasco, March 19, 1936. A wild papaya; fruits from 1½ to 2½ inches in diameter.

For previous introduction see 102878.

114342. *CARICA PAPAYA* L. Papayaceae. Papaya.

No. 3779. Collected near Huimanguillo, Tabasco, March 19, 1936. A cultivated papaya with fruits 8 by 12 inches; often larger.

114343. *PASSIFLORA LIGULARIS* Juss. Passifloraceae. Sweet granadilla.

No. 3784. *Jujo*. Collected at Cardenas, Tabasco, March 20, 1936.

114344 and 114345.

From China. Scions presented by R. C. Ching, Lushan Arboretum and Botanic Garden, Kuling, Kiangsing. Received April 7, 1936.

114344. *CASTANEA HENRYI* (Skan.) Rehd. and Wils. Fagaceae. Chestnut.

For previous introduction see 113662.

114345. *CASTANEA SEGUINII* Dode. Fagaceae.

Small wild chestnuts.

For previous introduction see 112753.

114346 to 114348. *VITIS VINIFERA* L. Vitaceae. European grape.

From Germany. Scions presented by Dr. H. Moog, Lehr- und Forschungsanstalt für Wein-Obst- und Gartenbau, Gartenbau, Geisenheim am Rhein. Received April 6, 1936.

114346. *Blauer Spätburgunder*.

114347. *Gewürz Traminer*.

114348. *Müller-Thurgau*.

114349. *BAMBUSA BEECHYANA* Munro. Poaceae. Bamboo.

From California. Culms presented by William Hertrich, Huntington Botanic Garden, San Marino. Received November 13, 1935. Numbered in April 1936.

This bamboo, identified by Dr. F. A. McClure, of Lingnan University, Canton, China, is stated by him to be the commonest and most valuable edible bamboo of southern China. It grows to a height of about 35 feet, but the culms are of greater diameter in the lower part, in proportion to the height, than are those of most other bamboos. Culms up to 3¼ inches in diameter near the base have been produced at San Marino.

114350 to 114369. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

From Ecuador. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received April 3, 1936.

114350. No. 75. *Esmeraldas*. From Guayas Province, March 12, 1936.

114350 to 114369—Continued.

Nos. 114351 to 114354 were collected at the Hacienda Angel Maria, Guayas Province, March 12, 1936.

114351. No. 76.

114352. No. 77.

114353. No. 78. *Esmeraldas negro*.

114354. No. 79.

Nos. 114355 to 114357 were collected at Puca, Guayas Province, March 12, 1936.

114355. No. 80.

114356. No. 81.

114357. No. 82.

114358. No. 83. Collected at Jordan, Guayas Province, March 13, 1936.

Nos. 114359 to 114361 were collected at Santa Lucia, Guayas Province, March 13, 1936.

114359. No. 84. *Barbasco*.

114360. No. 85. *Barbasco*.

114361. No. 86. *Criollo*.

Nos. 114362 to 114369 were collected in Guayas Province, March 12-14, 1936.

114362. No. 87. From Fortuna.

114363. No. 88. From Bermejo.

114364. No. 89. From La Isla.

114365. No. 90. *Esmeraldas blanco*. From San Juan.

114366. No. 91. *Brasil*. From San Vincente.

114367. No. 92. *Esmeraldas blanco*. From the Hacienda Antonieta.

114368. No. 93. *Ropon*. From San Antonia.

114369. No. 94. Collected along the Daule River.

114370 to 114372. NICOTIANA TABACUM L. Solanaceae.

Common tobacco.

From Costa Rica and Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received April 3, 1936.

114370. No. 3756. From San Ramon, Costa Rica, March 4, 1936. *Istepeque*. A variety with pink and white flowers.

114371. No. 3758. From San Ramon, Costa Rica. A bitter variety with white flowers, March 4, 1936.

114372. No. 3783. *Criollo*. From Cardenas, Tabasco, Mexico, March 20, 1936.

114373 to 114376. SACCHARUM. Poaceae. Sugarcane.

From India. Cuttings presented by the Sugarcane Expert, Sugarcane Experiment Station, Lawley Road via Coimbatore. Received April 10, 1936.

114373. Co. 421. 114375. Co. 356.

114374. Co. 313. 114376. Co. 270.

114377 and 114378.

From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received April 8, 1936.

114377 and 114378—Continued.

114377. ARACHIS HYPOGAEA L. Fabaceae. Peanut.

No. 3791. March 27, 1936. A cultivated peanut from San Andres, Tuxtla, Veracruz.

114378. CUCUMIS MELO L. Cucurbitaceae. Muskmelon.

No. 3785. March 24, 1936. A cultivated muskmelon from Minatitlán, Veracruz.

114379 to 114381. ARACHIS HYPOGAEA L. Fabaceae. Peanut.

From Morocco. Seeds presented by the Station Centrale de Recherches Agronomique, Rabat; through W. A. Carver, Agricultural Experiment Station, Gainesville, Fla. Received April 6, 1936.

114379. From China.

114380. From Bombay.

114381. From Sakamia.

114382 to 114390.

From Rumania. Seeds presented by the Director, Botanic Garden, Cluj. Received April 4, 1936.

114382 to 114387. DELPHINIUM spp. Ranunculaceae. Larkspur.

114382. DELPHINIUM CAUCASICUM C. A. Mey.

A perennial delphinium with stems about a foot high, five-parted leaves, and blue flowers in few-flowered sub-terminal clusters. Native to the Caucasus region.

114383. DELPHINIUM CORYMBOSUM Regel.

A hardy bushy perennial up to 18 inches high, with the upper leaves palmate, three- to five-lobed, and clusters of about six pale-violet flowers. Native to Turkistan.

114384. DELPHINIUM ELATUM L. Bee larkspur.

A European species 2 to 6 feet high, bearing blue flowers with dark-violet petals.

For previous introduction see 114160.

114385. DELPHINIUM SPECIOSUM Bieb.

A hardy handsome perennial delphinium, with simple stems up to 2 feet high and many showy dark-blue flowers in elongated panicles. Native to the Caucasus region.

114386. DELPHINIUM SPUREUM Boiss. and Haussk.

114387. DELPHINIUM TATSIIENENSE Franch.

A larkspur from western China, with slender stems and hairy leaves divided into three to five sections. The deep-blue flowers are in a large loose raceme.

For previous introduction see 114164.

114388. HYACINTHUS LEUCOPHAEUS (C. Koch) Stev. Liliaceae.

A hyacinth about a foot high, usually with 2 linear dark-green fleshy leaves and many small crowded bell-shaped blue or whitish flowers in a raceme. Native to the southern part of the Soviet Union.

114382 to 114390—Continued.

114389. *LALLEMANTIA IBERICA* (Bieb.)
Fisch. and Mey. *Menthaeaceae*.

114390. *TULIPA HUNGARICA* Borb. *Lilia-
ceae*.

A tulip from southern Europe and the Transcaucasus region, with a slender stem up to 18 inches high, three to four broad leaves, and a bright-yellow or greenish-yellow bell shaped flower. Related to *Tulipa vilhetiana*.

114391 to 114398. *NICOTIANA TABACUM* L. *Solanaceae*.

Common tobacco.

From Ecuador. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received April 15, 1936.

Nos. 114391 to 114397 were collected at San Mateo, Province of Esmeraldas, March 23, 1936.

114391. No. 95. 114395. No. 99.

114392. No. 96. 114396. No. 100.

114393. No. 97. 114397. No. 101.

114394. No. 98.

114398. No. 102. From Esmeraldas, Province of Esmeraldas, March 23, 1936.

114399 to 114406. *NICOTIANA TABACUM* L. *Solanaceae*.

Common tobacco.

From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received April 17, 1936.

114399. No. 3782. Verde. From Ocuapan, near Huimanguillo, Tabasco, March 16, 1936. Cultivated tobacco.

Nos. 114400 to 114403 were collected at San Andres Tuxtla, Veracruz, March 28 and 29, 1936.

114400. No. 3792. *Tabasqueño prieto*, an impure strain.

114401. No. 3793. *Tabasqueño prieto*, a pure strain.

114402. No. 3794. *Tabasqueño colorado*.

114403. No. 3795. *Tabasqueño colorado*.

114404. No. 3799. From Tesechoacan, Veracruz, April 1, 1936. Mixed sample, probably *Blanco*, *Colorado*, and *Habanero*.

114405. No. 3800. From Tesechoacan, Veracruz, April 1, 1936. A mixed sample, probably *Blanco* and *Colorado*.

114406. No. 3802. From Curazao, Veracruz, April 1, 1936.

114407 to 114412. *CITRUS* spp. *Ruta-
ceae*.

From Spain. Budwood presented by Manuel Herrero, Estación Naranjera de Levante, Burjasot, Valencia. Received April 17, 1936.

114407 to 114411. *CITRUS SINENSIS* (L.)
Osbeck. **Orange.**

114407. *Cadenera fina*.

114408. *Berna*, a typical Spanish variety.

114409. *Torregrosa*, a very acid fruit.

114410. *Sangre doble fina*.

114407 to 114412—Continued.

114411. *Washington-Sangre*, a selection made at the station.

114412. *CITRUS NOBILIS DELICIOSA* (Ten.)
Swingle. **Mandarin orange.**

Mandarina comun.

114413 to 114415.

From England. Plants presented by Sir Arthur W. Hill, Director, Royal Botanic Gardens, Kew. Received April 13, 1936.

114413. *THAMNOCALAMUS FALCONERI* Hook.
f. *Poaceae*. **Bamboo.**

A bamboo with a cylindrical culm, which, when young, has 8 to 12 branches at each node; these branches vary in length, are exceedingly slender, often purplish in color, and have four to seven leaves gathered near the tips. The leaves are lanceolate, $1\frac{1}{2}$ to 4 inches long by three-sixteenths to about three-eighths of an inch wide. The slenderness of the branches gives this bamboo a distinctive beauty.

For previous introduction see 92507.

114414. *ARUNDINARIA RACEMOSA* Munro.
Poaceae. **Bamboo.**

An erect bamboo up to 15 feet high, with linear-lanceolate leaves 4 to 7 inches long. Native to the Himalayan region at altitudes of 6,000 to 12,000 feet.

114415. *THAMNOCALAMUS SPATHIFLORUS*
(Trin.) Munro. **Bamboo.**

A rare bamboo, said to grow in clumps, with slender culms up to 35 feet high and with branches tufted at the nodes; the narrow leaves, up to 5 inches long, are gathered two to four at the ends of the branchlets.

114416 to 114459.

From Ceylon. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received April 4, 1936.

114416. *ABELMOSCHUS ESCULENTUS* (L.)
Moench. *Malvaceae*. **Okra.**

No. 45. *Bandakka*. From the market at Kandy, February 23, 1936.

114417. *AMARANTHUS GANGETICUS* L. *Amaranthaceae*. **Ganges amaranth.**

No. 65. *Loka-tampala*. From the market at Kandy, February 23, 1936. Leaves said to be eaten as greens.

114418. *ANETHUM GRAVEOLENS* L. *Apiaceae*. **Dill.**

No. 44. *Sadukufa*. From the market at Colombo, February 21, 1936.

114419. *ANNONA MURICATA* L. *Annonaceae*. **Soursop.**

No. 8. *Altha*. From the Colombo market, February 20, 1936. The green reniform bristly fruit weighed 4 pounds. The colorless juice suggests the flavor of pineapple and mint.

114420. *ARACHIS HYPOGAEA* L. *Fabaceae*. **Peanut.**

No. 20. *Rata-Kaju*, *Nela-Kadala*. From the market at Colombo, February 20, 1936.

114421. *AEGLE MARMELOS* (L.) Correa.
Rutaceae. **Bel.**

No. 23. *Baeli*. From the market at Colombo, February 20, 1936. A hard-

114416 to 114459—Continued.

shelled, yellow-green, globular fruit 4 inches in diameter; used medicinally.

114422. *BENINCASA HISPIDA* (Thunb.) Cogn. Cucurbitaceae. Waxgourd.

No. 74. *Alupubul, ash-pumpkin*. From the market at Kandy, February 23, 1936. A beautiful green fruit with an ashy bloom, weight up to 15 pounds.

For previous introduction see 110896.

114423. *BRASSICA JUNCEA* (L.) Coss. Brassicaceae. Chinese mustard.

No. 28. *Abut, Kadu*. From the market at Colombo, February 20, 1936. Seeds used as a condiment.

114424. *CAPSICUM FRUTESCENS* L. Solanaceae. Bush redpepper.

No. 62. *Miris*. From the market at Kandy, February 23, 1936.

114425. *CARUM COPTICUM* (L.) Benth. and Hook. Apiaceae.

No. 43. *Asumodigan*. From the market at Colombo, February 21, 1936. Used in medicine.

114426. *CICER ARIETINUM* L. Fabaceae. Chickpea.

No. 18. *Konda, Kasdala*. From the market at Colombo, February 20, 1936. A winter crop in India in dry season. The pods are eaten raw and the ripe fruit is roasted or boiled.

114427. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. Watermelon.

No. 64. *Peni-puhul*. From the market at Kandy, February 23, 1936.

114428 to 114437. *CITRUS* spp. Rutaceae.

114428. *CITRUS AURANTIFOLIA* (Christm.) Swingle. Lime.

No. 11. *Dehi*. From the market at Colombo, February 20, 1936. Lemon-shaped, yellow fruits up to 3 inches long, pleasantly acid, very juicy, of superior quality.

114429. *CITRUS AURANTIFOLIA* (Christm.) Swingle. Lime.

No. 41. *Dehi*. From the market at Colombo, February 20, 1936. Yellow fruits, 1¾ inches long; very pleasantly acid.

114430. *CITRUS AURANTIUM* L. Seville orange.

No. 80. *Dodang*. From the market at Kandy, February 23, 1936. A subacid fruit of fair quality with green rind; rare.

114431. *CITRUS AURANTIUM* L. Seville orange.

No. 79. *Ambuldusan, Pulidodan*. From the market at Kandy, February 23, 1936. A fruit 2½ inches in diameter, with thick green bitter skin and acid juice, used in chutneys and marmalade.

114432. *CITRUS GRANDIS* (L.) Osbeck. Grapefruit.

No. 81. *Jambulato*. From the market at Kandy, February 23, 1936. A yellow fruit, 4½ inches in diameter, with rather bitter, subacid juice and thick peel.

114416 to 114459—Continued.

114433. *CITRUS LIMONIA* Osbeck. Lemon.

No. 78. *Natran*. From the market at Kandy, February 23, 1936. Fruits yellow, elongate, 4 inches long, pleasantly acid.

114434 to 114437. *CITRUS NOBILIS* Lour. King orange.

114434. No. 9. *Jambu-naran*. From the market at Colombo, February 20, 1936. A golden yellow fruit 3 inches in diameter, with clinging peel and rough-skinned divisions and pleasant subacid juice.

114435. No. 76. *Hinarang*. From the market at Kandy, February 23, 1936. A flattened orange about 1½ inches across, with rather acid juice and fragrant peel.

114436. No. 10. *Nas-naran*. From the market at Colombo, February 20, 1936. A small fruit with highly aromatic peel, very acid juice, and about 30 percent by volume of seeds.

114437. No. 77. *Nas-naran*. From the market at Kandy, February 23, 1936. A small, very acid orange, much like No. 10 (P. I. 114436).

114438. *CUCUMIS MELO* L. Cucurbitaceae. Muskmelon.

No. 53. *Pitti kekri*. From the market at Kandy, February 23, 1936. Rare.

114439. *CUCUMIS SATIVUS* L. Cucurbitaceae. Cucumber.

No. 60. *Pepinga*. From the market at Kandy, February 23, 1936. Fruits up to 18 inches long. Said to be eaten both raw and cooked; usually sold ripe.

114440. *CUMINUM CYMINUM* L. Apiaceae. Cumin.

No. 21. *Suduru, Siragum*. From the market at Colombo, February 20, 1936.

114441. *CYPHOMANDRA BETACEA* (Cav.) Sendt. Solanaceae. Tree-tomato.

No. 2. *Takkalk*. From the market at Colombo, February 20, 1936. Fruit egg-shaped, thick-skinned, and yellow.

For previous introduction see 99778.

114442. *DIOSPYROS DISCOLOR* Willd. Diospyraceae. Mabelo.

No. 73. *Velvet apple*. From the market at Kandy, February 23, 1936. Fruit velvety, orange pink, very attractive in appearance; flavor insipid.

114443. *DOLICHOS BIFLORUS* L. Fabaceae. Twinflower dolichos.

No. 19. *Kollu*. From the market at Colombo, February 20, 1936.

For previous introduction see 101580.

114444 and 114445. *DOLICHOS LABELAB* L. Fabaceae. Hyacinth-bean.

From the market at Kandy, February 23 and 24, 1936.

114444. No. 82. *Awara*.

114445. No. 48. *Nila awara*.

114446. *FERONIA LIMONIA* (L.) Swingle. Rutaceae. Wood-apple.

No. 12. *Dumbul*. From the market at Colombo, February 20, 1936. Fruit size

114416 to 114459—Continued.

of a baseball, ashy outside, with brownish, mealy, pleasantly acid flesh. Said to be used in medicine and for preserves.

For previous introduction see 95594.

114447. *GUILANDINA BONDUC* L. *Caesalpinaceae*.

No. 25. *Kumbura, Kallichikota*. From the market at Colombo, February 20, 1936. Used medicinally.

For previous introduction see 42521.

114448. *MOMORDICA CHARANTIA* L. *Cucurbitaceae*. **Balsam-pear.**

No. 56. *Karawila*. From the market at Kandy, February 23, 1936. Green fruits 8 inches long. The flesh is bitter, but is eaten cooked.

For previous introduction see 110186.

114449. *MORINGA OLEIFERA* Lam. *Moringaceae*. **Horseradish-tree.**

No. 59. *Murunga*. From the market at Kandy, February 23, 1936. Best used as a condiment; leaves said to be excellent fried; fruit used as a vegetable.

For previous introduction see 52293.

114450. *PASSIFLORA QUALRANGULARIS* L. *Passifloraceae*. **Giant granadilla.**

No. 42. *Rata-puhul*. From the market at Colombo, February 21, 1936. A green subglobose fruit, 4 inches long, filled with purplish, sweet-acid pulp. Used as a vegetable, also made into jam.

For previous introduction see 108313.

114451. *PHASEOLUS AUREUS* Roxb. *Fabaceae*. **Mung bean.**

No. 17. *Muneta, Pias-pias*. From the market at Colombo, February 20, 1936. Used as food, also as forage.

114452. *PHASEOLUS VULGARIS* L. *Fabaceae*. **Common bean.**

No. 46. *Boncietta, Meribonci*. From the market at Kandy, February 23, 1936. Used as string beans, also eaten as dry beans.

114453. *PHYLLANTHUS EMBLICA* L. *Euphorbiaceae*. **Nelli.**

No. 31. *Kyu-ru*. From the market at Colombo, February 20, 1936. A very acid fruit; said to be used in medicine, for tanning, preserves, etc.

For previous introduction see 99749.

114454. *PISUM SATIVUM* L. *Fabaceae*. **Pea.**

No. 30. *Bola, Kadala*. From the market at Colombo, February 20, 1936.

114455. *SPONDIAS CYTHEREA* Sonner. *Anacardiaceae*. **Vi-apple.**

No. 14. *Ambarella, Hogplum*. From the market at Colombo, February 20, 1936. Acid, yellow fruits 3 inches long; used for preserves and chutneys.

For previous introduction see 35884.

114456. *TERMINALIA CHEBULA* Retz. *Combretaceae*.

No. 24. *Aralu, Kaduka*. From the market at Colombo, February 20, 1936. A medicinal plant.

114457. *TRIGONELLA FOENUM-GRÆCUM* L. *Fabaceae*. **Fenugreek.**

114416 to 114459—Continued.

No. 27. *Uluarst, Ulwahl*. From the market at Colombo, February 29, 1936. Used as a condiment.

For previous introduction see 85398.

114458. *VIGNA SINENSIS* (Torner) Savi. *Fabaceae*. **Cowpea.**

No. 16. *Mekaral*. From the market at Colombo, February 20, 1936. Used as green beans; also the dry seeds are cooked and eaten as food.

114459. *ZEA MAYS* L. *Poaceae*. **Corn.**

No. 66. *Iringu*. From the market at Kandy, February 18, 1936.

114460. *IRIS* sp. *Iridaceae*.

From Germany. Plants purchased from Karl Foerster, Bornim-Potsdam-Sanssouci. Received April 18, 1936.

Variety *Patula Kola*.

114461. *SOLANUM TUBEROSUM* L. *Solanaceae*. **Potato.**

From Germany. Tubers imported by the Bailer Manufacturing Co., Atchison, Kans. Received April 20, 1936.

Variety *Parnissia*.

114462. *IRIS* sp. *Iridaceae*.

From China. Seeds collected by Dr. J. F. Rock, Yunnanfu, Yunnan Province. Received April 10, 1936.

Collected in alpine meadows west of the Yangtze on Mount Labako, northwest of Likang, at 10,000 feet altitude.

114463. *DELPHINIUM PRZEWALSKII* Huth. *Ranunculaceae*.

From Austria. Seeds presented by the Director, Botanic Gardens, Graz. Received April 17, 1936.

A Mongolian larkspur about 8 feet high, with three- to five-parted leaves, the divisions deeply lacinate, and sky-blue flowers that appear from July to September. Closely related to *Delphinium henryi*, which, however, blooms in March.

For previous introduction see 105179.

114464 to 114476.

From Sweden. Seeds presented by the Director, Botanic Garden, Stockholm. Received April 4, 1936.

114464. *BETA PALELLARIS* Moq. *Chenopodiaceae*.

For previous introduction see 112522.

114465. *LACTUCA AUGUSTANA* All. *Cichoriaceae*. **Lettuce.**

An annual lettuce allied to *Lactuca scariola*. Native to Europe.

114466. *LACTUCA VIROSA* L. *Cichoriaceae*. **Lettuce.**

A biennial with a long fusiform root and a tall leafy stem often branched at the base. Native to rocky places in central and southern Europe.

For previous introduction see 91532.

114467 to 114471. *RHEUM* spp. *Polygonaceae*. **Rhubarb.**

114464 to 114476—Continued.

114467. RHEUM FRANZENBACHII Muentzer.

A rapidly growing species, native to temperate Asia. It is a striking ornamental, suitable for borders and possibly useful for breeding purposes.

For previous introduction see 114171.

114468. RHEUM PALMATUM TANGUTICUM Maxim.

A tall perennial, up to 6 feet high, with large rounded cordate leaves. Native to northeastern Asia.

For previous introduction see 110759.

114469. RHEUM PUMILUM Maxim.

A wild rhubarb with a leafy stem about a foot high and somewhat fleshy leaves. It is related to *Rheum delavayi*. Native to northwestern China.

114470. RHEUM RHAPONTICUM L.
Common rhubarb.

114471. RHEUM WITTRICKII Lundstroem.

114472 to 114476. SOLANUM spp. Solanaceae.

114472. SOLANUM GILO Raddi.

For previous introduction see 93095.

114473. SOLANUM HETERODOXUM Dun.

For previous introduction see 110814.

114474. SOLANUM MACROCARPON L.
Nightshade.

A low shrub native to Peru, with ovate-sinuate leaves 8 inches long, small blue-purple flowers in cymes 2 inches across, and globose yellow fruits the size of an apple.

For previous introduction see 91549.

114475. SOLANUM sp.

An annual received under the name "Roberti-Eliae," for which a place of publication has not been found.

114476. SOLANUM SISYMBRIFOLIUM Lam.

For previous introduction see 110815.

114477 to 114493.

From England. Seeds presented by Sir Arthur W. Hill, Director, Royal Botanic Gardens, Kew. Received April 8, 1936.

114477. APIUM GRAVEOLENS L. Apiaceae.
Celery.114478. BETA TRIGYNA Waldst. and Kit.
Chenopodiaceae.

For previous introduction see 112561.

114479. BETA VULGARIS L. Chenopodiaceae.
Common beet.

Variety *Maritima*.

114480. BETA VULGARIS L. Chenopodiaceae.
Common beet.

Variety *Saccharifera*.

114481 to 114486. DELPHINIUM spp. Ranunculaceae.

114481. DELPHINIUM CAUCASICUM C. A. Mey.

For previous introduction and description see 114382.

114482. DELPHINIUM DECORUM Fisch. and Mey.

For previous introduction see 104890.

114477 to 114493—Continued.

114483. DELPHINIUM DUHMBERGII Huth.

For previous introduction see 104847.

114484. DELPHINIUM DYCTIOCARPUM Steud.

For previous introduction see 104892.

114485. DELPHINIUM GAYANUM Wilmott.

For previous introduction see 104850.

114486. DELPHINIUM TATSJENENSE Franch.

For previous introduction and description see 114387.

114487 to 114489. LACTUCA spp. Cichoriaceae.
Lettuce.

114487. LACTUCA BOURGAEI (Boiss.) Irish and Taylor.

A thick-stemmed bristly leaved herbaceous perennial often 6 feet high, with small lilac-colored flower heads. Native to the Mediterranean region.

114488. LACTUCA PERENNIS L.

A perennial lettuce about 2 feet high with pale-blue flower heads. Native to Europe.

114489. LACTUCA VIROSA L.

A biennial with a long fusiform root and a tall leafy stem often branched at the base. Native to rocky places in central and southern Europe.

For previous introduction see 114466.

114490 to 114492. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

114490. Variety *Cerasiforme*.114491. Variety *Pyriforme*.114492. Variety *Racemigerum*.114493. PHASEOLUS COCCINEUS L. Fabaceae.
Scarlet runner bean.

114494. MEDICAGO FALCATA × SATIVA. Fabaceae.

From New Zealand. Seeds presented by W. C. Robinson, Director-General, Department of Agriculture, Wellington. Received April 15, 1936.

Tivacata. A hybrid alfalfa.

114495. RHUS VIMINALIS Ait. Anacardiaceae.
Sumac.

From the Union of South Africa. Seeds presented by the McGregor Museum, Kimberley. Received April 9, 1936.

Karree boom. An evergreen tree up to 30 feet high, native to South Africa in semi-arid regions at over 4,000 feet altitude. Sheep and goats browse on the foliage.

For previous introduction see 95067.

114496 and 114497.

From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received April 17, 1936.

114496. TEPHROSIA sp. Fabaceae.

No. 3803. From Azueta, Veracruz, April 1, 1936.

114497. DATURA STRAMONIUM L. Solanaceae.

No. 3778. From Huimanguillo, Tabasco, March 18, 1936. A form with purple double flowers.

114498 to 114524.

From Sweden. Seeds presented by Dr. C. Skottsberg, Director, Botanic Garden, Göteborg. Received April 11, 1936.

114498. *CROCUS ETRUSCUS* Parl. Iridaceae.

114499. *CROCUS BIFLORUS PESTALOZZAE* (Boiss.) Maw. Iridaceae.

A variety with small whitish flowers.

114500 to 114507. *DELPHINIUM* spp. Ranunculaceae. Larkspur.

114500. *DELPHINIUM BULLEYANUM* Forst.

An alpine larkspur 2 to 4 feet high, native to Yunnan, China, between 11,000 and 12,000 feet altitude. The long-stemmed leaves are palmately divided and incised serrate, and the deep rich-blue flowers are in a paniculate raceme.

For previous introduction see 104939.

114501. *DELPHINIUM NUTTALLII* Gray.

114502. *DELPHINIUM GEYERI* Greene.

A perennial delphinium up to about 2 feet high, with rather large, deep-blue flowers in a compact raceme. Native to the high plains of Wyoming and Colorado.

For previous introduction see 114162.

114503. *DELPHINIUM MAACKIANUM* Regel.

An erect perennial delphinium up to 3 feet high, with three- to five-parted leaves and many blue flowers in racemes. It is closely related to *Delphinium elatum*.

For previous introduction see 114163.

114504. *DELPHINIUM PUNICEUM* Pall.

A perennial delphinium with erect branching stems over 2 feet high and deep-violet flowers in dense elongated racemes. Native to the Soviet Union.

114505. *DELPHINIUM PYLZOWI* Maxim.

A larkspur, native to China, with a leafy stem, five-parted leaves, and attractive flowers with violet sepals and blackish petals.

For previous introduction see 81886.

114506. *DELPHINIUM TATSIENENSIS* Franch.

For previous introduction and description see 114486.

114507. *DELPHINIUM YUNNANENSIS* Franch.

A perennial alpine with a simple or branched stem and pale-green, finely pubescent leaves that are divided at the middle into five obovate incised segments. The calyx is intensely blue while the petals are bluish violet, the entire flower being four-fifths of an inch long.

For previous introduction see 104369.

114508 to 114510. *IRIS* spp. Iridaceae.

114508. *IRIS HUMILIS* Bieb.

An iris of the Apogon section with about 12 tufted linear leaves up to a foot long and bright-lilac flowers, the limbs about 2 inches long. Native to southern Europe and the Caucasus region.

114509. *IRIS LAEVIGATA* Fisch.

For previous introduction see 28448.

114498 to 114524—Continued.

114510. *IRIS MELLITA* Janka.

For previous introduction see 53706.

114511. *LACTUCA MURALIS* (L.) Fresen. Cichoriaceae.

An erect annual or biennial about 2 feet high with toothed or lobed triangular or narrow leaves and small yellow flower heads on terminal panicles. Native to Europe and western Asia.

114512. *LACTUCA SERRIOLA* L. Cichoriaceae. Prickly lettuce.

For previous introduction see 104854.

114513. *PASSIFLORA GRACILIS* Jacq. Passifloraceae. Crinkled passionflower.

For previous introduction see 110807.

114514 to 114518. *RHODODENDRON* spp. Ericaceae.

114514. *RHODODENDRON FERRUGINEUM* L. Rock rhododendron.

A dwarf evergreen shrub up to 4 feet high and wide, with narrow oblong leaves over an inch long and pink or carmine flowers about three-fourths of an inch across in small terminal clusters. Native to the mountains of central Europe.

114515. *RHODODENDRON IMPEDITUM* Balf. and Smith.

A low shrub native to the Likiang Snow Range, Yunnan, China, between 15,000 and 16,000 feet altitude. The short branchlets are covered with small black scales, and the broadly elliptic leaves, less than an inch long, are densely scaly on both surfaces. The openly funnel-shaped flowers, mauve or light purple blue, are solitary or in twos.

For previous introduction see 98467.

114516. *RHODODENDRON LUTEUM* Sweet. Pontic azalea.

For previous introduction see 78875.

114517. *RHODODENDRON PONTICUM* L. Pontic rhododendron.

For previous introduction see 66476.

114518. *RHODODENDRON SMIRNOWII* Trautv. Smirnow rhododendron.

For previous introduction see 101962.

114519 to 114522. *SOLANUM* spp. Solanaceae.

114519. *SOLANUM AVICULARE* Forst. f. Nightshade.

A bushy shrub 6 to 8 feet high, with lacinate leaves 10 inches long, small cymes of large dark-purple flowers, and yellowish fruits an inch in diameter, which are used for making marmalade.

For previous introduction see 114179.

114520. *SOLANUM GRACILE* Otto.

For previous introduction see 110813.

114521. *SOLANUM HETERODOXUM* Dun.

For previous introduction see 114473.

114522. *SOLANUM HUMILE* Lam.

A dwarf shrubby perennial with ovate leaves and violet-colored flowers; known only in cultivation.

For previous introduction see 110661.

114498 to 114524—Continued.

114523. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

Variety *Cerasiforme*.

114524. *VITIS DAVIDII* (Carr.) Föëx. Vitaceae. Brier grape.

A very late grape with bunches which weigh over 2 pounds.

For previous introduction see 78817.

114525 and 114526.

From Pennsylvania. Seeds presented by Edgar T. Wherry, University of Pennsylvania, Philadelphia. Received April 23, 1936.

114525. *ELLIOTTEIA RACEMOSA* Muhl. Ericaceae.

114526. *TRIPETALEIA PANICULATA* Sieb. and Zucc. Ericaceae.

A shrub 4 to 6 feet high, with red-brown branchlets, native to Japan. The rhomboid-ovate leaves are 1 to 3 inches long, and the small pink-tinged white flowers, with three distinct petals, are in terminal panicles 2 to 4 inches long.

For previous introduction see 102309.

114527 to 114545.

From England. Seeds presented by the Director, University Botanic Garden, Cambridge. Received April 9, 1936.

114527 to 114529. *BETA* spp. Chenopodiaceae. Beet.

114527. *BETA VULGARIS* L. Common beet.

114528. *BETA PATELLARIS* Moq.

For previous introduction see 114464.

114529. *BETA TRIGYNA* Waldst. and Kit.

114530 to 114533. *DELPHINIUM* spp. Ranunculaceae. Larkspur.

114530. *DELPHINIUM CAUCASICUM* C. A. Mey.

For previous introduction and description see 114382.

114531. *DELPHINIUM GAYANUM* Wilmott.

For previous introduction see 114485.

114532. *DELPHINIUM REQUIENI* DC.

A biennial larkspur about 4 feet high, with three- or five-parted leaves and sky-blue flowers in lax racemes. Native to the islands of Corsica and Majorca.

For previous introduction see 105090.

114533. *DELPHINIUM YUNNANENSE* Franch.

For previous introduction and description see 114507.

114534 to 114536. *LACTUCA* spp. Cichoriaceae. Lettuce.

114534. *LACTUCA PERENNIS* L.

For previous introduction and description see 114488.

114535. *LACTUCA SERRIOLA* L.

Prickly lettuce.

For previous introduction see 114512.

114536. *LACTUCA VIROSA* L.

For previous introduction and description see 114489.

114527 to 114545—Continued.

114537 to 114539. *PASSIFLORA* spp. Passifloraceae.

114537. *PASSIFLORA BRYONIOIDES* H. B. K.

A herbaceous vine with broad deeply three-lobed leaves 2 to 3 inches long and solitary white flowers about 1 inch across. Native to Mexico.

114538. *PASSIFLORA GRACILIS* Jacq.

For previous introduction see 114513.

114539. *PASSIFLORA QUADRANGULARIS* L. Giant granadilla.

114540 and 114541. *PISUM SATIVUM* L. Fabaceae. Pea.

114542 to 114545. *SOLANUM* spp. Solanaceae.

114542. *SOLANUM ATROPURPUREUM* Schrank.

For previous introduction see 110608.

114543. *SOLANUM CAPSICASTRUM* Link. False Jerusalem-cherry.

For previous introduction see 114180.

114544. *SOLANUM MELONGENA* L. Eggplant.

114545. *SOLANUM NODIFLORUM* Jacq.

A woody perennial about 2 feet high, with ovate entire leaves 2 to 5 inches long and very small white flowers in small umbels, followed by small black globose berries. Native to tropical America.

For previous introduction see 104864.

114546 to 114548.

From Peru. Seeds presented by Dr. Cesar Vargas. University of Cuzco, Cuzco. Received April 13, 1936.

114546. *FRAGARIA CHILOENSIS* (L.) Duchesne. Rosaceae. Chiloe strawberry.

Fruits collected at Urubamba, February 29, 1936, at 3,100 meters altitude.

114547. *RUBUS ROSEUS* Poir. Rosaceae.

Native names *cjari-cjari*, *zarzamora*. A large-fruited wild red raspberry collected at Ollantaytambo, February 29, 1936, at 3,100 meters altitude.

For previous introduction see 53218.

114548. *RUBUS URTICAEFOLIUS* Poir. Rosaceae.

Native name *cjari-cjari*. Collected at Ollantaytambo, February 29, 1936, at 3,000 meters altitude. A Peruvian species with strong-growing canes 12 feet high and rather thorny. Flowers and fruits in all stages occur on the same plant. The ripe fruits are slightly acid, but with no characteristic flavor.

For previous introduction see 101221.

114549 to 114586. *NICOTIANA TABACUM* L. Solanaceae.

Common tobacco.

From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received April 23, 1936.

114549. No. 3595. Cultivated tobacco collected October 27, 1935, at Papaloapam, Veracruz.

114549 to 114586—Continued.

Nos. 114550 to 114555 were collected October 28, 1935, at Tuxtepec, Oaxaca. Cultivated tobacco.

114550. No. 3596. *Huimangillo*.

114551. No. 3597. *Habanero prieto*.

114552. No. 3598.

114553. No. 3599. *Habanero*.

114554. No. 3600. *Habanero*.

114555. No. 3601. *Mulato*.

Nos. 114556 to 114558 were collected March 31, 1936, at La Esperanza, Veracruz. Cultivated tobacco.

114556. No. 3796. *Punta de Lanza*.

114557. No. 3797. *Punta de Lanza*.

114558. No. 3798. *Colorado* (?)

114559. No. 3801. April 1, 1936. Volunteer tobacco from Tesechoacan, Veracruz.

114560. No. 3804. April 1, 1936. Volunteer tobacco from Cosamaloapam, Veracruz.

114561. No. 3805. *Tlapacoyan*. Cultivated tobacco from Tlapacoyan, Veracruz, April 9, 1936.

Nos. 114562 to 114566 were collected in the State of Nuevo Leon, November 4, 1935. Cultivated tobacco.

114562. No. 3806. From Casillas.

114563. No. 3807. From El Barrial.

114564. No. 3808. From Rayones.

114565. No. 3809. From Rayones.

114566. No. 3810. From Las Troncas.

114567. No. 3812. Cultivated tobacco from Tlalchapa, Guerrero, October 3, 1935.

Nos. 114568 to 114574 were collected at Encarnacion, Jalisco, December 10, 1935. Cultivated tobacco.

114568. No. 3813. *Lengua de Vaca*.

114569. No. 3814. *Hoja China*.

114570. No. 3815. *Villalobos*.

114571. No. 3816. *Villalobos*.

114572. No. 3817. *Mano de oso*.

114573. No. 3818. A mixed sample.

114574. No. 3819. *Mostrenco*.

Nos. 114575 to 114586 were collected December 10, 1935, at Leon, Guanajuato. Cultivated tobacco.

114575. No. 3820. *Turco*.

114576. No. 3821. *Lengua de vaca*.

114577. No. 3822. *Virginia, Chino, and Negro* (mixed).

114578. No. 3823. *Chino negro*.

114579. No. 3824. *Burley*.

114580. No. 3825. *Lenguillo grande*.

114581. No. 3826. *Oja de Vástago*.

114582. No. 3827. *Negro combinado*.

114583. No. 3828. *Negro and Lenguillo grande* (mixed).

114584. No. 3829. *Maguey*.

114549 to 114586—Continued.

114585. No. 3830. *Lenguillo chica*.

114586. No. 3831. *Castaño*.

114587 to 114603.

From the Union of Soviet Socialist Republics. Seeds presented by the Director, Laboratory of Botany, Timirjasev Academie, Moscow. Received April 15, 1936.

114587. DELPHINIUM CASHMERIANUM Royle. Ranunculaceae. Cashmere larkspur.

A Himalayan plant 10 to 18 inches high, with deep azure-blue flowers 2 inches long.

For previous introduction see 53142.

114588. DELPHINIUM FLEXUOSUM Bieb. Ranunculaceae. Larkspur.

A hardy herbaceous perennial with violet flowers. Native to the mountains of Armenia.

For previous introduction see 108786.

114589. DELPHINIUM sp. Ranunculaceae. Larkspur.

Received under the name "rossicum," which does not appear to have been properly published.

114590 and 114591. PISUM SATIVUM L. Fabaceae. Pea.

114592. PISUM sp. Fabaceae.

Nos. 114593 to 114602. RHEUM spp. Polygonaceae. Rhubarb.

114593. RHEUM COLLINIANUM Baill.

A Chinese rhubarb, possibly of the *Rheum hybridum* series, with incised lobed leaves and red flowers.

114594. RHEUM AUSTRALE Don.

For previous introduction see 114170.

114595. RHEUM FRANZENBACHII Muentzer.

For previous introduction and description see 114467.

114596. RHEUM OFFICINALE Baill.

For previous introduction see 114174.

114597. RHEUM PALMATUM L. Sorrel rhubarb.

A leafy perennial about 5 feet high, with subcylindrical stems and broad roundish leaves deeply palmately lobed. Native to northwestern Asia.

For previous introduction see 110758.

114598. RHEUM PALMATUM TANGUTICUM Maxim.

A variety with leaves more elongated and not so deeply lobed.

114599. RHEUM RHAPONTICUM L. Common rhubarb.

114600. RHEUM TATARICUM L. f.

114601. RHEUM UNDULATUM L.

114602. RHEUM WITTROCKII Lundstroem.

114603. SOLANUM DULCAMARA L. Solanaceae. Bitter nightshade.

For previous introduction see 114330.

114604 to 114631.

From Czechoslovakia. Seeds presented by Prof. Adolf Kutin, Director, Botanic Garden, Tabor. Received April 13, 1936.

114604 to 114631—Continued.

114604. *APIUM GRAVEOLENS* L. Apiaceae.
Celery.
114605. *BETA* SP. Chenopodiaceae.
Received under the name "scutellaris,"
for which a place of publication has not
been found.
114606. *BETA TRIGYNA* Waldst. and Kit.
Chenopodiaceae.
For previous introduction see 114529.
114607. *DELPHINIUM DISCOLOR* Fisch. Ra-
nunculaceae.
- 114608 and 114609. *LACTUCA SATIVA* L.
Cichoriaceae. Garden lettuce.
114610. *LALLEMANTIA IBERICA* (Bieb.)
Fisch. and Mey. Menthaceae.
For previous introduction see 114389.
114611. *LYCOPERSICON ESCULENTUM* Mill.
Solanaceae. Tomato.
- 114612 to 114622. *PHASEOLUS* spp. Faba-
ceae.
114612. *PHASEOLUS COCCINEUS* L.
Scarlet runner bean.
114613. *PHASEOLUS LUNATUS* L.
Lima bean.
- 114614 to 114622. *PHASEOLUS VULGARIS*
L. Common bean.
114614. Oval, gray-brown beans.
114615. Long brown beans.
114616. Oval-rounded tan beans mot-
tled with darker brown.
114617. Tan-colored beans.
114618. White beans.
114619. Deep-red, oval-rounded beans.
114620. Black, oval beans.
114621. Long black beans.
114622. Long, tan-colored, mottled
beans.
- 114623 to 114627. *PISUM SATIVUM* L.
Fabaceae. Pea.
114623. Variety *Hibernum*.
114624. Grayish black, mottled.
114625. Cream colored.
114626. Brownish.
114627. Pale greenish yellow.
114628. *RHEUM RHAPONTICUM* L. Poly-
gonaceae. Common rhubarb.
114629. *RHEUM UNDULATUM* L. Polygona-
ceae. Rhubarb.
For previous introduction see 114601.
114630. *SOLANUM DULCAMARA* L. Solana-
ceae. Bitter nightshade.
114631. *SOLANUM NIGRUM* L. Solanaceae.
Black nightshade.
114632. *ACER HERSII* Rehder. Acera-
ceae. Maple.
- From England. Plants purchased from Hil-
lier & Sons, West Hill Nurseries, Winches-
ter. Received April 24, 1936.
- A medium-sized tree native to northern
China, with cordate, broadly-ovate, long-
pointed, three-lobed leaves and samaras about
an inch long.
- For previous introduction see 76049.

114633 to 114636. *NICOTIANA TABA-
CUM* L. Solanaceae.

Common tobacco.

From Mexico. Seeds collected by W. A.
Archer, Bureau of Plant Industry. Re-
ceived April 24, 1936.

114633. No. 3832. From Cordoba, Vera-
cruz, November 18, 1935.

Nos. 114634 to 114636 were collected
in December 1935 at Almolonga, Veracruz.

114634. No. 3833. *Granja*.

114635. No. 3834. *Longa*.

114636. No. 3835. *San Andres*.

114637 to 114639. *TRITICUM AESTIVUM* L.
Poaceae. Common wheat.

From Australia. Seeds presented by H.
Wenholz, Director of Plant Breeding, De-
partment of Agriculture, Sydney, New
South Wales. Received April 1, 1936.

114637. *Free Gallipoli*.

114638. *Glucub*.

114639. *White Lammas*.

114640 to 114656.

From Scotland. Seeds presented by Sir Wil-
liam Wright Smith, Regius Keeper, Royal
Botanic Gardens, Edinburgh. Received
April 17, 1936.

114640 to 114644. *DELPHINIUM* spp. Ra-
nunculaceae. Larkspur.

114640. *DELPHINIUM DELAVAYI* Franch.

For previous introduction see 104940.

114641. *DELPHINIUM DICTYOCARPUM*
Steud.

A perennial delphinium with flexuose
stems, five-parted leaves, and blue flow-
ers in simple racemes. Native to the
Caucasus region.

114642. *DELPHINIUM DUHMBERGII* Huth.

For previous introduction see 114483.

114643. *DELPHINIUM MAACKIANUM* Regel.

For previous introduction see 114503.

114644. *DELPHINIUM PRZEWALSKII* Huth.

For previous introduction see 104894.

114645 to 114648. *LACTUCA* spp. Cicho-
riaceae. Lettuce.

114645. *LACTUCA BOURGAEI* (Boiss.)
Irish and Taylor.

For previous introduction and descrip-
tion see 114487.

114646. *LACTUCA BRACTEATA* Hook. f.
and Thoms.

A tall perennial lettuce with loose
panicles of large blue flower heads. Na-
tive to the Himalayan region.

114647. *LACTUCA HASTATA* DC.

A robust perennial up to 7 feet high,
with pinnatifid leaves about a foot long
and small heads of blue, purple, or
dark-red flowers. Native to the Hima-
layas between 4,000 and 12,000 feet
altitude.

For previous introduction see 111058.

114640 to 114656—Continued.

114648. *LACTUCA PLUMIERI* (L.) Gren. and Godr.

A perennial lettuce with stout stems about 6 feet high and purple flower heads in terminal cymes. Native to Europe.

114649. *MUSCARI* sp. Liliaceae.
Grape-hyacinth.

Received under the name "argaei," which has not been properly published. This is a grape-hyacinth similar to *Muscari neglectum*.

114650. *MUSCARI AUCHERI* (Boiss.) Baker. Liliaceae.
Grape-hyacinth.

A grape-hyacinth with usually three fleshy linear leaves 2 or 3 inches long and a slender purple scape about as long, with 6 to 10 blue flowers in a dense spikelike cluster. Native to Asia Minor.

114651. *PISUM JOMARDI* Schrank. Fabaceae.
Pea.

A hardy white-flowered annual pea about 3 feet high, native to Egypt.

For previous introduction see 110605.

114652 to 114656. *RHEUM* spp. Polygonaceae.
Rhubarb.

114652. *RHEUM ACUMINATUM* Hook. f. and Thoms.

114653. *RHEUM OFFICINALE* Baill.

For previous introduction see 114596.

114654. *RHEUM PALMATUM* L.
Sorrel rhubarb.

For previous introduction and description see 114597.

114655. *RHEUM RHAPONTICUM* L.
Common rhubarb.

For previous introduction see 114628.

114656. *SOLANUM DULCAMARA* L. Solanaceae.
Bitter nightshade.

For previous introduction see 114630.

114657. *ZEPHYRANTHES* sp. Amaryllidaceae.

From Mexico. Bulbs collected by W. A. Archer, Bureau of Plant Industry. Received April 21, 1936.

No. 3790. *San Juan*. Collected March 26, 1936, at San Juan Evangelisto, Veracruz.

114658 to 114661.

From the Netherlands. Seeds presented by the Director, Botanic Garden, Groningen. Received April 18, 1936.

114658. *DELPHINIUM PYZOWI* Maxim. Ranunculaceae.
Larkspur.

For previous introduction and description see 114505.

114659. *DELPHINIUM REQUIENI* DC. Ranunculaceae.
Larkspur.

For previous introduction and description see 114532.

114660. *KITAIBELIA VITIFOLIA* Willd. Malvaceae.

For previous introduction see 98360.

114661. *OPHIROSTRYX VOLUBILIS* (Harv.) Skeels. Liliaceae.

An asparaguslike perennial with a globose bulb 4 to 6 inches in diameter, small

114658 to 114661—Continued.

erect linear leaves, and a slender twining stem 6 to 8 feet long. The numerous small greenish flowers are less than one-half inch long. Native to southern Africa.

For previous introduction see 31853.

114662 to 114664. *SOLANUM TUBEROSUM* L. Solanaceae.
Potato.

From Ireland. Tubers presented by Dr. W. J. Megraw, through C. F. Clark, Bureau of Plant Industry. Received April 25, 1936.

114662. *Arran Victory*; blight-resistant.

114663. *Ballydoon*; strong grower, second early.

114664. *Kerr's Pink*; of good quality.

114665. *CARICA PAPAYA* L. Papayaceae.
Papaya.

From Hawaii. Seeds presented by W. T. Pope, Agricultural Experiment Station, Honolulu. Received April 23, 1936.

Solo variety.

114666. *ENTEROLOBIUM CYCLOCARPUM* (Jacq.) Griseb. Mimosaceae.
Guanacaste tree.

From Costa Rica. Seeds presented by the Chief, Botanical Section of the National Agricultural Bureau, San José, through Harold M. Collins, American consul, San José. Received April 22, 1936.

A large spreading tree, native to the Pacific region of tropical America, where it grows at an altitude of about 2,700 feet. The trunk sometimes becomes 3 feet in diameter. The compound leaves close during the night, and the pods are twisted into a sort of spiral. The leaves and pods are much relished by cattle.

For previous introduction see 93577.

114667 to 114669.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received April 22, 1936.

114667. *FORTUNELLA HINDSII* (Champ.) Swingle. Rutaceae.
Hong Kong kumquat.

From the Botanical and Forestry Department, Hong Kong. A small shrub with oval-elliptic, leathery leaves and small attractive orange fruits. Native to southeastern China.

For previous introduction see 109765.

114668. *TECOMARIA CAPENSIS* (Thunb.) Spach. Bignoniaceae.

From the Botanical and Forestry Department, Kenya, British East Africa. Native to South Africa. A rambling shrub about 6 feet high, with pinnate leaves 2 to 5 inches long and cymes of many orange-red to scarlet flowers about 2 inches long.

114669. (Undetermined.)

From Sun Yat-Sen University, Canton, China. Received as "*Zenia insignis*," for which a place of publication has not been found.

114670. PRUNUS SIBIRICA L. Amygdalaceae. **Siberian apricot.**

From South Dakota. Plants presented by Prof. N. E. Hansen, South Dakota State College, Brookings. Received April 28, 1936.

A wild Siberian apricot collected from a stony hillside at Shivando, in the vicinity of Shilka at the north fork of the Siberian Railway.

For previous introduction see 114074.

114671 to 114678.

From England. Plants purchased from Hillier & Sons, Winchester. Received April 29, 1936.

114671 to 114675. RHODODENDRON spp. Ericaceae.**114671. RHODODENDRON ALBRECHTII** Maxim.

A shrub 3 to 5 feet high, with obovate to oblanceolate membranous leaves which turn yellow in autumn. The rotate-campanulate, red-purple flowers, 2 inches across, in clusters of three to five, appear with the leaves. It is somewhat like *Rhododendron schlippenbachii* and is native to Japan.

For previous introduction see 86749.

114672. RHODODENDRON INDICUM (L.) Sweet.

Variety *Kokinshita*. A compact low-growing bush with narrow leaves and single scarlet flowers of the general type of the plant known in trade as *Azalea macrantha*. It is very free flowering.

For previous introduction see 78379.

114673. RHODODENDRON INDICUM (L.) Sweet.

Variety *Misomogiri*.

114674. RHODODENDRON QUINQUEFOLIUM Biss. and Moore. **Cork azalea.**

A deciduous shrub or small tree up to 25 feet high, with broad-elliptic to ovate leaves about 2 inches long and white, green-spotted campanulate flowers about 2 inches across. Native to Japan.

114675. RHODODENDRON TSCHONOSKII Maxim.

A forest shrub, native to Japan, with flaky bark, elliptic leaves one-third of an inch long, and heads of one to four small white flowers.

For previous introduction see 85859.

114676. X BERBERIS LOLOGENSIS Sandw. Berberidaceae.

An evergreen shrub related to *Berberis darwinii*. It is described as a hybrid of *Berberis darwinii* and *Berberis linearifolia*.

114677. CHIONANTHUS RETUSA Lindl. Oleaceae. **Chinese fringetree.**

A handsome deciduous hardy ornamental tree bearing, during the spring, a multitude of small delicately fragrant flowers, with very narrow petals, followed in the fall by masses of blue berries resembling wild grapes. This species is considered by some to be superior to the Virginia fringetree (*Chionanthus virginica*), because of the whiteness and fragrance of its flowers and its more graceful habits.

For previous introduction see 103120.

114671 to 114678—Continued.**114678. JASMINUM HUMILE L.** Oleaceae. **Italian jasmine.**

A shrub, usually evergreen, with upright and spreading branches, angled branchlets, and compound leaves made up of three to seven ovate, entire leaflets about 1 inch long. The bright-yellow flowers, nearly 1 inch long, are borne in several-flowered open cymes. It is native to southern Asia.

For previous introduction see 93904.

114679. ACHRAS ZAPOTA L. Sapotaceae. **Sapodilla.**

From Costa Rica. Seeds presented by Alan Kelso, Chief of the Propagation Service, Department of Agriculture, Puntarenas. Received April 27, 1936.

White-fleshed giant.

For previous introduction see 112602.

114680 to 114687. MYRCIARIA CAULIFLORA (Mart.) Berg. Myrtaceae. **Jaboticaba.**

From Brazil. Plants purchased from Dierberger & Companhia, São Paulo. Received May 2, 1936.

For previous introduction see 113511.

114680. Blanco.**114681. Bronzcada.****114682. Grumichama.**

114683. Sabará seedlings. The leading commercial variety in Brazil. The fruit is medium sized, very thin-skinned, with small seeds and sweet flesh of good quality. The seedlings are said to resemble closely the parent.

114684. Murta.

114685. Paulista. A late-ripening variety, with large rather thick-skinned fruits containing large seeds; not equal in quality to Sabará.

114686. Pintada.**114687. Rajada.****114688 and 114689. NICOTIANA TABACUM L.** Solanaceae. **Common tobacco.**

From Honduras. Seeds obtained through the American consulate, Tegucigalpa, at the request of W. A. Archer, Bureau of Plant Industry. Received May 2, 1936.

114688. Chapeolito. From Dani.

114689. A mixed sample from Santa Rosa de Copan.

114690. MYRCIARIA CAULIFLORA (Mart.) Berg. Myrtaceae. **Jaboticaba.**

From Brazil. Seeds presented by B. H. Hunnicutt, Lavras, Minas Geraes. Received December 29, 1921. Numbered in April 1936.

For previous introduction see 114687.

114691 to 114693. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From Germany. Tubers presented by Dr. Karl Stapp, Biologische Reichsanstalt für Land und Forstwirtschaft, Berlin-Dahlem. Received May 5, 1936.

114691 to 114693—Continued.

114691. *Daber*.114692. *Eierkartoffel*.114693. *Flava*.114694. OCHROMA CONCOLOR Rowlee.
Bombacaceae.

From Mexico. Seeds collected by Prof. M. Martínez at Villa Azueta, Veracruz, and presented by W. R. Maxon, United States National Museum. Received May 2, 1936.

A large tropical tree, native to Guatemala; one of several species which yield the balsam wood of commerce.

114695 to 114697.

From Scotland. Seeds presented by the Scottish Society for Research in Plant Breeding, Craigs House, Corstorphine, Edinburgh. Received May 29, 1936.

114695. AGROSTIS PALUSTRIS Huds. Poaceae.
Creeping bent.114696. PHLEUM PRATENSE L. Poaceae.
Timothy.

CB. 191. Pasture timothy.

114697. PHLEUM PRATENSE L. Poaceae.
Timothy.

CB. 213. Rust resistant hay timothy.

114698 and 114699. SOLANUM TUBEROSUM L. Solanaceae. Potato.

From Uruguay. Tubers presented by the Instituto Fitotecnico y Semillero Nacional "La Estanzuela," Montevideo. Received April 25, 1936.

114698. *Americana blanca*.114699. *Yaguau*.

114700 to 114823.

From China. Seeds collected in Szechwan Province and presented by the Botanic Garden Division of the Sun Yat-Sen Tomb and Memorial Park Commission, Nanking. Received April 3, 1936.

114700. ACANTHOPANAX SEPTEMLOBUM (Thunb.) Koidz. Araliaceae.

No. 1. A tree up to 90 feet high, native to eastern Asia. The large round leaves, sometimes a foot across, are divided into seven triangular serrate lobes, and the small white flowers, in large terminal clusters, are followed by small black fruits.

For previous introduction see 99141.

114701. ACANTHOPANAX SETCHUENENSIS Harms. Araliaceae.

No. 2. A bush up to 10 feet high, native to western China, where it is found in thickets at altitudes of 5,500 to 6,500 feet. The small white flowers, in short-peduncled umbels, are followed by black fruits. This species is closely related to *Acanthopanax leucorrhizus*.

For previous introduction see 52928.

114702. ACANTHOPANAX TRIFOLIATUM (L.) C. Schneid. Araliaceae.

No. 3. A hardy spiny climbing shrub, native to western China, with slender-stemmed, three-parted, light-green leaves and compound terminal umbels of small greenish flowers followed by small black berries.

For previous introduction see 110285.

114700 to 114823—Continued.

114703. ACER BRIANTHUM Schwerin. Aceraceae. Maple.

No. 5. A small tree, related to *Acer caudatum*, with five-lobed to seven-lobed leaves about 4 inches long and broad. Native to central and western China.

114704. ACER LAEVIGATUM Wall. Aceraceae. Maple.

No. 6. A large tree, up to 40 feet high and 3 to 4 feet in diameter, native to the temperate slopes of the Himalayas and western China. The oblong-ovate, nearly entire leaves are 2 to 6 inches long, reticulate beneath, and the paniced cymes of small white flowers appear with the leaves.

For previous introduction see 99711.

114705. ACER TETRAMERUM Pax. Aceraceae. Maple.

No. 7. A tree native to central and western China, 20 to 30 feet high, with oval or oblong, coarsely toothed leaves from 2 to 3½ inches long. The keys are slender stalked, and the nutlets are thick and strongly veined.

For previous introduction see 43813.

114706. ACHYRANTHES BIDENTATA Blume. Amaranthaceae.

No. 8. A slender perennial 4 to 6 feet in height, with broadly elliptic leaves 3 to 10 inches long and slender spikes of small white flowers. Native to eastern Asia.

114707. ACTINIDIA CALLOSA Lindl. Dilleniaceae.

No. 9. A climbing shrub, becoming 20 feet or more long, with conspicuous lenticels on the branchlets. The oval to oblong, serrulate, acuminate leaves are 3 to 5 inches long, and the small white flowers, one-half inch across, are followed by ovoid spotted fruits 1 inch long. Native to the Himalayas and southwestern China.

114708. ACTINIDIA CORIACEA (Fin. and Gagn.) Dunn. Dilleniaceae.

No. 10. A climbing shrub about 25 feet high, with persistent, coriaceous, lanceolate, finely dentate leaves nearly 6 inches long. These are bronze red, passing into metallic green; in autumn they take on a beautiful reddish color. The fragrant white flowers are followed by small greenish ovoid or elongated fruits. Native to western China.

For previous introduction see 42683.

114709. ACTINODAPHNE CONFERTIFOLIA (Hemsl.) Gamble. Lauraceae.

No. 11. An evergreen shrub or tree of medium size, with lanceolate leaves about 4 inches long, clustered at the tops and forks of the branches, and inconspicuous flowers, followed by small black berries. Native to western China.

114710. ACTINODAPHNE RETICULATA Meissn. Lauraceae.

No. 12. A small evergreen tree with whorled linear or elliptic lanceolate leaves about 6 inches long and clusters of small greenish flowers. Native to northeastern India.

114711. ADENOSTEMMA LAVENIA (L.) Kuntze. Asteraceae.

No. 13.

114700 to 114823—Continued.

114712. *AKEBIA LOBATA AUSTRALIS* Diels. Lardizabalaceae.

No. 14. A glabrous twining monoecious shrub up to 20 feet long with compound leaves, the leaflets ovate to ovate-oblong, and 1 to 3 inches long. The pistillate flowers are maroon and nearly an inch across, whereas the staminate, light-purple flowers are smaller. The edible fleshy pods are about 3 inches long. Native to central and western China.

For previous introduction see 54353.

114713. *AMPELOPSIS DELAVAYANA* Planch. Vitaceae.

No. 16. A stout vine with the young growth hairy and reddish, and cordate, broadly ovate, more or less three-lobed leaves 2 to 5 inches long. The small blue fruits are borne in small cymes. Native to central China.

For previous introduction see 35115.

114714. *ANEMONE VITIFOLIA* Buch-Ham. Ranunculaceae. Grapeleaf anemone.

No. 18. A stout bushy perennial, 1 to 3 feet in height, with large deeply divided leaves 3 to 6 inches across and open corymbs of beautiful white flowers an inch or more across. Native to the Himalayas at altitudes of 5,000 to 10,000 feet.

For previous introduction see 88511.

114715. *ANISOMELES INDICA* (L.) Kuntze. Menthaceae.

No. 19. A densely woolly herb 3 to 6 feet high, with ovate-acuminate leaves and dense whorls of small purplish flowers. Native to tropical and subtropical India.

For previous introduction see 41618.

114716. *ARDISIA HENRYI* Hemsl. Myrsinaceae.

No. 20. An evergreen shrub about 3 feet high, with narrow lanceolate leaves about 7 inches long and small white flowers followed by red berries. Native to central and western China.

114717. *AUCUBA CHINENSIS* Benth. Cornaceae.

No. 24. An evergreen shrub similar to *Aucuba japonica*, with lanceolate to ovate leaves up to 8 inches long and small purplish flowers in terminal panicles. Native to southern China.

114718. *BAUHINIA HUPEHANA* Carib. Caesalpiniaceae.

No. 25. A climbing shrub up to 20 feet or more, with broad bilobed leaves and racemes about 4 inches long of small white or pink fragrant flowers. Native to western China.

114719. *BERCHEMIA POLYPHYLLA LEOCLADA* Hand-Mazz. Rhamnaceae.

No. 27. An ornamental woody climber 5 to 15 feet high, with elliptic to ovate leaves about 2 inches long and few small greenish-white flowers in terminal clusters. Native to China.

114720. *BOENNINGHAUSENIA ALBIFLORA* (Hook.) Reichenb. Rutaceae.

No. 30. A slender erect perennial herb 1 to 2 feet high, native to northern India between 4,000 and 8,000 feet altitude. The bipinnate leaves have membranous orbicordate entire leaflets about 1 inch long, and the slightly nodding, pure-white flow-

114700 to 114823—Continued.

ers, less than an inch across, are borne in compound terminal leafy cymes.

For previous introduction see 102311.

114721. *BUDDLEIA LINDLEYANA SINUATODENTATA* Hemsl. Loganiaceae.

No. 34. A tall bush 3 to 6 feet high, with pale-green leaves nearly 4 inches long and 2 inches wide and purplish-violet flowers in dense erect racemes 3 to 5 inches long. Found in thickets in western Szechwan between 2,000 and 4,000 feet altitude.

For previous introduction see 35177.

114722. *CALICARPA RUBELLA HEMSLEYANA* Diels. Verbenaceae.

No. 36. A somewhat coarse large deciduous shrub or small tree up to 20 feet high, with large cordate-oblong leaves and many small lilac to purple flowers in axillary clusters, followed by small showy purple berries. Native to western China.

114723. *BOTRYOPLEURON AXILLARE* (Sieb. and Zucc.) Hemsl. Scrophulariaceae.

No. 37. An erect herbaceous perennial, with very small alternate ovate acuminate serrate leaves and small pink flowers in dense spikes scarcely 1 inch long. Native to eastern Asia.

114724. *CAMPANUMBOEA JAVANICA* Blume. Campanulaceae.

No. 38. A perennial twining vine, with opposite leaves and yellowish, brown-veined, broadly bell-shaped flowers over an inch across. Native to Java.

114725. *CASSIA MIMOSOIDES* L. Caesalpiniaceae.

No. 39. An herb about 2 feet high with yellow flowers. Native to tropical Asia.

For previous introduction see 103608.

114726. *CELASTRUS LOESENERI* Rehd. and Wils. Celastraceae. Bitter-sweet.

No. 42. A climbing shrub up to 18 feet high, with broadly elliptic to elliptic-lanceolate leaves about 5 inches long and yellow fruits in terminal clusters. Native to central China.

For previous introduction see 50406.

114727. *CELASTRUS SPICIFORMIS* Rehd. and Wils. Celastraceae.

No. 43. A climbing shrub, up to 18 feet high, with membranous elliptic-ovate leaves about 4 inches long and small whitish flowers in terminal clusters, followed by small yellow fruits. It is related to *Celastrus hypoleuca*. Native to Hupeh and Szechwan Provinces, China.

114728. *CIPADESSA CINERASCENS* (Pelleg.) Hand-Mazz. Meliaceae.

No. 46. A shrub or small tree up to about 20 feet high, sometimes scandent, with large compound leaves and panicles of inconspicuous white flowers. Native to Indo-China.

114729. *CLEMATIS GRATA GRANDIDENTATA* Rehd. and Wils. Ranunculaceae.

No. 49. An ornamental vine about 20 feet high, with silky hairy rounded leaves and solitary or paired pinkish flowers 3 to 4 inches across. Native to central and western China.

For previous introduction see 72793.

114700 to 114823—Continued.

114730. *CLERODENDRUM FRAGRANS* Willd. Verbenaceae.

No. 47. An erect half-shrubby clerodendrum 3 to 5 feet high, with broadly ovate leaves and fragrant white or bluish flowers, usually double, in compact terminal corymbs. Native to Japan.

114731. *CORNUS CHINENSIS* Wangerin. Cornaceae.

No. 51. A tree, sometimes 40 feet high, with glaucous, ovate leaves 2 to 5 inches long and stalked umbels of small yellow flowers followed by black fruits. It is allied to *Cornus officinalis*. Native to central and western China.

114732. *CUCUBALUS BACCIFER* L. Silenaceae.

No. 56. A herbaceous perennial with prostrate or climbing stems about 4 feet long and small greenish or yellowish-white flowers in cymes. Native to Europe.

114733. *CYNOGLOSSUM TRISTE* Diels. Boraginaceae.

No. 57. A stout-stemmed biennial up to 18 inches high, with lax racemes of small deep-purple flowers. Native to southwestern China at altitudes of 10,000 to 11,000 feet.

114734. *DALBERGIA DYERIANA* Prain. Fabaceae.

No. 58. A large shrubby climber with the branchlets sometimes hooked, pinnate leaves, and small whitish flowers in axillary panicles. Native to central and western China.

For previous introduction see 111395.

114735. *DAPHNIPHYLLUM MACROPODUM* Miqel. Euphorbiaceae.

No. 59. An evergreen shrub with handsome elliptic-oblong, dark-green leathery leaves 5 to 8 inches long, inconspicuous flowers, and small ellipsoidal fruits in axillary racemes 3 inches long. Native to eastern Asia.

For previous introduction see 111394.

114736. *DEBREGEASIA EOUULIS* (Sieb. and Zucc.) Wedd. Urticaceae.

No. 60. A shrub up to 6 feet high, with shining dark-green, oblong-lanceolate to elliptic leaves 3 to 5 inches long and small orange-red fruits. Native to Japan.

114737. *DECAISNEA FARGESII* Franch. Lardizabalaceae.

No. 61. A handsome deciduous shrub up to 15 feet high, with large drooping pinnate leaves 3 feet long, greenish flowers in pendulous racemes a foot or more long, and deep-blue, oblong-cylindrical fruits 3 to 4 inches long. Native to western China.

For previous introduction see 103125.

114738. *DEUTZIA PILOSA* Rehd. Hydrangeaceae.

No. 64. A shrub about 3 feet high, with ovate membranous leaves up to 3 inches long and cymes of few small flowers. Native to western China.

114739. *DIOSPYROS GLAUCIFOLIA* Metcalf. Diospyraceae.

No. 67. A tree up to 50 feet high, with ovate or broad-elliptic, dull-green leaves about 5 inches long and small globose

114700 to 114823—Continued.

smooth fruits. Native to southeastern China.

For previous introduction see 104870.

114740. *DISPORUM CANTONIENSE* Merr. Convallariaceae.

No. 70. A disporum with stems up to 4 feet high, ovate-oblong or lanceolate leaves 2 to 6 inches long, and whitish or dull-purple flowers nearly an inch long. Native to southern China.

114741. *DUMASIA VILLOSA* DC. Fabaceae.

No. 71. A twining herb with broad-ovate leaflets and axillary racemes of small yellow or purplish flowers. Native to India.

114742. *ELAEBAGNUS GLABRA* Thunb. Elaeagnaceae.

No. 73. An evergreen creeping or climbing shrub up to about 20 feet long, usually unarmed, with shiny elliptic leaves about 3 inches long and small white flowers, solitary or three in a cluster. Native to Japan.

114743. *EURYA ACUMINATA* DC. Theaceae.

No. 79. A shrub 10 to 12 feet high, with oblong leathery leaves and small white flowers which are either solitary or in fascicles. The wood is reddish white, soft, and close grained.

For previous introduction see 47681.

114744. *EUONYMUS DIELSIANUS* Loes. Celastraceae.

No. 77. An evergreen shrub about 6 feet high, with lanceolate leaves about 4 inches long and clusters of small white flowers. Native to China.

114745. *FICUS CLAVATA* Wall. Moraceae.

No. 81. An erect shrub about 6 feet high, with membranous oblong-lanceolate leaves about 5 inches long. Native to India and the Federated Malay States.

114746. *FICUS HETEROMORPHA* Hemsl. Moraceae.

No. 82. A small shrub of the *Scydium* section, with exceedingly variable leaves. Native to central China.

114747. *FLEMINGIA MACROPHYLLA* (Willd.) Kuntze. Fabaceae.

No. 83. An erect woody shrub up to 6 feet high. Native to southeastern Asia.

114748. *FORDIOPHYTON FABERI* Stapf. Melastomaceae.

No. 84. A much-branched shrub up to 2 feet high, similar to the *osbeckias* in appearance. The opposite leaves are 2 to 4 inches long, narrowly ovate, dark green above, reddish beneath, and the flowers, nearly an inch across, are dark rose with conspicuous yellow stamens. Native to Szechwan, China.

114749. *FORDIOPHYTON TUBERCULATUM* Guill. Melastomaceae.

No. 85. An erect purplish herb about 1 foot high, with dentate, acuminate leaves, green above and purplish violet beneath, and small red flowers in terminal and axillary clusters. Native to southwestern China.

114750. *HELWINGIA CHINENSIS* Batal. Cornaceae.

No. 91. A deciduous shrub 3 to 5 feet high, with small green-white flowers borne

114700 to 114823—Continued.

on the midrib of the leaves and followed by black fruits.

For previous introduction see 99175.

114751. *HOLBOELLIA FARGESI* Réaub. Lar-dizabalaceae.

No. 92. An evergreen twining shrub up to about 20 feet high, with five to nine leaflets, usually oblong-lanceolate, and small flowers, the pistillate purplish, the staminate greenish white. Native to central and western China.

114752. *HOSIEA SINENSIS* (Oliver) Hemsl. and E. H. Wils. Icacinaceae.

No. 93. A woody climber about 8 feet high, with cordate leaves 2 to 4 inches long and small whitish flowers followed by orange fruits about one-half inch long. Native to western China.

114753. *HYDRANGEA ANOMALA* D. Don. Hydrangeaceae.

No. 95. A climbing shrub up to 15 feet, with ovate leaves 3 to 6 inches long and large corymbs of white flowers. Native to Nepal at 4,000 to 10,000 feet altitude.

114754. *HYDRANGEA STRIGOSA* Rehd. Hydrangeaceae.

No. 96. A shrub 8 feet high, with strigose branchlets. The leaves, oblong-ovate to elliptic-lanceolate, acuminate serrulate or serrate, are sparingly strigose or nearly glabrous above, but densely strigose below and from 3 to 7 inches long. The sterile flowers, white or sometimes purple and over an inch across, are in cymes 4 to 6 inches wide. Native to central China.

For previous introduction see 99176.

114755. *IDESIA POLYCARPA* Maxim. Flacourtiaceae.

No. 98. A deciduous tree up to 45 feet high, with large ovate to oblong-ovate leaves and small, greenish-yellow fragrant flowers in pendulous panicles up to a foot long. Native to Japan.

114756. *IDESIA POLYCARPA VESTITA* Diels. Flacourtiaceae.

No. 99. A variety with the leaves densely pubescent below. Native to western China.

114757. *ILEX CORALLINA* Franch. Aquifoliaceae. Coral holly.

No. 100. A graceful bushy evergreen shrub up to 10 feet high, which does not have the rigid appearance of most other hollies. The ovate-lanceolate leaves are thin but tough, spiny-serrate and from 4 to 6 inches long, brilliant green on top and pale green underneath. The small coral-red fruits are in dense clusters. Native to western China.

For previous introduction see 103427.

114758. *ILEX LATIFOLIA* FANGH Rehd. Aquifoliaceae.

No. 101. A variety with smaller, narrower, and thinner leaves. Native to Szechwan, China.

114759. *ILEX PERNYI* Franch. Aquifoliaceae.

No. 102. A dense-growing evergreen holly of a very dwarf and compact habit, with small dark-green spiny leaves squarish at the base, and red berries. Probably

114700 to 114823—Continued.

allied to *Ilex cornuta*, and first discovered by Père Paul Pery in western China.

For previous introduction see 103221.

114760. *JASMINUM UROPHYLLUM* Hemsl. Oleaceae.

No. 105. A climbing shrub 6 feet long, similar to *Jasminum dispernum*, but with fewer yellow flowers. Native to western China.

114761. *LANGUAS JAPONICA* (Thunb.) Sasaki. Zinziberaceae.

No. 107. A subtropical gingerlike perennial with leafy stems about 1 foot high, the leaves rather large and lanceolate. The small reddish flowers are in terminal panicles. Native to the warmer areas of Japan.

114762. *LASIANTHUS FORDII* Hance. Rubiaceae.

No. 108. A small shrub with elliptic-lanceolate leaves about 4 inches long which are deep lustrous green above, and small white flowers in sessile cymes. Native to China.

114763. *LIGUSTRUM COMPACTUM* Hook. f. and Thoms. Oleaceae.

No. 110. A shrub or small tree sometimes 30 feet high native to the mountains of southwestern China. The persistent leaves are 3 to 6 inches long and the small white flowers, in large panicles, are followed by blue-black fruits.

For previous introduction see 111361.

114764. *LINDERA COMMUNIS* Hemsl. Lauraceae.

No. 111. An evergreen shrub or small tree up to 15 feet high, with somewhat lanceolate leaves about 3 inches long and umbels of small yellow flowers, followed by dark-red fruits. Native to central and western China.

114765. *LINDERA MEGAPHYLLA* Hemsl. Lauraceae.

No. 112. An evergreen shrub or tree up to 60 feet high, with large oblong or oblanceolate, lustrous leaves and umbels of numerous small yellow flowers appearing in March and April. Native to central China.

For previous introduction see 111364.

114766. *LINDERA STRYCHNIFOLIA HEMSLEYANA* Diels. Lauraceae.

No. 113. A deciduous bush 6 to 9 feet high, with lanceolate to ovate leaves, clusters of small yellow flowers, and black fruits. Native to western China at altitudes of 3,000 to 5,000 feet.

114767. *LITSEA POPULIFOLIA* (Hemsl.) Gamble. Lauraceae.

No. 114. A shrub or small tree native to western China, with obovate leathery leaves about 4 inches long and small black berries.

114768. *LONICERA FUCHSIODES* Hemsl. Caprifoliaceae.

No. 115. An erect shrub with stiff, oblong or ovate-oblong leaves up to 6 inches long and orange or reddish flowers about an inch long in pairs and in many-flowered terminal racemes. Native to western China.

114700 to 114823—Continued.

114769. MAESA HENRYI Hu. Myrsinaceae.

No. 118. An evergreen shrub 5 feet high, with elliptic or lanceolate leaves up to 6 inches long and numerous white flowers in diffuse panicles. Native to southwestern China.

114770. MALLOTUS REPANDUS (Willd.) Muell. Arg. Euphorbiaceae.

No. 119. A large scandent evergreen shrub or tree, native to tropical Asia, with broadly rhombic-ovate leaves about 3 inches long and clusters of small yellow flowers.

114771. MILLETTIA DIELSIANA Harms. Fabaceae.

No. 123. A handsome shrubby climber up to 20 feet in length, with oblong-lanceolate leaflets 2 to 4 inches long and terminal panicles of small dark-red flowers. Native to western China.

For previous introduction see 55663.

114772. MUSSAENDA DIVARICATA Hutch. Rubiaceae.

No. 124. An erect or climbing evergreen shrub 3 feet or more in height, with elliptic-ovate, abruptly acuminate, papery leaves 3 to 5 inches long and lax cymes of yellow flowers. Native to western China.

114773. MYRSINE SEMISERRATA Wall. Myrsinaceae.

No. 125. A small handsome evergreen shrub with round glossy-green leaves about half an inch across and small dark-red fruits. Native to northeastern India and western China.

For previous introduction see 67774.

114774. PATRINIA SCABIOSAEFOLIA Fisch. Valerianaceae.

No. 128. An erect perennial 1 foot high, with the lower leaves auriculate, ovate, and 2 inches long. The upper leaves are ovate, dentate, and smaller. The small yellow flowers are in terminal cymes. Native to Japan.

114775. PHOTINIA DAVIDSONIAE Rehd. and Wils. Malaceae.

No. 129. A handsome evergreen tree 20 to 30 feet high, with dense foliage, native to Hupeh, western China. The leathery oblong or lanceolate leaves are up to 6 inches long, and the white flowers, nearly half an inch across, are in many-flowered terminal corymbs. The globose orange-red berries are about one-third of an inch in diameter.

For previous introduction see 102258.

114776 to 114778. PITTOSPORUM spp. Pittosporaceae.

114776. PITTOSPORUM DAPHNIPHYLLOIDES Hay.

No. 132. A small evergreen tree up to 15 feet high, with green fruits containing scarlet seeds. Native to Taiwan.

For previous introduction see 99195.

114777. PITTOSPORUM GLABRATUM Lindl.

No. 133. An evergreen shrub or small tree, native to northeastern India and central China, with oblong-lanceolate leaves. The small fragrant yellow flow-

114700 to 114823—Continued.

ers, produced in corymbs, are succeeded by orange fruits.

For previous introduction see 111371.

114778. PITTOSPORUM GLABRATUM NERIIFOLIUM Rehd. and Wils.

No. 134. A variety with long, oblong-lanceolate leaves. Native to western China.

114779 to 114781. PRUNUS spp. Amygdalaceae.

114779. PRUNUS PUBIGERA (C. Schneid.) Koehne.

No. 139. A tree up to 60 feet high, with obovate-oblong leaves about 4 inches long and many small white flowers in racemes. Allied to *Prunus padus*. Native to western China.

114780. PRUNUS RUFOMICANS Koehne.

No. 140. A deciduous tree up to about 90 feet high, with oblong-serrulate leaves, densely tomentose beneath, and racemes of small white flowers. Native to western China.

114781. PRUNUS WILSONII (Diels) Koehne.

No. 142. A large tree up to 60 feet high, with oblong leaves, silky tomentose beneath, and racemes of small white flowers. Native to central China.

114782. QUISQUALIS INDICA L. Combretaceae. Rangoon-creeper.

No. 209. A rambling subscentent shrub, native to India, with opposite obovate leaves 4 inches long and short axillary and terminal spikes of tubular pink or red flowers. The obovoid fruits are 1 to 2 inches long and are sharply five-angled.

For previous introduction see 108992.

114783. RANDIA HENRYI E. Pritz. Rubiaceae.

No. 146. An evergreen shrub or small tree, with small leathery lanceolate leaves dark green above and few white flowers about an inch across in nearly sessile cymes. Native to central China.

114784. RHODODENDRON CALOPHYTUM Franch. Ericaceae.

No. 149. A shrub or tree from 15 to 50 feet high, native to western Szechwan, China. The bright-green leathery leaves are 8 to 12 inches long, and the rosy-white to red flowers, 2 to 3 inches long, are borne in loose racemose clusters of up to 30.

For previous introduction see 97659.

114785. RHUS PUNJABENSIS SINICA (Diels) Rehd. and Wils. Anacardiaceae. Sumac.

No. 150. A small tree 15 to 20 feet high, with a short relatively thick trunk covered with dark-gray, moderately smooth bark. The numerous spreading branches form a round flattened head, and in the autumn the dark-red or crimson panicles make the tree very attractive. It is abundant in thickets in western Hupeh and Szechwan.

For previous introduction see 38158.

114786. RIBES MOUPINENSE Franch. Grossulariaceae. Currant.

No. 153. A shrub from 3 to 15 feet high, with somewhat twisted branches,

114700 to 114823—Continued.

variable leaves, and glabrous, sessile, turbinate flowers, greenish red or washed with red. Native to the high mountainous country of eastern Tibet and western China.

For previous introduction see 40465.

114787. ROSA CORYMBULOSA Rolfe. Rosaceae. White-eye rose.

No. 154. An unarmed or sparsely prickly rose from central China. The numerous small flowers, which are deep rose above and white at the base, are up to an inch wide. Native to thickets in western Hupeh at 1,300 to 3,600 feet altitude.

For previous introduction see 43885.

114788. ROSA DAVIDI Crepin. Rosaceae. David rose.

No. 155. A pink-flowered, orange-fruited rose 3 to 18 feet high, native to western Szechwan, China, at altitudes of 4,000 to 9,000 feet. It is the nearest Chinese relative of *Rosa acrophylla* of the western Himalayas.

For previous introduction see 73447.

114789 to 114793. RUBUS spp. Rosaceae.

114789. RUBUS AMPELINUS Focke.

No. 158. A prostrate shrub similar to *Rubus lambertianus*, with slender stems about 3 feet long, broad-ovate leaves about 2 inches long, and terminal clusters of few small flowers. Native to central China.

For previous introduction see 113811.

114790. RUBUS CHROOSEPALUS Focke.

No. 159. A Chinese bramble with glabrous cordate leaves, white tomentose beneath, and small purplish flowers followed by black fruits. Native to Hupeh Province.

For previous introduction see 113813.

114791. RUBUS ICHANGENSIS Hemsl. and Kuntze.

No. 161. A straggling plant with white flowers, found in thickets between 2,000 and 4,000 feet altitude in central and western China. The small fruits are of good flavor.

For previous introduction see 113815.

114792. RUBUS MESOGAEUS Focke.

No. 162. A bramble, native to central China, with slender climbing stems 12 to 15 feet long, rather small flowers, and small globose berries.

For previous introduction see 113817.

114793. RUBUS SETCHUENENSIS Bureau and Franch.

No. 163. A deciduous straggling shrub about 2 feet high, with deeply-lobed, mallowlike leaves and many small purple flowers in dense panicles, followed by black fruits of good flavor. Native to western China.

For previous introduction see 113820.

114794. SALIX LONGIFLORA Anderss. Salicaceae.

No. 164. A small willow up to 30 feet high, with elliptic variable leaves, the larger ones up to 6 inches long. Native to the Himalayas at about 9,000 feet altitude.

114700 to 114823—Continued.

114795. SALIX LUCTUOSA Lévl. Salicaceae.

No. 165. A shrubby willow of the Denticulata group, with small narrow elliptic-lanceolate leaves. Native to Yunnan Province, China.

114796. SAMBUCUS JAVANICA Reinw. Caprifoliaceae. Elder.

No. 166. A straggling shrub about 6 feet high, with acuminate leaflets and flat clusters of ovoid red berries. Native to eastern Asia, ascending to 6,000 feet in the Himalayas.

114797. SAUSSUREA GLOMERATA CHINENSIS Chen. Asteraceae.

No. 167. A stout herbaceous perennial, with pinnatifid leaves and numerous red flower heads in paniced corymbs. Native to China.

114798. SCHIZANDRA PROPINQUA (Wall.) Hook. f. and Thoms. Magnoliaceae.

No. 168. An evergreen twining shrub with ovate-lanceolate leaves about 4 inches long and small yellow or orange flowers. Native to the Himalayan region at altitudes of 4,000 to 8,000 feet.

114799. SCHIZANDRA RUBRIFLORA (Franch.) Rehd. and Wils. Magnoliaceae.

No. 169. An evergreen climbing shrub with ovate denticulate leathery leaves 3 to 5 inches long, axillary clusters of dark-red flowers, and persistent clusters of bright-red berries. Native to western China.

For previous introduction see 76597.

114800. SCHIZOPHRAGMA INTEGRIFOLIA Oliver. Hydrangeaceae.

Chinese hydrangea-vine.

No. 170. A trailing shrub about 18 feet long, with ovate or broadly-ovate thickish bright-green leaves, usually pubescent on the veins beneath, and cymes 10 inches across of white flowers. Native to western China.

For previous introduction see 99179.

114801. SIEGESBECKIA ORIENTALIS L. Asteraceae.

No. 171. An erect yellow-flowered annual up to 3 feet high. Native to the Tropics of both hemispheres.

114802. SINOMENIUM ACUTUM (Thunb.) Rehd. and Wils. Memispermaceae.

No. 172. A twining shrub up to 20 feet high, with large ovate entire or three-to seven-lobed leaves and long panicles of small bluish berries. Native to Japan.

114803. SPIRAEA JAPONICA ACUMINATA Franch. Rosaceae. Spirea.

No. 181. A handsome hardy deciduous Chinese shrub 3 to 6 feet in height, native to western Szechwan and Hupeh at altitudes of 3,500 to 4,500 feet. The brilliant rose-colored or red flowers make a very fine contrast with the dark-green foliage.

For previous introduction see 49685.

114804. STACHYURUS sp. Stachyuraceae.

No. 182. Received as "latifolia," a name for which a place of publication has not been found.

114805. STACHYURUS YUNNANENSIS Franch. Stachyuraceae.

No. 183. A procumbent evergreen shrub, with lax racemes of small pale-

114700 to 114823—Continued.

yellow flowers. Native to western and southwestern China.

114806. *SWERTIA BIMACULATA* (Sieb. and Zucc.) Hook. f. and Thoms. Gentiana-ceae.

No. 184. An erect annual 2 to 6 feet high, with numerous white or yellowish-green flowers in panicles. The plant is native to the eastern Himalayas at altitudes of 5,000 to 8,000 feet.

For previous introduction see 111093.

114807. *SYMPLOCOS LAURINA* (Retz) Wall. Symplocaceae.

No. 185. An evergreen shrub or small tree, with broad-lanceolate leaves about 5 inches long and fragrant small white flowers in spikes about 4 inches long. Native to India.

114808. *THLADIANTHA CALCARATA* C. B. Clarke. Cucurbitaceae.

No. 188. A large herbaceous climber, with cordate leaves about 4 inches long and golden yellow flowers, over an inch across, in racemes. Native to India.

114809. *TREMA VIRGATA* (Planch.) Blume. Ulmaceae.

No. 192. A small tree, allied to *Celtis*.

114810. *TRICALYMA VIRIDIFLORA* (DC.) Matsum. Rubiaceae.

No. 193. An evergreen shrub or small tree of the habit of *Canthium* with oblong-lanceolate shiny leaves 2 to 4 inches long and small pale-yellow flowers in short dense axillary cymes. Native to China.

114811. *TURPINIA POMIFERA* (Roxb.) DC. Staphyleaceae.

No. 195. A small tree with odd-pinnate leaves 1 to 2 feet long, made up of three to nine crenate-serrate ovate leaflets 3 to 8 inches long. The small yellowish flowers are in terminal panicles 6 to 10 inches long and are followed by fleshy green, yellow or red subglobose fruits 2 inches in diameter. It is native to the subtropical slopes of the Himalayas in India.

For previous introduction see 94084.

114812. *URENA LOBATA* L. Malvaceae.

No. 196. An erect undershrub with cordate entire or lobed leaves 2 to 3 inches long, flowers an inch across, rose red at the base, and small fruits armed with hooked bristles. The stems furnish fiber, used for bags and twine. Native to tropical Asia.

For previous introduction see 77937.

114813. *CUDRANIA TRICUSPIDATA* (Carr.) Bureau. Moraceae.

No. 197. A thorny shrub or small tree, native to eastern Asia. The fruits, resembling clusters of red raspberries, are edible, and the plant has been recommended as a good hedge plant for the Southern States. The extremely hard wood is used for tools, and the ovate, usually entire leaves are used in some sections to feed silkworms.

For previous introduction see 79547.

114814. *VERNONIA BOCKIANA* Diels. Astera-ceae.

No. 198. A tree about 20 feet high, with membranous, oblong-lanceolate leaves

114700 to 114823—Continued.

up to about 6 inches long and many small lavender flower heads. Native to western China.

114815 to 114821. *VIBURNUM* spp. Capri-foliaceae.

114815. *VIBURNUM BRACHYBOTRYUM* Hemsl.

No. 199. A shrub about 10 feet high, with leathery obovate to oblong leaves up to 3 inches long and many small white flowers in large terminal panicles. Native to central China.

114816. *VIBURNUM CORDIFOLIUM* Wall.

No. 200. A large subtropical shrub, with heart-shaped sharply toothed leaves and small dense corymbs of white flowers. Native to the temperate Himalayas.

For previous introduction see 94049.

114817. *VIBURNUM DILATATUM* Thunb. Linden viburnum.

No. 201. A profusely flowering shrub up to 10 feet high, native to China and Japan. The pure-white flowers, in cymes 3 to 5 inches across, are produced at the top of the branch and also from short twigs down the sides. The bright-red fruits are less than an inch long.

For previous introduction see 53745.

114818. *VIBURNUM FOETIDUM* Wall.

No. 203. An upright, half-evergreen shrub up to 10 feet high, with elliptic to oblong-obovate leaves about 2 inches long. The small white flowers, in corymbs 2 inches across, are followed by small scarlet fruits. Native to the Himalayas and southwestern China.

114819. *VIBURNUM ICHANGENSE* (Hemsl.) Rehd.

No. 204. A white-flowered, red-fruited shrub, with yellowish-green leaves, native to China.

For previous introduction see 53747.

114820. *VIBURNUM OLIGANTHUM* Batalin.

No. 206. A deciduous shrub with elliptic-lanceolate leaves and paniculate cymes of small white flowers. Native to western China.

114821. *VIBURNUM* sp.

No. 205. Received as *Viburnum lobophyllum*, but the seeds do not agree with those of that species.

114822. *FAGARA STENOPHYLLA* (Hemsl.) Engl. Rutaceae.

No. 208. A scandent shrub up to 6 feet high, often with slender hooked prickles on the leafstalks. The ovate-oblong to lanceolate leaflets are glabrous and 1 to 3 inches long. The small reddish beaked flowers, in loose terminal cymes 2 to 3 inches across, have long exerted stamens. Native to southwestern China.

For previous introduction see 34588.

114823. (Undetermined.)

No. 65.

114824 to 114843. *NICOTIANA* spp. Solanaceae. Tobacco.

From California. Seeds collected by the University of California Botanical Garden

114824 to 114843—Continued.

Expedition to the Andes, 1935-36, and presented by T. H. Goodspeed, Department of Botany, University of California, Berkeley. Received May 1, 1936.

114824. *NICOTIANA CORYMBOSA* Remy.

No. 4995. A semiprostrate tobacco, native to Chile at about 8,000 feet altitude.

114825. *NICOTIANA GLAUCA* R. Grah.
Tree tobacco.

No. 4510. A plant from 6 to 20 feet high, with yellow flowers; grows commonly throughout Mexico.

For previous introduction see 112354.

114826. *NICOTIANA PANICULATA* L.

No. 4010. A viscid-pubescent annual having a simple stem 2 to 3 feet tall and yellowish-green flowers in terminal panicles. Native to Peru.

For previous introduction see 42339.

114827. *NICOTIANA RUSTICA* L.
Aztec tobacco.

Mrs. Ynes Mexia's No. 7381. From the Hacienda Curipipoyo, Ibarra, Provincia Imbabura, Ecuador. A common perennial with greenish-yellow flowers. Collected at about 7,000 feet altitude.

For previous introduction see 110328.

114828. *NICOTIANA RUSTICA* L.
Aztec tobacco.

No. 4111.

114829 to 114836. *NICOTIANA TABACUM* L.
Common tobacco.

114829. No. 3931. 114833. No. 4160.

114830. No. 4098. 114834. No. 4265.

114831. No. 4159. 114835. No. 4283.

114832. No. 4109. 114836. No. 7364.

114837 to 114841. *NICOTIANA TOMENTOSA*
Ruiz and Pav. Giant tobacco.

For previous introduction see 23914.

114837. No. 3736. 114840. No. 4505.

114838. No. 3762. 114841. No. 4507.

114839. No. 4110.

114842. *NICOTIANA* sp.

No. 4161.

114843. *NICOTIANA* sp.

No. 3797.

114844. *CROTALARIA* sp. Fabaceae.

From Bolivia. Seeds collected by H. C. Stuntz, the American Institute, La Paz. Received April 30, 1936.

Collected in the Yungas region at 6,500 feet altitude, where the plant grows into a large bush and is browsed by cattle.

114845 to 115046.

From India. Seeds and bulbs collected by Walter Koelz, Bureau of Plant Industry. Received April 21, 1936.

Unless otherwise mentioned, the material was collected as seeds.

114845. *ABELMOSCHUS ESCULENTUS* (L.)
Moench. Malvaceae. Okra.

No. 88. *Bandakka*. From near Kandy, Ceylon, February 25, 1936.

114845 to 115046—Continued.

114846. *ACACIA* sp. Mimosaceae.

No. 190. From Coimbatore, southern India, March 4, 1936. A tree 60 feet high and 18 inches in diameter.

114847 to 114850. *ALLIUM* spp. Liliaceae.114847. *ALLIUM ASCALONICUM* L.
Shallot.

No. 189. Bulbs from Coimbatore, southern India, March 11, 1936. Said to be grown locally.

For previous introduction see 114824.

114848. *ALLIUM CEPA* L. Onion.

No. 221. *Yeragadda*. From Bangalore, Mysore, March 5, 1936. A native red onion.

114849. *ALLIUM SATIVUM* L. Garlic.

No. 232. Bulbs from Bombay, March 8, 1936. Said to have come from the Calcutta area.

114850. *ALLIUM SATIVUM* L. Garlic.

No. 194. Bulbs from Bangalore, Mysore, March 5, 1936.

114851 to 114856. *AMARANTHUS* spp. Amaranthaceae.114851. *AMARANTHUS GANGETICUS* L.
Ganges amaranth.

No. 210. *Kaikura*. From Bangalore, Mysore, March 5, 1936. Used as greens.

For previous introduction see 114417.

114852. *AMARANTHUS MANGOSTANUS* Jusl.

No. 212. *Chirakura*. From Bangalore, Mysore, March 5, 1936. A vegetable used as greens.

For previous introduction see 34455.

Nos. 114853 to 114855 were collected at Teldeniya, near Kandy, Ceylon, February 25, 1936.

114853. *AMARANTHUS* sp.

No. 99. *Rata tampala*.

114854. *AMARANTHUS* sp.

No. 100. *Tampala*.

114855. *AMARANTHUS* sp.

No. 102. *Lansi tampala*.

114856. *AMARANTHUS* sp.

No. 219. *Dankukura*. From Bangalore, Mysore, March 5, 1936.

114857. *AMYGDALUS COMMUNIS* L. Amygdalaceae. Almond.

No. 248. Bombay, March 10, 1936. Sold as Persian almonds from Isfahan. Flavor very good; hard shelled.

114858. *ANETHUM GRAVEOLENS* L. Apiaceae. Dill.

No. 218. *Subakshi Kura*. Bangalore, Mysore, March 5, 1936. Said to be used as a green vegetable; also for flavoring.

114859. *ANNONA RETICULATA* L. Annonaceae. Custard-apple.

No. 123. *Anada*. From Kandy, Ceylon, February 26, 1936. The fruit is the size of an ostrich egg, with agreeably sweet white flesh.

114845 to 115046—Continued.

114860. *ARISTEA HCKLONI* Baker. Iridaceae.

No. 139. From Nuwara Eliya, Ceylon, February 28, 1936. A perennial herb with a rosette of linear leaves 6 to 18 inches long and flattened flower stems 2 feet long. The bright-blue flowers, one-third of an inch long, are borne in clusters arranged in a lax corymbose panicle with ascending branches. It is native to southern Africa and has been naturalized in Ceylon where it is growing in large clumps.

For previous introduction see 94174.

114861. *ARISTOLOCHIA ELEGANS* Masters. Aristolochiaceae. Caliciflower.

No. 172—P. *Dove creeper*. From Kandy, Ceylon. A perennial vine with long-stalked, broadly ovate leaves 2 to 3 inches across; the solitary flowers, without unpleasant odor, are borne on the pendulous young wood. The flowers have a yellow-green tube 2 to 3 inches long and a purple and white blotched cordate-circular limb 3 inches across. It is native to Brazil.

For previous introduction see 98798.

114862. *ATRIPLEX HASTATA* L. Chenopodiaceae.

No. 225. *Chakranti Kura*. From Bangalore, Mysore, March 5, 1936.

114863. *AVERRHOA BILIMBI* L. Oxalidaceae. Bilimbi.

No. 7. *Biling*. From Colombo, Ceylon, February 20, 1936. Fruit of a tropical tree 20 to 60 feet high, cultivated for the sake of its greenish-yellow, cucumber-shaped acid fruits, 3 to 4 inches long, which are pickled or used as a relish with meat.

For previous introduction see 110684.

114864. *BASELLA RUBRA* L. Basellaceae.

No. 72. From the market at Kandy, Ceylon, February 23, 1936. A succulent, herbaceous, freely branched climber, native to Bengal and cultivated throughout India. The leaves and stems are used as a potherb as we use spinach. The black fruit has magenta-colored juice.

For previous introduction see 96388.

114865. *BAUHINIA VARIEGATA* L. Caesalpinaceae. Buddhist bauhinia.

No. 216. From Bangalore, Mysore, March 5, 1936. An Indian tree up to 20 feet high, with broadly ovate leaves two-lobed at the top and small clusters of large white flowers beautifully variegated with red and yellow.

For previous introduction see 99691.

114866. *BENINCASA HISPIDA* (Thunb.) Cogn. Cucurbitaceae. Waxgourd.

No. 4. *Puhul-geddia* or *ash-pumpkin*. From the market at Colombo, Ceylon, February 20, 1936. The greenish rounded elliptical fruits are up to 2 feet long and covered with waxy bloom.

For previous introduction see 114422.

114867. *BENINCASA HISPIDA* (Thunb.) Cogn. Cucurbitaceae. Waxgourd.

No. 155. *Jeta-puhul*. From Kandy, Ceylon, February 28, 1936.

114868. *BRASSICA OLERACEA BOTRYTIS* L. Brassicaceae. Cauliflower.

No. 120. Originally obtained in Marseilles, France, January 31, 1936.

114845 to 115046—Continued.

114869. *CAESALPINIA PULCHERRIMA* (L.) Swartz. Caesalpinaceae. Flowerfence.

No. 172—A. A handsome tropical evergreen shrub about 7 feet high, with mimosalike foliage and yellow flowers, which appear on the new growth.

For previous introduction see 109207.

114870. *CALONYCTION ACULEATUM* (L.) House. Convolvulaceae.

No. 83. *Alanga*. From Teldeniya, near Kandy, Ceylon, February 25, 1936. A woody climber with large white flowers that are said to open in the evening.

For previous introduction see 4882.

114871 and 114872. *CANAVALIA GLADIATA* (Jacq.) DC. Fabaceae. Swordbean.

Ali-Awara, awara. Collected at Teldeniya near Kandy, Ceylon, February 25, 1936. A woody climber whose pods and dried beans are used as food.

114871. No. 101. 114872. No. 102—A.

114873 and 114874. *CANAVALIA ENSIFORMIS* (L.) DC. Fabaceae. Jackbean.

Pods and dried beans eaten as food.

114873. No. 92. *Gas-awara, gas-boncl*. From Teldeniya, near Kandy, Ceylon, February 25, 1936.

114874. No. 217. *Tamatakan*. From Bangalore, Mysore, March 5, 1936.

114875. *CANNA GLAUCA* L. Cannaceae.

No. 172—K. A mixed sample of double varieties.

114876 to 114884. *CAPSICUM ANNUM* L. Solanaceae. Common redpepper.

114876. No. 170. *Miris*. From Keke-riwa, Ceylon, March 2, 1936. A rather mild pepper with short blunt pods three-fourths of an inch long.

114877. No. 188. From Coimbatore, southern India, March 4, 1936. A mild redpepper, 1 inch long and acorn shaped, which is slightly acid.

114878. No. 205. *Mirapa kaya*. From Bangalore, Mysore, March 5, 1936. Said to have been grown at Chikbalapur. A short stout variety, 2 inches long.

114879. No. 206. *Mirapa kaya*. From Bangalore, Mysore, March 5, 1936. Said to have been grown at Tiptur. A slender pepper, 4 inches long.

Nos. 114880 to 114884 were collected in Bombay, March 8, 1936, in the market.

114880. No. 239. Said to have been grown at Surat District.

114881. No. 238. From Kathiwan District.

114882. No. 240. From Poona, a very hot pepper.

114883. No. 241. From Belgaum District. A sweet, mildly sharp pepper.

114884. No. 244. A very hot pepper 1 inch long.

114885. *CAPSICUM FRUTESCENS* L. Solanaceae. Bush redpepper.

No. 32. *Velichi Miris*. From the Colombo, Ceylon, market, February 20, 1936. A pepper 4 inches long.

For previous introduction see 114424.

114845 to 115046—Continued.

114886. *CAPSICUM ANNUUM* L. Solanaceae.
Common redpepper.

No. 119. *Nai-Miris*. From Katu Kasbabu, near Kandy, Ceylon, February 26, 1936.

114887. *CAPSICUM FRUTESCENS* L. Solanaceae.
Bush redpepper.

No. 63. *Guinea* pepper, *Kochi-Miris*, *Irkoehika*. From the Kandy, Ceylon, market, February 23, 1936.

114888. *CARYOPHYLLUS JAMBOS* (L.) Stokes. Myrtaceae.
Rose-apple.

No. 288. *Panirupandu*. From Bangalore, Mysore, March 5, 1936. A medium-sized, handsome tree, native to India and the Malay Peninsula, but cultivated in many tropical countries for the edible, fragrant, pinkish fruits about the size of a hen's egg, of a sweetish acid taste, and used as preserves.

For previous introduction see 100722.

114889 to 114895. *CASSIA* spp. Caesalpiniaceae.

114889. *CASSIA FISTULA* L.
Golden-shower.

No. 172-E. From Kandy, Ceylon. An ornamental tree with handsome pinnate foliage and long pendulous racemes of golden-yellow flowers. Native to India.

For previous introduction see 93775.

114890. *CASSIA GRANDIS* L. f.
Pink-shower.

No. 172-I. From Kandy, Ceylon. A handsome tree 40 to 50 feet high that produces masses of pale-pink flowers in the early spring before the pinnate leaves appear. Native to Panama.

For previous introduction see 110825.

114891. *CASSIA HIRSUTA* L.

No. 171. From the Botanic Gardens, Hakgala, Ceylon, February 28, 1936. A shrub up to 2 feet high, covered throughout with long hairs, with the compound leaves made up of three to five pairs of ovate leaflets 2 to 3 inches long and small yellow flowers in axillary racemes. Native to Brazil.

For previous introduction see 111211.

114892. *CASSIA LAEVIGATA* Willd.
Smooth senna.

No. 171-A. From the Botanic Gardens, Hakgala, Ceylon. A handsome yellow-flowered shrub or small tree, with dark-green, glossy, evergreen foliage.

For previous introduction see 70898.

114893. *CASSIA OCCIDENTALIS* L.

No. 107. *Rata-tora*. From the market at Kandy, February 25, 1936. A shrub 2 feet high with yellow flowers.

For previous introduction see 109976.

114894. *CASSIA TOMENTOSA* L. f.
Woolly senna.

No. 172. From the Botanic Gardens, Hakgala, Ceylon. The *Ranavara* of the Singalese is a rapid-growing shrub with large yellow flowers. It is found wild in the dry portions of Ceylon.

For previous introduction see 67682.

114845 to 115046—Continued.

114895. *CASSIA TORA* L.

No. 106. From Peradeniya, near Kandy, Ceylon, February 25, 1936. Pods and leaves are used as a vegetable.

114896. *CASUARINA DISTYLA* Vent. Casuarinaceae.

No. 171-B. From the Botanic Gardens, Hakgala, Ceylon. A small shrub 2 to 3 feet high.

For previous introduction see 90680.

114897. *CEIBA PENTANDRA* (L.) Gaertn. Bombacaceae.

No. 161. *Putung*. Near Kandy, Ceylon.

For previous introduction see 87477.

114898. *COCCINIA CORDIFOLIA* (L.) Cogn. Cucurbitaceae.

No. 157. *Koway*. From Dumballa, Ceylon, March 1, 1936, at 1,000 feet altitude. A perennial tropical vine with small broadly ovate-cordate, deep-green leaves, white flowers, and red fruits about 2 inches long which taste like cucumbers. Native to eastern India.

For previous introduction see 106952.

114899. *CESTRUM ELEGANS* (Brongn.) Schlecht. Solanaceae.

No. 127. February 27, 1936. From Nuwara-Eliya, Ceylon, at 6,500 feet altitude. A slender graceful shrub with attractive dark-green, ovate-lanceolate leaves about 4 inches long and clusters of showy carmine flowers and berries. It is native to Mexico, but has become naturalized in the high regions of Ceylon.

114900 to 114906. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. Watermelon.

114900. No. 3. *Peni-Komardu*. From the market at Colombo, Ceylon, February 20, 1936. Fruits dark green with darker stripes. Flesh red-pink, rather insipid.

114901. No. 40. *Peni-Komardu*. From the market at Colombo, Ceylon, February 21, 1936. Fruits pale green, unmarked, up to 5 pounds in weight. The red-pink flesh is of fair quality.

114902. No. 97. *Peni-puhul*. From Teldeniya, near Kandy, Ceylon, February 25, 1936. Used boiled as a vegetable.

114903. No. 98. *Getupuhul*. From near Colombo, Ceylon, February 25, 1936. Said to be a good vegetable.

114904. No. 176. From Coimbatore, southern India, March 4, 1936. A dark-green melon 14 inches long, with rather insipid flesh.

114905. No. 192. From Bangalore, Mysore, India, March 5, 1936. An unmarked dark-green melon of fair flavor.

114906. No. 193. From Bangalore, Mysore, March 5, 1936. An elongated, light-green melon with heavy black-green striping; weight about 5 pounds and the flavor is fair.

114907. *CITRUS LIMONIA* Osbeck. Rutaceae.
Lemon.

No. 200. From Bangalore, Mysore, March 5, 1936. Presented by the Superintendent of the Government Horticultural Garden. A fine-flavored lemon.

114845 to 115046—Continued.

114908. *CITRUS* sp. Rutaceae.

No. 204. *Maduwalla, Kadharangai, Dabbagahi*. From Bangalore, Mysore, March 5, 1936. Presented by the Superintendent, Government Horticultural Garden. A shrub or small tree which produces large warty fruits a foot long, weighing 3 pounds, with sweetish rind 1 inch thick and insipid flesh. It is preserved for medicinal purposes.

114909. *CLEOME* sp. Capparidaceae.

No. 172—F. From Kandy, Ceylon. An ornamental herb with clusters of pink and white flowers.

114910. *TEPHROSIA VOGELII* Hook. f. Fabaceae.

No. 132. From a tea field on the Nuwara-Eliya Road, Ceylon, February 27, 1936, at 5,000 feet altitude.

For previous introduction see 111348.

114911 to 114923. *CUCUMIS* spp. Cucurbitaceae.114911 to 114918. *CUCUMIS MELO* L. Muskmelon.

Nos. 114911 to 114915 were collected at Coimbatore, southern India, March 4, 1936.

114911. No. 180. *Artani palam*. A fruit 18 inches long, elongate, netted, greenish yellow, with salmon flesh of fair flavor.

114912. No. 181. *Welakosa*. A round smooth, creamy-white melon 1 foot in diameter, with pale salmon-colored, fragrant flesh of poor flavor.

114913. No. 184. *Shakan palam*. A small sparsely netted flattened brown melon with firm but not tough, pale salmon-colored flesh of fair flavor, which will shrivel but not rot. An excellent keeper.

114914. No. 186. *Molampalam*. A slightly netted, brown-yellow, cylindrical fruit 8 inches long, with fragrant salmon-colored flesh, which is rather insipid.

114915. No. 187. A fruit the size, shape, and color of a grapefruit with pale salmon-colored flesh, which is mealy and insipid.

Nos. 114916 to 114918 were collected at Bangalore, Mysore, March 5, 1936.

114916. No. 195. A fruit the size, shape, and color of a smooth-skinned large grapefruit. The white flesh is of good flavor.

114917. No. 196. Fruit ellipsoid, 1 foot long, well-netted with white insipid flesh.

114918. No. 197. A rounded, well-netted yellow fruit 8 inches in diameter, with white insipid flesh that is not mealy.

114919 to 114923. *CUCUMIS SATIVUS* L. Cucumber.

Nos. 114919 and 114920 were collected in the market at Colombo, Ceylon, February 20, 1936.

114919. No. 34. *Pipinga*. A yellow-brown, thick-fleshed fruit 15 inches long, which is cooked or eaten raw.

114845 to 115046—Continued.

114920. No. 36. *Keriri*. A golden-brown, roundish fruit.

Nos. 114921 to 114923 were collected at Coimbatore, March 4, 1936.

114921. No. 174. *Waterika*. A banana-shaped cucumber 18 inches long when ripe, commonly sold while immature (6 inches long); excellent as a salad vegetable.

114922. No. 185. *Waterika*. Very similar to No. 174 [P. I. 114921].

114923. No. 227. *Malabar waterika*. A golden-brown fruit, streaked with lighter brown, about 8 inches long. Said to keep in edible condition for a year. Peculiar to the Malabar coast where it has been grown since ancient times.

114924 to 114931. *CUCURBITA* spp. Cucurbitaceae.114924. *CUCURBITA MAXIMA* Duchesne. Squash.

No. 162. *Rata Wataka*. A Siamese squash received from Dumballa, Ceylon, March 1, 1936. Said to be better than the local variety; rather rare.

114925. *CUCURBITA MAXIMA* Duchesne. Squash.

No. 175. *Rata Wataka*. From Keke-riwa, Ceylon, March 2, 1936. Introduced from Siam and said to be superior to the local varieties. The gray elongated fruit is pointed at both ends, has thick yellow flesh, and weighs up to 10 pounds.

114926 to 114930. *CUCURBITA MOSCHATA* Duchesne. Cushaw.

114926. No. 5. *Wataka*. From the market at Colombo, Ceylon, February 20, 1936. A brownish-yellow, faintly ribbed, elongated fruit with yellow flesh, which commonly weighs about 40 pounds. Said to keep for several months in a dry place.

114927. No. 6. From the market at Colombo, Ceylon, February 20, 1936. Like No. 5 [P. I. 114926], but smaller and more like a pumpkin in appearance.

114928. No. 211. *Gummachi Kayi*. From Bangalore, Mysore, March 5, 1936. A red-brown pumpkin type, common, and said to keep well.

114929. No. 154. *Palong-Wataka*. From the market at Kandy, Ceylon, February 28, 1936.

114930. No. 201. From Bangalore, Mysore, March 5, 1936. An attractive looking, smooth creamy white fruit about 1 foot long, with thick yellow flesh.

114931. *CUCURBITA PEPO* L. Pumpkin.

No. 38. *Meru*. From the market at Colombo, Ceylon, February 20, 1936. An oblong orange fruit, 18 inches long, striped and mottled with green. Probably introduced from Europe.

114932. *CYAMOPSIS TETRAGONOLOBA* (L.) Taub. Fabaceae. Guar.

No. 86. *Kataranga*, cluster bean. From Teldeniya, near Kandy, Ceylon, February 25, 1936. Pods used as food.

114845 to 115046—Continued.

114933. CYAMOPSIS TETRAGONOLOBA (L.) Taub. Fabaceae. Guar.

No. 224. *Gorichikadi*. From Bangalore, Mysore, March 5, 1936. Used both green and dried.

114934. CYPHOMANDRA BETACEA (Cav.) Sendt. Solanaceae. Tree-tomato.

No. 1. *Takkali*. From the market at Kandy, Ceylon, February 19, 1936.

For previous introduction and description see 114441.

114935. ×CYRTANTHUS INTERMEDIUS Mast. Amaryllidaceae.

No. 150. From the Botanic Gardens, Hakgala, Ceylon, February 28, 1936. Bulbs of an artificial hybrid, *Cyrtanthus-mackenii* × *angustifolius*, about 18 inches high, with strap-shaped leaves and 8 to 10 orange-pink, tubular flowers 2 inches long in an umbel.

114936. CYRTANTHUS MACKENII Hook. f. Amaryllidaceae.

No. 149. From the Botanic Gardens, Hakgala, Ceylon, February 28, 1936. Bulbs of a species with two to six linear leaves 1 foot long, appearing with the flower stem, which is a foot high, red-brown at the base, and bears an umbel of 4 to 10 ivory-white tubular flowers 2 inches long. It is native to southern Africa.

For previous introduction see 89645.

114937. DATURA SUAVEOLENS Humb. and Bonpl. Solanaceae. Angel-trumpet.

No. 135. From the Botanic Gardens, Hakgala, Ceylon, February 28, 1936. A handsome plant 15 to 20 feet high, with smooth elliptic leaves, downy beneath; sometimes 300 of the very large, pure-white, sweet-scented pendent flowers are open at once.

For previous introduction see 53919.

114938. DELONIX REGIA (Boj.) Raf. Caesalpiniaceae. Royal poinciana.

No. 172-B. From Kandy, Ceylon.

For previous introduction see 109208.

114939 to 114948. DOLICHOS LABLAB L. Fabaceae. Hyacinth-bean.

114939. No. 69. *Avara kai*, *Avara*. From the market at Kandy, Ceylon, February 23, 1936.

114940. No. 126. *Sudu dambala*. From Katukastota, near Kandy, Ceylon, February 26, 1936.

114941. No. 168. *Kiri dhambala*. From Kekerawa, Ceylon, March 2, 1936. A vine with purple flowers and pods 30 inches long. Said to be eaten green and as dry beans.

Nos. 114942 to 114946 are bush varieties obtained at the Imperial Agricultural Station, Coimbatore, March 4, 1936.

114942. No. 191. Khaki-colored seeds.

114943. No. 191-A. Black seeds.

114944. No. 191-B. White seeds.

114945. No. 191-C. White seeds.

114946. No. 191-D. Buff seeds.

114845 to 115046—Continued.

114947. No. 215. *Peda chikad kaya*. From Bangalore, Mysore, March 5, 1936. Said to be a climbing sort. Pods and beans both used as food.

114948. No. 245. From Bombay, March 8, 1936, but said to have come from Rangoon. The dry seeds are used as food.

114949. EXACUM ZEYLANICUM Roxb. Gentianaceae.

No. 146. From the Botanic Gardens, Hakgala, Ceylon, February 28, 1936. An erect East Indian annual 1 foot high, with basal leaves elliptic oblong and a terminal cluster of large, deep-purple flowers with bright-orange stamens.

For previous introduction see 77484.

114950. FICUS MYSORENSIS Heyne. Moraceae. Fig.

No. 198. From Bangalore, Mysore, March 5, 1936. A large broadly spreading tree native to the forests of the sub-tropical Himalayas from Sikkim eastward. The aerial roots are few, embracing the trunk, and the oval leathery leaves, which are prominently veined, are up to 8 inches in length.

For previous introduction see 92952.

114951. DUCHESNEA INDICA (Andrews) Focke. Rosaceae. Mock-strawberry.

No. 128. From the Botanic Gardens, Hakgala, Ceylon, February 28, 1936.

For previous introduction see 58891.

114952. FUCHSIA ARBORESCENS Sims. Onagraceae.

No. 171-D. From the Botanic Gardens, Hakgala, Ceylon, February 28, 1936. A shrub or small tree, with large opposite or ternate, oblanceolate or oblanceolate-oblong leaves and dense terminal panicles of pink or purplish flowers about one-half inch long. Native to Mexico.

114953. FUCHSIA RADICANS Miers. Onagraceae.

No. 136. From the Botanic Gardens, Hakgala, Ceylon, February 28, 1936. A tropical shrub, sometimes climbing, with whorled, elliptic, entire leaves about 2 inches long and few showy scarlet flowers nearly 2 inches long in axillary clusters. Native to Brazil.

114954. GERBERA sp. Asteraceae.

No. 160. From the Peradeniya Gardens, Ceylon, March 1, 1936.

114955. GOSSYPIUM ARBOREUM L. Malvaceae. Cotton.

No. 167. *Kabupulun*. From Kalawewa, Ceylon, March 2, 1936. Altitude 600 feet. Collected from a plant 10 feet high. The flowers were yellowish and the yield was abundant. Not much cultivated.

For previous introduction see 102894.

114956. COSMOS CAUDATUS H. B. K. Asteraceae.

No. 172-G. From Kandy, Ceylon. A perennial herb 1½ to 6 feet high, with bipinnate leaves, the segments linear-lanceolate, and rose-colored flower heads. Native to the West Indies.

114845 to 115046—Continued.

114957. *HIBISCUS SABDARIFFA* L. Malvaceae. Roselle.

No. 52. From the market at Kandy, Ceylon, February 23, 1936. A plant with red calyxes which are made into preserves; the leaves are used as a green vegetable.

For previous introduction see 87463.

114958. *INDIGOFERA* sp. Fabaceae.

No. 172. From Kandy, Ceylon. A plant with very beautiful rose-colored flowers.

114959. *IPOMOEA* sp. Convolvulaceae.

No. 177. From Coimbatore, southern India, March 4, 1936. Said to be a free-flowering morning-glory with large blue flowers which remain open in the hot sun most of the day.

114960. *LAGENARIA LEUCANTHA* (Duchesne) Rusby. Cucurbitaceae. Calabash gourd.

No. 51. *Dunya tabu; sorakai*. From the market at Kandy, Ceylon, February 23, 1936. Fruit light green, bottle shaped, and 2 inches long.

114961. *LANTANA CAMARA* L. Verbenaceae. Common lantana.

No. 131. Collected February 27, 1936, along the Nuwara-Eliya Road, Ceylon, at 4,000 feet altitude. The small heads of orange-red flowers are very attractive.

114962. *LANTANA CAMARA* L. Verbenaceae. Common lantana.

No. 138. From Nuwara-Eliya, Ceylon, February 28, 1936. A form with heads of lovely pink flowers that has become naturalized in Ceylon.

For previous introduction see 103512.

114963. *LUFFA ACUTANGULA* (L.) Roxb. Cucurbitaceae. Singkwa towelgourd.

No. 55. *Vetakala, Pikunga*. From the market at Kandy, Ceylon, February 23, 1936. Fruit ridged, green, 10 inches long.

For previous introduction see 103706.

114964. *LUFFA CYLINDRICA* (L.) Roemer. Cucurbitaceae. Suakwa towelgourd.

No. 87. *Sponge gourd; Niyavetakola*. From Teldeniya, near Kandy, Ceylon, February 25, 1936. The fruit is eaten fresh as a vegetable and, when ripe, the hard fibrous seed pod is used for scouring pots, etc.

For previous introduction see 103916.

114965 to 114969. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

114965. No. 75. *Takkali*. From the market at Kandy, Ceylon, February 23, 1936. The irregular fruits are less than 2 inches across.

114966. No. 121. From the market at Suez, Egypt, February 6, 1936. A red fruit $3\frac{1}{2}$ inches long, common in the market.

114967. No. 173. From Coimbatore, March 4, 1936. Round fruits 1 inch in diameter; the plant is said to be very hardy.

114968. No. 207. From a seed store in Bangalore, Mysore, March 5, 1936. A red fruit, 1 inch in diameter, said to be wilt resistant.

114969. No. 237. From Bombay, March 8, 1936. Fruit red, globose, up to $1\frac{1}{2}$ inches in diameter.

114845 to 115046—Continued.

114970 to 114973. *MOMORDICA* spp. Cucurbitaceae.

114970. *MOMORDICA CHARANTIA* L. Balsam-pear.

No. 90. *Karawila*. From Teldeniya, near Kandy, Ceylon, February 25, 1936.

For previous introduction and description see 114448.

114971 and 114972. *MOMORDICA DIOICA* Roxb.

Tumba karawila. From the market at Kandy, Ceylon, February 23, 1936. A tropical climber with an edible tuberous root and small rough yellow fruits 2 to 3 inches long which are eaten as a vegetable. Native to India.

114971. No. 57. 114972. No. 61.

114973. *MOMORDICA CHARANTIA* L. Balsam-pear.

No. 158. *Tita karawila*. From Dumballa, Ceylon, March 1, 1936, at 1,000 feet altitude.

For previous introduction and description see 114970.

114974. *MORAEA IRIDIOIDES* L. Iridaceae. Iris moraea.

No. 140. From the Hakgala Gardens, Ceylon, February 28, 1936. A south African relative of the iris, which forms large clumps with irislike leaves and flower stalks 3 feet high. The very attractive flowers, like the Japanese iris in form, have blue-purple standards and white falls marked with yellow.

For previous introduction see 67369.

114975. *MORINGA OLEIFERA* Lam. Moringaceae. Horseradish-tree.

No. 226. *Murunga Kaya*. From Bangalore, Mysore, March 5, 1936.

For previous introduction and description see 114449.

114976. *STIZOLOBIUM ATERRIMUM* Piper and Tracy. Fabaceae. Velvetbean.

No. 111. *Wanduru-me* (monkey bean). From Katu Kastota, near Kandy, Ceylon, February 26, 1936. A climber from 20 to 30 feet high; both pods and seeds are used as food.

114977. *DRACAENA* sp. Liliaceae.

No. 172-N. From Kandy, Ceylon. A tropical shrub with ornamental foliage and pinkish-white flowers.

114978. *CASTALIA PUBESCENS* (Willd.) Woody. and Wood. Nymphaeaceae.

No. 230. *Olu*. From Kekirawa, Ceylon, March 2, 1936. A waterlily with reniform leaves 8 to 10 inches across, scabrous above, and white flowers, similar to those of *Nymphaea alba*, borne 6 inches above the water. Native to eastern India.

114979. *OCIMUM GRATISSIMUM* L. Mentha-ceae.

No. 112. *Madurutala*. From Katu Kastota, near Kandy, Ceylon, February 26, 1936. A tropical evergreen shrub up to 8 feet high, with ovate leaves about 3 inches long and racemes of small pale-yellow flowers.

Nos. 114980 to 114982 were collected in the Botanic Gardens, Hakgala, Ceylon, February 28, 1936.

114845 to 115046—Continued.

114980. *OSBECKIA BUXIFOLIA* Arn. Melastomaceae.

No. 147. A small rufous-woolly shrub, with leathery ovate leaves about one-half inch long and royal purple flowers about 1 inch across. Native to Ceylon.

114981. *OSBECKIA RUBICUNDA* Arnott. Melastomaceae.

No. 148. A bushy shrub 4 to 6 feet high, with hairy elliptic leaves about 2 inches long and small clusters of brilliant purplish-crimson flowers.

For previous introduction see 57261.

114982. *OSBECKIA WIGHTIANA* Benth. Melastomaceae.

No. 171-E. A woody perennial about 2 feet high, with elliptic or oblong leaves up to 3½ inches long and small clusters of showy purple flowers. Native to southern India and Ceylon at altitudes up to 5,000 feet.

114983. *PANICUM MILIACEUM* L. Poaceae. Broomcorn millet.

No. 96. *Meneri*. From Teldeniya, near Kandy, Ceylon, February 25, 1936.

For previous introduction see 113364.

114984 to 114986. *PASSIFLORA* spp. Passifloraceae.

114984. *PASSIFLORA FOETIDA HISPIDA* (DC.) Killip.

No. 166. *Oibattu*. From Kalawewa, Sind, March 2, 1936. A trailing vine, hispid throughout, with cordate-trilobate, membranous leaves, small purple flowers, and small edible yellow fruits. Native to northwestern South America.

114985. *PASSIFLORA EDULIS* Sims. Purple granadilla.

No. 110. *Passion fruit*. From Kandy, Ceylon, February 25, 1936.

For previous introduction see 114294.

114986. *PASSIFLORA MIXTA* L. f.

No. 171-F. From the Botanic Gardens, Hakgala, Ceylon, February 28, 1936. A vine with thick orbicular-ovate broad leaves about 3 inches long, three-lobed to the middle, and rose-pink flowers about 3 inches across. Native to the Andes.

For previous introduction see 82628.

114987 to 114996. *PHASEOLUS* spp. Fabaceae.

114987 to 114992. *PHASEOLUS LUNATUS* L. Lima bean.

114987. No. 103. *Patura-bonci*, *Potudambala*. From Teldeniya, near Kandy, Ceylon, February 25, 1936.

114988. No. 113. *Ratamurunga* or *Kiridambala*. From Teldeniya, near Kandy, Ceylon, February 26, 1936.

114989. No. 114. *Potudambala*. From Katu Kastota, near Kandy, Ceylon, February 26, 1936.

114990. No. 152. *Potudambala*. From the market at Kandy, Ceylon, February 28, 1936.

114991. No. 220. *Doublebeans*. From Bangalore, Mysore, March 5, 1936.

114845 to 115046—Continued.

114992. No. 242. From the Coimbatore bazar, March 4, 1936.

114993 to 114996. *PHASEOLUS VULGARIS* L. Common bean.

Nos. 114993 to 114995 were from the market in Kandy, Ceylon, February 23, 1936.

114993. No. 68. *Butter bonci*; probably imported.

114994. No. 70. *Murung bonci*.

114995. No. 104. *Bonci*; scarlet beans.

114996. No. 115. *El-dambala*. From Teldeniya, near Kandy, Ceylon, February 26, 1936.

114997. *PHYSALIS PERUVIANA* L. Solanaceae. Peruvian groundcherry.

No. 171-G. *Cape gooseberry*. From the Botanic Gardens, Hakgala, Ceylon, February 23, 1936.

For previous introduction see 103722.

114998. *PISUM SATIVUM* L. Fabaceae. Pea.

No. 214. *Battani*. From Bangalore, Mysore, March 5, 1936. Small compact pods 1½ inches long.

114999. *TIBOUCHINA SEMIDECDANDRA* Cogn. Melastomaceae.

No. 137. From Nuwara-Eliya, Ceylon, February 28, 1936. A slender graceful shrub, native to Brazil, 4 to 7 feet high, with rigid ovate-oblong leaves and royal purple flowers borne at the tips of the branches.

115000. *PRUNUS CERASUS* L. Amygdalaceae. Sour cherry.

No. 249. From Bombay, March 10, 1936. Sold as "Persian cherry."

115001. *PRUNUS DOMESTICA* L. Amygdalaceae. Common plum.

No. 250. From Bombay, March 10, 1936. Sold as "Persian plum" and said to be imported from Iran.

115002. *PSOPHOCARPUS TETRAGONOLOBA* (L.) DC. Fabaceae.

No. 49. *Daluk-dambala*. From the market at Kandy, Ceylon, February 23, 1936. Large winged pods, 8 inches long, used as a vegetable.

115003. *PSOPHOCARPUS TETRAGONOLOBA* (L.) DC. Fabaceae.

No. 163. *Daluk-dambala*. From Dumballa, Ceylon, March 1, 1936. Seeds taken from a dry pod.

115004. *RAPHANUS SATIVUS* L. Brassicaceae. Radish.

No. 67-A. *Rabu*; *mulingi*. From the market at Kandy, Ceylon, February 23, 1936. A large white radish, 18 inches long and 2 inches in diameter; both roots and tops are used as food.

115005. *RAPHANUS SATIVUS* L. Brassicaceae. Radish.

No. 213. *Mulangi gaddi*. From Bangalore, Mysore, March 5, 1936. A white radish a foot long, of mild flavor; said to grow the year around. Tops not used for food.

114845 to 115046—Continued.

115006 to 115012. RUBUS spp. Rosaceae.

115006. RUBUS LINEATUS Reinw.

No. 142. From the Botanic Gardens, Hakgala, Ceylon, February 28, 1936, at 6,200 feet altitude; grown from wild Ceylon stock for experiment. The fruits are sour and yellow.

115007. RUBUS NIVEUS Thunb.

Raspberry.

No. 144. From the Botanic Gardens, Hakgala, Ceylon, February 28, 1936. A semierect plant 10 feet high, from wild stock. The small purple-rose fruits are woolly and sour. Of possible use to breeders.

115008. RUBUS NIVEUS Thunb.

Raspberry.

No. 202. From Bangalore, Mysore, March 5, 1936. Fruits of good appearance and flavor; said to fruit freely throughout the year.

115009. RUBUS PEDUNCULOSUS Don.

Blackberry.

No. 143. From the Botanic Gardens, Hakgala, Ceylon, February 28, 1936. A creeping vine, 10 feet long, cultivated from wild stock. The berry is pleasant and of fair size.

115010. RUBUS MOLUCCANUS L.

Blackberry.

No. 145. From the Botanic Gardens, Hakgala, Ceylon, February 28, 1936. A tall growing bramble with attractive foliage and an abundance of sour, purplish fruits; cultivated from wild stock. Probably of no use except for breeding.

115011. RUBUS ELLIPTICUS J. E. Smith.
Yellow Himalayan raspberry.

No. 129. From the Botanic Gardens, Hakgala, Ceylon, February 28, 1936. Fruit very small, pea size, and yellow.

115012. RUBUS PEDUNCULOSUS Don.

No. 130. Collected in the Botanic Gardens, Hakgala, Ceylon, at 6,500 feet altitude, February 28, 1936.

115013. SAPINDUS sp. Sapindaceae.

No. 26. *Penela*; *bundikota*. From the market at Colombo, Ceylon, February 20, 1936. Used for washing; especially good for woollens.

115014. SEMECARPUS ANACARDIUM L. f.
Anacardiaceae.

No. 22. *Sen gutta*. From the market at Colombo, Ceylon, February 20, 1936. The juice of this nut, mixed with lime, forms an indelible ink, used for marking clothes.

115015. SESAMUM ORIENTALE L. Pedalia-
Sesameae.

No. 29. *Tallu*; *ellu*. From the market at Colombo, Ceylon, February 20, 1936. Seeds said to yield a high-grade oil.

115016. SESBANIA GRANDIFLORA (L.) Poir.
Fabaceae.

No. 153. *Agati*. From the market at Kandy, Ceylon, February 23, 1936. A small tree 20 feet high whose flowers and pinnate leaves are eaten.

114845 to 115046—Continued.

115017 to 115024. SOLANUM MELONGENA L.
Solanaceae. Eggplant.115017. No. 47. *Wambatu*; *katerikai*.
From the market at Kandy, Ceylon,
February 23, 1936. Fruit purple, 6
inches long.115018. No. 95. *Wambatu*. Collected
near Colombo, Ceylon, February 25,
1936.115019. No. 164. *Wambatu*. From
Dumballa, Ceylon, March 1, 1936.
Fruit purple white, the size of a
large orange. Said to be the best
variety grown in Ceylon.115020. No. 165. *Wambatu*. From
Dumballa, Ceylon, March 1, 1936.
Fruit purple white, about a foot long
and 2 inches in diameter. Said to
be inferior to the round variety (No.
164, P. I. 115019).115021. No. 178. *Udapi*; *Katerikai*.
From Colmbatore, March 11, 1936.
Fruit round, 3½ inches in diameter,
with a green mantle over the yellow-
green body. There are few seeds in
the red flesh, and it is not acid; said
to be one of the best varieties and to
be peculiar to Udapi where it has
been grown for centuries.115022. No. 183. *Katerikai*. From
Coimbatore, March 4, 1936. Fruit
many seeded, acid, round, yellow, 2
inches in diameter. Adapted to dry
alkaline soil.115023. No. 209. *Vankaya*. From
Bangalore, Mysore, March 5, 1936.
Fruit said to be large, round, purple.115024. No. 222. *Erangere*. From
Bangalore, Mysore, March 5, 1936.
Fruit said to be green and of super-
ior quality.

115025. SOLANUM sp. Solanaceae.

No. 172-O. From Kandy, Ceylon.
Ferot. Blue and white flowers.115026 and 115027. SOLANUM XANTHOCAR-
PUM Schrad. and Wendl. Solanaceae.

Elabattu. A prickly annual, native to
the Tropics of the Old World. Small
fruits and leaves eaten as vegetables.

115026. No. 54. 115027. No. 94.

115028 and 115029. SORGHUM VULGARE
Pers. Poaceae. Sorghum.

Collected at Teldeniya, near Kandy, Cey-
lon, February 25, 1936. Said to be used
as grain.

115028. No. 91. *Teringu*.115029. No. 105. *Kara-iringu*.115030. STIZOLOBIUM ATERRIMUM Piper and
Tracy. Fabaceae. Velvetbean.

No. 89. From Teldeniya, near Kandy,
Ceylon, February 25, 1936. Plant grown
for fodder; said to have been introduced
from the United States.

115031. STIZOLOBIUM DEERINGIANUM Bort.
Fabaceae. Deering velvetbean.No. 109. *Endura*. From Kandy, Cey-
lon, February 23, 1936.

114845 to 115046—Continued.

115032. *TAMARINDUS INDICA* L. Caesalpinaceae. Tamarind.

No. 124. *Sujambala*. From the market at Kandy, Ceylon, February 27, 1936. Fruit sold dried; used throughout India for chutney.

For previous introduction see 98884.

115033. *ALTERNANTHERA SESSILIS* (L.) R. Br. Amaranthaceae.

No. 50. *Mukunucena*; *Polkurupula*. From Teldeniya, near Kandy, Ceylon, February 25, 1936. An annual native to Australia; naturalized in tropical Asia where it grows as a weed and is used as greens.

115034. *TITHONIA DIVERSIFOLIA* (Hemsl.) A. Gray. Asteraceae.

No. 156. *Natasuria*. From Kandy, Ceylon, March 1, 1936. A stout herb 10 feet high, with large yellow flowers, commonly used as a hedge plant.

115035. *TRICHOSANTHES ANGUINA* L. Cucurbitaceae. Snakegourd.

No. 58. *Patola*; *patalunga*. From the market at Kandy, February 23, 1936. Fruit green, 4 feet long. Used as a vegetable.

For previous introduction see 103714.

115036. *TRICHOSANTHES HIMALENSIS* C. B. Clarke. Cucurbitaceae.

No. 159. *Gong Kekri*. From Sigiyira, Ceylon, at 500 feet altitude, March 1, 1936. A wild vine, becoming about 10 feet long; with oblong fruits 1 inch long.

115037. *X TRITONIA CROCOSMIFLORA* Nicholson. Iridaceae.

No. 141. From the Botanic Gardens, Hakgala, Ceylon, February 28, 1936. A plant which resembles a gladiolus, with orange-colored flowers about 2 inches across.

For previous introduction see 103482.

115038 to 115044. *VIGNA* spp. Fabaceae.

115038. *VIGNA SESQUIPEDALIS* (L.) Fr. Asparagus-bean.

No. 108. *Polon-me* or *diya-mekoral*. From Teldeniya, near Kandy, Ceylon, February 25, 1936. Pods said to be up to 4 feet long and one-half inch wide. Used as a vegetable.

115039 to 115044. *VIGNA SINENSIS* (Turner) Savi. Cowpea.

Nos. 115039 to 115042 were collected in the market at Kandy, Ceylon, February 23, 1936.

115039. No. 71. *Mekoral*.

115040. No. 117. *Me*. Pods used as a vegetable.

115041. No. 116. *Li-me*. Pods used as a vegetable.

115042. No. 118. *Nilmorunga*. Pods used as a vegetable.

115043. No. 125. *Diya-Mekoral*. From a village near Kandy, Ceylon, February 27, 1936. Seeds and pods eaten.

115044. No. 208. *Alasandi*. From Bangalore, Mysore, March 5, 1936.

114845 to 115046—Continued.

Both green pods and dried beans used as food.

115045. *VITIS VINIFERA* L. Vitaceae. European grape.

No. 199. From Bangalore, Mysore, March 5, 1936. The sweet blue-black fruits are the size of marbles and much like the Concord in flavor. Said to have been introduced into Mysore over 100 years ago; it grows well, producing two crops yearly. The vine does not stand pruning.

115046. *EUPATORIUM LIGUSTRINUM* DC. Asteraceae.

No. 171—C. From the Botanic Gardens, Hakgala, Ceylon, February 23, 1936. An attractive shrub up to 15 feet high, with small oblong leaves and many heads of small white flowers. Native to eastern and southern Mexico.

115047 to 115059.

From the Union of Soviet Socialist Republics. Seeds presented by N. I. Sharapov, at the request of Doctor Sinskaya, Institute of Plant Industry, Leningrad. Received April 23, 1936.

115047 to 115050. *ELEUSINE COBACANA* (L.) Gaertn. Poaceae. African millet.

115047. No. 6912. From Ethiopia.

115048. No. 8334. Originally from California.

115049. No. 5863. From Ceylon.

115050. No. 5847. Originally from Eritrea.

115051 to 115053. *ERAGROSTIS ABYSSINICA* (Jacq.) Schrad. Poaceae. Teff.

For previous introduction see 60485.

115051. No. 5778. From Addis Ababa, Ethiopia.

115052. No. 5797. From Ethiopia.

115053. No. 5801. From Ethiopia.

115054. *ERAGROSTIS POAEIODES* (L.) Beauv. Poaceae.

No. 1642.

For previous introduction see 113164.

115055 to 115059. *PENNISSETUM GLAUCUM* (L.) R. Br. Poaceae. Pearl millet.

115055. No. 8354. Originally from Tunisia.

115056. No. 9437. Originally from Eritrea.

115057. No. 8299. Originally from Arabia.

115058. No. 5880. Originally from Massaua.

115059. No. 7672. Originally from India.

115060 to 115095.

From the Union of Soviet Socialist Republics. Bulbs and seeds presented by Dr. V. P. Alekseev, Chief, Section of Introduction, All-Union Research Institute of Dry Subtropics, Tashkent. Received April 24, 1936.

Unless otherwise stated, the material was received as seeds.

115060 to 115095—Continued.

115060. *ALLIUM CAESIUM* Schrenk. Liliaceae.

No. 1. Bulbs of a lavender-flowered onion, native to Turkistan.

For previous introduction see 73597.

115061. *ALLIUM SUWOROWI* Regel. Liliaceae.

No. 2. A hardy bulbous plant, with very narrow flat leaves up to 16 inches long and hemispherical umbels of fragrant violet-rose flowers. Native to Kirghis Desert, Turkistan.

115062. *ALLIUM TATARICUM* L. f. Liliaceae.

No. 3. An allium with about 6 linear-lorate leaves, a stem up to 2 feet high, and a head of many rose or bright purple flowers. Native to southern Russia.

115063 to 115068. *AMYGDALUS* spp. Amygdalaceae.

115063 to 115067. *AMYGDALUS COMMUNIS* L. Almond.

115063. No. 67.

115064. No. 71.

115065. No. 72.

115066. No. 67-A.

115067. No. 68.

115068. *AMYGDALUS SPINOSISSIMA* Bunge.

No. 5. A wild almond, native to Turkistan.

For previous introduction see 108855.

115069. *BERBERIS HETEROPODA* Schrenk. Berberidaceae. Turkistan barberry.

No. 11. A handsome spreading shrub up to 5 feet high, with spines, when present, often 2 inches long and broadly oval, pale blue-green entire leaves an inch or two in length. The fragrant orange flowers are in five- to seven-flowered racemes, and the dark-blue berries are covered with a glaucous bloom. Native to Turkistan.

For previous introduction see 107896.

115070. *CICER FLEXUOSUM* Lipsky. Fabaceae.

No. 13. A decumbent or prostrate legume closely related to *Cicer songaricum*. Native to Turkistan.

115071. *CLEMATIS ORIENTALIS* L. Ranunculaceae. Oriental clematis.

No. 14. An ornamental vine with finely cut leaves and yellow and white flowers. The seeds are borne in terminal clusters, each seed having a fluffy or featherlike appendage. Native to Iran [Persia].

For previous introduction see 89733.

115072. *EREMURUS OLGAE* Regel. Liliaceae.

No. 22. A hardy herbaceous perennial with white flowers, produced in dense racemes. Native to Turkistan.

For previous introduction see 112855.

115073. *EUONYMUS SEMENOVII* Regel and Herd. Celastraceae.

No. 89. A low shrub with lanceolate leaves about 2 inches long and clusters of small yellowish flowers. Allied to *Euonymus europaeus*. Native to Turkistan.

115060 to 115095—Continued.

115074. *FRITILLARIA SEWERZOWI* Regel. Liliaceae.

No. 25. A bulbous plant with numerous ovate to lanceolate leaves up to 4 inches long and a terminal raceme of 5 to 12 purplish-green flowers. Native to Turkistan.

For previous introduction see 107543.

115075. *HERACLEUM* sp. Apiaceae.

No. 26.

115076. *HIPPOPHAE RHAMNOIDES* L. Elaeagnaceae. Common sea-buckthorn.

No. 91. A large-fruited variety with a high sugar content.

For previous introduction see 112736.

115077. *IRIS ORCHIOIDES* Carr. Iridaceae.

No. 28. A Juno iris from the mountains of Turkistan, with about six lanceolate leaves up to 9 inches long and a three- to six-headed stem often a foot high. The bright-yellow falls have purple blotches on each side of the crest.

115078. *IRIS HALOPHILA SOGDIANA* (Bunge) Skeels. Iridaceae.

No. 29. Leaves pale green, 1 to 1½ feet long; the stout terete stem, up to 2 feet high, often bears one or two spicate clusters of pale gray-lilac flowers below the end one. Native to Asia from Asia Minor eastward to Kashmir and Mongolia.

For previous introduction see 28868.

115079 and 115080. *JUGLANS FALLAX* Dode. Juglandaceae.

A walnut, closely related to *Juglans regia*, with very thick-shelled nuts. Native to southern Asia.

115079. No. 70.

115080. No. 70-A.

115081. *MALUS PUMILA* Mill. Malaceae. Paradise apple.

No. 78.

For previous introduction see 107634.

115082. *PAEONIA ANOMALA* L. Ranunculaceae. Peony.

No. 93.

115083. *PAEONIA INTERMEDIA* C. A. Mey. Ranunculaceae. Peony.

No. 38. A peony related to *Paeonia anomala*, with biternate leaves of many pinnatifid segments and large rosy-crimson flowers. Native to Turkistan.

115084 to 115087. *PISTACIA VERA* L. Anacardiaceae. Pistachio.

115084. No. 73.

115086. No. 94-A.

115085. No. 94.

115087. No. 94-B.

115088 and 115089. *PRUNUS CERASIFERA DIVARICATA* (Ledeb.) C. Schneid. Amygdalaceae. Cherry plum.

115088. No. 78.

115089. No. 55.

115090. *PRUNUS PROSTRATA* Labill. Amygdalaceae. Mountain cherry.

No. 56. A low, spreading, drought-resistant, deciduous shrub up to 3 feet high, with sharply serrate, broadly ovate leaves, pubescent beneath, and over an inch long. The rose-colored flowers, over an inch across, are followed by small red,

115060 to 115095—Continued.

nearly sessile fruits. Native to south-western Asia.

For previous introduction see 106803.

115091. AMYGDALUS TRILOBA (Lindl.) Ricker. Amygdalaceae. Flowering almond.

No. 76.

For previous introduction see 45728.

115092. PRUNUS sp. Amygdalaceae.

No. 74.

115093. PYRUS HETEROPHYLLA Regel and Schmalh. Malaceae.

No. 57.

115094. SPIRAEA HYPERICIFOLIA L. Rosaceae. Spirea.

No. 64. A deciduous shrub 5 feet high, with slender arching branches; the cuneate-obovate to obovate-lanceolate leaves, almost sessile, are over an inch long, and the small white flowers are in sessile umbels. Native from eastern Europe to Turkistan.

For previous introduction see 30569.

115095. VICIA TENUIFOLIA Roth. Fabaceae. Vetch.

No. 65.

115096 to 115106. NICOTIANA spp. Solanaceae. Tobacco.

From Peru and Ecuador. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received May 7, 1936.

115096. NICOTIANA GLUTINOSA L.

No. 103. *Tabaquillo*. From Olivo, Santulalia, near Lima, Peru, April 10, 1936.

115097. NICOTIANA GLUTINOSA L.

No. 106. From Yicán, near Matucana, 84 kilometers from Lima, Peru, April 10, 1936, at 2,340 meters altitude.

115098 to 115104. NICOTIANA TABACUM L. Common tobacco.

115098. No. 107. From San Mateo, Peru, at 3,100 meters altitude, April 10, 1936. Plants came originally from Chanchamayo, Peru.

115099. No. 108. Uncultivated tobacco collected near the suburbs of Lima, Peru, April 11, 1936.

115100 to 115104. From the Estanco de Tabaco, Provincia del Guayas, Guayaquil, Ecuador, April 4, 1936.

115100. No. 109. *Balzar*.

115101. No. 109—A. *Colimes*.

115102. No. 109—B. *Dawle*.

115103. No. 109—C. *Salitre*.

115104. No. 109—D. *Santa Lucia*.

115105. NICOTIANA sp.

No. 104. From Cocachacra, near Lima, Peru, at 1,400 meters altitude, April 10, 1936. A strain with white flowers.

115106. NICOTIANA sp.

No. 105. From Matucana, Peru, at 2,340 meters altitude, April 10, 1936. A strain with white flowers.

115107 to 115128. HUMULUS LUPULUS L. Moraceae. Common hop.

From the Union of Soviet Socialist Republics. Roots presented by the Zhitomir Plant Breeding Station, at the request of H. I. Sharapov, former Head of Department of New Cultures and Introduction, Leningrad. Received April 8, 1936.

115107. Serebrianka. No. 3-10.

115108. Serebrianka. No. 3-13.

115109. Skorospelka. Nos. 4177, 9-18.

115110. Zemshevii. Nos. 4176, 28-6.

115111. Skorospelka. Nos. 4183, 9-19.

115112. Zemshevii. Nos. 4168, 27-23.

115113. Zemshevii. Nos. 4169, 27-18.

115114. Zaatzkii. Nos. 4159, 21-16.

115115. Serebrianka. Nos. 4151, 3-21.

115116. Zaatzkii. Nos. 4164, 22-8.

115117. Zemshevii. Nos. 4170, 28-7.

115118. Zemshevii. Nos. 4175, 27-11.

115119. Skorospelka. Nos. 4180, 8-20.

115120. Skorospelka. Nos. 4154, 3-18.

115121. Zaatzkii. Nos. 4162, 22-5.

115122. Skorospelka. Nos. 4179, 8-17.

115123. Zaatzkii. Nos. 4160, 21-21.

115124. Serebrianka. Nos. 4150, 3-20.

115125. Serebrianka. Nos. 4146, 4-4.

115126. Skorospelka. Nos. 4178, 8-18.

115127. Zemshevii. Nos. 4174, 27-12.

115128. Zemshevii. Nos. 4172, 27-22.

115129. SOLANUM TUBEROSUM L. Solanaceae. Potato.

From Germany. Tubers presented by Dr. R. Schick, Kaiser-Wilhelm Institute für Züchtungsforschung, Müncheberg Mark. Received May 9, 1936.

Eierkartoffel.

115130 and 115131.

From the Union of Soviet Socialist Republics. Seeds presented by the Director, Botanic Garden of the Academy of Sciences, Leningrad. Received April 29, 1936.

115130. CYCLAMEN sp. Primulaceae.

115131. ROSA sp. Rosaceae.

115132 to 115139. SOLANUM TUBEROSUM L. Solanaceae. Potato.

From Tasmania. Tubers presented by the Department of Agriculture, Launceston. Received May 11, 1936.

Tubers grown at Myrtle Bank, Tasmania.

115132. No. M. B. 18.

115133. No. M. B. 19.

115134. No. M. B. 25.

115135. No. M. B. 27.

115136. No. M. B. 35.

115137. No. M. B. 36.

115138. No. M. B. 41.

115139. No. M. B. 42.

115140. GOSSYPIMUM PERUVIANUM Cav.
Malvaceae. Cotton.

From Brazil. Seeds presented by S. Octavio Lamartine de Faria, Ministerio da Agricultura. Received October 2, 1930. Numbered in May 1936.

Moco cotton. Grown at the Experiment Station in Acary, Rio Grande do Norte.

115141 to 115289.

From the Union of Soviet Socialist Republics. Seeds presented by the Director, Botanic Garden, Samara. Received April 28, 1936.

115141. APIUM GRAVEOLENS L. Apiaceae.
Celery.

No. 82.

115142 to 115147. BETA VULGARIS L. Chenopodiaceae.
Common beet.

115142. No. 125.

115143. *Bordo*. No. 126.

115144. *Eclips*. No. 127.

115145. *Egyptetskaja*. No. 128.

115146. *Erfurtskaja*. No. 130.

115147. *Sacharnaya*. No. 129.

115148 to 115152. CAPSICUM ANNUUM L. Solanaceae.
Common redpepper.

115148. *Cardinal*. No. 221.

115149. *Kalinovskiy* (sweet). No. 220.

115150. *Kayenne* (pungent). No. 222.

115151. *Koziy zog* (pungent). No. 223.

115152. *Pomidorovidny* (sweet). No. 224.

115153 to 115160. CITRULLUS VULGARIS Schrad. Cucurbitaceae.
Watermelon.

115153. *Astrachanskiy belokoriy*. No. 287.

115154. *Azninovsky*. (No number.)

115155. *Bogatyry*. No. 288.

115156. *Chanteclair*. No. 290.

115157. *Cormovoy sem viridis*. No. 291.

115158. *Doct Forkass*. No. 292.

115159. *Lubimec chutora*. No. 293.

115160. *Sibirica nigrum*. No. 294.

115161 to 115173. CUCUMIS MELO L. Cucurbitaceae.
Muskmelon.

115161. *Abricos Lesevickogo*. No. 326.

115162. *Alzhirskaja*. No. 327.

115163. *Americanka*. No. 328.

115164. *Ananasnaya*. No. 329.

115165. *Cantaloup Arabka*. No. 330.

115166. *Cantaloup prescot*. No. 331.

115167. *Kara-kis*. No. 332.

115168. *Kerczenekaya*. No. 333.

115169. *Ksyl-uruk*. No. 334.

115170. *Nevidimka*. No. 335.

115171. *Persidskaya*. No. 336.

115172. *Tsarine dyon* or *dyori*(?). No. 337.

115173. *Ucz-ksyl*. No. 338.

115141 to 115289—Continued.

115174 and 115175. CUCUMIS SATIVUS L. Cucurbitaceae.
Cucumber.

115174. *Zelenchuk*. No. 339.

115175. No. 340.

115176 to 115188. CUCURBITA spp. Cucurbitaceae.

115176. CUCURBITA FICIFOLIA Bouche.
Alcailota.

No. 342. A melon, native to Ecuador, where it is cultivated extensively and used for food for man as well as stock. The melons average 20 to 30 pounds each; when completely ripe, the shell is very hard, the flesh white, and the seeds black. There are two varieties, the white shelled and the green and white striped.

For previous introduction see 114150.

115177. CUCURBITA PEPO L. Pumpkin.
 No. 344.

115178 to 115180. CUCURBITA MAXIMA Duchesne.
Squash.

115178. *Kubyschka seraya*. No. 340.

115179. *Mindalnaya*. No. 350.

115180. *Stofuntovaya*. No. 255.

115181. CUCURBITA MOSCHATA Duchesne.
Cushaw.

Donskaja perechvatka. No. 395.

115182 to 115187. CUCURBITA PEPO L. Pumpkin.

115182. *Italica*. No. 346.

115183. *Kabaczoskie graceskie*. No. 348.

115184. *Mosoleevskaja*. No. 351.

115185. *Ovalnajo*. No. 352.

115186. *Patisson*. No. 353.

115187. *Scorospelka*. No. 354.

115188. CUCURBITA sp.

Received under the name "amantia," for which a place of publication has not been found.

115189 to 115191. LACTUCA SATIVA L. Cichoriaceae.
Garden lettuce.

115189. No. 552. *Fol aurea*.

115190. No. 393. *Napumsk*.

115191. No. 394. *Steinkopf*.

115192. LACTUCA SERRIOLA L. Cichoriaceae.
Prickly lettuce.

No. 396.

For previous introduction see 114535.

115193. LALLEMANTIA IBERICA (Bieb.) Fisch. and Mey. Menthaceae.

No. 558.

For previous introduction see 114610.

115194 to 115226. LYCOPERSICON ESCULENTUM Mill. Solanaceae.
Tomato.

115194. No. 449. *Alice Roosevelt*.

115195. No. 627. *Nest of All*.

115196. No. 546-C. *Budenovka*.

115197. No. 478. *Cerasiformis*.

115141 to 115289—Continued.

115198. No. 469. *Dwarf*.
 115199. No. 457. *Ficarazzi*.
 115200. No. 635. *First Borgesse*.
 115201. No. 634. *First Early*.
 115202. No. 639. *Italica*.
 115203. No. 636. *Jaune grosse*.
 115204. No. 546—C. *John Baer*.
 115205. No. 546. *Yuwel*.
 115206. No. 641. *Krasaviza*.
 115207. No. 642. *Luczschiy is Krasaviy*.
 115208. No. 644. *Merveille de Italica*.
 115209. No. 546—G. *Merveille des marches*.
 115210. No. 645. *Metschles*.
 115211. No. 646. *Non plus ultra*.
 115212. No. 647. *Piedro*.
 115213. No. 476. *Pieretta*.
 115214. No. 649. *Pimpinellifolium*.
 115215. No. 650. *Pomme rouge*.
 115216. No. 546—K. *Ponderosa*.
 115217. No. 652. *Precoce de Gall*.
 115218. No. 653. *Reed cherry*.
 115219. No. 546—Q. *Reine des Hatives*.
 115220. No. 546—M. *Roi Humbert*.
 115221. No. 460. *Sparx Ertiana*.
 115222. No. 546—O. *Sparx Gribowsky*.
 115223. No. 659. *Surprise*.
 115224. No. 468. *Triumph*.
 115225. No. 637. *Yellow-cherry*.
 115226. No. 1056.
- 115227 to 115260. PHASEOLUS VULGARIS L.
 Fabaceae. Common bean.
 115227. No. 596. *Angliyskayo zhaltaya*.
 115228. No. 592. *Arabaka sparzhovoya*.
 115229. No. 614. *Berlinskaya*.
 115230. No. 591. *Bomba ochryanaya*.
 115231. No. 814. *Charkovskaja pestraja*.
 115232. No. 815. *Cyganka*.
 115233. No. 816. *Ellypticzeskaja pestraja*.
 115234. No. 817. *Gloire de vitry rouge*.
 115235. No. 818. *Gollandskeja*.
 115236. No. 606. *Jaune de la chine*.
 115237. No. 616. *Improved golden wax*.
 115238. No. 821. *Koricznevajae Rjasan*.
 115239. No. 822. *Lopata*.
 115240. No. 823. *Mandzhurskaja sem rubre*.
 115241. No. 605. *Moskovskaya rannaya*.
 115242. No. 615. *Nesravuennayo*.
 115243. No. 597. *Noir de l'Hermitage*.
 115244. No. 599. *Ochryanka*.
 115245. No. 828. *Pestraja*.

115141 to 115289—Continued.

115246. No. 829. *Prjaniczki*.
 115247. No. 830. *Radosty chosjayki*.
 115248. No. 613. *Risovaya*.
 115249. No. 832. *Rond-blanc*.
 115250. No. 619. *Rosovo-pestraja*.
 115251. No. 611. *Rosovo-zolotistayo*.
 115252. No. 617. *Rostovskayo belaya*.
 115253. No. 836. *Sacharnaja*.
 115254. No. 837. *Sem alba e Gallia*.
 115255. No. 601. *Sem sulphuree e Tauria*.
 115256. No. 596. *Sparzhevaya shokoladnaya*.
 115257. No. 620. *Triumph*.
 115258. No. 622. *Wilhelm*.
 115259. No. 588. *Zolotoy dozhdy*.
 115260. No. 843. *Zolotaja gora*.
- 115261 to 115268. PISUM SATIVUM L. Fabaceae. Pea.
 115261. No. 872. *Konjek-gorbunok*.
 115262. No. 874. *Martonsky*.
 115263. No. 873. *Mergeyma*.
 115264. No. 875. *Richlik*.
 115265. No. 880. *Thebaicum*.
 115266. No. 648. *Tykvoviy*.
 115267. No. 878. *Victoria rosea*.
 115268. No. 877. *Wachs Schwert grosse*.
115269. PISUM sp. Fabaceae.
 No. 879. From Morocco.
- 115270 to 115279. RHEUM spp. Polygonaceae. Rhubarb.
 115270. RHEUM sp.
 No. 700. Received under the name "atlanticum," for which a place of publication has not been found.
 115271. RHEUM COMPACTUM L.
 No. 943.
 For previous introduction see 21764.
 115272. RHEUM AUSTRALE Don.
 No. 944.
 115273. RHEUM FRANZENBACHII Muentner.
 No. 945.
 For previous introduction see 114595.
 115274. RHEUM PALMATUM L.
 Sorrel rhubarb.
 No. 976.
 For previous introduction see 114654.
 115275. RHEUM RHAPONTICUM L.
 Common rhubarb.
 No. 947.
 115276. RHEUM RIBES L.
 No. 948. A herbaceous perennial up to 5 feet high, with large cordate to reniform leaves and panicles of small blood-red, narrow-winged fruits. Native to the mountains of southwestern Asia.
 For previous introduction see 114176.

115141 to 115289—Continued.

115277. *RHEUM WEBBIANUM* Royle.

No. 696. A stout perennial up to 6 feet high, native to the Himalayas at altitudes between 10,000 and 14,000 feet.

For previous introduction see 110629.

115278. *RHEUM* sp.

No. 949. *Victoria*, a horticultural variety.

115279. *RHEUM* sp.

No. 695.

115280. to 115289. *SOLANUM* spp. Solanaceae.115280 and 115281. *SOLANUM DULCAMARA* L. Bitter nightshade.

115280. No. 1047.

115281. No. 1048.

115282. *SOLANUM GRACILE* Otto.

No. 1049.

For previous introduction see 110813.

115283. *SOLANUM LUTEUM* Mill.

No. 1051. A hairy herb with branching stems over 2 feet high, woolly ovate leaves, and umbels of white flowers followed by small yellow berries. Native to temperate South America.

For previous introduction see 110662.

115284. *SOLANUM MELONGENA* L. Eggplant.

No. 1052.

115285. *SOLANUM MINIATUM* Bernh.

No. 1057. An annual, native to southern Europe, with unarmed stems over a foot high, ovate glabrous leaves, and racemes of small white flowers.

For previous introduction see 110663.

115286 and 115287. *SOLANUM NIGRUM* L. Black nightshade.

115286. No. 1053.

115287. No. 1054.

115288. *SOLANUM PYRACANTHUM* Jacq. Nightshade.

No. 1055. A prickly evergreen bush about 3 feet high, with blue flowers in racemes sometimes 6 inches long. The bright-red round fruits are edible. Probably native to tropical Africa.

For previous introduction see 91552.

115289. *SOLANUM QUITOENSE* Lam. Naranjilla.

No. 1050. An ornamental shrub about 3 feet high; the oblong-ovate, deep-green leaves are soft-hairy and the large white flowers are in short axillary clusters. The aromatic orange-colored juicy fruits are nearly spherical and about 2 inches in diameter; they are used in the preparation of refreshing drinks. The plant is native to the mountains of Peru.

For previous introduction see 89548.

115290 to 115298. *AGROPYRON* spp. Poaceae.

From Canada. Seeds presented by J. R. Fryer, University of Alberta, Edmonton. Received April 29, 1936.

115290 to 115298—Continued.

115290. *AGROPYRON ALBICANS* Scribn. and Smith.115291. *AGROPYRON CRISTATUM* (L.) Gaertn. Crested wheatgrass.115292. *AGROPYRON DASYSTACHYUM* (Hook.) Scribn. Thickspike wheatgrass.

A perennial grass up to about 2 feet high, with creeping rhizomes. Native to Canada.

115293. *AGROPYRON ELONGATUM* (Host) Beauv.

A drought-resistant grass.

For previous introduction see 98526.

115294. *AGROPYRON INTERMEDIUM* (Host) Beauv.

For previous introduction see 114205.

115295 and 115296. *AGROPYRON SMITHII* Rydb.

For previous introduction see 21866.

115297 and 115298. *AGROPYRON SUBSECUNDUM* (Link) Hitchc. Bearded wheatgrass.

115299 to 115315.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Plant Industry, Leningrad. Received April 27, 1936.

115299 to 115312. *ONOBRYCHIS* spp. Fabaceae.115299. *ONOBRYCHIS ARENARIA* DC.

No. 14377. From the Veselyi Podol Breeding Station, Ukraine.

Nos. 115300 to 115308 were received under the name "antasiatica," for which a place of publication has not been found.

115300. *ONOBRYCHIS* sp.

No. 19516. From the Plant Breeding Station, Azerbaijan.

115301. *ONOBRYCHIS* sp.

No. 16898. From the Plant Breeding Station, Azerbaijan.

115302. *ONOBRYCHIS* sp.

No. 17552. From the Plant Breeding Station Azerbaijan.

115303. *ONOBRYCHIS* sp.

No. 18253. From the Dasian District, Armenia.

115304. *ONOBRYCHIS* sp.

No. 19515. From the Azerbaijan Plant-Breeding Station.

115305. *ONOBRYCHIS* sp.

No. 19517. Sta. Var. No. 2. From the Plant-Breeding Station, Azerbaijan; originally from Akhalkalikian, Sainfain, Georgia.

115306. *ONOBRYCHIS* sp.

No. 19518. From the Plant-Breeding Station, Azerbaijan.

115307. *ONOBRYCHIS* sp.

No. 19123. From the District of Sisian, Armenia.

115299 to 115315—Continued.

115308. *ONOBRYCHIS* sp.

No. 19522. From the Plant-Breeding Station, Azerbaijan.

115309. *ONOBRYCHIS OXYTROIPOIDES* Bunge.

No. 15150. From Armenia. A stemless herbaceous perennial with a woody spreading rhizome and compound leaves 2 to 3 inches long. Native to Asia Minor.

For previous introduction see 108662.

115310. *ONOBRYCHIS PETRAEA* Desv.

No. 13406. From Azerbaijan, Shera-dil. An erect perennial with pinnate leaves, the leaflets oblong-lanceolate. Native to the Caucasus region.

For previous introduction see 108663.

115311 and 115312. *ONOBRYCHIS VULGARIS* Hill. Sanfoin.

From the Uladovo-Lulenez Plant Breeding Station. Variety 4/5.

115311. No. 19571.

115312. No. 19571-A.

115313. *PHLEUM PHLEOIDES* (L.) Karst. Poaceae. Timothy.

No. K-15098.

For previous introduction see 111706.

115314. *POA PRATENSIS* L. Poaceae. Kentucky bluegrass.

No. K-15772.

115315. *POA TIBETICA* Munro. Poaceae. Bluegrass.

No. K-14661. From the Altai region. A tall stout grass 1 to 2 feet high, with firm, linear, acute leaves about 8 inches long. Native to northwestern India at altitudes of 9,000 to 16,000 feet.

For previous introduction see 108534.

115316. *VIOLA* sp. Myristicaceae.

From the Canal Zone. Seeds presented by J. E. Higgins, Director, Canal Zone Experiment Gardens, Summit. Received May 20, 1936.

115317 to 115319.

From the Union of South Africa. Seeds purchased from the Winton Nurseries, Bonnie Vale. Received May 6, 1936.

115317. *BRUNSVIGIA GIGANTEA* Heist. Amariyllidaceae.

A brunsvigia with about four tongue-shaped leaves 3 to 5 inches broad and about 1 foot long. The 20 to 30 bright-red flowers, about 2 inches long, are in an umbel on a scape a foot or more high. Native to South Africa.

115318. *BRUNSVIGIA JOSEPHINAE* (Red.) Ker. Amariyllidaceae.

A South African bulbous plant 2 to 3 feet high, with 8 or 10 thick closely ribbed, strap-shaped leaves and large bright-red flowers.

For previous introduction see 61245.

115319. *BUPHANE DISTICHA* (L. f.) Herbert. Amariyllidaceae.

A South African plant with a very large bulb up to a foot in diameter, which

115317 to 115319—Continued.

grows half out of the ground, protected by a multitude of papery coats. The stout scape, 6 inches to 1 foot high, bears a dense umbel of red flowers, and the thick distichous leaves, which appear late, are strap-shaped and 1 to 2 feet long.

For previous introduction see 108292.

115320 to 115416.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Plant Industry, Lenin Academy of Agricultural Sciences, Leningrad. Received May 25, 1936.

115320 to 115322. *AGROPYRON ELONGATUM* (Host) Beauv. Poaceae.

A drought-resistant grass.

For previous introduction see 115293.

115320. No. 815. From Kazakstan.

115321. No. 575. K-15102.

115322. No. 810. From Saratov.

115323. *AGROPYRON JUNCEUM* (L.) Beauv. Poaceae.

No. 709. From Pamir, Turkistan.

For previous introduction see 88715.

115324. *AGROPYRON* sp. Poaceae.

No. 900. From Turkmenistan.

115325. *AGROSTIS ALBA* L. Poaceae.

No. K-15067. From eastern Kazakstan.

115326. *AGROSTIS ALBA* L. Poaceae.

No. K-16086.

From the Mamont region.

115327. *ALOPECURUS PRATENSIS* L. Poaceae. Meadow foxtail.

No. K-15095. From Gorki Province.

For previous introduction see 111514.

115328. *POA PALUSTRIS* L. Poaceae. Bluegrass.

No. K-15094. From Gorki Province.

115329 to 115344. *BROMUS* spp. Poaceae. Bromegrass.115329 to 115338. *BROMUS INERMIS* Leyss.

115329. No. K-9792.

115330. No. K-11854.

115331. No. K-14590.

115332. No. K-14591.

115333. No. K-14593.

115334. No. K-15016.

115335. No. K-15786.

115336. No. K-15899.

115337. No. K-16081.

115338. No. K-17252.

115339. *BROMUS TECTORUM GLABRATUS* Spenner.

No. K-14925.

For previous introduction see 106427.

115340 to 115342. *BROMUS VARIEGATUS* Bieb.

115340. No. K-14958.

115320 to 115416—Continued.

115341. No. K-16080. From Armenia.
115342. No. K-15204. From Armenia.
115343. *BROMUS* sp.
No. K-15029. From the Ukraine.
115344. *BROMUS* sp.
No. K-9760.
- 115345 to 115349. *DACTYLIS GLOMERATA* L.
Poaceae. Orchard grass.
115345. No. K-11837. From northern Caucasus.
115346. No. K-11859. From northern Kazakhstan.
115347. No. K-11971. From Armenia.
115348. No. K-15270. From eastern Kazakhstan.
115349. No. K-15756. From west Siberia.
- 115350 to 115358. *FESTUCA* spp. Poaceae.
Fescue.
- 115350 to 115355. *FESTUCA ELIATOR* L.
Meadow fescue.
115350. No. K-14964. From Armenia.
115351. No. K-14966. From Armenia.
115352. No. K-14967. From Armenia.
115353. No. K-15079.
115354. No. K-15819. From eastern Kayakota.
115355. No. K-17726. From western Siberia.
- 115356 to 115358. *FESTUCA OVINA* SULCATA Hack.
For previous introduction see 111975.
115356. No. K-12257. From south Kayakota.
115357. No. K-14274. From the Middle Volga region.
115358. No. K-16221.
115359. *FESTUCA RUBRA* L. Red fescue.
No. K-12900.
- 115360 to 115391. *MEDICAGO* spp. Fabaceae.
Medick.
- 115360 to 115367. *MEDICAGO FALCATA* L.
Yellow-flowered alfalfa.
115360. No. K-195.
115361. No. K-143.
115362. No. K-201.
115363. No. K-210.
115364. No. K-216.
115365. No. K-261.
115366. No. K-329.
115367. No. K-431.
- 115368 to 115386. *MEDICAGO SATIVA* L.
Alfalfa.
115368. No. K-1244.
115369. No. K-1453.
115370. No. K-1484.

115320 to 115416—Continued.

115371. No. K-1646.
115372. No. K-1961.
115373. No. K-1836.
115374. No. K-1282.
115375. No. K-2116.
115376. No. K-1489.
115377. No. K-1530.
115378. No. K-1830.
115379. No. K-1812.
115380. No. K-1450.
115381. No. K-1460.
115382. No. K-1887.
115383. No. K-2113.
115384. No. K-2114.
115385. No. K-1458.
115386. No. K-1404.
115387. *MEDICAGO*.
No. K-205. A hybrid alfalfa.
- 115388 to 115391. *MEDICAGO SATIVA* L.
Alfalfa.
115388. No. K-1851.
115389. No. K-1839.
115390. No. K-1627.
115391. No. K-1545.
- 115392 to 115396. *MELILOTUS* spp. Fabaceae.
Sweetclover.
- 115392 to 115394. *MELILOTUS ALBA* Desr.
White sweetclover.
115392. No. K-9654/94.
115393. No. K-10354.
115394. No. K-10178.
115395. *MELILOTUS DENTATA* (Waldst. and Kit.) Pers.
No. K-456. From west Siberia.
115396. *MELILOTUS OFFICINALIS* (L.) Lam.
No. K-2207. From the Amur region.
- 115397 to 115399. *ONOBRYCHIS* spp. Fabaceae.
115397. *ONOBRYCHIS ARENARIA* DC.
No. 14377. From the Vesely Podol Plant Breeding Station.
For previous introduction see 111695.
115398. *ONOBRYCHIS VULGARIS* Hill.
Sanfoin.
No. 17154. Originally from Armenia.
115399. *ONOBRYCHIS* sp.
No. 19515. From Azerbaijan. Received under the name "antasiatica," for which a place of publication has not been found.
- 115400 to 115405. *PHLEUM* spp. Poaceae.
Timothy.
- 115400 and 115401. *PHLEUM PHLEOIDES* (L.) Karst.
115400. No. K-14930.
115401. No. K-15098. From west Siberia.

115320 to 115416—Continued.

- 115402 to 115405. *PHLEUM PRATENSE* L.
 115402. No. K-15309. From Armenia.
 115403. No. K-15776. Originally from the Altai region.
 115404. No. K-9747.
 115405. No. K-15772. From west Siberia.
- 115406 to 115416. *TRIFOLIUM* spp. Fabaceae. Clover.
 115406. *TRIFOLIUM HYBRIDUM* L. Alsike clover.
 No. R-17749. From the Ural region.
- 115407 to 115414. *TRIFOLIUM PRATENSE* L. Red clover.
 115407. No. R-2724. From the Tambor region.
 115408. No. R-9726. From the Ural region.
 115409. No. R-9992. From the Cheronepety region.
 115410. No. K-16186. From Transven.
 115411. No. K-18969. From west Siberia.
 115412. No. K-1914. From west Siberia.
 115413. No. K-18970. From west Siberia.
 115414. No. R-19556. From Leningrad Province.
- 115415 and 115416. *TRIFOLIUM REPENS* L. White clover.
 115415. No. K-19554.
 115416. No. R-15670. From Kazakhstan.

115417 to 115427.

- From Belgium. Seeds presented by the Director, Botanic Garden, Brussels. Received April 29, 1936.
115417. *ASTRAGALUS CICER* L. Fabaceae.
 A European perennial with prostrate or ascending stems.
 For previous introduction see 66515.
- 115418 to 115424. *DELPHINIUM* spp. Ranunculaceae. Larkspur.
 115418. *DELPHINIUM BICORNUTUM* Hemsl.
 A branching delphinium about 3 feet high, with five-parted leaves and blue flowers with spurs sometimes two-horned. Native to Mexico.
115419. *DELPHINIUM BRUNONIANUM* Royle.
 A perennial larkspur a foot or less high, with five-parted leaves, the lobes sharply cut or toothed. Native to western Tibet at 14,000 feet altitude.
 For previous introduction see 104950.
115420. *DELPHINIUM CARDIOPETALUM* DC.
 An annual, blue-flowered larkspur closely related to *Delphinium hatteratum*. Native to the Mediterranean region.

115417 to 115427—Continued.

115421. *DELPHINIUM MAACKIANUM* Regel.
 For previous introduction and description see 114643.
115422. *DELPHINIUM PENARDI* Huth.
 115423. *DELPHINIUM TATSIIENENSE* Franch.
 For previous introduction and description see 114506.
115424. *DELPHINIUM VILLOSUM* Stev.
 A perennial delphinium with stems about 3 feet high and lax racemes of blue flowers. It is allied to *Delphinium elatum*. Native to southeastern Europe and western Asia.
115425. *RHEUM TETRAGONOPUS* Mart. Polygonaceae.
 115426. *RHEUM UNDULATUM* L. Polygonaceae.
 115427. *SPINACIA OLERACEA* L. Chenopodiaceae. Common spinach.
- 115428 to 115525.
 From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received April 29, 1936.
- 115428 to 115430. *ALLIUM CEPA* L. Liliaceae. Onion.
 115428. No. 297. *Piaz.* From Poona, March 16, 1936. A flat red onion, 3 inches in diameter. Presented by the principal of the Poona Agricultural College.
 115429. No. 298. *Piaz.* From Poona, March 16, 1936. A flat white onion 3 inches in diameter. Presented by the principal of the Poona Agricultural College.
 115430. No. 299. *Piaz.* From Poona, March 16, 1936. A red onion, presented by a farmer.
115431. *BETA VULGARIS* L. Chenopodiaceae. Common beet.
 No. 308. *Palak.* A potherb, said to be native. Presented by the principal of the Poona Agricultural College.
115432. *BETA VULGARIS* L. Chenopodiaceae. Common beet.
 No. 325. *Palak.* March 16, 1936. A potherb, native variety.
- 115433 to 115436. *CAJANUS INDICUS* Spreng. Fabaceae. Figeon-pea.
 Nos. 115433 to 115435 were collected at Poona, March 16, 1936. *Tur.* An important dry-soil crop; used as split peas.
115433. No. 290.
 115434. No. 300.
 115435. No. 301.
 115436. No. 118—A. *Raba fora.* From near Kandy, Ceylon. February 26, 1936. The leaves are eaten.
- 115437 to 115443. *CAPSICUM ANNUM L.* Solanaceae. Common redpepper.
 From Poona, March 16, 1936. Presented by Dr. G. S. Cheema, Chief Horticulturist, Bombay Government. Strains of redpeppers that have been bred from the local forms.

115428 to 115525—Continued.

115437. No. 322. A long, thin-skinned variety.
115438. No. 322-A. A thick-skinned variety.
115439. No. 322-B. *Hungarian yellow*; a vegetable type.
115440. No. 322-C. *Ruby King*; a vegetable type.
115441. No. 322-D. *Donna kai* of Dlarwar; a vegetable type.
115442. No. 322-E. Local *Deccan*.
115443. No. 322-F. Short, thick, and very pungent.
115444. CARTHAMUS TINCTORIUS L. Asteraceae. Safflower.
No. 293. *Kardi*. Poona, March 16, 1936. Presented by the principal of the Poona Agricultural College. Used for oil and dye.

For previous introduction see 99340.

115445. CHENOPODIUM ALBUM L. Chenopodiaceae.
No. 307. *Chandenbatwa*. Poona, March 16, 1936. Presented by the principal of the Poona Agricultural College. The leaves are used as a potherb throughout the year.

For previous introduction see 97718.

115446. CHENOPODIUM ALBUM L. Chenopodiaceae.
No. 279. *Chakvat*. From Poona, March 15, 1936. Much esteemed as a potherb.
- 115447 to 115450. CICER ARIETINUM L. Fabaceae. Chickpea.
Nos. 115447 to 115449 were collected at Poona, March 16, 1936. *Chama*. Presented by the principal of the Poona Agricultural College. An important dry ground crop. The beans are used in a variety of ways, even sold roasted as peanuts.

115447. No. 303. 115449. No. 305.

115448. No. 304.

115450. No. 252. *Kabula challa*. From Bombay, March 10, 1936. Said to be imported from Iran [Persia].

115451. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.
No. 271. *Tindo* or *delpasand*. From Poona, March 15, 1936. Variety *Fistulosus*. A form with thicker stems, sparingly lobed leaves, and long, somewhat hispid hairs. The smooth globose fruits, 3 inches in diameter, are sold green and are much esteemed as a vegetable, especially in the Punjab.

115452 to 115459. CUCUMIS MELO L. Cucurbitaceae. Muskmelon.

115452. No. 182. *Weleri polam*. From Coimbatore, March 4, 1936. An elongate, cylindrical melon about 18 inches long with rounded ends, yellowish rind slightly netted, and fragrant, mealy, pale salmon flesh of little flavor.

115453. No. 231. From the Tunghabdra River district, Mysore, March 6, 1936, at 1,200 feet altitude. A compressed fruit 6 inches long by 8 inches in diameter, netted, creamy white outside with firm, salmon-col-

115428 to 115525—Continued.

ored insipid flesh which will not rot, but will shrivel instead.

115454. No. 233. From Bombay, March 8, 1936. A well-netted, golden, elongated fruit 12 inches long, somewhat pointed at the ends. The thick, white, firm flesh has a honeydew flavor and keeps remarkably well with no tendency to rot.
115455. No. 234. Bombay, March 8, 1936. A rare type. The fruits are subglobose, 6 inches long, pale cream throughout, with a trace of netting on the outside, and insipid flesh.
115456. No. 235. From Bombay, March 8, 1936. A rare type with compressed fruit, 6 inches long by 8 inches in diameter, smooth, marbled green and yellow. The fragrant green flesh changes to salmon color around the seed cavity and has a distinctive flavor.
115457. No. 236. From Bombay, March 8, 1936. From the market. A nearly smooth yellow fruit with a few green marks, about the size and shape of a large grapefruit. The pale-yellow flesh is firm, fragrant, and sometimes very good. It keeps well.
115458. No. 342. *Pineapple*. From Poona, March 16, 1936. A melon with green, fragrant flesh which has been selected from local strains.
115459. No. 343. *Japanese mixed*. From Poona, March 16, 1936. A trade name used by the local seedsmen. The fruit is said to be of good quality.
115460. CUCUMIS SATIVUS L. Cucurbitaceae. Cucumber.
No. 326. *Kira*. From Poona, March 16, 1936. Fruit said to be 6 inches long, with white flesh; eaten fresh.
115461. CUCUMIS SATIVUS L. Cucurbitaceae. Cucumber.
No. 327. *Kakri*. From Poona, March 16, 1936. When ripe, the golden-brown fruit is 1 foot long.
- 115462 to 115464. CYAMOPSIS TETRAGONOLOBA (L.) Taub. Fabaceae. Guar.
From Poona, March 16, 1936. Presented by the principal of the Poona Agricultural College.
- For previous introduction see 114932.
115462. No. 314. 115464. No. 336.
115463. No. 315.
115465. DAUCUS CAROTA L. Apiaceae. Carrot.
No. 332. *Gajas*. March 16, 1936. From Poona. A pink carrot 6 inches long and over 2 inches across the top, said to grow the year round. Winter-grown specimens are tender and sweet.
- 115466 and 115467. DOLICHOS BIFLORUS L. Fabaceae. Twinflower dolichos.
From Poona, March 16, 1936. Presented by the principal of the Poona Agricultural College. The green pods are used as food and the dry beans as fodder.
115466. No. 312. *Kutti*.
115467. No. 313. *Kutti*; a different strain.

115428 to 115525—Continued.

115468 to 115471. *DOLICHOS LABLAB* L. Fabaceae. Hyacinth-bean.

115468. No. 276. *Paota* or *surati wal.* From Poona, March 15, 1936. The green pods and split dry seeds are eaten. Also used as a fodder plant.

115469. No. 277. *Karwal.* From Poona, March 15, 1936. The dry beans are used as food. The plant is used as fodder and green manure.

115470. No. 311. *Kadow wal.* From Poona, March 16, 1936. Presented by the principal of the Poona Agricultural College.

115471. No. 338. *Walwor.* From Poona, March 16, 1936. The pods are esteemed.

115472. *ELAEAGNUS* sp. Elaeagnaceae.

No. 345. From Poona, March 16, 1936. A wild shrub about 6 feet high; the sour-sweet, orange-pink fruits are sold in the market.

115473. *GOSSYPIUM ARBOREUM* L. Malvaceae. Cotton.

No. 335. Poona, March 16, 1936. Seeds from young plants 3 feet high, flowers mahogany colored; not widely cultivated.

115474. *GUIZOTIA ABYSSINICA* (L. f.) Cass. Asteraceae.

No. 310. *Karala.* March 16, 1936. The seeds contain from 40 to 43 percent of oil which is used for various household uses. Presented by the principal of the Poona Agricultural College.

115475. *SESBANIA AEGYPTIACA* Poir. Fabaceae.

No. 281. Poona, March 15, 1936. An attractive small tree with pods 6 inches long. Found in dry situations.

115476. *LACTUCA SATIVA* L. Cichoriaceae. Garden lettuce.

No. 306. From Poona, March 16, 1936. Presented by the principal of the Poona Agricultural College. Said to be naturalized from imported seed.

115477. *LATHYRUS SATIVUS* L. Fabaceae. Bitter vetch.

No. 302. *Lakh.* From Poona, March 16, 1936. Presented by the principal of the Poona Agricultural College. The dry beans are used as food.

115478. *LENS ESCULENTA* Moench. Fabaceae. Lentil.

No. 291. *Masur.* Poona, March 16, 1936. Used as cattle feed and for green manure.

115479. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

No. 309. From Poona, March 16, 1936. Presented by the principal of the Poona Agricultural College. Said to be naturalized.

115480. *MEDICAGO SATIVA* L. Fabaceae. Alfalfa.

No. 333. *Desi ghas.* "Native grass" from Kathiawar. From Poona, March 16, 1936. Grown as an annual for fodder.

115428 to 115525—Continued.

115481. *MEDICAGO SATIVA* L. Fabaceae. Alfalfa.

No. 334. *Desi ghas.* From Poona, March 16, 1936. A local alfalfa which lasts 3 years and can be cut 10 or 12 times a year; yields 15 tons of hay per acre.

115482. *MIMOSA* sp. Mimosaceae.

No. 280. *Shing.* From Poona, March 15, 1936. An attractive shrub 10 feet high, found in dry situations. The seeds are said to be used for ink.

115483. *MORINGA OLEIFERA* Lam. Moringaceae. Horseradish-tree.

For previous introduction and description see 114975.

115484 to 115492. *PHASEOLUS* spp. Fabaceae. Bean.

115484. *PHASEOLUS ACONITIFOLIUS* Jacq. Moth bean.

No. 273. *Matki.* From Poona, March 15, 1936. A dry-soil plant whose pods are eaten green and the dry seeds used as "split peas."

115485 and 115486. *PHASEOLUS AUREUS* Roxb. Mung bean.

From Poona, March 16, 1936. One of the best varieties. Both the green pods and the dry beans are used as food, and the plant is used as fodder.

115485. No. 289. 115486. No. 272.

115487 to 115489. *PHASEOLUS LUNATUS* L. Lima bean.

From Poona, March 16, 1936. Presented by the principal of the Poona Agricultural College.

115487. No. 294.

115488. No. 295. *Doublebeans.*

115489. No. 296. *Rangoon-bean.*

115490. *PHASEOLUS MUNGO* L. Urd.

No. 275. *Udi.* From Poona, March 15, 1936. The green pods and dry beans are used as food; the plant is used as fodder. From the flour a favorite wafer is made.

For previous introduction see 101581.

115491 and 115492. *PHASEOLUS VULGARIS* L. Common bean.

From Poona, March 15, 1936.

115491. No. 269. *Giaora.* Beans eaten stewed.

115492. No. 274. *Sharaun guara.* Both green pods and dry beans are eaten as food.

115493. *PISUM SATIVUM* L. Fabaceae. Pea.

No. 346. *Watana.* From Bombay, March 17, 1936. Seeds used as food and as fodder.

115494. *PISUM SATIVUM* L. Fabaceae. Pea.

No. 292. *Watana.* From Poona, March 16, 1936. Both green and dried beans are eaten as food, and the plant is used as fodder.

115428 to 115525—Continued.

115495 to 115497. *RAPHANUS SATIVUS* L.
Brassicaceae. Radish.

From Poona, March 16, 1936. Presented by the principal of the Poona Agricultural College.

115495. No. 328. *Magri*. The seed pods, up to 2 feet long, are used as a vegetable.

115496. No. 329. *Magri*. The seed pods, up to 2 feet long, are used as a vegetable.

115947. No. 331. *Sufed muli*. The leaves and the white root, up to a foot long, are eaten. The flavor is mild and pleasant, and the plant is said to grow the year round.

115498. *SOJA MAX* (L.) Piper. Fabaceae.
Soybean.

No. 337. From Poona, March 16, 1936. Origin unknown; the beans are used both as food and as fodder.

115499. *CAJANUS INDICUS* Spreng. Fabaceae.
Pigeonpea.

No. 203. *Tuarka balli*. From Bangalore, Mysore, March 5, 1936. Much esteemed as food.

115500. *VOANDZEBIA SUBTERRANEA* (L.) Thours. Fabaceae.

No. 246. *Musambi charma*. From Bombay, March 8, 1936. Eaten dry and said to be imported from Africa.

115501 to 115512. *SOLANUM MELONGENA* L.
Solanaceae. Eggplant.

115501. No. 278. *Kathe vanjalk*. From Poona, March 15, 1936. A very seedy, much-esteemed fruit, globose, greenish, marked white or purple, and about 2 inches in diameter with a spiny calyx.

115502. No. 323. *Gote vangi*. From Poona, March 16, 1936. A popular variety, said to be subglobose, of medium size, pale purple lined abundantly with white.

115503. No. 324. *Kalevangi*. From Poona, March 16, 1936. A black-purple fruit 8 inches long.

115504. No. 339. *Muktakeshi*. From Poona, March 16, 1936. A variety weighing up to 2 pounds and free from seeds.

115505. No. 340. *Giant of Benares*. A strain selected by a local seedsman from a northerly variety. Said to grow to 3 pounds.

115506 to 115512. From Poona, March 16, 1936. Presented by Dr. G. S. Chacema, Chief Horticulturist, Bombay Government. A collection of strains bred from the local forms, represented in his collection.

115506. No. 321. *Black Beauty*.

115507. No. 321—A. *Gote Vangi*.

115508. No. 321—B. *Long Green*.

115509. No. 321—C. *Long Purple*.

115510. No. 321—D. *New York Improved Purple*.

115511. No. 321—E. *Round Purple*.

115512. No. 321—F. *Round Purple*.

115428 to 115525—Continued.

115513 to 115517. *TRITICUM AESTIVUM* L.
Poaceae. Common wheat.

From Poona, March 16, 1936.

115513. No. 283. *Punjabi Sarvati*. Said to have come originally from the Punjab.

115514. No. 284. *Kaligawaran*.

115515. No. 285. *Gawaran*.

115516. No. 286. *Sarpatti Gawaran*.

115517. No. 282. *Bakshi goo*. Said to be locally grown and to be a very good winter crop.

115518. *VIGNA SESQUIPEDALIS* (L.) Frurth. Fabaceae. Asparagus-bean.

No. 344. From Poona, March 16, 1936. Pods and seeds used as food, but the plant is not widely grown, although the pods appear to be very good.

115519 to 115524. *VIGNA SINENSIS* (Torner) Savi. Fabaceae. Cowpea.

115519. No. 243. *Choti chau*. From Bombay, March 8, 1936. Said to be eaten dry and to be from Gujerat.

115520. No. 247. *Chaula*. From Bombay, March 8, 1936. Said to come from Abusar. Eaten dry.

115521 to 115524. From Poona, March 16, 1936. Presented by the principal of the Poona Agricultural College. *Chauli*. The seeds are eaten dry and used as fodder.

115521. No. 316. 115523. No. 318,

115522. No. 317. 115524. No. 319.

115525. *ZIZIPHUS MAURITIANA* Lam. Rhamnaceae. Indian jujube.

No. 253. *Bhor*. From Bombay, March 11, 1936. An uncultivated tree whose leaves are used for fodder and the small fruits, three-fourths of an inch in diameter, are more or less astringent, but edible.

115526 to 115537.

From the Netherlands. Seeds presented by Dr. Th. J. Stomps, Director, Botanic Garden of the University of Amsterdam, Amsterdam. Received April 22, 1936.

115526. *CUCURBITA MAXIMA* Duchesne. Cucurbitaceae. Squash.

115527. *LACTUCA PLUMIERI* (L.) Gren. and Godr. Cichoriaceae.

For previous introduction see 114648.

115528. *LACTUCA VIROSA* L. Cichoriaceae.

For previous introduction see 114536.

115529. *RHEUM PALMATUM* L. Polygonaceae. Sorrel rhubarb.

For previous introduction see 115274.

115530. *RHEUM PALMATUM TANGUTICUM* Maxim. Polygonaceae. Rhubarb.

For previous introduction see 114468.

115531 to 115537. *SOLANUM* spp. Solanaceae.

115531. *SOLANUM AVICULARE* Forst. f. Nightshade.

115526 to 115537—Continued.

115532. SOLANUM BONARIENSE L.

Grandillo. A tender evergreen shrub up to 10 feet high, with ovate-oblong, sinuate-repand leaves, long lateral racemes of large white flowers and globose yellow berries. Native to Argentina; said to have medicinal properties.

For previous introduction see 41312.

115533. SOLANUM CAPSICASTRUM Link.
False Jerusalem-cherry.

For previous introduction see 114543.

115534 and 115535. SOLANUM DULCAMARA L.
Bitter nightshade.115536. SOLANUM MELONGENA L.
Eggplant.

115537. SOLANUM ROSTRATUM Dun.

115538 to 115547.

From the Union of Soviet Socialist Republics. Seeds presented by Dr. A. M. Popov, Institute of Plant Industry, Leningrad. Received May 6, 1936.

Seeds grown at the Aral Research Station.

115538 to 115542. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.

115538. No. 2474. *Azhinovskii*.115539. No. 2634. *Azovskii Pudovik*.115540. No. A-523. *Lubimetz khutora*.115541. No. A-2482. *Murashka Bogavetskii*.115542. No. A-1822. *Tsgeoecemurzko*.

115543 to 115547. CUCUMIS MELO L. Cucurbitaceae. Muskmelon.

115543. *Bukharka*.115544. *Itch-Kysyl*.115545. *Koi-bash*.115546. *Krasavitsa Vostoka*.115547. *Tsaritsa Dynl*.

115548 and 115549. ORYZA SATIVA L. Poaceae. Rice.

From Portuguese Guinea, Africa. Seeds presented by the Resident Agriculturist of Bafata, through Dr. Leon Croizat, New York City, N. Y. Received April 23, 1936.

115548. Variety *Jambarum*.115549. Variety *Jaka*.

115550 to 115632.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received May 4, 1936.

Collected in the bazar at Istanbul, Turkey, March 31 and April 4, 1936, unless otherwise stated.

115550 and 115551. ABELMOSCHUS ESCULENTUS (L.) Moench. Malvaceae. Okra.

115550. No. 68. *Bümia*.115551. No. 63. *Bümia*.

115552 to 115554. ALLIUM CEPA L. Liliaceae. Onion.

115552. No. 25. A brown onion.

115553. No. 72. A long type of onion.

115554. No. 75. A large flat sweet onion.

115550 to 115632—Continued.

115555. ALLIUM PORRUM L. Liliaceae. Leek.

No. 31. *Prassa*.

115556. ANETHUM GRAVEOLENS L. Apiaceae. Dill.

No. 66. *Tercotou*.

115557 and 115558. APIUM GRAVEOLENS L. Apiaceae. Celery.

115557. No. 23. *Rus Selino Kerewiz*.115558. No. 43. *Kerewiz Yaprok*.

115559 to 115561. BETA VULGARIS L. Chenopodiaceae. Common beet.

115559. No. 61. *Pazi* (red).115560. No. 7. *Pandjar*.115561. No. 4. *Rundjar*.

115562 to 115566. BRASSICA SP. Brassicaceae.

115562. BRASSICA OLERACEA BOTRYTIS L. Cauliflower.

No. 62. *Carmochitia*.

115563 and 115564. BRASSICA OLERACEA CAPITATA L. Cabbage.

115563. No. 40. *Lahana*, a green cabbage.115564. No. 15. *Kirmizi lahana*, a red cabbage.

115565. BRASSICA OLERACEA GEMMIFERA Zenker. Brussels sprouts.

No. 41. *Bruselle Chou*.

115566. BRASSICA RAPA L. Turnip.

No. 50. *Sielgarm*.

115567. CALENDULA ARVENSIS L. Asteraceae.

No. 84. April 4, 1936. From near Istanbul, Turkey. An annual plant about 2 feet high, with spatulate, radical leaves and yellow flower heads. Native to southern Europe.

115568 to 115570. CAPSICUM ANNUM L. Solanaceae. Common redpepper.

115568. No. 73. A large round type.

115569. No. 34. *Biber uzuu*.115570. No. 52. *Patlidjan Kerner*.

115571. CICER ARIETINUM L. Fabaceae. Chickpea.

No. 36. *Nohut*.

115572. CICHORIUM ENDIVIA L. Cichoriaceae. Endive.

No. 17. *Kuzu kulagi*.

115573 to 115576. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.

115573. No. 78.

115574. No. 83. Mixed seed.

115575. No. 56. *Karpuz*.115576. No. 8. *Karpuz*.

115577. CORCHORUS OLITORIUS L. Tiliaceae. Jute.

No. 65. *Muhlie*. A type used as greens.

For previous introduction see 61225.

115550 to 115632—Continued.

- 115578 to 115580. CUCUMIS MELO L. Cucurbitaceae. Muskmelon.
115578. No. 81. *Izmir* or *Smyrna* type.
115579. No. 19. *Topatan Kavunu*. A long sugar melon.
115580. No. 33. Sugar melon (round).
- 115581 to 115583. CUCUMIS SATIVUS L. Cucurbitaceae. Cucumber.
115581. No. 37. A long type.
115582. No. 42. *Angurükia*, a short type (Russian).
115583. No. 71. A Russian type.
- 115584 and 115585. CUCURBITA MAXIMA Duchesne. Cucurbitaceae. Squash.
115584. No. 82. A long white squash.
115585. No. 14. *Helvacci Kabak*.
115586. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. Cushman.
- No. 45. *Bal Kabak*.
115587. CUCURBITA PEPO L. Cucurbitaceae. Pumpkin.
- No. 60. *Takiz Kabak*.
- 115588 and 115589. DAUCUS CAROTA L. Apiaceae. Carrot.
115588. No. 3. *Havuç Büyük*. A large carrot.
115589. No. 64. *Carota ufak*.
115590. ERUCA SATIVA Hill. Brassicaceae. Roquette.
- No. 1. *Roka salata*. Garden cress.
- For previous introduction see 58414.
- 115591 and 115592. LACTUCA SATIVA L. Cichoriaceae. Garden lettuce.
115591. No. 13. *Top salata*, head lettuce.
115592. No. 54. *Marulha*.
- 115593 and 115594. LAGENARIA LEUCANTHA (Duchesne) Rusby. Cucurbitaceae. Calabash gourd.
115593. No. 32. *Su Kobak*.
115594. No. 30. *Armia Kobak*.
115595. LENS ESCULENTA Moench. Fabaceae. Lentil.
- No. 35.
- 115596 and 115597. LEPIDIUM SATIVUM L. Brassicaceae. Garden cress.
115596. No. 58. *Ceré*.
115597. No. 76.
115598. LOLIUM PERENNE L. Poaceae. Perennial ryegrass.
- No. 20. *Chim*.
- 115599 to 11601. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.
115599. No. 5.
11600. No. 79. A tall-growing type for irrigated gardens.
11601. No. 80. A small variety for dry soils.
11602. MALVA sp. Malvaceae.
- No. 9. *Ebe gumeçi*, mallow (greens).

115550 to 115632—Continued.

- 115603 and 115604. MEDICAGO SATIVA L. Fabaceae. Alfalfa.
115603. No. 6. *Junca*.
115604. No. 22.
- 115605 to 115607. PETROSELINUM CRISPUM (Mill.) Nym. Apiaceae. Parsley.
115605. No. 59. *Maidanoz*.
115606. No. 67. A curled type.
115607. No. 74. *Persil*.
115608. PHALARIS CANARIENSIS L. Poaceae. Canary grass.
- No. 26.
- 115609 to 115617. PHASEOLUS VULGARIS L. Fabaceae. Common bean.
115609. No. 10. *Cale*. A short pole bean with very thin tender pods.
115610. No. 12. Late beans.
115611. No. 28. *Gher tzali fasulio*.
115612. No. 29. *Barbunia*.
115613. No. 38. *Yeni dünya*. A late variety.
115614. No. 46. *Aiche Kadın*. An early variety.
115615. No. 47. *Aiche alldjüll*.
115616. No. 69. *Ayse Kadın fasulyasi*. A late type.
115617. No. 77.
- 115618 to 115620. PISUM SATIVUM L. Fabaceae. Pea.
115618. No. 27. *Bezelia Turk*.
115619. No. 39. *Freng bezelia*. A sweet pea.
115620. No. 53.
- 115621 to 115623. RAPHANUS SATIVUS L. Brassicaceae. Radish.
115621. No. 51. *Crup bievöz*. A white type.
115622. No. 11. *Bayir turku*.
115623. No. 2. *Kirmizi Turp*. A red radish.
115624. SESAMUM ORIENTALE L. Pedaliaceae. Sesame.
- No. 21.
115625. SOLANUM MELONGENA L. Solanaceae. Eggplant.
- No. 18. *Boston Patlicani*. A round eggplant.
- 115626 and 115627. SPINACIA OLERACEA L. Chenopodiaceae. Common spinach.
115626. No. 70.
115627. No. 55. *Ispamak*.
115628. VICIA FABA L. Fabaceae. Broadbean.
- No. 57. *Bakla Fevci*.
115629. VIGNA SESQUIPEDALIS (L.) Fruwirth. Fabaceae. Asparagus-bean.
- No. 48. *Antaze firsuka*.
- 115630 and 115631. VIGNA SINENSIS (Torrer) Savi. Fabaceae. Cowpea.

115550 to 115632—Continued.

115630. No. 44. *Boređe fasulio*. A black-eyed bean.

115631. No. 49.

115632. ZEA MAYS L. Poaceae. Corn. No. 24.

115633. VITIS sp. Vitaceae.

From Ecuador. Plants and cuttings presented by Luis Gattoni, Departamento de Agricultura de Ecuador, Quito. Received May 20, 1936.

A wild grape, native to Ecuador, used as a grafting stock for varieties of *Vitis vinifera*.

115634 to 115637. ZEA MAYS L. Poaceae.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received May 6, 1936.

From Agra, United Provinces, March 28, 1936. Both yellow and white types are planted in the rainy season. The white corn is said to be very tender.

115634. No. 433. 115636. No. 433-B.

115635. No. 433-A. 115637. No. 433-C.

115638 to 115662. HEDERA spp. Araliaceae.

From England. Plants purchased from L. R. Russell, Ltd., Richmond Nurseries, Richmond, Surrey. Received May 20, 1936.

115638 and 115639. HEDERA CANARIENSIS Willd. Algerian ivy.

A high-climbing tender ivy with large bright-green roundish-ovate leaves. Native to the Canary Islands.

115638. *Gloire de Maringo*.

115639. *Azorica variegata*.

115640. HEDERA NEPALENSIS K. Koch.

A high-climbing ivy with triangular-ovate to triangular-oblong, pinnate-lobed leaves 2 to 5 inches long. Native to India.

115641 to 115644. HEDERA COLCHICA Koch. Colchis ivy.

A high-climbing vine with the young growth covered by golden-yellow scales, broadly cordate, almost entire, very large bright-green leaves of firm texture, and small umbels of greenish-yellow flowers in paniculate clusters, followed by black fruits. Native to the Caucasus region.

For previous introduction see 108792.

115641. The type.

115642. Variety *Amurensis*.

115643. Variety *Dentata*.

115644. Variety *Dentata Variegata*.

115645 to 115662. HEDERA HELIX L. English Ivy.

115645. Variety *Alba Marginata*; small greenish leaves with white margins.

115646. Variety *Angularis Aurea*; young leaves soft yellowish green.

115638 to 115662—Continued.

115647. Variety *Atropurpurea*; leaves dark purple in winter.

115648. Variety *Caenwoodiana*; leaves small, finely cut with whitish veins.

115649. Variety *Contracta*; plants dwarf, freely branched, leaves small, close set, much waved at margins.

115650. Variety *Donerailensis*; leaves larger than those of variety *Caenwoodiana*, usually three-lobed.

115651. Variety *Elegantissima*; leaves small with white margins.

115652. Variety *Emerald Gem*; leaves small, bright glossy green.

115653. Variety *Howardii*; leaves mottled, sometimes silver at edge.

115654. Variety *Rhomboidea Variegata*; leaves rhomboid ovate, silver margined.

115655. Variety *Sublee*; leaves small, silver variegated and margined.

115656. Variety *Comglomerata*; plants dwarf with erect stems and close-set leaves.

115657. Variety *Mrs. Pollock*; leaves small, golden.

115658. Variety *Russell's Gold*; leaves small, new growths golden.

115659. Variety *Shcen Silver*; leaves small, silver edged and variegated.

115660. Variety *Hibernica*.

115661. Variety *Hibernica Aurcomaculata*; leaves blotched pale, creamy yellow.

115662. Variety *Rhomboidea*; leaves thick, rhomboid-ovate; stems thick with short internodes.

115663. CARYA OVATA (Mill.) K. Koch. Juglandaceae. Hickory nut.

From Canada. Scions presented by G. H. Corsan, Echo Valley Nut Plantation, Islington, Ontario. Received May 21, 1936.

Neilson. A true shagbark hickory; the nuts are very large and have a thin shell which cracks easily. The tree is 70 feet tall, with a spread of 35 feet, and withstands a temperature of -40° F.

115664. AMORPHOPHALLUS KONJAC KOCH. Araceae.

From Japan. Tubers purchased from the Yokohama Nursery Co., Yokohama. Received May 21, 1936.

An aroid grown in Japan for the edible starchy tubers.

For previous introduction see 47226.

115665. PROSOPIS CHILENSIS (Molina) Stuntz. Mimosaceae.

From Hawaii. Seeds presented by E. L. Caum, Experiment Station of the Hawaiian Sugar Planters Association. Received May 5, 1936.

The sweetish pods of this tree are eaten by cattle.

For previous introduction see 96516.

115666 to 115776. VIGNA SINENSIS (Torrer) Savi. Fabaceae. **Cowpea.**

From England. Seeds presented by the Royal Botanic Gardens, Kew, Surrey. Received May 22, 1936.

Nos. 115666 to 115671 were originally from the Anglo-Egyptian Sudan, Africa.

115666. *Lubia hillu.* From Donga Province.

115667. *Lubia hillu.* From Dongola Province.

115668. *Lubia hinaitu.* From Medani District.

115669. *Lubia Abiad.* From Medani District.

115670. *Lubia hillu.* From Shendi District.

115671. *Lubia hillu.* From White Nile Province.

Nos. 115672 to 115689 were originally from Ceylon.

115672. *Usl Leema.* No. 35. From Ambalantota.

115673. *Gal-li-me.* No. 86. From Badulla District.

115674. *Hen-me.* No. 87. From Badulla District.

Nos. 115675 to 115680 were from Bata District.

115675. *Kallu Leema.* No. 39.

115676. *Masmora.* No. 54.

115677. *Ematiya.* No. 56.

115678. *Bala.* No. 58.

115679. *Hodi.* No. 59.

115680. *Polon.* No. 68.

115681. *Polon.* No. 35. From Galle District.

115682. *Palukena.* No. 70. From Matava District.

Fruits hang in clusters.

115683. *Polon Leema.* No. 71. From Matava District.

115684. *Wapurana.* No. 72. From Matava District.

115685. *Kalu.* No. 64. From Midyemaya District.

115686. *Kotu me.* No. 18. From Nikamaratiya District.

115687. *Kotu me.* No. 2. From Rattota District.

115688. *Swappu Pathangai.* No. 91. From Sengapaddai District.

115689. *Ametiya Leema.* No. 51. From Weeraketiya District.

115690. *Azmerli.* From Egypt.

115691. *Beladi.* From Egypt.

115692. Family 4/34. No. 6. From Egypt. Claimed to be resistant to root knot and immune from rust.

Nos. 115693 to 115706 were originally from Kenya Colony, Africa.

Nos. 115693 to 115695 were from Embu District, Central Province.

115693. Brown. **115695. White.**

115694. Purple.

115666 to 115776—Continued.

115696. *Kimakoko.* From Killifi, Coast Province.

Nos. 115697 to 115701 were from Machakos District.

115697. No. 1. **115700. No. 5.**

115698. No. 3. **115701. No. 6.**

115699. No. 4.

Nos. 115702 to 115706 were from Nyanza Province.

115702. *Nyamamu.*

115703. *Dagala.* buff.

115704. *Nyalienga.*

115705. *Dagala.* No. 6.

115706. *Dagala.* No. 7.

115707. White. From Mauritius.

115708. Pink. From Mauritius.

Nos. 115709 to 115715 were originally from Northern Rhodesia, Africa.

115709. No. 5. From Barotseland.

Introduced by natives from Angola.

115710. No. 18. From Barotseland.

115711. No. 9. From Broken Hill District.

115712. No. 15. From Isoka Imporokosi(?).

115713. Purple pod.

115714. *Chipinyi.*

115715. *White Poddio.*

Nos. 115716 to 115745 were originally from Nigeria, Africa.

Nos. 115716 to 115723 were from Benue Province.

115716. Y 1.

115717. Y 2.

115718. Y 7.

115719. Y 14-A.

115720. Y 12. *Segha.*

115721. Y 17-A. *Segha.*

115722. Y 17-D. *Segha.*

115723. Y 20. *Segha.*

115724. No. 2. *Ere me me* (?). From Hovia Emivate.

Nos. 115725 to 115729 were from Kano Emivate.

115725. 1-B. *Sa dabba Sata.*

115726. 3-A. *Hannum Marini.*

115727. No. 4. *Kanmanado.*

115728. No. 5. *Kyampos.*

115729. *Dan arbain.*

Nos. 115730 to 115735 were from Katsina Emivate.

115730. No. 1. **115732. No. 5.**

115731. No. 2. **115733. No. 7.**

115734. No. 8. *Kashin Kaji.*

115735. *Tesririya.*

115736. No. 1. From Lake Chad.

115666 to 115776—Continued.

115737. No. 2. From Lake Chad.

Nos. 115738 to 115744 were from Sokoto Emirate.

115738. *Sokoto*. No. 1.115739. *Sokoto*. No. 2.115740. *Sokoto*. No. 3.115741. *Sokoto*. No. 4.115742. *Sokoto*. No. 5.115743. *Sokoto*. No. 6.115744. *Sokoto*. No. 8.115745. *Jan Tserriya*. From Zaria District.

Nos. 115746 to 115751 were originally from Tanganyika, Africa.

115746. *Cowpea*. From Morogore District.115747. *Kunde Tambaazi*. From Morogore District.115748. *Kiliyamgombera*.115749. *Kati*.115750. *Kunde loima*.115751. *Muskeneka*.

Nos. 115752 to 115776 were originally from Uganda, Africa.

115752. No. 1. From Bunyoro District.

115753. No. 2. From Bunyoro District.

Nos. 115754 to 115757 were from Imball District.

115754. *Namugero* (c).115755. *Kagumba*.115756. *Kisyanka*.115757. *Namudamu* (b).

Nos. 115758 to 115762 were from Kampala District.

115758. *Bimogeti*. 115761. *Inpindi*.115759. *Kantinti*. 115762. *Inpindi*.115760. *Kigomoti*.

Nos. 115763 to 115771 were from Lango District.

115763. *Acuta-akol*.115764. *Akuto-atar*.115765. *Acungo*.115766. *Alegi*.115767. *Apee*.115768. *Kakobe-mogoto*.115769. *Magoti* (2).115770. *Magoti* (3).115771. *Obungula* or *Gswagwa*.

Nos. 115772 to 115775 were from Toro District.

115772. *Binara*. 115774. *Musango*.115773. *Muko*. 115775. *Rubani*.115776. *Ngor* (Alur), *Osuru* (Lugevava). From White River Province.

115777 to 115783. GOSSYPIUM spp. Malvaceae.

From Puerto Rico. Seeds collected by L. C. Fife, Bureau of Entomology and Plant Quarantine. Received April 28, 1936.

The C. and F. numbers are those of the Division of Cotton and Other Fiber Crops and Diseases.

Wild cotton.

Nos. 115777 and 115778 have locks 2½ to 3 inches long.

115777. GOSSYPIUM sp.

C. and F. No. 1089.

115778. GOSSYPIUM sp.

C. and F. No. 1090.

115779. GOSSYPIUM sp.

C. and F. No. 1091.

115780. GOSSYPIUM sp.

C. and F. No. 1092.

115781. GOSSYPIUM sp.

C. and F. No. 1093.

Seed fuzzy; leaves entire, resembling upland cotton.

115782. GOSSYPIUM sp.

C. and F. No. 1094.

115783. GOSSYPIUM sp.

C. and F. No. 1095.

115784. VITIS VINIFERA L. Vitaceae. European grape.

From Greece. Cuttings presented by the Ecole Supérieure Agronomique, Athens, at the request of N. Lely, Greek Legation, Washington, D. C. Received May 22, 1936.

Rhazaki de Crete.

115785 to 115790. TRITICUM spp. Poaceae.

From England. Seeds presented by Prof. John Percival, University College, Reading. Received May 1, 1936.

115785. TRITICUM COMPACTUM ATRUM Körn.

115786. TRITICUM PYRAMIDALE PSEUDOCOMPRESSUM Percival.

115787. TRITICUM PYRAMIDALE PSEUDOCOCTICUM Percival.

115788. TRITICUM SPHAEROCOCCUM GLOBOSUM Percival.

115789. TRITICUM SPHAEROCOCCUM RUBIGINOSUM Percival.

115790. TRITICUM TIMOPHEEVI Zhuk.

115791. ROYSTONEA sp. Phoenicaceae. Royal palm.

From California. Seeds presented by David Barry, Jr., Los Angeles. Received May 22, 1936.

The roystoneas are tall, pinnate-leaved palms, native to the West Indies.

115792 to 115809. CAPSICUM ANNUUM L.
Solanaceae. **Common redpepper.**

From India. Seeds presented by R. B. Deshpande, Special Research Assistant to the Imperial Economic Botanist, Pusa. Received May 11, 1936.

Chilli.

115792. Type 4.	115801. Type 25.
115793. Type 5.	115802. Type 26.
115794. Type 6.	115803. Type 28.
115795. Type 8.	115804. Type 30.
115796. Type 12.	115805. Type 31.
115797. Type 15.	115806. Type 34.
115798. Type 18.	115807. Type 41.
115799. Type 19.	115808. Type 46.
115800. Type 21.	115809. Type 51.

115810 and 115811.

From the Union of South Africa. Seeds presented by the McGregor Museum, Kimberley. Received May 6, 1936.

115810. OLEA VERRUCOSA (Roem. and Schult.) Link. Oleaceae. **Olive.**

A tree up to 30 feet high, native to southern Africa, with linear-lanceolate leaves 3 inches long, covered with small yellow scales beneath, and short axillary panicles of inconspicuous flowers followed by small dry globose fruits. The fruit is of no value in itself, but the tree is very drought- and frost-resistant.

For previous introduction see 111232.

115811. RHUS LANCEA L. f. Anacardiaceae. **Sumac.**

Kavree-boom. A small bushy tree with gray bark and long-stemmed leaves with linear-lanceolate leaflets 4 to 6 inches long. It is a valuable hardwood tree for regions of limited rainfall. Native to the Cape of Good Hope.

For previous introduction see 111233.

115812 to 115821. TRITICUM spp. Poaceae.

From the Union of Soviet Socialist Republics. Seeds presented by Dr. N. I. Vavilov, Institute of Plant Industry, Leningrad. Received May 11, 1936.

115812. TRITICUM HORDEIFORME Host.

No. 16419.

115813. TRITICUM MACHA Dekapr. and Men.

No. 28170.

For previous introduction see 113963.

115814. TRITICUM ORIENTALE INSIGNE Percival.

No. 23896. From Daghestan.

115815. TRITICUM ORIENTALE INSIGNE Percival.

No. 15992. From Turkey.

115816. TRITICUM PERSICUM FULIGINOSUM Zhuk.

No. 7106. From the republic of Georgia.

115812 to 115821—Continued.

115817. TRITICUM PERSICUM RUBIGINOSUM Zhuk.

No. 11891. From the republic of Georgia.

115818. TRITICUM SPHAEROCOCCUM GLOBOSUM Percival.

No. 23824. From the Punjab, India.

115819. TRITICUM THAOUAR Reut.

No. 27134. From Turkey.

115820. TRITICUM VAVILOVI Jakub.

No. 33770. From Van, Turkey.

115821. TRITICUM VAVILOVI Jakub.

No. 29533. From Van, Turkey.

115822 to 115824.

From Kenya Colony, Africa. Seeds purchased from the Mount Elgon Nurseries, Elgon, Kitale. Received May 16, 1936.

115822 and 115823. TEPHROSIA VOGELII Hook. f. Fabaceae.

115822. A form with white flowers.

115823. A form with pink flowers.

115824. OLEA CHRYSOPHYLLA Lam. Oleaceae.

A small evergreen tree closely related to the cultivated olive. Its chief ornamental value lies in the golden color of the under surface of the leaves. Native to eastern Africa.

For previous introduction see 99445.

115825 to 115829. ORNITHOGALUM spp. Liliaceae.

From the Union of South Africa. Bulbs presented by Miss K. C. Stanford, Stellenbosch, through the W. Atlee Burpee Co., Philadelphia, Pa. Received May 25, 1936.

115825. ORNITHOGALUM LACTEUM Jacq. **Star-of-Bethlehem.**

A bulbous plant from the Cape of Good Hope, with about 10 fleshy basal leaves and white flowers in a large dense raceme on a stout stem 1 or 2 feet high.

For previous introduction see 80575.

115826. ORNITHOGALUM MACULATUM Jacq.

An ornithogalum native to southern Africa, with four or five linear leaves about 4 inches long and several small yellow flowers with brown spots at the tips of the three outer segments.

115827. ORNITHOGALUM SAUNDERSIAE Baker.

A South African bulbous plant with lanceolate leaves up to 1 foot long, and white or yellow flowers borne in a dense raceme on a scape 1 foot or more high.

For previous introduction see 66473.

115828. ORNITHOGALUM sp.

Received under the name "splendens," for which a place of publication has not been found.

A rare species with large orange-red flowers on stems about 2 feet high.

115829. ORNITHOGALUM sp.

A form with double flowers.

115830. NICOTIANA TABACUM L. Solanaceae. **Common tobacco.**

From Guatemala. Seeds collected by C. H. Logan at Antigua. Received May 26, 1936.

Volunteer tobacco, collected on the ruins of old houses in Antigua, January 1936.

115831 to 115833. TRIFOLIUM spp. Fabaceae. **Clover.**

From the Union of Soviet Socialist Republics. Seeds presented by Dr. N. I. Vavilov, Director, Institute of Plant Industry, Leningrad. Received May 13, 1936.

115831. TRIFOLIUM CANESCENS Willd.

No. 11756. From Azerbaijan. A perennial clover about 6 inches high, with obovate villous leaflets and grayish-white flower heads. Native to Asia Minor.

For previous introduction see 108700.

115832 and 115833. TRIFOLIUM OCHROLEUCON Huds.

From the Maisop region, northern Caucasus.

115832. No. K-16255.

115833. No. K-16257.

115834 to 115842.

From Germany. Seeds presented by Dr. Rosmer, Director, Pflanzenzuchtstation der Universität, Halle Saale. Received May 18, 1936.

115834 to 115840. TRITICUM AESTIVUM L. Poaceae. **Common wheat.**

115834. No. 1020/31.

115835. No. 4172/30.

115836. No. 1456/32.

115837. No. 3330/32.

115838. No. 4453/31.

115839. No. 1381/32.

115840. No. 4065/32.

115841 and 115842. HORDEUM VULGARE L. Poaceae. **Barley.**

115841. *Nacktgerste.*

115842. *Morgenrot.*

115843 to 115853. SOJA MAX (L.) Piper. Fabaceae. **Soybean.**

From India. Seeds presented by I. S. S. Kumar, Economic Botanist of the Government of Bombay. Received May 19, 1936.

Late-maturing Indian varieties.

115843. No. 1. Yellow; from Lucknow.

115844. No. 2. Black; from Lucknow.

115845. No. 3. White; from Darjeeling.

115846. No. 4. Green; from Darjeeling.

115847. No. 5. Small, brown; from Darjeeling.

115848. No. 6. Large, brown, from Darjeeling.

115849. No. 7. *Baramali*; from Darjeeling.

115850. No. 8. *Napali*; from Assam.

115851. No. 9. *Spotted Khasi*; from Assam.

115843 to 115853—Continued.

115852. No. 10. *White Khasi*; from Assam.

115853. No. 11. From the Unao District.

115854 to 115864. TRITICUM spp. Poaceae.

From the Union of Soviet Socialist Republics. Seeds presented by N. I. Sharapov, Head of the Department of New Cultures, Institute of Plant Industry, Leningrad. Received May 7, 1936.

115854. TRITICUM DICOCOIDES SPONTANEOGRUM (Flaks.) Percival.

No. 17157. From Syria.

115855. TRITICUM DURUM FERE-ALEXANDRINUM Jacob. and Nikol.

No. 17195. From Syria.

115856 to 115858. TRITICUM DURUM Desf. **Durum wheat.**

115856. No. 17889. From Cyprus.

115857. No. 17784. From Cyprus.

115858. No. 17787. From Cyprus.

115859. TRITICUM MONOCOCCUM HORNEMANNI Clem.

No. 23653. From Armenia.

115860. TRITICUM DURUM Desf. **Durum wheat.**

No. 23032. From Yugoslavia.

115861. TRITICUM sp.

No. 28247. From Nakhechevan. Received as "spontaneum," a name for which a place of publication has not been found.

115862. TRITICUM DURUM Desf. **Durum wheat.**

No. 14384. From Turkey (Asia Minor).

115863 and 115864. TRITICUM THAOU DAR Reut.

From Turkey (Asia Minor).

115863. No. 27141. 115864. No. 27134.

115865 to 115867.

From the Union of Soviet Socialist Republics. Seeds presented by the Director, Botanic Garden, Tiflis, Georgia. Received May 8, 1936.

115865. BELLEVALIA LONGISTYLA (Misch.) Grossh. Liliaceae.

A bulbous plant with lanceolate leaves about a foot high and one-half inch wide and a panicle of 15 to 25 small, rusty-purple, campanulate flowers. Native to the Caucasus region.

For previous introduction see 108783.

115866. FESTUCA ELATIOR L. Poaceae. **Meadow fescue.****115867. FESTUCA OVINA** SULCATA Hack. Poaceae. **Fescue.**

For previous introduction see 115258.

115868 to 115872.

From the Union of Soviet Socialist Republics. Seeds presented by Dr. A. M. Popov, Institute of Plant Industry, Leningrad. Received May 21, 1936.

115868 and 115869. BRASSICA OLERACEA CAPITATA L. Brassicaceae. **Cabbage.**

115868 to 115872—Continued.

115868. No. 179. From Nomer Pervy, Moscow.

115869. No. 184. From Belorusskaya, Moscow.

115870. BRASSICA OLERACEA L. Brassica-
caea. Wild cabbage.

No. 1425. From northern Caucasus. Received under the varietal name "orientalis," for which a place of publication has not been found.

115871 and 115872. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

115871. No. K-1561. *Budionovka*.

115872. No. 163/co. *Chudo Rinka*. From the Ukraine.

115873 to 115973.

From India. Seeds collected by Walter Koelz. Bureau of Plant Industry. Received May 6, 1936.

115873. ABELMOSCHUS ESCULENTUS (L.) Moench. Malvaceae. Okra.

No. 401. *Bhindi*. From the market at Agra, United Provinces, March 28, 1936. Fruits up to 3 inches long.

115874 to 115876. ALLIUM CEPA L. Liliaceae. Onion.

Piyaz. From Agra, United Provinces, March 29, 1936.

115874. No. 407. Said to be a red flat strong onion, 4 inches in diameter, which keeps from May to January in good condition.

115875. No. 417. Said to be a flat red onion, 4 inches in diameter.

115876. No. 437. Said to be a flat white onion, 4 inches in diameter.

115877. ARACHIS HYPOGAEA L. Fabaceae. Peanut.

No. 257. *Aurapalli*. From Poona, March 15, 1936.

115878 to 115886. BRASSICA spp. Brassicaceae.

115878 to 115883. BRASSICA OLERACEA BOTRYTIS L. Cauliflower.

From Agra, United Provinces, March 27 to March 29, 1936.

115878. No. 394. *Agra phulgobi*. The largest heads of the five varieties grown here.

115879. No. 397. *Agra phulgobi*. The heads are 10 inches in diameter.

115880. No. 399. *Agra phulgobi*.

115881. No. 409. *Patna phulgobi*. A form said to be self-bleaching.

115882. No. 410. *Saharanpur phulgobi*. Said to be 15 days later than 409 [115881] and to have larger heads.

115883. No. 435. Said to mature in 3 months.

115884. BRASSICA OLERACEA CAPITATA L. Cabbage.

No. 428. *Gobi*. March 29, 1936. Probably naturalized from Europe. Heads seen on the market were firm, rounded, and 8 inches in diameter.

115873 to 115973—Continued.

115885 and 115886. BRASSICA RAPA L. Turnip.

Shelgam. From Agra, United Provinces, March 28, 1936.

115885. No. 398. Said to be red-skinned, rounded, and to grow the year round.

115886. Probably the common red-skinned form.

115887. CARTHAMUS TINCTORIUS L. Asteraceae. Safflower.

No. 418. *Kasni*. From Agra, United Provinces, March 29, 1936. Flowers and seeds used medicinally.

For previous introduction see 115444.

115888. MURRAYA PANICULATA (L.) Jack. Rutaceae.

No. 420. From Agra, United Provinces, March 29, 1936. An attractive shrub with fragrant white flowers like orange blossoms and dark shiny leaves.

For previous introduction see 32317.

115889. CHENOPODIUM ALBUM L. Chenopodiaceae.

No. 414. *Batwa*. A potherb from Agra, United Provinces, March 29, 1936.

115890 to 115902. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.

Nos. 115890 to 115895 were collected at Poona, March 15, 1936.

115890. No. 256. An elongate, light-green melon with darker irregular stripes, 18 inches long; fairly sweet flesh of good quality and thin rind.

115891. No. 258. A dark-green melon 19 inches long, with thick rind; flesh fairly sweet and of fair quality.

115892. No. 262. A somewhat elongate melon 1 foot in diameter with medium-green rind with broken nets of darker green; rind thick; flesh coarse but fairly sweet.

115893. No. 265. Fruit globose, dark green, feebly blotched with lighter green, 14 inches in diameter; rind hard and thick; flesh melting, insipid.

115894. No. 267. Fruit 18 inches long, elongate, rind pale green, striped darker. Flesh granular, not particularly good.

115895. No. 287. A dark-green globose fruit 1 foot in diameter; flesh of fair quality, but not very sweet.

Nos. 115896 and 115897 were collected in Bombay, March 18, 1936.

115896. No. 351. A whitish green, unmarked, subglobose fruit, 1 foot in diameter; flesh pink, coarse and insipid.

115897. No. 352. A light-green fruit finely netted with darker green, subglobose and 1 foot in diameter; flesh of fair quality but insipid.

Nos. 115898 to 115900 were collected at Jalgaon, Khandesh, Bombay Presidency, March 21, 1936.

115898. No. 374. A medium-green, finely netted fruit, heavily blotched with darker green, 18 inches by 12 inches; rind thick; flesh of fair quality and flavor.

115873 to 115973—Continued.

115899. No. 367. A dark-green, unmarked, somewhat elongate fruit 8 inches in diameter; rind thin and firm; flesh fine-grained and of fair flavor.
115900. No. 368. A light-green fruit, finely ribbed and netted with darker green, 14 inches in diameter; flesh of fair texture and flavor.
- Nos. 115901 and 115902 were collected at Agra, United Provinces, March 29, 1936.
115901. No. 439. *Tarbuzia*. Form grown in the rainy season.
115902. No. 429. *Tinda*. Round fruits 6 inches in diameter, much esteemed as a vegetable.
- 115903 to 115935. *CUCUMIS* spp. Cucurbitaceae.
- 115993 to 115926. *CUCUMIS* MELO L. Muskmelon.
- Nos. 115903 to 115909 were collected at Poona, March 14 and 15, 1936.
115903. No. 254. Said to come from near Shalapur. Fruits 8 inches long, pointed at both ends, creamy white, moderately netted, fragrant, with white, sometimes very sweet flesh. Seed cavity small; seeds firmly attached.
115904. No. 255. Fruit fragrant, golden brown, often with green ribs and heavily netted, subglobose, about 8 inches in diameter, with a pronounced navel in the blossom end; flesh bright salmon, somewhat acid.
115905. No. 260. Fruit much flattened, 5 inches by 2½ inches, creamy white, smooth, with strange fragrance; flesh bright salmon of fair flavor.
115906. No. 261. Fruit top-shaped, 12 inches long, with a pronounced navel at the blossom end; green yellow with broken bands of yellow brown; flesh green, melting, fragrant; fruit firm and keeps well.
115907. No. 263. Fruit subglobose, somewhat flattened, very firm, cream-colored, heavily and strongly netted, with a strong strange fragrance; flesh thick, bright salmon, of odd flavor.
105908. No. 264. Fruit much elongated, 15 inches by 8 inches, yellow, more or less netted, more or less conspicuous navel; flesh salmon, firm but juicy, not much flavor.
115909. No. 268. Fruit subglobose, 10 inches long, orange and heavily netted; flesh salmon, somewhat acid.
- Nos. 115910 and 115911 were collected March 18, 1936, in Bombay.
115910. No. 350. Fruit compressed, 6 inches by 4 inches, yellow to gold and nearly smooth; flesh white, sweet, with a pleasant distinctive flavor.
115911. No. 353. Fruit football shaped, 1 foot long, yellow, feebly netted; flesh white, rather flavorless.

115873 to 115973—Continued.

- Nos. 115912 to 115915 were collected March 21, 1936, at Jalgaon, Khandesh, Bombay Presidency.
115912. No. 362. A smooth yellow fruit 18 inches long; flesh salmon, somewhat insipid; seed cavity large, and flesh rather thin.
115913. No. 371. A round fragrant fruit, 6 inches in diameter, pale green, heavily and coarsely ribbed; flesh white, insipid. Navel at blossom end.
115914. No. 372. Fruit green-brown, ribbed with pale green and somewhat netted, 6 inches in diameter; flesh salmon, insipid.
115915. No. 373. Fruit pear-shaped, smooth, cream-colored, 4 to 5 inches long; flesh greenish white; rind rather thin; seed cavity compact with seeds.
- Nos. 115916 and 115917 were collected at Jalgaon, East Khandesh, Bombay Presidency, March 21, 1936.
115916. No. 375. Fruit strongly netted, yellow-brown, 6 by 4 inches; flesh green, melting, good flavor.
115917. No. 376. Fruit round, somewhat elongate, 6 inches in diameter, pale yellow and strongly netted; flesh salmon, thick and melting, often of good flavor.
- Nos. 115918 to 115922 were collected at Itarsi, Central Provinces, March 23, 1936.
115918. No. 378. Fruit round or slightly elongate, with conspicuous navel at blossom end, yellow-brown, strongly netted; flesh thick, pale salmon, acid, otherwise flavorless.
115919. No. 379. Fruit flattened, 6 by 4 inches; segments of yellow-brown, heavily netted, alternate with nearly smooth ones of dark green; flesh salmon, insipid.
115920. No. 380. Fruit elongate, 14 by 4 inches, yellow, heavily netted with broad, darker, unnetted ribs; flesh pale salmon, acid.
115921. No. 381. Fruit elongate, flask-shaped, up to 1 foot long, pale yellow; flesh paler, insipid. Skin may be smooth or slightly netted.
115922. No. 382. Fruit rounded oblong, 8 inches long, golden brown with unbroken ribs of yellow; smooth skinned; flesh salmon, good flavor.
- Nos. 115923 to 115926 were collected at Agra, United Provinces, March 25, 1936.
115923. No. 384. Fruits much flattened, usually with a huge protruding navel over blossom end, up to 3½ inches in diameter, smooth, yellow, more or less ribbed or mottled green. Rind very thin; flesh one-fourth inch thick, white. The whole seed cavity is tightly packed with seeds.
115924. No. 411. *Kharbuza*. Probably a mixture of races or subspecies.
115925. No. 432. *Kharbuza*. Planted in the rainy season. Most of the

115873 to 115973—Continued.

southern sorts are grown in winter or during light monsoons. This may represent a mixture.

115926. No. 440. *Kakri*. Supposed to be seeds of an elongate "snake cucumber" now on the market. Fruits 2 feet long, light green with fine elongate ridges. When young, they make an excellent salad vegetable, later stewed.

115927 to 115935. CUCUMIS SATIVUS L. Cucurbitaceae. Cucumber.

115927. No. 266. *Kakri*. From Poona, March 15, 1936. Fruit 2 feet long by 8 inches in diameter, yellow, smooth. Seed cavity like a muskmelon with seeds and placenta free from the flesh. Flesh thick, white, firm, mealy, cucumberlike. Seeds in orange acid envelope.

115928. No. 360. *Kakri*. From Bombay, March 20, 1936. Fruits 6 inches long, white when ripe; eaten as a salad.

115929. No. 363. *Danga Kakri*. From Jalgaon, Khandesh, Bombay Presidency, March 21, 1936. Fruits over 2 feet long and 5 or 6 inches in diameter, tapering to the neck, which is somewhat curved. Rather irregularly ribbed lengthwise, ribs 1 inch apart. Color pale yellow; flesh mealy also creamy, turning salmon color at the cavity. Whole fruit when ripe, fragile and perishable; fragrant, but no taste except slight fresh acidity. The immature fruits are used for salad.

115930. No. 377. *Kakri*. From Harsi, Central Provinces, March 23, 1936. A tapering fruit, 18 inches long and 6 to 8 inches in diameter; light green with elongated broken blotches of blackish green; fruit thin; seed cavity large; fruit frail.

115931. No. 390. *Khira*. Said to be a foot long and yellow when ripe; stewed or eaten fresh.

Nos. 115932 to 115935 were collected in Agra, United Provinces, March 27, 1936.

115932. No. 391. *Kakri*.

115933. No. 402. *Samo Khira*. A quick-growing, alkali-resistant fruit 10 inches long, dark green when ripe.

115934. No. 404. *Khira*. Said to be a foot long and yellow when ripe; eaten raw.

115935. No. 403. *Kakri*. Said to be 18 inches long and white when ripe; eaten both raw and cooked.

115936 to 115939. CUCURBITA spp. Cucurbitaceae.

Nos. 115936 and 115937 were collected at Jalgaon, Khandesh, Bombay Presidency, March 21, 1936.

115936. CUCURBITA MAXIMA Duchesne. Squash.

No. 369. Fruit much flattened, 18 inches by 12 inches, strongly ribbed,

115873 to 115973—Continued.

white to salmon pink. This or a kindred race is said to grow to 70 pounds.

- 115937 to 115939. CUCURBITA MOSCHATA Duchesne. CUSHAW.

115937. No. 365. *Gangafal*. Fruit 30 inches long by 14 inches in diameter, green, sparingly spotted with yellow and with very faint ribs. Leaves and flowers are eaten as greens. Keeps very well.

Nos. 115938 to 115940 were collected at Agra, United Provinces, March 25 to 29, 1936.

115938. No. 386. *Kasipul* or *Kola*. Fruit buckskin pink, up to 18 inches long, tapering to the blossom end, smooth except for the rather conspicuous ribs.

115939. No. 431. *Kaddu*. A mixture of probably three local forms, obtained from a farmer.

115940. DAUCUS CAROTA L. Apiaceae. Carrot.

No. 389. *Lal gadjas*. A red carrot that grows all the year.

115941. DURANTA REPENS L. Verbenaceae. Skyflower.

No. 288. From Poona, March 16, 1936. A very handsome shrub used for hedges; the racemes of purple flowers are followed by orange fruits about one-half inch in diameter.

For previous introduction see 112087.

115942. HIBISCUS SABDARIFFA L. Malvaceae. Roselle.

No. 408. *Patwa*. From Agra, United Provinces, March 28, 1936. A stout annual 5 to 7 feet high; the fruiting calyxes are used for jellies.

For previous introduction see 114957.

115943. LACTUCA SATIVA L. Cichoriaceae. Garden lettuce.

No. 400. *Salat*. From Agra, United Provinces, March 28, 1936. Probably naturalized. Used fresh and cooked.

115944 to 115946. LAGENARIA LEUCANTHA (Duchesne) Rusby. Cucurbitaceae. Calabash gourd.

115944. No. 356. *Dudhya*. From Bombay, March 20, 1936. Fruits rounded oblong, not so prominently necked as the bottle gourd. Used as a vegetable.

115945. No. 392. *Ghahiya* or *Loki*. From Agra, United Provinces, May 27, 1936. Fruit bottle-shaped, sold immature on the market, about 2 inches long and pale green. Used for curries.

115946. No. 427. From Agra, United Provinces, March 29, 1936. Said to be a rounded form, used for food while immature.

115947. LUFFA ACUTANGULA (L.) Roxb. Cucurbitaceae. Singkwa towelgourd.

No. 436. *Turi*. From Agra, United Provinces, March 29, 1936. Young fruits eaten.

For previous introduction see 114963.

115873 to 115973—Continued.

115948 to 115950. *LUFFA CYLINDRICA* (L.) Roemer. Cucurbitaceae.
Suakwa towelgourd.

Young fruits eaten cooked; mature fruit fibers used as sponges.

For previous introduction see 114964.

115948. No. 425. *Turai*. From Agra, United Provinces, March 29, 1936.

115949. No. 357. *Ghi turai* or *Gosara*. From Bombay, March 20, 1936.

115950. No. 426. *Turai*. From Agra, United Provinces, March 29, 1936.

115951. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

No. 383. From Agra, United Provinces, March 24, 1936. Fruits red, round to laterally elongate, up to 3 inches in diameter. Probably naturalized.

115952. *MOMORDICA CHARANTIA* L. Cucurbitaceae. Balsam-pear.

No. 430. *Karela*. From Agra, United Provinces, March 29, 1936. Fruits bitter, eaten fried; considered medicinal and used in various ways.

115953. *MORUS* sp. Moraceae.

No. 388. From Agra, United Provinces, March 27, 1936. Tree up to 35 feet high, well-formed, with large shiny dark-green leaves. Fruits red-purple, acid, up to 2 inches long and one-fourth of an inch in diameter.

115954. *PHASEOLUS AUREUS* Roxb. Fabaceae. Mung bean.

No. 366. From Jalgaon, Khandesh, Bombay Presidency, March 21, 1936. Dry beans popular as "split peas," also used as fodder.

115955 to 115958. *RAPHANUS SATIVUS* L. Brassicaceae. Radish.

From Agra, United Provinces, March 27 to 29, 1936.

115955. No. 393. *Feziabad Muli*. Leaves said to be small, root about 13 inches long, the upper fourth green and the rest white. Said to grow all year.

115956. No. 396. *Muli*. A form with large leaves; root white, 18 inches long; said to grow the year round. Both leaves and roots are eaten.

115957. No. 413. *Muli*.

115958. No. 438. *Sengar*. Used as vegetable in all of its parts, especially the elongated seed pods.

115959. *RUMEX VESICARIUS* L. Polygonaceae.

No. 355. *Chuka bhaji*. From Bombay, March 20, 1936. Leaves used as a potherb.

115960. *SOJA MAX* (L.) Piper. Fabaceae. Soybean.

No. 358. From Bombay, March 20, 1936. Dry beans used as food; the plant and pods used as fodder.

115961 to 115964. *SOLANUM MELONGENA* L. Solanaceae. Eggplant.

115961. No. 370. From Jalgaon, Khandesh, Bombay Presidency, March 21, 1936. Fruits yellow, faintly marked with purple, very seedy, 1½ inches in diameter, somewhat elongated.

115873 to 115973—Continued.

115962. No. 434. *Sufed Brinjal*. From Agra, United Provinces, March 29, 1936. Fruit white, rounded, about 4 inches long; considered very good.

115963. No. 442. *Bhattya bengal*. From Agra, United Provinces, March 29, 1936. Fruit said to be purple-black, rounded, and 3 inches in diameter.

115964. No. 364. *Wanga*. From Jalgaon, Khandesh, Bombay Presidency, March 21, 1936. Fruit yellow to gold, rounded, and 4 inches in diameter.

115965. *SPINACIA OLERACEA* L. Chenopodiaceae. Common spinach.

No. 415. *Palag*. From Agra, United Provinces, March 29, 1936. A potherb.

115966 and 115967. *TRICHOSANTHES ANGUINA* L. Cucurbitaceae. Snakegourd.

From Agra, United Provinces, March 28 and 29, 1936.

For previous introduction see 115035.

115966. No. 406. *Chachera*. Said to grow to 10 feet and to be a strain from the Bombay region.

115967. No. 443. *Chachinda*.

115968. *VICIA FABA* L. Fabaceae. Broadbean.

No. 412. *Bagala*. From Agra, United Provinces, March 28, 1936. A forage crop.

115969 to 115972. *VIGNA* spp. Fabaceae.

115969. *VIGNA SESQUIPEDALIS* (L.) Fr-wirth. Asparagus-bean.

No. 395. *Lobia*. From Agra, United Provinces, March 27, 1936. A strong-growing vine; the green pods and seeds are used as food.

115970. *VIGNA SINENSIS* (Torner) Savi. Cowpea.

No. 405. *Lamas*. From Agra, United Provinces, March 28, 1936. Pods 6 inches long, much esteemed as a green vegetable.

115971. *VIGNA SINENSIS* (Torner) Savi. Cowpea.

No. 359. *Chawl*. From Bombay, March 20, 1936. Pods and dry beans eaten.

115972. *VIGNA* sp.

No. 441. *Lobia*. From Agra, United Provinces, March 29, 1936. A mixture of varieties of which the green pods are eaten.

115973. *WRIGHTIA TINCTORIA* R. Br. Apocynaceae.

No. 354. From Kaligan, Bombay Presidency, March 18, 1936. A small bushy tree about 8 feet high, with opposite elliptic lanceolate leaves 3 to 5 inches long and large cymes of small white flowers. Native to central and eastern India.

115974. *BETULA CORYLIFOLIA* Regel and Maxim. Betulaceae. Birch.

From Japan. Seeds presented by Dr. T. Nakai, Director, Botanical Garden of the Imperial University, Tokyo. Received May 22, 1936.

This is allied to the river birch (*Betula nigra*) of the eastern United States. The

115974—Continued.

coarsely dentate leaves are broadly elliptic or obovate $1\frac{3}{4}$ to $2\frac{1}{2}$ inches long, and silky hairy on the veins beneath. Native to Japan.

115975. DELPHINIUM CASHMEREANUM
Royle. Ranunculaceae.

Cashmere larkspur.

From the Netherlands. Seeds presented by Dr. V. J. Koningsberger, Director, Botanic Garden, Utrecht. Received May 23, 1936.

For previous introduction and description see 114587.

115976 to 115992.

From India. Seeds presented by G. Ghose & Co., Darjeeling. Received May 18, 1936.

115976. CORTIA HOOKERI C. B. Clarke.
Apiaceae.

A stemless herbaceous perennial with a rosette of three to four pinnate leaves, the ultimate segments linear and about one-fourth inch long. The white or purplish flowers are borne in sessile umbels which are up to 8 inches long and form a dense mass over the crown of the plant. It is native to the Sikkim region in India.

For previous introduction see 99729.

115977. CREPIS GLOMERATA (Decaisne)
Benth. and Hook. Cichoriaceae.

A herbaceous perennial up to 6 inches high, with variable foliage and many densely crowded heads of yellow flowers. Native to the Himalayas between 13,000 and 17,000 feet altitude.

For previous introduction see 111042.

115978. CYANANTHUS sp. Campanulaceae.

115979. GAULTHERIA TRICHOPHYLLA Royle.
Ericaceae.

A low evergreen shrub of densely tufted habit, 3 to 6 inches high, spreading by means of underground shoots; the slender wiry bristly stems are densely covered with small leaves. The narrow oblong, stalkless leaves, one-fourth inch long and about one-eighth inch wide, are smooth on both surfaces but bristly on the margins, glossy dark green above and pale beneath. The solitary bell-shaped pink flowers are borne in the leaf axils and are followed by blue-black fruits. Native to the Himalayas up to 13,000 feet altitude.

For previous introduction see 100551.

115980. GENTIANA ORNATA (G. Don) Wall.
Gentianaceae.

A perennial gentian with many short decumbent stems and solitary, terminal whitish or turquoise-blue flowers over an inch long. Native to the Himalayas at altitudes of 11,000 to 15,000 feet.

115981. GERANIUM NEPALENSE Sweet.
Geraniaceae.

A procumbent perennial about 6 inches high, with cordate deeply five-lobed leaves and bright-pink or red flowers. Native to Nepal.

115982. LILIUM NEPALENSE D. Don. Lilia-
ceae. Lily.

A showy lily, native to the central Himalayas, with a slender erect stem 2 to 3 feet long, leafy to the inflorescence. The glossy bright-green leaves, 4 to 6 inches long, are oblong-lanceolate and

115976 to 115992—Continued.

five-ribbed. The flowers, 4 to 5 inches long, are greenish yellow outside and yellow within, and flushed except in the upper third, with purplish black. The oblanceolate segments are reflexed only in the upper half. The purplish-black filaments bear yellow anthers nearly an inch long.

For previous introduction see 92408.

115983. LILIUM WALLICHIANUM Schult. f.
Liliaceae. Wallich lily.

A lily 4 to 6 feet high, with linear leaves 6 to 9 inches long and usually solitary, creamy, waxy-white, fragrant flowers 9 inches long which are golden yellow at the base inside and green outside.

For previous introduction see 112750.

115984. PRIMULA STUARTII Wall. Primula-
ceae. Primrose.

A mealy or quite glabrous perennial herb, native throughout the alpine and subalpine Himalayas of India and Tibet at altitudes between 12,000 and 16,000 feet. The coriaceous oblanceolate leaves with entire or crenulate margins are 4 to 10 inches long and the scapes, 12 to 18 inches high, bear loose umbels of light-yellow, drooping flowers.

For previous introduction see 102325.

115985. RHEUM NOBILE Hook. f. and
Thoms. Polygonaceae. Rhubarb.

A handsome herbaceous plant, with a stem 3 to 4 feet high and as thick as the wrist at the base. It is found in the inner ranges of the Sikkim Himalayas at altitudes between 13,000 and 15,000 feet. The root resembles that of the common rhubarb, but is spongy and inert. The acid stems are eaten both boiled and raw, and the dried leaves afford a substitute for tobacco.

For previous introduction see 39050.

115986. ROSA MACROPHYLLA Lindl. Rosa-
ceae. Bigleaf rose.

A large, nearly thornless shrub, native to the temperate Himalayas up to 10,000 feet altitude. The compound leaves have 9 to 11 oblong to ovate leaflets, 1 to 2 inches long, pubescent beneath, and the red flowers, 2 inches across, in clusters of one to three, are followed by oblong-ovoid red fruits which are sometimes 2 inches long.

For previous introduction see 102781.

115987. RUBUS ELLIPTICUS J. E. Smith.
Rosaceae. Yellow Himalayan raspberry.

For previous introduction and description see 115011.

115988. SAUSSUREA GOSSIPIPHORA D. Don.
Asteraceae.

A curious perennial over a foot high, found in the Himalayas in poor soil among limestone rocks between 14,000 and 15,000 feet altitude. The plant grows as a white woolly mass with linear-lanceolate basal leaves. The oblong, densely cottony, bluish flower heads are buried among cottony scales.

For previous introduction see 111081.

115989. SAXIFRAGA sp. Saxifragaceae.

Received under the name "latifolia," a name of uncertain status.

115976 to 115992—Continued.

115990. *SEDUM HIMALENSE* D. DON. Cras-sulaceae.

A Himalayan sedum with stems 4 to 14 inches high, loosely intricate, narrow obovate or lanceolate leaves, and leafy cymes of dark-purple flowers.

115991. *SENECIO RETUSUS* (DC.) Wall. Asteraceae. Groundsel.

A perennial herb 12 to 18 inches high and 8 inches across, native to the slopes of the Himalayas at Nepal and Sikkim at altitudes of 12,000 to 15,000 feet. The toothed leaves vary from reniform at the base to oblong-lanceolate at the top of the plant. The yellow flower heads, 1 to 2 inches across, are solitary or two to eight in a simple terminal raceme.

For previous introduction see 102329.

115992. *SPIRAEA BELLA* Sims. Rosaceae. Himalayan spirea.

A beautiful hardy shrub, native to Nepal, continuing in flower from May until the end of the summer. It may be increased by layers or seeds; it flourishes in fresh loamy soil. The lanceolate blue-green leaves and the full terminal clusters of rose-colored flowers make this a striking ornamental.

For previous introduction see 49658.

115993 to 116012. *NICOTIANA TABACUM* L. Solanaceae.

Common tobacco.

From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Numbered in May 1936.

Cultivated tobacco.

115993. No. 3429. *Numero 3*. Mexico City, August 13, 1935. Purchased in a seed store.

115994. No. 3430. *Virginia*. Mexico City, August 13, 1935. Purchased in a seed store, said to be locally grown from United States seed. May be mixed with other types.

115995. No. 3431. *Maryland*. Mexico City, August 13, 1935. Purchased in a seed store, said to be locally grown. May be mixed with other types.

115996. No. 3553. From Bobedas, half way between Aguascalientes and Pabellon, Aguascalientes, October 5, 1935. Collected from three plants in a field of apparently mixed types.

115997. No. 3558. Probably *Macuchi*. Torreon, Coahuila, October 11, 1935. Sample of seed left over from field planted near the edge of town; the common tobacco of this region.

115998 and 115999. October 1, 1935. From Tepic, Nayarit. Original seed said to have been obtained long ago and cultivated continuously, but not probably mixed with other types.

115998. No. 3575. *Jamaica*.

115999. No. 3576. *Bonanza*.

116000. No. 3577. From Raymundo, Durango, October 18, 1935. Seed from the first year's seed of a Turkish variety obtained in Syria.

116001. No. 3578. Said to be *Virginia*. From Aviles, Durango, October 18, 1936.

116002. No. 3579. *Lagunero*. From Aviles, Durango, October 18, 1935.

115993 to 116012—Continued.

116003. No. 3580. *Cordoba* type. From Coscomatepec, Veracruz, September 29, 1935. Received through the courtesy of the Aguila Cigarette Co.

Nos. 116004 to 116008 were collected in the State of Guerrero in September 1935.

116004. No. 3581. From San Miguel Totolapan.

116005. No. 3582. From Pungarabato.

116006. No. 3583. From Pungarabato.

116007. No. 3584. From Tepipac.

116008. No. 3585. From Tepipac.

116009. No. 3586. From Yurécara, September 2, 1935.

Nos. 116010 to 116012 were collected in the State of Michoacan in September 1935.

116010. No. 3587. From Huetamo de Nunez.

116011. No. 3588. From La Pied.

116012. No. 3589. From Tacambaro.

116013 to 116015.

From Argentina. Seeds presented by Silvio Spangenberg, Director Tecnico, Semillero El Milagro, Carreras, through Murray L. Brawner, Buenos Aires. Received May 26, 1936.

116013 and 116014. *LINUM USITATISSIMUM* L. Linaceae. Flax.

116013. No. 11 "*Capa*."

116014. 330 M. A.

116015. *TRITICUM AESTIVUM* L. Poaceae. Common wheat.

38 M. A. B. 04. 27.

116016 to 116087.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received May 18, 1936.

Unless otherwise stated all of this material was collected at Jaipur City from April 2 to 7, 1936.

116016. *ABELMOSCHUS ESCULENTUS* (L.) Moench. Malvaceae. Okra.

No. 477. *Bendi*. Fruits 3 inches long.

116017. *BAUHINIA* sp. Caesalpiniaceae.

No. 496. Said to be a small tree with white flowers.

116018. *BAUHINIA* sp. Caesalpiniaceae.

No. 499. A tree said to have white flowers.

116019. *BAUHINIA* sp. Caesalpiniaceae.

No. 422. *Kachinas*. From Agra, United Provinces, March 29, 1936. A tree about 40 feet high, with fragrant purple flowers. The buds are eaten in Punjab and are somewhat like mushrooms in flavor.

116020. *BRASSICA OLERACEA BOTRYTIS* L. Brassicaceae. Cauliflower.

No. 460. *Phulgobi*. Said to be a very early variety which matures in 60 days. May be an imported variety.

116021. *BRASSICA RAPA* L. Brassicaceae. Turnip.

No. 469. *Lal Shalgum*. Said to be the common turnip of this area.

116016 to 116067—Continued.

116022. *CAESALPINIA* sp. *Caesalpinia*ceae.

No. 480. *Khair*. An attractive, medium-sized tree whose wood is used in dyeing and tanning. The gum also is used.

116023 to 116028. *CAPSICUM ANNUUM* L. *Solanaceae*. Common redpepper.

116023. No. 457. *Mirch*. Said to be 6 inches long and 1 inch in diameter, of medium pungency.

116024. No. 491. *Mirch*. A mild pepper, 3 inches long by three-fourths of an inch in diameter.

116025. No. 453. *Mirch*. Fruits to 3 inches long with indented nose, 1½ inches in diameter; mild but not without pungency.

116026. No. 494. *Patna mirch*. Said to be a hot pepper from Patna.

116027. No. 492. *Mirch*. A mild pepper with pods like No. 491 (P. I. 116024) but broader.

116028. No. 495. *Mirch*. Apparently the local pepper, but larger than any seen before. Blunt-nosed type, mild, 4 inches long by 2 inches across.

116029. *CASSIA FISTULA* L. *Caesalpinia*ceae. Golden-shower.

No. 500. For previous introduction see 114889.

116030. *CASSIA SIAMEA* Lam. *Caesalpinia*ceae. Siamese senna.

No. 485. A large tropical tree with bluish, pinnate leaves up to a foot long. In the late summer and early autumn this tree bears axillary and terminal panicles of attractive bright-yellow flowers. It is native to southern India and Malaysia.

For previous introduction see 61481.

116031. *CITRULLUS VULGARIS* Schrad. *Cucurbitaceae*. Watermelon.

No. 471. *Terbuza*. A mixture of red-fleshed variety and a yellow-fleshed variety.

116032. *CUCUMIS SATIVUS* L. *Cucurbitaceae*. Cucumber.

No. 458. *Kakri*. Fruits said to be 2 feet long and 4 inches in diameter; yellow when ripe and used both fresh and stewed.

116033. *CUCURBITA MOSCHATA* Duchesne. *Cucurbitaceae*. Cushaw.

No. 446. *Kaddu*. From Agra, United Provinces, March 31, 1936. Fruit faintly ribbed, orange-pink, flattened, 14 inches across and 9 inches long; flesh salmon colored.

116034. *CYAMOPSIS TETRAGONOLOB* (L.) Taub. *Fabaceae*. Guar.

No. 459. *Gouvar*. Green pods edible, dry pods not eaten.

116035. *DAUCUS CAROTA* L. *Apiaceae*. Carrot.

No. 463. *Kala gadjar*. Roots purple black outside with white or yellow flesh.

116036. *DOLICHOS LABLAB* L. *Fabaceae*. Hyacinth-bean.

No. 421. *Sem*. From Agra, United Provinces, March 29, 1936. A form with green pods which are used for food while young and tender.

116016 to 116067—Continued.

116037. *DOLICHOS LABLAB* L. *Fabaceae*. Hyacinth-bean.

No. 466. *Ballal*. A climbing bean. The pods are eaten green, but are much stronger in flavor than our string beans.

116038. *ERYTHRINA VARIEGATA* Stickm. *Fabaceae*. Coraltree.

No. 481. *Dhaldak*. A tree 20 to 30 feet high, native throughout India, with clusters of large bright-red flowers which appear before the leaves. The pods are 4 to 8 inches long and contain dark carmine seeds.

For previous introduction see 106924.

116039. *HOLOPTELEA INTEGRIFOLIA* (Roxb.) Planch. *Ulmaceae*.

No. 483. A large spreading tree, closely related to the elms, which grows in dry sandy soils at low altitudes in northern and central India. Its chief use appears to be as a timber tree; the wood is yellowish gray and moderately hard and is used for general construction.

For previous introduction see 59680.

116040 and 116041. *HORDEUM VULGARE* L. *Poaceae*. Barley.

Jav. From Agra, United Provinces, March 29, 1936. Collected near the southern limit of the crop.

116040. No. 444. 116041. No. 449.

116042. *IPOMOEA CAIRICA* (L.) Sweet. *Convolvulaceae*. Morning-glory.

No. 461. Flowers large, dark-blue, produced abundantly.

For previous introduction see 60552.

116043. *JACARANDA MIMOSIFOLIA* Don. *Bignoniaceae*. Green-ebony.

No. 451. A tree up to 50 feet high, with very attractive blue-purple flowers, borne in large racemes before the leaves.

For previous introduction see 30387.

116044 and 116045. *LAGENARIA LEUCANTHA* (Duchesne) Kusby. *Cucurbitaceae*. Calabash gourd.

116044. No. 473. *Ghiya*. Fruits said to be larger than No. 464 (P. I. 116045), and the vine does well only when allowed to climb.

116045. No. 464. *Ghiya*. Said to grow 3 feet, bottle-shaped. Adapted to terrestrial training.

116046. *LUFFA ACUTANGULA* (L.) Roxb. *Cucurbitaceae*. Singkwa towelgourd.

No. 470. *Tori*. Fruits ridged and winged; eaten green.

For previous introduction and description see 115497.

116047. *LYCOPERSICON ESCULENTUM* Mill. *Solanaceae*. Tomato.

No. 467. *Termattes*. Small elliptical flattened fruits, not like the ordinary "wild fruits." Said to bear all summer.

116048. *MALVA SYLVESTRIS* L. *Malvaceae*. No. 501.

116049. *MILLETTIA OVALIFOLIA* Kurz. *Fabaceae*.

No. 419. From Agra, United Provinces, March 29, 1936. A medium-sized tree

116016 to 116067—Continued.

with odd-pinnate leaves 4 to 18 inches long and slender axillary racemes of small fragrant blue flowers.

116050 and 116051. *MIMUSOPS ELENGI* L. Sapotaceae.

A small handsome evergreen tree, native to India, with dark-green shining leaves and an abundance of long acorn-shaped fruits that turn red when ripe.

For previous introduction see 67580.

116050. No. 497. *Maulsari*.

116051. No. 452. *Bontseli*.

116052. *MOMORDICA CHARANTIA* L. Cucurbitaceae. Balsam-pear.

No. 456. *Karela*.

For previous introduction and description see 115952.

116053. *MORINGA OLEIFERA* Lam. Moringaceae. Horseradish-tree.

No. 479.

For previous introduction and description see 115483.

116054. *MORUS* sp. Moraceae.

No. 503. *Safed shahtut*. Fruits yellow, to 2 inches long, peach scented, very sweet, and of good flavor.

116055. *MORUS* sp. Moraceae.

No. 502. *Kala Shahtut*. Fruit purple red to 1½ inches long, of a pleasant acid flavor.

116056. *PISUM SATIVUM* L. Fabaceae. Pea.

No. 475. *Matar*. A mixture of two native forms (red and white flowers).

116057. *PROSOPIS CHILENSIS* (Molina) Stuntz. Mimosaceae. Algaroba.

No. 546. *Babul*. From Bikaner, Bikaner State, April 13, 1936. A large tree of attractive habit and foliage.

116058. *RAPHANUS SATIVUS* L. Brassicaceae. Radish.

No. 465. *Arak mali*. Seed pods and leaves used as a potherb. Roots of no use.

116059. *RAPHANUS SATIVUS* L. Brassicaceae. Radish.

No. 476. *Muli*. Root solid, long, white, usually stewed; plants are vigorous.

116060. *SANTALUM ALBUM* L. Santalaceae. Sandalwood.

No. 490. A small evergreen semiparasitic tree, native to the drier regions of southern India, and cultivated in northern India for the sake of the white or citron-colored wood which, when dried, is sweet scented and esteemed as a perfume. The acacia is a frequent host of this tree.

For previous introduction see 66153.

116061 to 116064. *SOLANUM MELONGENA* L. Solanaceae. Eggplant.

116061. No. 424. From Agra, United Provinces, March 29, 1936. Fruits ovoid, 5 inches long and deep purple. The plants are strong and very prolific.

116062. No. 462. *Gol bengani*. Fruit said to be globose, black-purple, up to 5 inches in diameter.

116016 to 116067—Continued.

116063. No. 472. *Rutlami bengani*. Fruit said to be globose, purple-black, up to 6 inches in diameter.

116064. No. 474. *Bengani*. Fruits black-purple, elongate, and said to grow 12 inches long.

116065. *TERMINALIA ARJUNA* (Roxb.) Wight and Arn. Combretaceae.

No. 487. *Ayum*. An attractive evergreen with the habit of the American elm.

116066. *TRITICUM AESTIVUM* L. Poaceae. Common wheat.

No. 445. *Gehun*. From Agra, United Provinces, March 31, 1936. From the market; said to have come from the Punjab.

116067. *VIGNA SINENSIS* (Torner) Savi. Fabaceae. Cowpea.

No. 468. *Chaonli*. Pods said to be about 4 inches long. Both green pods and the dry seeds are eaten.

116068. *RICINUS COMMUNIS* L. Euphorbiaceae. Castor-bean.

From Cuba. Seeds presented by A. Martinez, Havana. Received May 1, 1936.

116069. *DIGITALIS FERRUGINEA* L. Scrophulariaceae.

From the Union of Soviet Socialist Republics. Seeds presented by the Introduction Garden, Sukhum, Transcaucasus, through the Institution of Plant Industry, Leningrad. Received May 11, 1936.

A biennial or perennial, 5 to 6 feet high, densely leafy, with long dense racemes of rusty-red flowers. Native to southern Europe.

For previous introduction see 109284.

116070 to 116077. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

From Costa Rica. Seeds presented by C. H. Ballou, at the request of W. A. Archer, Bureau of Plant Industry. Received June 3, 1936.

116070. *Cien hojas*.

116071. *Copan*.

116072. *Desconocido*.

116073. *Desgajador*.

116074. *Palmira blanco*.

116075. *Palmira negro*.

116076. *Palmiron*.

116077. *Vuelta abajo*.

116078 to 116085. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

From Honduras. Seeds presented by Antonio Fernandez, Santa Rose de Copan, through the American consul at Tegucigalpa, at the request of W. A. Archer, Bureau of Plant Industry. Received June 6, 1936.

116078. *Chichicaste*, a pure strain.

116079. *Copanico flor blanco*, a pure strain.

116080. *Copanico flor roja*, a pure strain.

116081. *Gigante*, a pure strain.

116078 to 116085—Continued.

116082. *Negro*, a pure strain.
 116083. *Pina*, a pure strain.
 116084. Collected at Santa Rita.
 116085. Collected at San Nicolas.

116086. *SACCHARUM* sp. Poaceae.

From Papete, New Hebrides Islands. Rooted cuttings. Received June 8, 1936.

Received under the name "robustum," a name not properly published.

116087. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

From Honduras. Seeds presented by Ricardo Aparicio, Tuxtepec, Oaxaca, Mexico, through the American consul at Tegucigalpa, at the request of W. A. Archer, Bureau of Plant Industry. Received June 9, 1936.

Chichicaste (Honduras); *Burro* (Cuba).

116088. *MANGIFERA INDICA* L. Anacardiaceae. Mango.

From the Canal Zone. Plants presented by J. E. Higgins, Canal Zone Experiment Gardens, Balboa Heights. Received June 10, 1936.

Fairchild mango.

116089. *CHIMONOBAMBUSA MARMOREA* (Mitf.) Makino. (*Arundinaria marmorata* (Mitf.) Makino). Poaceae. Bamboo.

From England. Plant presented by the Royal Botanic Gardens, Kew, Surrey. Received June 9, 1936.

A small bamboo growing 3 feet or more high. The internodes of the culms are very short with three branches at each node, two short and one long. The bright-green, nearly sessile leaves are up to 4½ inches long by three-eighths to five-eighths of an inch wide, rough on both edges, and with tessellated venations. The degree of hardness of the plant is not definitely known, though it is reported to have withstood a temperature of about 8° F. without injury in England.

For previous introduction see 90301.

116090 to 116098. *BETA* spp. Chenopodiaceae.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Plant Industry, Leningrad. Received June 17, 1936.

116090 and 116091. *BETA LOMATOGONA* Fisch. and Mey.

116090. No. 1. From Armenia.

116091. No. 2. From Azerbaijan.

116092 and 116093. *BETA MACRORHIZA* Stev.

A perennial, native to the Caucasus region.

116092. No. 6. Near Yak, Azerbaijan.

116093. No. 7. Near Kriz, Azerbaijan.

116094 to 116096. *BETA TRIGYNA* Waldst. and Kit.

For previous introduction see 114606.

116094. No. 4. From District Ketaulu, Arger, Armenia.

116090 to 116098—Continued.

116095. No. 3. From District Elenoone, Armenia.

116096. No. 5. From Crimea.

116097 and 116098. *BETA VULGARIS* L. Common beet.

116097. No. 9. From Azerbaijan.

116098. No. 8. From Azerbaijan.

116099 to 116114.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received June 19, 1936.

Unless otherwise stated, all of this material was collected April 11 and 12, 1936, at Bikaner, Bikaner State.

116099. *TERMINALIA BELLERICA* (Gaertn.) Roxb. Combretaceae.

No. 486. From Jaipur City, April 7, 1936. The small round fruits of this tropical Indian tree are exported for tanning purposes under the name *myrobalans*. The yellowish-gray wood is used for general construction, and the tree also has merit as a shade tree for avenues, with its huge buttressed trunk and low horizontal branches.

For previous introduction see 97985.

116100. *ALLIUM CEPA* L. Liliaceae. Onion.

No. 516. *Peyaz*. Said to be a round red onion.

116101. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. Watermelon.

No. 513.

116102. *CUCUMIS MELO* L. Cucurbitaceae. Muskmelon.

No. 514. Fruit is dried; later the seeds are crushed and cooked with vegetables.

116103. *CUCUMIS SATIVUS* L. Cucurbitaceae. Cucumber.

No. 515. *Kakri*. A mixed sample.

116104. *CUCURBITA MOSCHATA* Duchesne. Cucurbitaceae. Cuslaw.

No. 447. *Kaddu*. From Jaipur City, Jaipur State, April 1, 1936. Fruit prominently ribbed, 2 feet long, pointed at the blossom end, mottled pink, brown, and dark green; flesh salmon.

116105. *CYAMOPSIS TETRAGONOLOBA* (L.) Taub. Fabaceae. Guar.

No. 521. *Gowas*. Used as food while green, but the ripe seeds are used as cattle feed.

116106. *DAUCUS CAROTA* L. Apiaceae. Carrot.

No. 517. *Lal gajar*. Said to be a red-fleshed form.

116107. *HORDEUM VULGARE* L. Poaceae. Barley.

No. 450. *Jau*. From Jaipur City, April 2, 1936.

116108. *LUFFA CYLINDRICA* (L.) Roemer. Cucurbitaceae. Suakwa towelgourd.

No. 530. Fruit 18 inches long, smooth, with no trace of ribs.

116109. *Pennisetum glaucum* (L.) R. Br. Poaceae. Pearl millet.

No. 523. *Bajei*. Used for bread; also cooked to a paste and squeezed through

116099 to 116114—Continued.

a strainer; the fine vermicellilike strings are cooked in oil.

116110. *PHASEOLUS ACONITIFOLIUS* Jacq. Fabaceae. Moth bean.

No. 518. A dry-land crop.

116111. *RAPHANUS SATIVUS* L. Brassicaceae. Radish.

No. 519. *Muli*. A long white root, grown under irrigation.

116112. *RUMEX VESICARIUS* L. Polygonaceae.

No. 510. *Chuka*. From Jaipur City, Jaipur State, April 10, 1936. A potherb, widely cultivated in India.

116113. *SESAMUM ORIENTALE* L. Pedaliaceae. Sesame.

No. 522. *Til*. An oil crop, valued as butter, also used for the making of sweets.

116114. *ZIZIPHUS MAURITIANA* Lam. Rhamnaceae. Indian jujube.

No. 524. *Bhor*. Dried fruits sold in the bazar.

For previous introduction see 115525.

116115 to 116157.

From China. Seeds and bulbs presented by the Botanic Garden Division of the Sun Yat-Sen Tomb and Memorial Park Commission, Nanking. Received May 12, 1936.

Unless otherwise stated, the material presented was seeds.

116115. *ALLIUM MACROSTEMON* Bunge. Liliaceae.

No. 24. Bulbets of an allium with linear leaves and lax umbels of three to many small rose-colored flowers. Native to northern China.

116116. *ACTINIDIA CORIACEA* (Fin. and Gagn.) Dunn. Dilleniaceae.

No. 12.

116117. *BETA VULGARIS* L. Chenopodiaceae. Common beet.

No. 85.

116118. *BRASSICA OLERACEA* L. Brassicaceae. Wild cabbage.

No. 93. For previous introduction see 65590.

116119. *CARPINUS LAXIFLORA* Blume. Betulaceae. Hornbeam.

No. 136. A tree native to Japan, 40 to 50 feet high. The obliquely elliptic to cordate, long-pointed leaves are 2 to 3 inches long and have serrate margins. The inconspicuous flowers are borne in loose catkins 2 to 3 inches long.

For previous introduction see 98310.

116120. *CARPINUS TURCZANINOVII* Hance. Betulaceae. Hornbeam.

No. 137. A hardy shrubby tree with oval, sharp-pointed leaves 1 to 2 inches long. It is said to resemble *Carpinus polynœura*, also a Chinese species. Native to Hopei Province, China.

For previous introduction see 93113.

116121 to 116123. *CASTANOPSIS* spp. Fagaceae.

116121. *CASTANOPSIS CUSPIDATA* (Thunb.) Schottky.

No. 150.

116115 to 116157—Continued.

116122. *CASTANOPSIS EYREI* (Champ.) Tutch.

No. 151. An evergreen tree about 30 feet high. Native to southern China.

116123. *CASTANOPSIS SCLEROPHYLLA* (Lindl.) Schottky.

No. 152.

116124. *CELASTRUS GEMMATA* Loes. Celastraceae.

No. 158. A woody climber up to 18 feet long, with ovate-elliptic leaves 2 to 4 inches long and cymes of large golden-yellow fruits. Native to central and western China.

116125. *CELTIS BIONDII* Pampan. Ulmaceae. Hackberry.

No. 161. A stout-branched hackberry from western China, with rather stiff, broadly ovate, long-acuminate leaves 2 to 3 inches long and small black fruits.

For previous introduction see 105313.

116126. *CELTIS BUNGEANA* Blume. Ulmaceae. Hackberry.

No. 162.

116127. *COIX LACRYMA-JOBI* L. Poaceae. Jobs-tears.

No. 203.

116128. *CORNUS WALTERI* Wangerin. Cornaceae. Dogwood.

No. 220. A tree 40 feet high, with white flowers and blue-black fruits, growing in woodlands at 900 to 2,000 feet altitude in western Hupeh, China.

For previous introduction see 65767.

116129. *DAUCUS CAROTA* L. Apiaceae. Carrot.

No. 246.

116130 to 116133. *LACTUCA* spp. Cichoriaceae. Lettuce.

116130. *LACTUCA CHINENSIS* (Thunb.) Makino.

No. 389. An ornamental lettuce with entire to pinnatisect, linear or sublinear leaves and lax corymbs of yellow or white flower heads. Native to Japan.

116131. *LACTUCA INDICA* L.

No. 390. A tall erect annual native to Japan.

116132. *LACTUCA SATIVA* L. Garden lettuce.

No. 391.

116133. *LACTUCA CHINENSIS* (Thunb.) Makino.

No. 392. For previous introduction and description see 116130.

116134 to 116139. *LESPEDEZA* spp. Fabaceae. Bushlover.

116134. *LESPEDEZA BUERGERI* Miquel.

No. 397. A low, bushy, hardy perennial with elliptic-ovate leaflets and white or purple flowers about one-third inch long. It is of ornamental value and is also used as fodder.

For previous introduction see 9230.

116135. *LESPEDEZA DAVIDI* Franch.

No. 398. A shrub about 6 feet high, with ovate or obovate leathery leaflets

116115 to 116157—Continued.

and many reddish-purple flowers in axillary or terminal racemes. Native to Kiangsi Province, China.

116136. *LESPEDEZA FLORIBUNDA* Bunge.

No. 399.

116137. *LESPEDEZA FORMOSA* (Vogel) Koehne. Purple bushclover.

No. 400. An erect, semishrubby plant 6 to 12 feet high, with trifoliolate leaves of oblong leaflets and racemes of rose-purple flowers. Native to Chosen.

For previous introduction see 111205.

116138. *LESPEDEZA STRIATA* (Thunb.) Hook. and Arn.

No. 402.

116139. *LESPEDEZA TOMENTOSA* (Thunb.) Sieb.

No. 403.

116140. *LITHOCARPUS GLABRA* (Thunb.) Rehd. Fagaceae.

No. 424. An evergreen tree with oblong, entire leaves 3 to 6 inches long and small nuts in spikes. Native to Japan.

116141 to 116146. *NICOTIANA* spp. Solanaceae. Tobacco.116141. *NICOTIANA ACUTIFLORA* A. St. Hil.

No. 490. A herbaceous perennial tobacco related to *Nicotiana longiflora*. Native to southern South America.

116142. *NICOTIANA ALATA GRANDIFLORA* Comes.

No. 491.

116143. *NICOTIANA RUSTICA* L. Aztec tobacco.

No. 493.

116144. *NICOTIANA TABACUM* L. Common tobacco.

No. 494.

116145. *NICOTIANA TABACUM MACROPHYLLA* Dunal.

No. 492.

116146. *NICOTIANA TABACUM MACROPHYLLA* Dunal.

No. 495.

116147. *POA ACROLEUCA* Steud. Poaceae.

No. 560. An annual grass, native to Japan.

116148. *QUERCUS FABRI* Hance. Fagaceae.

No. 603. A small evergreen oak of the *Prinus* section, up to 45 feet high, with obovate to oblong leaves to 7 inches long, sinuate and shallow lobed. Native to China.

116149 to 116151. *RUBUS* spp. Rosaceae.16149. *RUBUS BUERGERI* Miquel.

No. 633.

116150. *RUBUS LAMBERTIANUS* Seringe.

No. 634.

116151. *RUBUS TEPHRODES* Hance.

No. 637. A straggling shrub with branches about 15 feet long, terminal clusters of small pink flowers, and

116115 to 116157—Continued.

rather large black fruits. Closely related to *Rubus chroosepalus*. Native to Kiangsi Province, China.

For previous introduction see 113821.

116152 to 116155. *SOLANUM* spp. Solanaceae.116152. *SOLANUM ACULEATISSIMUM* Jacq.

No. 691. A spiny undershrub, 1 to 2 feet high, widely distributed in the Tropics. The few-flowered axillary cymes of snow-white flowers 1 inch across are followed by globose orange or yellow fruits often 2 inches in diameter.

For previous introduction see 46028.

116153. *SOLANUM AETHIOPICUM* L.

No. 692. A vigorous ornamental plant with white flowers and small fruits which resemble tomatoes in shape.

For previous introduction see 91546.

116154. *SOLANUM DULCAMARA* L.

No. 693.

116155. *SOLANUM NIGRUM* L. Black nightshade.

No. 694.

116156. *STYRAX FABERI* Perkins. Styracaceae.

No. 721. A shrub or tree with membranous, obovate to oblong leaves about 2 to 3 inches long and numerous showy yellowish flowers in axillary or terminal clusters. Native to eastern China.

116157. *STYRAX PHILADELPHOIDES* Perkins.

No. 722. A large shrub 5 to 6 feet high, with thin narrowly oblong, hairy leaves 1 to 3 inches long and white flowers half an inch long, in small axillary and terminal racemes. Native to eastern China.

For previous introduction see 105329.

116158 to 116180. *NICOTIANA* spp. Solanaceae. Tobacco.

From Peru and Ecuador. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received June 4, 1936.

Unless otherwise stated, all of this material was collected in Peru.

116158. *NICOTIANA GLAUCA* R. Grab. Tree tobacco.

No. 112. *Supai-cearcco*. Collected at San Sebastian, 5 kilometers south of Cuzco, 3,300 meters altitude, April 20, 1936.

116159 to 116164. *NICOTIANA TABACUM* L. Common tobacco.

116159. No. 114. April 21, 1936. A white-flowered form from Macchu-Picchu at 2,100 meters altitude.

116160. No. 115. April 21, 1936. A red-flowered form from Macchu-Picchu at 2,100 meters altitude.

116161. No. 116. April 23, 1936. A red-flowered form from Santa Rosa, Cuzco, at 1,150 meters altitude.

116162. No. 117. April 23, 1936. A white-flowered form from Santa Rosa, Cuzco, at 1,150 meters altitude.

116163. No. 119. April 24, 1936. A red-flowered form from Hacienda Santa Ana, Quillabamba, at 1,025 meters altitude.

116158 to 116180—Continued.

116164. No. 121. April 23, 1936. *Tabaco*, a red-flowered form from Santa Rosa, Cuzco, at 1,150 meters altitude.

116165. *NICOTIANA PANICULATA* L.

No. 122. *Ccamato*. April 25, 1936. From Ollantaytambo, Cuzco, at 2,800 meters altitude. A form with long yellowish flowers.

116166. *NICOTIANA PANICULATA* L.

No. 124. *Ccamato*. April 27, 1936. Collected in the Urubamba Valley between Ollantaytambo and Urubamba at 2,700 meters altitude.

116167 to 116174. *NICOTIANA TABACUM* L.
Common tobacco.

116167. No. 126. April 27, 1936. A pink-flowered form from Urubamba, Yucay Province, at 2,800 meters altitude.

116168. No. 127. April 27, 1936. A pink-flowered form from Coyo, Urubamba, at 2,900 meters altitude.

116169. No. 128. May 1, 1936. From Juliaca, Departamento Puno, at 3,825 meters altitude.

116170. No. 129. May 5, 1936. From Hacienda La Mascota, Provincia Pastaza, Ecuador, at 1,150 meters altitude.

116171. No. 130. May 8, 1936. From the Estanco de Tabaco, Lima.

116172. No. 131. May 8, 1936. From the Estanco de Tabaco, Lima. A white-flowered form.

116173. No. 132. *Ccamato*. April 23, 1936. From Santa Rosa, Cuzco, at 1,150 meters altitude.

116174. No. 133. May 9, 1936. From the Bravo Natural History Museum, Lima.

116175 and 116176. *NICOTIANA LEGUIANA* Macbr.

A tobacco closely related to *Nicotiana tomentosa*; native to Peru and Bolivia.

116175. No. 118. *Ccamato*. From Macchu-Picchu, Cuzco, April 22, 1936, at 2,100 meters altitude.

116176. No. 120. *Ccamato*. From Santa Rosa, Cuzco, April 23, 1936, at 1,150 meters altitude.

116177. *NICOTIANA UNDULATA* Ruiz and Pav.

No. 123. April 25, 1936. From Ollantaytambo, Cuzco, at 2,800 meters altitude.

116178. *NICOTIANA UNDULATA* Ruiz and Pav.

No. 125. April 27, 1936. From Coyo, Urubamba, at 2,900 meters altitude.

116179. *NICOTIANA* sp.

No. 113. *Ccama-sayri*. From San Sebastian, 5 kilometers south of Cuzco, at 3,300 meters altitude, April 20, 1936.

116180. *NICOTIANA PANICULATA* L.

No. 111. *Tabaquillo*. From Huasacache, near Arequipa, at 2,300 meters altitude, April 16, 1936.

116181 to 116183. *NICOTIANA TABACUM* L. Solanaceae.

Common tobacco.

From Mexico. Seeds presented through E. W. Eaton, American consul, Durango. Received June 12, 1936.

116181. From San Juan del Rio.

116182. From Santiago Papasquiaro. A tobacco which produces well at 5,600 feet altitude.

116183. From Yerbanis, Durango.

116184 to 116207.

From the Union of Soviet Socialist Republics. Seeds presented by the Director, Botanic Garden, Alma-Ata. Received May 27, 1936.

116184 to 116190. *AGROPYRON* spp. Poaceae.

116184. *AGROPYRON CANINUM* (L.) Beauv. Awned wheatgrass.

For previous introduction see 107869.

116185. *AGROPYRON CRISTATUM* (L.) Gaertn. Crested wheatgrass.

116186. *AGROPYRON DESERTORUM* (Fisch.) Schult.

For previous introduction see 111481.

116187. *AGROPYRON PAUCIFLORUM* (Schwein.) Hitchc.

116188. *AGROPYRON RAMOSUM* (Trin.) Richt.

For previous introduction see 108425.

116189. *AGROPYRON REPENS* (L.) Beauv. Quackgrass.

116190. *AGROPYRON SIBIRICUM* (Willd.) Beauv.

116191. *BERBERIS ILIENSIS* M. Pop. Berberidaceae.

A deciduous shrub with oblong or lanceolate leaves. It is closely related to *Berberis nummularia*. Native to Turkistan.

116192. *BETULA TIANSHANICA* Rupr. Betulaceae.

A small tree with ovate or narrow-ovate leaves about 2 inches long. It is allied to *Betula alba*. Native to Turkistan.

116193. *BETULA PENDULA* Roth. Betulaceae.

A form with purple leaves.

For previous introduction see 91460.

116194. *DELPHINIUM DASYANTHUM* Kar. and Kir. Ranunculaceae. Larkspur.

A perennial delphinium with simple stems 1 to 2 feet high and terminal clusters of deep-violet flowers. Native to Turkistan.

116195 to 116197. *EREMURUS* spp. Liliaceae.

116195. *EREMURUS ALTAICUS* (Pall.) Stev.

An ornamental desert plant with long linear leaves forming a rosette from which rises a columnar spike of star-shaped, rosy-purple flowers.

For previous introduction see 107913.

116184 to 116207—Continued.

116196. EREMURUS INDERIENSIS Regel.

A hardy herbaceous perennial with a rosette of narrow-linear leaves and a raceme of purplish flowers on a scape up to 18 inches high. Native to Turkistan.

For previous introduction see 107526.

116197. EREMURUS OLGÆ Regel.

For previous introduction and description see 115072.

116198. PISUM SATIVUM L. Fabaceae. Pea.

Variety *Asiaticum*.

116199 to 116202. RHEUM spp. Polygonaceae. Rhubarb.

116199. RHEUM RIBES L.

116200. RHEUM SONGARICUM Schrenk.

116201. RHEUM WITTRICKII Lunstroem.

116202. RHEUM sp.

116203 to 116206. ROSA spp. Rosaceae. Rose.

116203. ROSA PERSICA Michx. Persian rose.

A low straggling shrub 1 to 3 feet high, with simple oval to oblong, glaucous leaves and small yellow flowers. It is native to dry clayey ridges and alkaline loess plains from northern Iran [Persia] to Siberia.

For previous introduction see 31695.

116204. ROSA SPINOSISSIMA L. Scotch rose.

116205. ROSA BEGGERIANA Schrenk.

A dense prickly shrub 4 to 8 feet high, with oval or elliptic, bluish or grayish-green leaflets. The flowers in small or large corymbs are white or rarely pink and about 1 inch across, and the fruits are very dark red. Native to northern Iran and Turkistan.

For previous introduction see 91997.

116206. ROSA sp.

116207. STIPA KIRGHISORUM P. Smirn. Poaceae. Grass.

A perennial grass up to 2 feet high. Native to Turkistan.

116208. ARCHONTOPHOENIX ALEXANDRAE (F. Muell.) Wendl. and Drude. Phoenicaceae. Palm.

From the United States Plant Introduction Garden, Coconut Grove, Fla. Plants growing at the garden from seeds collected on the southwest coast of Florida in 1932 by O. F. Cook, Bureau of Plant Industry. Numbered in 1936.

A pinnate-leaved palm 70 to 80 feet high, with leaves several feet long, and lanceolate, usually entire leaflets up to 2 feet in length and whitish beneath. The yellow-green flowers are borne in a cluster about a foot long and are followed by small dry round fruits. It is native to Queensland, Australia.

For previous introduction see 111941.

116209 and 116210. COCOS NUCIFERA L. Phoenicaceae. Coconut.

From the Canal Zone. Seeds presented by J. E. Higgins, Superintendent, Canal Zone Experiment Gardens, Summit. Received June 10, 1926.

116209. Variety *King*.116210. Variety *Nawasi*.

116211. ERYTHRINA ACANTHOCARPA, E. Mey. Fabaceae.

From South Australia. Seeds presented by J. Howard Johnson, St. Peters. Received June 12, 1936.

A rigid, wide-spreading shrub, native to South Africa, 4 to 6 feet high and armed with sharp awl-shaped reflexed prickles. The leaves are made up of three elliptical leaflets an inch long. The scarlet flowers, 1 to 2 inches long, are in lateral and terminal racemes and last from 2 to 3 weeks, before the leaves have fully developed. The flowers are followed by twisted prickly pods up to 7 inches long.

For previous introduction see 80251.

116212. TRITICUM AESTIVUM L. Poaceae. Common wheat.

From Australia. Seeds presented by H. Wenholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received May 22, 1936.

Variety *Wannon*.

116213 to 116215. SOJA MAX (L.) Piper. Fabaceae. Soybean.

From India. Seeds presented by the Economic Botanist, Department of Agriculture, Jorhat, Assam. Received May 22, 1936.

116213. *Khasi Rymbailieh*.116214. *Khasi Rymbai Thohriaw*.116215. *Nepali*, a large variety.

116216 to 116220.

From Morocco. Seeds presented by the Director, Station Centrale de Recherches Agronomiques, Rabat. Received May 26, 1936.

116216. ABELMOSCHUS ESCULENTUS (L.) Moench. Malvaceae. Okra.

116217. BRASSICA RAPA L. Brassicaceae. Turnip.

116218. DAUCUS CAROTA L. Apiaceae. Carrot.

116219. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

116220. RAPHANUS SATIVUS L. Brassicaceae. Radish.

116221 to 116236. TRITICUM AESTIVUM L. Poaceae. Common wheat.

From Australia. Seeds presented by H. Wenholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received May 23, 1936.

116221. *Argentine*. C. 8681.116222. *Argentine* K 33. C. 9655.

116221 to 116236—Continued.

116223. *Argentine*. C. 9656.
 116224. *Clubhead*. C. 9342.
 116225. *Ford*.
 116226. *Greek* 18. C. 7142.
 116227. *Greek* 10. C. 7135.
 116228. *Minor*. C. 9142.
 116229. *Mocha*. C. 9693.
 116230. *Portugal* 65. C. 7897.
 116231. *Portugal* 90. C. 7921.
 116232. *Solid straw Tusca*. C. 10850.
 116233. *Uruguay*. C. 10836.
 116234. *Uruguay*. C. 10835.
 116235. *Uruguay*. C. 10834.
 116236. *Varonne*. C. 6146.

116237 to 116241.

From Mexico. Bulbs and plants purchased from Dr. C. A. Purpus, Zacuapam, Huatusco, Veracruz. Received June 13, 1936.

116237. *CHAMAEDOREA SARTORII* Liebm.
 Phoenicaceae.

A palm, native to southern Mexico, with a trunk 8 to 15 feet high, covered with the bases of the leaf petioles. The pinnately compound leaves, 3 to 4 feet long, are made up of alternate falcate pinnae 12 inches long, and the ovoid black fruits are less than an inch long.

For previous introduction see 101700.

- 116238 to 116241. *ZEPHYRANTHES* spp.
 Amaryllidaceae.

Bulbs collected on the higher sierras and from the lower plains near Zacuapam.

116238. *ZEPHYRANTHES* sp.
 116239. *ZEPHYRANTHES* sp.
 116240. *ZEPHYRANTHES* sp.
 116241. *ZEPHYRANTHES* sp.

116242 and 116243.

From Ecuador. Seeds presented by the Dirección de Agricultura del Litoral, Guayaquil, through the American consulate general, Guayaquil, at the request of Raymond Stadelman, Bureau of Plant Industry. Received June 6, 1936.

116242. *DUCHESNEA INDICA* (Andrews)
 Focke. Rosaceae.

For previous introduction see 58891.

116243. *RUBUS* sp. Rosaceae.

116244 to 116247.

From Peru and Ecuador. Seeds collected by Raymond Stadelman. Bureau of Plant Industry. Received June 4, 1936.

116244. *CARICA CANDICANS* A. Gray. Papayaceae.

From Matucana, Lima, Peru, at 4,700 feet altitude. A wild relative of the papaya (*Carica papaya*), which is native to the mountainous region of Peru between Lima and Obrajilla, at about 7,000 feet altitude. It is a small tree 6 to 10 feet high, with a few stout branches and a fruit said to be shaped like a cacao pod.

For previous introduction see 58627.

116244 to 116247—Continued.

116245. *TEPHROSIA TOXICARIA* (Sw.) Pers.
 Fabaceae.

Collected April 23, 1936, at Santa Rosa, Cuzco, Peru, at 3,800 feet altitude.

For previous introduction see 114081.

116246. *DATURA STRAMONIUM* L. Solanaceae.

Adormidera. From Santa Rosa, Cuzco, Peru, April 23, 1936, at 3,800 feet altitude.

116247. *LANTANA CAMARA* L. Verbenaceae.
 Common *lantana*.

From San Mateo, Province Esmeraldas, Ecuador, March 24, 1936. Fruit used medicinally.

For previous introduction and description see 114962.

116248 to 116254. *AGROPYRON* spp.
 Poaceae. Grass.

From the Union of Soviet Socialist Republics. Seeds presented by Dr. N. I. Vavilov, Director, Institute of Plant Industry, Leningrad. Received June 6, 1936.

- 116248 to 116250. *AGROPYRON DESERTORUM* (Fisch.) Schult.

116248. No. K. 10421 (931).

116249. No. 764.

116250. No. 763.

116251. *AGROPYRON SIBIRICUM* (Willd.) Beauv.

No. 643 (982).

For previous introduction see 116190.

- 116252 and 116253. *AGROPYRON TRICHOPHORUM* (Link) Richt.

116252. No. 1014. 116253. No. 898.

116254. *AGROPYRON* sp.

No. 915.

116255 to 116285. *GOSSYPIUM* spp. Malvaceae. Cotton.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Applied Botany, Leningrad. Received June 3, 1936.

- 116255 to 116257. *GOSSYPIUM ARBOREUM* L.

For previous introduction see 115473.

116255. No. K. 2509.

116256. No. K. 2520.

116257. No. K. 2526.

- 116258 to 116285. *GOSSYPIUM HERBACEUM* L.

116258. No. K. 2507.

116259. No. K. 2513.

116260. No. K. 2508.

116261. No. K. 2514.

116262. No. K. 2516.

116263. No. K. 2519.

116264. No. K. 2521.

116265. No. K. 2525.

116266. No. K. 2530.

116255 to 116285—Continued.

116267. No. K. 2531.
 116268. No. K. 2532.
 116269. No. K. 2539.
 116270. No. K. 2545.
 116271. No. K. 2548.
 116272. No. K. 2549.
 116273. No. K. 2550.
 116274. No. K. 2568.
 116275. No. K. 2572.
 116276. No. K. 2577.
 116277. No. K. 2590.
 116278. No. K. 2612.
 116279. No. K. 2614.
 116280. No. K. 2619.
 116281. No. K. 2621.
 116282. No. K. 2626.
 116283. No. K. 2645.
 116284. No. K. 2852.
 116285. No. K. 3001.

116286. PIPTADENIA sp. Mimosaceae.

From Nigeria. Seeds presented by the Conservator of Forests, through the Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba. Received June 2, 1936.

Received as *Piptadenia africana*, but the seeds do not agree with that species.

116287 to 116296. AEGILOPS spp. Poaceae.

From Germany. Seeds presented by Dr. Elizabeth Schieman through the Kaiser Wilhelm Institut, Möncheberg. Received June 8, 1936.

116287. AEGILOPS BIUNCIALIS Visiani.

An annual grass, native to the Mediterranean region.

116288. AEGILOPS CAUDATA L.

An annual grass, native to Crete.

116289. AEGILOPS COLUMNARIS Zhuk.

An annual grass, native to Asia Minor.

116290. AEGILOPS COMOSA Sibth. and Smith.

An annual grass, native to Greece and Asia Minor.

116291. AEGILOPS LIGUSTICA (Bertol.) Coss.

An annual grass, native to Europe.

116292. AEGILOPS SHARONENSIS Eig.

An annual grass, native to Palestine.

116293. AEGILOPS SPELTOIDES Tausch.

An annual grass of garden origin.

116294. AEGILOPS UMBELLULATA Zhuk.

An annual grass, native to Asia Minor.

116295. AEGILOPS UNIARISTATA Visiani.

An annual grass, native to the Mediterranean region.

116296. AEGILOPS VARIABILIS Eig.

A bushy annual grass, native to the eastern Mediterranean region.

116297 to 116331. TRITICUM AESTIVUM L. Poaceae. Common wheat.

From Australia. Seeds presented by H. Wenholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received June 5, 1936.

116297. *Argentine*, K. 40. C. 9658.

116298. *Argentine*, K. 33. C. 9655.

116299. *Argentine*. C. 9656.

116300. *Greek*, 10. C. 7135.

116301. *Greek*, 18. C. 7142.

116302. *Ford* × *Minturki* F₅. G. 8-0-0.

116303. *Ford* × *Minturki* F₆. G. 8-1-0.

116304. *Ford* × *Tenmarq* F₅. G-0-7.

116305. *Minor*. C. 9142.

116306. *Mocho*. C. 9693.

106307. *Nabawa* × *RL 723* × (*Tenmarq*)
F₄. G-101-3.

116308. *Nabawa* × *RL 723* × (*Tenmarq*)
F₄. G-101-1.

116309. *Nabawa* × *RL 723* × (*Tenmarq*)
F₄. G-101-2.

116310. *Portugal*. C. 7897.

116311. *Portugal*. C. 7921.

116312. *Pusa 4* × *RL 723* × (*Tenmarq*)
F₃. G-103.

116313. *Pusa 4* × *RL 723* × (*Tenmarq*)
F₃. G-102.

116314. *San Martin*. C. 9657.

116315. *Tenmarq* × *Pusa 4* F₅. G-0-0-11.

116316. *Tenmarq* × *Dundee* F₄. G-0-6.

116317. *Tenmarq* × *Pusa 4* F₅. G-0-0-110.

116318. *Tenmarq* × *Dundee* F₄. G-1-1.

116319. *Tenmarq* × *Dundee* F₄ from F₃
line. G-1-0.

116320. *Tenmarq* × *Dundee* F₄. G-101-1.

116321. *Tenmarq* × *Dundee* F₄. G-0-4.

116322. *Tenmarq* × *Pusa 4* F₄. G-0-13.

116323. *Tenmarq* × *Pusa 4* F₄. G-0-5.

116324. *Tenmarq* × *Pusa 4* F₄. G-0-11.

116325. *Tenmarq* × *Pusa 4* F₄. G-0-1.

116326. *Uruguay* 386. C. 10838.

116327. *Uruguay*. C. 10835.

116328. *Uruguay* 392. C. 10837.

116329. *Uruguay*. C. 10836.

116330. *Varonne*. C. 6146.

116331. *H44* × *Minhardi*. C. 9669.

116332 to 116452. ORYZA SATIVA L. Poaceae. Rice.

From Australia. Seeds presented by the Rice Research Station, Department of Agriculture, Yanco, New South Wales. Received June 22, 1936.

116332. *Acadia*. Y 2009.

116333. *Americana*. Y 1072-2.

116334. *Basantabahar*. Y 3480.

116335. *Benloch*. Y 1073-3.

116336. *Bentone*. Y 761.

116332 to 116452—Continued.

116337. *Blue Rose*. Y 1224.
 116338. *Blue Rose* × *Caloro*.
 116339. *Blue Rose* × *Caloro*, late.
 116340. *Blue Rose* × *Caloro*.
 116341. *Caloro*. 24-1-1. 18/2.
 116342. *Caloro*. Y 314-8.
 116343. *Caloro*. 314-9, late.
 116344. *Caloro*. Y 314-10, early.
 116345. *Caloro*. Y 2176-4-2.
 116346. *Caloro*. Y 2176-7, midseason.
 116347. *Caloro*. Y 2176-7-1, early.
 116348. *Caloro*. Y 2178-4, late.
 116349. *Caloro*. Y 2178-4-8.
 116350. *Caloro*. Y 2186, midseason.
 116351. *Caloro*. Y 2187.
 116352. *Caloro* × *Carolina White*. Y 3, late.
 116353. *Caloro* × *Carolina White*. Y 11.
 116354. *Caloro* × *Carolina White*. Y 14, late.
 116355. *Caloro* × *Carolina White*. Y 27, late.
 116356. *Caloro* × *Carolina White*. Y 35.
 116357. *Carolina Gold* × *Caloro*. Y 10, late.
 116358. *Carolina White*. Y 2851.
 Nos. 116359 to 116379 are different selections of *Carolina White* × *Bertone* F 3.
 116359. *Carolina White* × *Bertone*. F 3.
 116360. *Carolina White* × *Bertone*. F 3.
 116361. *Carolina White* × *Bertone*. F 3.
 116362. *Carolina White* × *Bertone*. F 3.
 116363. *Carolina White* × *Bertone*. F 3.
 116364. *Carolina White* × *Bertone*. F 3.
 116365. *Carolina White* × *Bertone*. F 3.
 116366. *Carolina White* × *Bertone*. F 3.
 116367. *Carolina White* × *Bertone*. F 3.
 116368. *Carolina White* × *Bertone*. F 3.
 116369. *Carolina White* × *Bertone*. F 3.
 116370. *Carolina White* × *Bertone*. F 3.
 116371. *Carolina White* × *Bertone*. F 3.
 116372. *Carolina White* × *Bertone*. F 3.
 116373. *Carolina White* × *Bertone*. F 3.
 116374. *Carolina White* × *Bertone*. F 3.
 116375. *Carolina White* × *Bertone*. F 3.
 116376. *Carolina White* × *Bertone*. F 3.
 116377. *Carolina White* × *Bertone*. F 3.
 116378. *Carolina White* × *Bertone*. F 3.
 116379. *Carolina White* × *Bertone*. F 3.
 116380. *Chinese Originario* 26 III '34.
 116381. *C. I. 1561* × *Y 1105*, early.
 116382. *Colusa* Y 180, early.
 116383. *Colusa* 14 '32, early.
 116384. *Colusa* Y 146-1, early.

116332 to 116452—Continued.

116385. *Colusa* Y 451-1-9-1-1, early.
 116386. *Delitus* Y 2926-1-3.
 116387. *Delitus* 2926-3.
 116388. *Early Wataribune* Y 387, midseason.
 116389. *Edith* Y 1227.
 116390. *Evangeline* Y 2927.
 116391. *Fortuna* Y 1256-4.
 116392. *Giros* Y 2276.
 116393. *Gladjhar* M late 229 Y 4089.
 116394. *Italia* C 279 Y 4132.
 116395. *Jamaica* Y 2858.
 116396. *Kirishima* Y 272, midseason.
 116397. *Kirishima* Y 286, late.
 116398. *Kwanja* Y 1366, late.
 116399. *Lady Wright* × *Caloro* Y 8-5.
 116400. *Lady Wright* × *Caloro* Y 1-1-1, late.
 116401. *Lady Wright* × *Caloro* Y 1-1-2-1.
 116402. *Lady Wright* × *Caloro* Y 1-1-5.
 116403. *Lady Wright* × *Caloro* Y 1-3-1.
 116404. *Lady Wright* × *Caloro* Y 1-3-1-3.
 116405. *Lady Wright* × *Caloro* Y 1-3-1-4.
 116406. *Lady Wright* × *Caloro* Y 1-3-5.
 116407. *Lady Wright* × *Caloro* Y 1-3-7.
 116408. *Lady Wright* × *Caloro* Y 1-4-3-6-1, midseason.
 116409. *Lady Wright* × *Caloro* Y 1-4-3-6-2.
 116410. *Lady Wright* × *Caloro* Y 3-3-2-3.
 116411. *Lady Wright* × *Caloro* Y 3-3-2-12, late.
 116412. *Lady Wright* × *Caloro* Y 3-3-2-14, late.
 116413. *Lady Wright* × *Caloro* Y 3-7-1.
 116414. *Lady Wright* × *Caloro* Y 6.
 116415. *Lady Wright* × *Caloro* Y 7.
 116416. *Lady Wright* × *Caloro* Y 8-9, late.
 116417. *Lady Wright* × *Caloro* Y 8-10-2.
 116418. *Lady Wright* × *Caloro* Y 8-15-1, late.
 116419. *Lady Wright* × *Caloro* Y 10-2-1, late.
 116420. *Lady Wright* × *Caloro* Y 12-3-2-1, late.
 116421. *Lady Wright* × *Caloro* Y 12-3-2-7, late.
 116422. *Lady Wright* × *Caloro* Y 13-3-1, late.
 116423. *Lady Wright* × *Caloro* Y 15-1-5.
 116424. *Lady Wright* × *Kirishima* Y 4, late.
 116425. *Lady Wright* × *Kirishima* Y 10, early.
 116426. *Late Caloro* × *Blue Rose*, late.
 116427. *Late Caloro* × *Blue Rose*.
 116428. *Late Caloro* × *Blue Rose*, late.

116332 to 116452—Continued.

116429. *Late Caloro* × *Blue Rose*, late.
 116430. *Late Caloro* × *Lady Wright* Y 4, late.
 116431. *Lencino* Y 1776.
 116432. *Madagascar* Y 2929-2.
 116433. *Maratelli* Y 760.
 116434. *Mertie* Y 1367-.
 116435. *Ngarean* Y 2206, late.
 116436. *Owari* Y 117.
 116437. *Precoce* Y 2277, early.
 116438. *Ranghino* Y 2895.
 116439. *Red* × *Caloro* Y 1506 "Italian," late.
 116440. *Sel* Y 2176, midseason.
 116441. *Sye Min* Y 4269.
 116442. *Tavallini* Y 2274-1.
 116443. *Togohune* Y 75-10.
 116444. *Texas Prolifica* Y 1225.
 116445. *Tamasari* Y 218-5-3.
 116446. *Tamasari* Y 218-7-3, midseason.
 116447. *Tamasari* Y 227-1-6-4.
 116448. *Ulncai* Y 2896.
 116449. *Vintula* Y 3424.
 116450. *Wari Lawo* Y 2897.
 116451. Selection 2187.
 116452. *Late Caloro* × *Blue Rose*.

116453 to 116554.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received June 2, 1936.

Unless otherwise stated, all of this material was collected at Saharanpur, United Provinces, April 16 to 19, 1936.

- 116453 and 116454. *ABELMOSCHUS ESCULENTUS* (L.) Moench. Malvaceae. **Okra.**
Bhendi.
 116453. No. 628. A native, long green variety.
 116454. No. 639. A native, dwarf white variety.
 116455. *ACACIA MODESTA* Wall. Mimosaceae.
 No. 583. Presented by the Saharanpur Gardens.
 116456. *ALBIZZIA PROCERA* (Roxb.) Benth. Mimosaceae.
 No. 560. From the Saharanpur Gardens. A tall handsome tree with large compound leaves and terminal panicles of yellow-white flowers. Native to eastern and southern India.
 For previous introduction see 99690.
 116457 and 116458. *ALLIUM CEPA* L. Liliaceae. **Onion.**
 116457. No. 611. *Safed pujaz*. A white onion.
 116458. No. 612. *Lal pujaz*. A red onion.

116453 to 116554—Continued.

116459. *ALSTONIA SCHOLARIS* (L.) R. Br. Apocynaceae.

No. 592. Presented by the Saharanpur Gardens. A tropical Indian tree 40 to 90 feet high with whorls of four to seven obovate evergreen leaves 8 inches long and cymes of greenish-white flowers. The bitter milky sap yields an inferior quality of gutta-percha, and an extract of the bark is used like quinine.

For previous introduction see 77642.

116460 to 116465. *BRASSICA OLERACEA* BORYTIS L. Brassicaceae. **Cauliflower.**

Phulgobi A collection of native varieties of cauliflower.

116460. No. 636. A large winter-growing form.

116461. No. 637. A good winter-grown form.

116462. No. 638. A good winter-grown form that originated here as *L. R. Brothers Selected*.

116463. No. 639. A good winter-grown sort, supposed to be different from 636 [116460].

116464. No. 640. An early Patna form, sown here in June.

116465. No. 641. A quick-growing form, sown here in May.

116466 to 116468. *BRASSICA RAPA* L. Brassicaceae. **Turnip.**

Sheigam. Native varieties of turnip, sown in winter.

116466. No. 633. A variety with purple top.

116467. No. 634. An early, large white turnip.

116468. No. 635. An early white variety.

116469. *CANAVALIA ENSIFORMIS* (L.) DC. Fabaceae. **Jackbean.**

No. 618. *Sem.* A strong perennial climber; the green beans are said to be of good quality.

116470 to 116473. *CAPSICUM ANNUUM* L. Solanaceae. **Common redpepper.**

Mirch. From the market.

116470. No. 604. Said to be from Lahore. A medium-strong pepper 1 foot long, tapering gradually to a blunt tip three-eighths of an inch wide.

116471. No. 605. A medium-strong yellow pepper 4 inches long and one-fourth of an inch wide when dry; locally grown.

116472. No. 642. Supposed to be the Khalsi Mirch, an extremely pungent variety, much more expensive than any locally grown sorts. Khalsi is a nearby hill town.

116473. No. 643. A locally grown, long, yellow pepper.

116474 to 116477. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. **Watermelon.**

116474. No. 535. *Tendi.* From Bikaner, Bikaner State, April 13, 1936. A

116453 to 116554—Continued.

- popular vegetable, but not widely grown in this region, probably on account of the short season.
116475. No. 620. *Safed tenda*. A small round white melon much esteemed as a vegetable and prepared like summer squash.
116476. No. 621. A small round green vegetable, like No. 620 [116475] except in color.
116477. No. 542. Presented by the Bikaner State Garden, April 13, 1936. A mixed sample said to represent six sorts, one of which bears fruits weighing up to 80 pounds; said to be sweet and to keep several months.
116478. *COMBRETUM ROXBURGHII* Spreng. Combretaceae.
No. 588. Presented by the Saharanpur Gardens, April 18, 1936. A large shrub with many slender and subsucculent branches, oblong leaves about 4 inches long, and large terminal panicles of conspicuous cream-white floral bracts. Native to India.
- 116479 to 116491. *CUCUMIS MELO* L. Cucurbitaceae. Muskmelon.
116479. No. 606. *Kakri*. Fruit said to be white, long, and thin, with longitudinal furrows 18 by 4 inches. Very good as salad when young.
116480. No. 607. Fruit said to be long, thin, and green, with longitudinal furrows 18 by 4 inches. Very good as salad when young.
116481. No. 671. Fruit slender, 3 feet long, bent and twisted, with a muskmelon odor when ripe.
116482. No. 448. From Jaipur City, April 1, 1936. Fruit elongate rounded, 1 foot by 7 inches, lemon yellow, greenish ribbed, heavily netted. Flesh whitish, rather insipid.
116483. No. 505. From Delhi, April 9, 1936. Fruit ovoid, about 6 inches long, with pronounced navel at blossom end, yellow, strongly and abundantly netted. Flesh salmon, thick, sweet. Said to have come from Itarsi, Central Provinces.
116484. No. 526. From Bikaner, Bikaner State, April 12, 1936. Fruit ellipsoid, yellow, heavily netted, 14 inches long, with very thick sweet fragrant salmon flesh. Said to have come from Ahmedabad.
116485. No. 531. From Bikaner, Bikaner State, April 13, 1936. Said to have come from Tonk. Fruit ellipsoid, 8 inches long, deep green with yellowish clouding and abundant longitudinal netting. Flesh white, flavorless, and apt to be bitter near the rind.
116486. No. 532. From Bikaner, Bikaner State, April 13, 1936. Said to have come from Tonk. Fruit compressed, 5 inches long and 7 inches in diameter, dark green and gold mottled, netted. Flesh pale salmon, rather insipid.
116487. No. 533. From Bikaner, Bikaner State, April 13, 1936. Said to have come from Tonk. Fruit elongate, often three-sided, pointed, with pronounced ribs, golden yellow. Flesh pale salmon, mealy, insipid.

116453 to 116554—Continued.

116488. No. 534. From Bikaner, Bikaner State, April 13, 1936. Said to have come from Tonk. Fruit subglobose, 6 inches in diameter, white, feebly ribbed, traces of netting. Flesh white, insipid.
116489. No. 547. Said to have come from Shabjehaupur. Fruit much compressed, over 3 inches long and 6 inches in diameter, yellow, heavily netted with green rib lines. Flesh pale salmon, rather fragrant, thin; rind firm.
116490. *Sard*. No. 601. Fruit subglobose, 8 inches long, bright yellow, finely netted, fragrant. Flesh pale salmon, melting. Not locally grown.
116491. No. 647. A mixed sample, probably native local varieties.
- 116492 to 116497. *CUCUMIS SATIVUS* L. Cucurbitaceae. Cucumber.
116492. No. 543. *Kakri*. Presented by the Bikaner State Gardens, April 13, 1936. Said to represent a mixture of several kinds of local cucumbers.
116493. No. 569. *Balam Khira*. Fruit elongate, 2 inches by 1 inch, green with elongate white stripes or russet, of delicious flavor, tender and refreshing; the best cucumber observed.
116494. No. 609. *Balam Khira*. Said to be a local bushy variety. Fruit elongate rounded, 3 inches long and 2 inches in diameter, russet with age, very tender and pleasant; superior salad vegetable.
116495. No. 610. Fruit long, green.
116496. No. 613. *Safed Kakri*. A long white fruit.
116497. No. 672. A quick-growing variety which matures in less than 90 days; fruit short, yellow, egglike. Said to be of Russian origin.
- 116498 to 116501. *CUCURBITA MOSCHATA* Duchesne. Cucurbitaceae. Cushaw. *Sitaphul*.
116498. No. 648. Fruit large, red-fleshed, firm, grows in the hot season.
116499. No. 648. Fruit firm, large, round, yellow-fleshed. Grows in the hottest weather.
116500. No. 650. Fruit large, red, grows in the rains.
116501. No. 674. Said to be a very large sort, not common here, never seen here by me before.
- 116502 to 116506. *DAUCUS CAROTA* L. Apiaceae. Carrot.
116502. No. 608. *Gadjas*. Said to be a mixture of native carrots used for horse fodder.
116503. No. 614. *Banapha gadjas, kala gadjas*. A long purple carrot of very good flavor, but apt to have a woody center.
116504. No. 615. *Pila gadjas*. A long yellow carrot.
116505. No. 616. *Safed gadjas*. A long red carrot.
116506. No. 617. *Lal gadjas*. A long red carrot.

116453 to 116554—Continued.

- 116507 to 116510. *DOLICHOS LABLAB* L. Fabaceae. **Hyacinth-bean.**
116507. No. 652. *Makhan sem.* "butter bean." Said to have broad tender pods.
116508. No. 653. *Hara sem.* Pods eaten fresh.
116509. No. 654. *Uda sem.* A variety with purple pods.
116510. No. 666. Said to have stringless pods.
116511. *FICUS BENGHALENSIS* L. Moraceae. **Fig.**
- No. 455. *Bor.* From Jaipur City, April 3, 1936.
- For previous introduction see 101311.
116512. *GOURLIEA DECORTICANS* Gillies. Fabaceae. **Chañar.**
- No. 574. Presented by the Saharanpur Garden. A large shrub or small tree native to northern Argentina. The small yellow flowers are followed by edible fleshy pods.
- For previous introduction see 33970.
116513. *HIPTAGE* sp. Malpigiaceae.
- No. 582. Presented by the Saharanpur Garden. A strong woody climber with abundant fragrant white flowers.
116514. *HORDEUM VULGARE* L. Poaceae. **Barley.**
- No. 545. *Manga jau.* "naked barley," from the Kulu Valley, Punjab, April 14, 1936, at 6,000 feet altitude.
116515. *IPOMOEA CAIRICA* (L.) Sweet. Convolvulaceae. **Morning-glory.**
- No. 507. From Jaipur City, April 10, 1936.
- For previous introduction and description see 116042.
116516. *IPOMOEA* sp. Convolvulaceae.
- No. 600. A vine found covering a tree 20 feet high.
116517. *LACTUCA SATIVA* L. Cichoriaceae. **Garden lettuce.**
- No. 619. *Salat.* Said to be a mixture of acclimatized varieties.
- 116518 and 116519. *LAGENARIA LEUCANTHA* (Duchesne) Rusby. Cucurbitaceae. **Calabash gourd.**
116518. No. 624. *Lanki.* The common bottle-shaped form.
116519. No. 625. *Lanki.* A round form.
- 116520 to 116522. *LUFFA ACUTANGULA* (L.) Roxb. Cucurbitaceae. **Singkwa towelgourd.**
116520. No. 626. A hot-weather form; the young fruits are very good cooked, and the fiber of the ripe fruit is used as a sponge.
116521. No. 541. *Tori.* Presented by the Bikaner Government Gardens, April 13, 1936. A form with yellow striped fruits. The luffas are all good vegetables when immature.
116522. No. 627. *Kali Tori.* A rain form with yellow-striped fruits.

116453 to 116554—Continued.

- 116523 and 116524. *LUFFA CYLINDRICA* (L.) Roemer. Cucurbitaceae. **Suakwa towelgourd.**
- Presented by the Bikaner Government Garden, April 12, 1936.
- For previous introduction and description see 116108.
116523. No. 536. A light-colored form.
116524. No. 539. A green form.
- 116525 and 116526. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. **Tomato.**
- For previous introduction see 116219.
116525. No. 538. Presented by the Bikaner Government Garden, April 13, 1936. A large red tomato; probably a recent introduction.
116526. No. 623. *Termatter.*
116527. *MORINGA OLEIFERA* Lam. Moringaceae. **Horseradish tree.**
- No. 596. Presented by the Saharanpur Gardens, April 18, 1936.
- For previous introduction see 116053.
116528. *MORUS NIGRA* L. Moraceae. **Black mulberry.**
- No. 570. *Lal Shahbut.* An attractive tree with shiny green foliage and purple-red fruits, 2 inches long by one-fourth inch in diameter, pleasantly acid.
- For previous introduction see 64956.
- 116529 and 116530. *PHOENIX* spp. Phoenicaceae. **Palm.**
- Presented by the Saharanpur Gardens, April 18, 1936.
116529. *PHOENIX DACTYLIFERA* L. **Date palm.**
- No. 576.
116530. *PHOENIX RUPICOLA* T. Anders. **Cliff date palm.**
- No. 597. A Himalayan palm with a solitary slender naked stem 15 to 20 feet high, bright-green leaves 10 feet long, and shining yellow, oblong fruits.
- For previous introduction see 100984.
116531. *PHYLLANTHUS EMBLICA* L. Euphorbiaceae. **Nelli.**
- No. 584. Presented by the Saharanpur Gardens.
- For previous introduction and description see 114453.
116532. *PTEROSPERMUM ACERIFOLIUM* (L.) Willd. Sterculiaceae.
- No. 580. *Maakkan.* Presented by the Saharanpur Gardens. A large, attractive tree with large white sweet-scented flowers.
- For previous introduction see 67533.
- 116533 to 116535. *RAPHANUS SATIVUS* L. Brassicaceae. **Radish.**
- Nuli.* A collection of white radishes which are sown at different seasons in India.
116533. No. 630. An all-season variety; may be sown in the rains or in hot weather.
116534. No. 631. A white radish with a purple top; sown in the winter.

116453 to 116554—Continued.

116535. No. 632. Sown in the winter.
- 116536 to 116544. *SOLANUM MELONGENA* L. Solanaceae. Eggplant.
Bengan. Nos. 116536 and 116537 were presented by the Bikaner Government Garden, Bikaner State, April 13, 1936.
116536. No. 537. A large, round, black-purple form.
116537. No. 540. An elongate, purple-black fruit 1 foot long and alkali-tolerant.
116538. No. 656. A large purple, native variety.
116539. No. 657. A large violet, native variety.
116540. No. 658. A large, long, black-purple native variety.
116541. No. 660. A very long, native variety, grown in summer.
116542. No. 661. A native sort, very long, for winter planting.
116543. No. 664. *Safed Bengan*. A round white variety.
116544. No. 665. *Safed Bengan*. A long white fruit.
- 116545 and 116546. *SPINACIA OLERACEA* L. Chenopodiaceae. Common spinach.
116545. No. 644. *Palag*. Said to be grown the year round.
116546. No. 645. *Palag*. A variety sown in the fall.
116547. *TECTONA GRANDIS* L. f. Verbenaceae. Teak.
No. 565. From the Saharanpur Gardens, April 17, 1936. An attractive tall timber tree.
116548. *TRICHOSANTHES ANGUINA* L. Cucurbitaceae. Snakegourd.
No. 622. *Chachinda*. Said to be a mixture of races.
For previous introduction and description see 115967.
- 116549 and 116550. *VICIA FABA* L. Fabaceae. Broadbean.
116549. No. 673. *Bakla Kalan*. Pods and green beans used as food.
116550. No. 655. *Seo Chand*. Said to be grown for the green pods.
- 116551 to 116554. *VIGNA SINENSIS* (Turner) Savi. Fabaceae. Cowpea.
Lobra. Grown for the edible green pods.
116551. No. 651. 116553. No. 668.
116552. No. 667. 116554. No. 669.
- 116555 and 116556.**
- From Italy. Bulbs presented by Miss Adela de Lines, San José, Costa Rica. Received June 23, 1936.
116555. *AMARYLLIS BELLADONNA* L. Amaryllidaceae. Belladonna-lily.
An amaryllis with pale rose-colored flowers.
For previous introduction see 109895.
116556. *ZEPHYRANTHES* sp. Amaryllidaceae.
A variety with pale-lilac flowers.

116557. CITRUS SINENSIS (L.) Osbeck.
Rutaceae. Orange.

From Australia. Budsticks presented by L. P. Rosen & Son, Fernhill Nurseries, Carlisle, New South Wales. Received June 23, 1936.

Berry Valencia orange.

116558 to 116565.

From Turkey. Seeds and bulbs collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received June 12, 1936.

116558. ALLIUM sp. Liliaceae.

No. 554. Bulblets collected north of the Agricultural Institute, Ankara, May 25, 1936.

Nos. 116559 to 116565 were collected May 20, 1936, on the hills around Ankara.

116559. ALLIUM AMPELOPRASM L. Liliaceae.

No. 555. Bulblets.

116560. ALLIUM AMPELOPRASM L. Liliaceae.

No. 556. Bulbs and bulblets collected at Gazi's farm.

116561. CROCUS sp. Iridaceae.

No. 558. Bulbs.

116562. CROCUS sp. Iridaceae.

No. 558-A.

116563. CROCUS sp. Iridaceae.

No. 560. Bulbs.

116564. GLADIOLUS sp. Iridaceae.

No. 557. Bulbs.

116565. MUSCARI sp. Liliaceae.

No. 559. Bulbs.

116566. TRITHRINAX ACANTHOCOMA
Drude. Phoenicaceae.

From California. Seeds presented by David Barry, Jr., Los Angeles. Received June 17, 1936.

A dwarf fan palm with a stout stem and netted leaf sheaths bearing many strong reflexed spines. The large fanlike leaf blades are deeply cut into about 40 narrow bifid segments. Native to Brazil.

116567. CITRUS NOBILIS DELICIOSA (Ten.)
Swingle. Rutaceae.

Mandarin orange.

From Brazil. Seeds presented by Agésilau Bitancourt, through Anna Jenkins, Bureau of Plant Industry. Received June 23, 1936.

Laranja cravo. A well-known citrus fruit of southern Brazil, somewhat like a tangerine. Fruit deep reddish-orange with a loose rough thick skin. The stem end protrudes, and there is a small navel at the distal end.

116568 and 116569. NICOTIANA TARACUM L. Solanaceae.

Common tobacco.

From Costa Rica. Seeds presented by J. M. Orozco, Jefe de la Sección de Botánica, Departamento de Agricultura, San Pedro Montes. Received June 24, 1936.

116568. *Chiracagre*. From Chiracagre, an Indian village at the foot of the Irazú volcano. Interesting for its resistance

116568 and 116569—Continued.

to adverse conditions and its ease of cultivation.

116569. *Criollo de flor blanco*. A variety extensively cultivated for more than 60 years and very disease resistant.

116570 to 116578.

From India. Bulbs and seeds collected by Walter Koelz, Bureau of Plant Industry. Received June 4, 1936.

116570 to 116573. *ALLIUM SATIVUM* L. Liliaceae. Garlic.

116570. No. 387. *Lassan*. From Agra, United Provinces, March 25, 1936. Bulbs commonly used as a condiment.

116571. No. 454. *Lassan*. Bulbs collected at Jaipur City, April 2, 1936.

116572. No. 685. *Lassan*. Bulbs collected at Saharanpur, United Provinces, April 21, 1936.

116573. No. 713. *Lassan*. Bulbs collected at Amritsar, Punjab, April 23, 1936.

Nos. 116574 to 116578 were collected at the Saharanpur Gardens, United Provinces, April 17 to 21, 1936.

116574. *GYMNOSPORIA ROTHIANA* (Walp.) Wight and Arn. Celastraceae.

No. 554. An evergreen shrub or small tree with thick, coarse branches, sometimes spiny, and elliptic leaves about 3 to 4 inches long. The crimson fruits split open when ripe and cast their seeds.

116575. *CITRUS* sp. Rutaceae.

No. 714. A fruit, grapefruitlike in form, color, and size, except that the surface is uneven with a small elevation at the stem end; strongly and not too agreeably acid.

116576. *EUGENIA* sp. Myrtaceae.

No. 688. A large attractive evergreen tree with small pleasantly acid fruits.

116577. *GLYCOSMIS PENTAPHYLLA* (Retz.) Correa. Rutaceae.

No. 686. An unarmed shrub with evergreen leaves and panicles of small white fragrant flowers and white berries. Said to be very hardy in dry places.

For previous introduction see 109792.

116578. *PUTRANJIVA ROXBURGHII* Wall. Euphorbiaceae.

No. 557. *Japata*. A spreading evergreen of attractive form with small whitish bitter fruits the size of a cherry. From the seeds is obtained an olive-brown oil used by the natives of India for burning. The hard gray wood is used for making tools.

For previous introduction see 59683.

116579 to 116623.

From India. Seeds presented by the Lloyd Botanic Gardens, Darjeeling, through Dr. R. A. Fenton, Portland, Oreg. Received June 4, 1936.

116579. *ALNUS NEPALENSIS* D. Don. Betulaceae.

116580. *ASPARAGUS RACEMOSUS* Willd. Convallariaceae.

116579 to 116623—Continued.

116581. *ASTILBE RIVULARIS* Buch-Ham. Saxifragaceae.

A perennial herb, native to Nepal and western China, with stems 3 to 5 feet high, covered with tawny hairs. The biternate leaves have dentate ovate leaflets 1 to 3 inches long, and the creamy-white flowers, with pure-white stamens, are borne in large paniced spikes at the top of the stems.

For previous introduction see 103114.

116582. *BERBERIS CONCINNA* Hook. f. Berberidaceae. Barberry.

For previous introduction see 65754.

116583. *BERBERIS WALLICHIANA* DC. Berberidaceae. Barberry.

116584. *CLEMATIS SMILACIFOLIA* Wall. Ranunculaceae.

A tall woody climber with large leathery, usually simple, ovate or cordate leaves and panicles of deep purple flowers. Native to India.

116585. *EDGEWORTHIA GARDNERI* (Wall.) Meisn. Thymelaeaceae. India papertree.

A handsome shrub, native to the Himalayas, whose branches are covered with dense clusters of yellow, sweet-scented flowers before the leaves appear. The strong tough fiber which is obtained from the long, straight twigs is sometimes used as paper-making material.

For previous introduction see 65250.

116586. *ERANTHEMUM INDICUM* (Nees) C. B. Clarke. Acanthaceae.

A bushy shrub up to 4 feet high, with lanceolate or narrowly ovate leaves about 7 inches long and dense racemes of white, purple-veined flowers over an inch long. Native to the Himalayas at altitudes of 1,000 to 5,000 feet.

116587. *EUPHORBIA SIKKIMENSIS* Boiss. Euphorbiaceae.

A stout perennial 3 to 4 feet high, native to the Sikkim Himalayas at altitudes of 8,000 to 10,000 feet. The linear-lanceolate, glabrous leaves are 2 to 4 inches long, and the small inconspicuous flowers are surrounded by broad, ovate, yellow bracts.

For previous introduction see 111047.

116588. *FRAGARIA DALTONIANA* J. Gay. Rosaceae. Himalayan strawberry.

A wild relative of the cultivated strawberry, which comes from alpine pastures of the Sikkim Himalayas at altitudes of 10,000 to 15,000 feet. It is a stoloniferous perennial with solitary white flowers and bright-scarlet, insipid fruits an inch long and half as broad.

For previous introduction see 58489.

116589. *GERANIUM POLYANTHES* Edgew. and Hook. f. Geraniaceae.

A perennial herb with simple or branching stems up to 10 inches high, divided orbicular-reniform leaves about 2 inches in diameter, and umbels of 3 to 10 dark-purple flowers less than an inch across. Native to the Sikkim Himalayas at altitudes of 9,000 to 12,000 feet.

116579 to 116623—Continued.

116590. *HYPERICUM HOOKERIANUM* Wight and Arn. Hypericaceae.

116591. *HYPERICUM JAPONICUM* Thunb. Hypericaceae.

A decumbent herbaceous perennial with ovate or oval leaves and terminal cymes of small yellow flowers. Native to eastern Asia.

116592. *LACTUCA DUBYAEA* C. B. Clarke. Cichoriaceae.

A low herbaceous perennial 6 to 18 inches high, native to the slopes of the central Himalayas in northern India. The ovate-hastate, hispid leaves, 3 to 6 inches long, vary from simple to pinnatifid, and the nodding yellow flower heads, 1 inch across, are clothed with black glandular hairs.

For previous introduction see 99667.

116593. *LACTUCA MACRANTHA* Clarke. Cichoriaceae.

A stout perennial lettuce up to 2 feet high, with large pinnatifid leaves and loosely paniced heads of blue flowers. Native to the Sikkim Himalayas at altitudes of 10,000 to 14,000 feet.

116594. *LIGUSTRUM CONFUSUM* Decaisne. Oleaceae. Privet.

A small tree up to 40 feet in height, which is one of the tropical relatives of the California privet (*Ligustrum ovalifolium*). The leathery obtuse leaves are about 9 inches long, and the small white flowers are in panicles 1 to 5 inches long.

For previous introduction see 66295.

116595 and 116596. *LOBELIA PYRAMIDALIS* Wall. Campanulaceae.

A perennial herb 2 to 7 feet high, found between 3,000 and 9,000 feet altitude in the Himalayan mountains. The linear leaves are glabrous, and the purple-rose or whitish flowers are produced in many-flowered racemes.

For previous introduction see 93906.

116597. *MAESA INDICA* (Roxb.) Wall. Myrsinaceae.

An evergreen shrub or small tree common throughout India at altitudes of 6,000 feet or less. The small white berries are used as food in Nepal, and the leaves are used in Kanara to poison fish.

For previous introduction see 47712.

116598. *DESMODIUM FLORIBUNDUM* (D. Don) G. Don. Fabaceae.

A woody, thickly pubescent Himalayan plant with very copious axillary and terminal racemes of pale-pink or lavender flowers.

For previous introduction see 94077.

116599. *DESMODIUM GYROIDES* DC. Fabaceae.

A shrubby leguminous plant 8 to 10 feet high, native to the warmer parts of the central and eastern Himalayas. It has pubescent leaves and terminal racemes of red-purple flowers. It is found growing in valleys, at times even on the borders of swamps.

For previous introduction see 105242.

116579 to 116623—Continued.

116600. *DESMODIUM TILIAEFOLIUM* (D. Don) G. Don. Fabaceae.

An attractive deciduous shrub with slender terete branches, thick green trifoliolate leaves about 4 inches long, and red flowers in lax racemes often a foot long. The bark yields an excellent fiber which is used in rope making, the leaves are good fodder, and the roots are used medicinally as a tonic and diuretic. It is native to the Himalayas from 3,000 to 6,000 feet altitude.

For previous introduction see 99743.

116601. *MELIA* sp. Meliaceae.

116602. *MICHELIA EXCELSA* Blume. Magnoliaceae.

A tall tree, native to the temperate Himalayas of northeastern India at altitudes of about 5,000 feet. The large narrow leaves are silky brown beneath, and the handsome white flowers are 4 or 5 inches across.

For previous introduction see 58909.

116603. *MICHELIA LANUGINOSA* Wall. Magnoliaceae.

This species is characterized by the white, woolly, lower surface of its long narrow magnoliolike 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 62814.

116604. *MUSSAENDA ROXBURGHII* Hook. f. Rubiaceae.

An erect undershrub with hairy stems and oblong-lanceolate leaves, native to the tropical slopes of the Himalayas in India. The yellowish flowers are borne in dense hairy cymes, and each flower is subtended by a prominent white calyx lobe. The fleshy berries are crowned by the persistent calyx.

For previous introduction see 93217.

116605. *PICEA SMITHIANA* (Wall.) Boiss. Pinaceae. Spruce.

A lofty tree, native to the mountains of northwestern India at altitudes of 7,000 to 11,000 feet; the terminal, drooping, pale-green cones are 4 to 6 inches long. The stiff, sharp, spirally arranged green leaves are crowded on pendulous falllike twigs.

For previous introduction see 55694.

116606. *POLYGONUM CAPITATUM* Buch.-Ham. Polygonaceae.

A prostrate perennial 6 to 10 inches long, with small elliptic-acute leaves and numerous heads of small pink flowers. Native to the Himalayas at altitudes of 3,000 to 6,000 feet.

116607. *POLYGONUM CHINENSE* L. Polygonaceae. Fleecflower.

116608. *POLYGONUM MOLLE* D. Don. Polygonaceae.

A shrubby perennial 2 to 3 feet high, with white flowers in large thyrse-like terminal panicles. Allied to *Polygonum polystachyum*. Native to Nepal.

116579 to 116623—Continued.

116609. *Polygonum* sp. Polygonaceae.

116610. *PORANA RACEMOSA* Roxb. Convolvulaceae.
Snow-creeper.

An evergreen vine, native to the subtropical Himalayas. It occurs in dense masses, climbing over other plants in the jungle. The small, dazzling-white flowers, in dense racemes, resemble patches of snow when seen from a distance.

For previous introduction see 105029.

116611. *SALVIA CAMPANULATA* Wall. Menthaceae.

A stout perennial 2 to 3 feet high, with ascending hirsute stems and ovate, cordate-crenate leaves on long petioles. The large flowers, yellow with purple dots, are in axillary or terminal racemes. Native to the Himalayas at altitudes of 9,000 to 13,000 feet.

For previous introduction see 112858.

116612. *SAUROPIUS ALBICANS* Blume. Euphorbiaceae.

An erect, somewhat shrubby plant with terete green branches, small greenish-red flowers, and small fleshy fruits. It is native to the hot valleys of the Sikkim Himalayas and is distributed southward to Ceylon and eastward to the Philippines.

For previous introduction see 47785.

116613. *SWERTIA BIMACULATA* (Sieb. and Zucc.) Hook. f. and Thoms. Gentianaceae.

For previous introduction and description see 114806.

116614. *SWERTIA DILATATA* C. B. Clarke. Gentianaceae.

An herb 1 to 3 feet high, with lanceolate leaves over an inch long and paniculate cymes of greenish-yellow flowers. Native to the Himalayas between 4,000 and 12,000 feet altitude.

For previous introduction see 111094.

116615. *SYMPLOCOS GLOMERATA* King. Symplocaceae.

A shrub or small tree becoming 10 feet high, with narrow leathery leaves 6 inches long and axillary clusters of small white flowers. This shrub is rather common in the hills of Sikkim and Bhutan, India, at altitudes of 1,000 to 8,000 feet.

For previous introduction see 111096.

116616. *SYMPLOCOS RAMOSISSIMA* Wall. Symplocaceae.

A shrub or tree up to 40 feet high, native to India. The oblong-lanceolate membranous leaves are 4 inches long, and the small white flowers are in axillary one- to six-flowered racemes.

For previous introduction see 102911.

116617. *SYMPLOCOS THEAEFOLIA* D. Don. Symplocaceae. Sweetleaf.

An erect tree of the eastern Himalayas from Nepal to Bhutan, between 4,000 to 6,000 feet altitude. The leaves of this species are used as an auxiliary with *Morinda tinctoria* and lac in dyeing.

For previous introduction see 46108.

116618. *THOMSONIA NAPAENSIS* Wall. Araceae.

A perennial herb allied to *Amorphophallus*, with leaves over 18 inches across and ovate or oblong leaflets about 4 inches

116579 to 116623—Continued.

long; a cylindrical, purple variegated scape to 2 feet high and a large green spathe. Native to India.

116619. *DESMOS CHINENSIS* Lour. Annonaceae.

A shrub 3 to 7 feet high, native to southern China, growing wild in shady places in clay soil. The very fragrant greenish-yellow flowers are followed by curious clusters of attractive fruits which turn from yellow to red and are composed of many moniliform pods radiating from a short peduncle.

For previous introduction see 63624.

116620. *VIBURNUM STELLULATUM* Wall. Caprifoliaceae.

A large evergreen shrub with elliptic-lanceolate leaves about 3 inches long and small red berries. Native to the temperate Himalayas and said to be hardy in England.

For previous introduction see 111102.

116621. *TETRASTIGMA SERRULATUM* (Roxb.) Planch. Vitaceae.

A glabrous woody vine with slender wiry stems, native to the temperate Himalayas. The palmately compound leaves have three to five lanceolate to obovate, bristly serrate leaflets 1 to 3 inches long, and the axillary or terminal cymes of small green flowers are followed by globose black fruits about one-fourth of an inch in diameter.

For previous introduction see 102782.

116622. *TETRASTIGMA LANCEOLARIUM* (Wall.) Planch. Vitaceae.

A woody evergreen climber with large, usually five-foliolate, fleshy to leathery leaves and small greenish flowers in cymes. Native to eastern India.

116623. *ZIZIPHUS RUGOSA* Lam. Rhamnaceae.

A large evergreen shrub or small tree, sometimes of climbing habit, with elliptic leaves, 2 to 6 inches long and fleshy fruits one-third of an inch in diameter. Native to the tropical Himalayas.

116624 to 116629. *NICOTIANA TABACUM* L. Solanaceae.

Common tobacco.

From Mexico. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received in June 1936.

116624. *Punta de Lanza*. From San Miguel, Veracruz.

116625. *Punta de Lanza*. From Uñas de la Candelaria, Veracruz.

116626. *Colorado*. From Uñas de la Candelaria, Veracruz.

116627. *Colorado*. From La Trinidad, Yaveo, Oaxaca.

116628. *Colorado*. From Jaltepec. Yaveo, Oaxaca.

116629. *Colorado*. From Santa Maria, Choapan, Oaxaca.

116630. *ZEPHYRANTHES* sp. Amaryllidaceae.

From Mexico. Bulbs purchased from Maximino Martínez, Professor of Botany, Mexico City, Distrito Federal. Received June 25, 1936.

116631 to 116634. NERINE spp. Amaryllidaceae.

From England. Bulbs purchased from Hocker Edge Gardens, Cranbrook, Kent. Received June 26, 1936.

116631. NERINE FILIFOLIA Baker.

116632. NERINE CURVIFOLIA FOTHERGILLII (Andr.) Baker.

A nerine with about six strap-shaped leaves a foot long, appearing after the flowers, and many crimson to scarlet flowers in an umbel about 4 inches across. Native to South Africa.

116633. NERINE MASONORUM L. Bolus.

A tender bulbous plant with narrow, channeled leaves about 1 foot long appearing with the rose-colored flowers. There are four to six flowers in an umbel, the segments being recurved, undulate, and about one-half inch long. Native to southern Africa.

116634. NERINE UNULATA (L.) Herb.

A tender bulbous perennial with four to six linear leaves 1 foot or more in length and 8 to 12 pale-pink flowers about three-fourths of an inch long in centrifugal umbels. Native to South Africa.

116635 to 116681.

From India. Seeds collected by Waiter Koelz, Bureau of Plant Industry. Received in June 1936.

Unless otherwise stated, all of this material was collected from April 20 to May 1, 1936, at Lahore, Punjab.

116635. ACACIA NILOTICA (L.) Willd. Mimosaecae.

No. 753. *Kikas*. A large attractive tree, native to tropical Africa, with bipinnate foliage and heads of small white flowers. Common in the hot dry parts of India.

For previous introduction see 97861.

116636 and 116637. ALLIUM CEPA L. Liliaceae.

116636. No. 744. *Lal pujaz*. A locally grown onion, red, flattened, 4 inches in diameter and keeps well.

116637. No. 757. *Safed pujaz*. A flat white onion 4 inches across.

116638. AMYGDALUS PERSICA L. Amygdalaceae.

No. 743. *Aru*. Said to have come from Peshawar.

116639 to 116643. BRASSICA OLERACEA BOTRYTIS L. Brassicaceae. Cauliflower.

116639. No. 775. Said to be a long-leaved variety.

116640. No. 776. Said to be from Peshawar and to be long leaved and the largest kind grown.

116641. No. 777. A small-leaved variety said to be from Sialkot.

116642. No. 778. *Agetri*. Said to be the Patna sort.

116643. No. 779. Said to be a Teroze-pur sort.

116644. CANAVALIA ENSIFORMIS (L.) DC. Fabaceae. Jackbean.

No. 752. *Makan Sem*. Green pods used as food.

116635 to 116681—Continued.

116645 to 116647. CAPSICUM ANNUUM L. Solanaceae. Common redpepper.

Mirch. A collection of locally grown varieties.

116645. No. 746. Fruit said to be 1 inch long and broadly triangular.

116646. No. 748. Said to be a long-podded sort.

116647. No. 747. Said to be 5 inches long.

116648. CASSIA FISTULA L. Caesalpinaceae. Golden-shower.

No. 711. From the Saharanpur Gardens, United Provinces, April 21, 1936. A tree 40 feet high and a foot in diameter with pods 20 inches long, longer than other trees of this species.

116649 to 116656. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.

116649. No. 739. Fruit subglobose, dark green with fine netting visible on close inspection; rind thin; flesh melting and sweet; weight 12 pounds.

116650. No. 769. *Peshawar Tarbuza*. A form grown at Peshawar.

116651. No. 770. *Gujuran Tarbuza*. A form grown at Gujuran.

116652. No. 772. *Jhang Tarbuza*. A form grown at Jhang.

116653. No. 773. Said to be different from Nos. 769, 770, 772 (P. I. 116650-116652).

116654. No. 774. *Quetta Tarbuza*. Said to be a first-class melon.

116655. No. 771. *Rasal Naggar Tarbuza*. A variety grown at Rasal Naggar; said to have a very thin rind.

116656. No. 742. *Chata tinda*. Fruit the size and shape of a tangerine; very good melon.

116657 to 116667. CUCUMIS MELO L. Cucurbitaceae. Muskmelon.

116657. No. 717. *Lucknow Kharbuza*. April 24, 1936, at Amritsar, Punjab. A melon said to have come from Lucknow. Fruit up to 6 inches long, flattened, smooth, lemon yellow with white to pale-salmon flesh, fragrant, but of rather poor taste.

116658. No. 756. *Kabuli Sarda*. Said to be a superior type of Iranian [Persian] melon.

116659. No. 760. *Kasuri Kharbuza*.

116660. No. 761. *Amritsari Kharbuza*. A locally grown melon.

116661. No. 762. *Jhang Kharbuza*. A Punjabi variety.

116662. No. 763. *Lucknow Kharbuza*. Considered very fine.

116663. No. 764. *Quetta Kharbuza*. A large melon grown at Quetta and famous in India as *Masteng*.

116664. No. 765. *Quetta Kharbuza*. A Quetta variety.

116665. No. 766. *Lahore Kharbuza*. A melon grown at Lahore.

116666 and 116667. *Poot Kharbuza*. A muskmelon that is said to ripen in the rains. There are two types, one

116635 to 116681—Continued.

round, one elongated. The quality is not so good, but they ripen when other melons are past.

116666. No. 767. 116667. No. 768.

116668. CUCURBITA PEPO L. Cucurbitaceae. Pumpkin.

No. 754. *Chini Kaddu*. A small roundish summer squash somewhat scalloped but not flattened. A very good vegetable.

116669 to 116671. DAUCUS CAROTA L. Apiaceae. Carrot.

116669. No. 749. *Pila gadjas*. Said to have a yellow root.

116670. No. 750. *Kala gadjas*. Said to have a dark-purple root.

116671. No. 755. *Safed gadjas*. Said to have a white root.

116672. DOLICHOS LABLAB L. Fabaceae. Hyacinth-bean.

No. 738. From Amritsar, Punjab, April 27, 1936. Grown for the green pods.

116673. LAGENARIA LEUCANTHA (Duchesne) Rusby. Cucurbitaceae. Calabash gourd.

No. 741. *Ghuja*. Fruits 2½ inches long and about 5 inches through.

116674. MORUS ALBA L. Moraceae. White mulberry.

No. 737. *Shahbut*. From Amritsar, Punjab, April 27, 1936. Fruit 1 inch long by three-eighths of an inch in diameter, white, more or less clouded with dull purple; quality fair.

For previous introduction see 104323.

116675 and 116676. PISUM SATIVUM L. Fabaceae. Pea.

116675. No. 758. *Matar*. Said to be the local Amritsar sort.

116676. No. 759. *Simla Matar*. A form said to have originated in Simla or from the neighboring mountains.

116677 to 116680. SOLANUM MELONGENA L. Solanaceae. Eggplant.

Nos. 780 to 783 are considered distinct forms.

116677. No. 780. Fruit round, black.

116678. No. 781. A dwarf plant with fruits 9 inches long.

116679. No. 782. Fruit purple black.

116680. No. 783. *Banarsi Sihai*. Said to be the well-known *Black Giant* of Benares.

116681. SPINACIA OLERACEA L. Chenopodiaceae. Common spinach.

No. 751. *Palag*. Locally grown as a potherb.

116682 to 116695.

From Egypt. Seeds presented by Alfred Bircher, The Middle Egypt Botanic Station, El Saff. Received June 15, 1936.

Seeds grown in the higher parts of El Saff and the Protectorate of Kenya.

116682. ACACIA ABYSSINICA Hochst. Mimosaceae.

A tree, native to Ethiopia, with bipinnate leaves, spinescent stipules, and very small flowers in capitulate clusters.

116682 to 116695—Continued.

116683. ACANTHUS EMINENS C. B. Clarke. Acanthaceae.

A shrub about 7 feet high, with large pinnatifid spinous leaves about 10 inches long and purple flowers 2 inches long in short spikes. Native to eastern tropical Africa.

116684. AMOMUM SP. Zinziberaceae.

A gingerlike herb.

116685. DOMBEYA BURGESSIAE Gerrard. Sterculiaceae.

A handsome low mound-shaped evergreen shrub with nearly white, bell-shaped flowers in graceful clusters. Native to southern Africa.

For previous introduction see 51248.

116686. HAGENIA ABYSSINICA (Bruce) J. F. Gmel. Rosaceae.

A small ornamental tree with large tufted, compound leaves and much-branched terminal panicles of small pinkish flowers. Native to Ethiopia.

116687. CRAIBIA ELLIOTI Dunn. Fabaceae.

A tropical evergreen shrub with three- to five-foliolate leaves about 5 inches long and terminal racemes of small flowers. Native to eastern tropical Africa.

116688. EKEBERGIA RUEPELLIANA (Fresen) A. Rich. Meliaceae.

A tree with leathery pinnate leaves a foot or more long and erect panicles of many small white flowers, followed by small inedible, globose berries. Native to tropical Africa.

116689. JUNIPERUS PROCERA Hochst. Pinaceae. East African juniper.

A tall handsome tree with a maximum height of about 100 feet. It is native to the high mountains of eastern tropical Africa and is closely related to *Juniperus excelsa*.

For previous introduction see 62395.

116690. LEPTOSPERMUM CITRATUM (Bailey and White) Challinor, Cheel, and Penfold. Myrtaceae.

An evergreen shrub or small tree 4 to 20 feet high, with linear to obtuse leaves about 1½ inches long and solitary white flowers. Native to Queensland, Australia.

116691. MARKHAMIA HILDEBRANDTII (Baker) Sprague. Bignoniaceae.

A shrub or small tree with pinnate leaves 6 to 10 inches long and showy yellow flowers over an inch long, in terminal and axillary panicles. Native to eastern tropical Africa.

116692. CALODENDRUM CAPENSE Salberg. Rutaceae.

A large handsome tree with branches spreading in pairs or in threes. The ovate evergreen opposite leaves are 3 to 4 inches long. The white flowers, with linear-oblong reflexed petals 1 to 2 inches long, are in terminal panicles, and the shining blue seeds, the size of hazelnuts, are borne in thick hard capsules. It is native to southern Africa.

For previous introduction see 98228.

116693. POLYSCIAS KIKUYUENSIS Summerhayes. Araliaceae.

A tree up to about 50 feet high, with large pinnate leaves. The wood is soft and white. Native to Kenya, Africa.

116682 to 116695—Continued.

116694. *PYGEUM AFRICANUM* Hook. f.
Amygdalaceae.

A small tree with elliptic-oblong leaves about 4 inches long and small flowers in racemose clusters. Native to tropical Africa at altitudes of 2,400 feet.

116695. *VITEX KENIENSIS* Turrill. Verbenaceae.

A tall tree sometimes 90 feet high, with large five-foliolate leaves. The wood has a grain resembling that of teak. Native to eastern tropical Africa.

116696 to 116703.

From the Union of Soviet Socialist Republics. Seeds presented by Dr. V. P. Alekseev, Chief, Section of Introduction, All Union Research Institute of Dry Subtropics, Tashkent, Middle Asia. Received June 17, 1936.

116696. *ASTRAGALUS PEDUNCULARIS* Royle.
Fabaceae.

No. 8.

116697. *ASTRAGALUS SEWERTZOWII* Bunge.
Fabaceae.

No. 9. A stemless perennial, native to Turkistan.

116698. *ASTRAGALUS SIEVERSII* Pall.
Fabaceae.

No. 10. An erect or ascending perennial with oblong hairy leaflets and axillary clusters of pale-yellow flowers. Native to central Asia.

For previous introduction see 111160.

116699. *CICER FLEXUOSUM* Lipsky. Fabaceae.

No. 13.

For previous introduction and description see 115070.

116700. *OXYTROPIS* sp. Fabaceae.

No. 35.

116701. *OXYTROPIS* sp. Fabaceae.

No. 36.

116702. *OXYTROPIS* sp. Fabaceae.

No. 37.

116703. *VICIA TENUIFOLIA* Roth. Fabaceae.

No. 65.

For previous introduction see 115095.

116704. *ULMUS PUMILA* L. Ulmaceae.
Chinese elm.

From Nebraska. Seeds presented by H. A. McComb, University of Nebraska Experiment Station, North Platte. Received June 24, 1936.

Tree No. 3, selection made at North Platte from plants received as *Ulmus pumila arborea* under P. I. No. 32830. This tree is of *Ulmus pumila* type and has escaped winter injury when most other trees of the species were injured. Seedlings from it are reported to be uniform in appearance and to have a good branching system.

For previous introduction see 108558.

116705. *EUCHLAENA MEXICANA* Schrad.
Poaceae. Teosinte.

From Guatemala. Seeds presented by Dr. Wilson Popenoe, United Fruit Co. Received June 30, 1936.

116706. *GOSYPIUM* sp. Malvaceae.
Cotton.

From Cuba. Seeds presented by Dr. Gonzalo M. Fortun, Director, Estación Experimental Agronomica, Santiago de las Vegas. Received June 17, 1936.

Marcucci cotton. Originally from Guatemala, the seed has developed satisfactorily in Cuba, but requires a long time to mature the very large bolls.

116707. *ALEURITES CORDATA* (Thunb.)
Muell. Arg. Euphorbiaceae.
Japan tung-oil tree.

From Japan. Seeds purchased from the Yokohama Nursery Co., Yokohama. Received January 1, 1936. Numbered in June 1936.

A small or medium-sized tree, native to southern Japan. It is closely related to the tung tree of China, *Aleurites fordii*, but is more tropical in character. The seeds are considerably smaller than tung seeds and run nearly 400 to the pound. They yield a valuable drying oil, apparently but little inferior to tung oil. The seeds seem to require a somewhat longer time than tung seeds for germination.

116708 to 116710. *MELILOTUS* spp. Fabaceae.
Sweetclover.

From the Union of Soviet Socialist Republics. Seeds presented by N. I. Sharapov, former Head of Department of New Cultures and Introduction, Institute of Plant Industry, Leningrad. Received June 23, 1936.

116708. *MELILOTUS DENTATA* (Waldst. and Kit.) Pers.

No. 456/6, originally from western Siberia.

116709. *MELILOTUS TAURICA* (Bieb.) Seringe.

No. 9095, originally from the Crimea.

For previous introduction see 67854.

116710. *MELILOTUS WOLGICA* Poir.

No. 11620, originally from Kuybishev Province.

For previous introduction see 27292.

116711 and 116712.

Plants growing at the Barbour Lathrop Plant Introduction Garden, Savannah, Ga. Originally received from China, June 24, 1927; collected by F. A. McClure, Bureau of Plant Industry. Renumbered in June, 1936.

116711. *PHYLLOSTACHYS* sp. Poaceae.
Bamboo.

No. 725. November 3, 1926. *Shat sam chuk, mah chuk*. From Chiuwashaan, Anhwei Province. A medium-sized, wild bamboo 4 to 4.5 meters high and 1.5 to 2 centimeters in diameter, with edible shoots. The culms are nearly solid with very small central chambers; they are used for walking sticks, whipsticks, etc., but not for weaving. The nodes are prominent; the branches, two at each node, are unequal, and the leaves are small to medium sized.

116712. *ARUNDINARIA* sp. Poaceae.
Bamboo.

No. 726. November 3, 1926. *Liu kin chuk*. Obtained at Chiuwashaan, An-

116711 and 116712—Continued.

hwei Province. A small monopodial bamboo, found wild in this region. It is characterized by large drooping leaves, few branches, nearly equal, rising at a sharp angle with the stiff cylindrical culm. Nodes not prominent, buds very flat, and indentation slight. Culms thick-walled, with small central cavity containing very little pith. Culm sheaths thin, tips ephemeral, but the bases cling rather tenaciously. Rhizomes hard, brittle, shiny, light brown when mature. Roots few and very stiff. There are many nodes of the rhizomes without buds.

116713 to 116767.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received June 5, 1936.

Nos. 116713 to 116718 were collected at Saharanpur, United Provinces, April 19 and 20, 1936.

116713. *ACACIA MODESTA* Wall. Mimosaceae.

No. 693. From the Saharanpur Gardens, April 21, 1936.

For previous introduction and description see 116455.

116714. *AGERATUM HOUSTONIANUM* Mill. Asteraceae.

No. 599.

116715. *ALLIUM ASCALONICUM* L. Liliaceae. Shallot.

No. 678.

116716. *APIUM GRAVEOLENS* L. Apiaceae. Celery.

No. 682. *Ajwain*. Grown commercially for the seed.

116717. *BARRINGTONIA ACUTANGULA* (L.) Gaertn. Lecythidaceae.

No. 703. From the Saharanpur Gardens. A medium-sized evergreen tree with obovate leaves about 5 inches long and long pendulous racemes of small pink flowers. The wood is soft and white with a pretty silver grain and is used for furniture. Native to India.

116718. *BENINCASA HISPIDA* (Thunb.) Cogn. Cucurbitaceae. Waxgourd.

No. 681. *Pethi*. Fruit light green with ashy bloom; flesh white, solid, often candied, also used as curry vegetable; keeps well.

116719 to 116722. *BRASSICA OLERACEA BOTRYTIS* L. Brassicaceae. Cauliflower.

Phulgobi. From Amritsar, Punjab, April 24, 1935.

116719. No. 715. A small-leaved variety.

116720. No. 716. Said to reach a diameter over a foot.

116721. No. 718. A small-leaved variety.

116722. No. 719. Said to be one of the largest varieties. Cauliflowers are dried here for summer use.

116723. *BUDDLEIA MADAGASCARIENSIS* Lam. Loganiaceae.

No. 697. From the Saharanpur Gardens, April 21, 1936. An attractive shrub 6 feet high, with drooping branches and silvery leaves.

116713 to 116767—Continued.

Nos. 116724 to 116726 were collected at Amritsar, Punjab, April 20 to 26, 1936.

116724. *CANAVALIA ENSIFORMIS* (L.) DC. Fabaceae. Jackbean.

No. 732. *Tras bin*. A bush form which grows 5 feet high without support. It is grown for the edible green pods.

116725 to 116735. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. Watermelon.

Nos. 116725 and 116726 were received as *Citrullus fistulosus*.

116725. No. 722. *Safed Tinda*. Fruits said to come from Benares, are about the size of a tangerine, greenish white with a pronounced concavity on the blossom end. They are delicious when cooked.

116726. No. 723. *Hara Tinda*. A favorite Punjab vegetable. Some specimens are nearly 6 inches in diameter, but those now on sale are like small tangerines.

Nos. 116727 to 116730 were collected at Saharanpur from April 16 to 20, 1936.

116727. No. 548. *Tarbuza*. Fruit globose, 8 inches in diameter, with widely spaced ribs of darker green; flesh red, insipid.

116728. No. 646. Fruit subglobose, 14 inches in diameter, dark green, obscurely and finely veined and ribbed with darker green; flesh red, good quality, fairly sweet, but very seedy; rind thick.

116729. No. 659. Fruit subglobose, 15 inches long, dark green with indistinct darker markings; rind thick; flesh red, sweet.

116730. No. 675. A mixed sample of local varieties.

Nos. 116731 to 116741 were collected April 24 to 26, 1936, at Amritsar, Punjab.

116731 and 116732. *Tarbuza*. Said to be a form grown locally that reaches a weight of 20 pounds.

116731. No. 728. 116732. No. 729.

116733. No. 730. *Tarbuza*. Said to be the largest local form, which reaches a weight of 40 pounds.

116734. No. 731. Said to be one of the smaller local sorts, weighing 10 to 15 pounds.

116735. No. 734. *Tarbuza*. Reported as the smallest of local sorts, not over 10 pounds in weight.

116736 to 116738. *CUCUMIS MELO* L. Cucurbitaceae. Muskmelon.

From Amritsar, Punjab, April 25 and 26, 1936.

116736. No. 726. *Maddar Karbuza*. A pale round smooth-skinned form grown at Maddar, near Kasur.

116737. No. 727. *Tinfutia*. A form said to be large, green, and netted; grown near Amritsar at Chamiari. Considered very good.

116738. No. 733. *Tarsini*. A melon 12 inches long, brownish yellow, netted, green-fleshed, and weighing up to 10 pounds. Considered one of the best local varieties.

116713 to 116767—Continued.

116739 to 116741. *CUCUMIS SATIVUS* L.
Cucurbitaceae. **Cucumber.**

Collected at Amritsar, Punjab, April 24 and 25, 1936.

116739. No. 721. Said to be a banana-like, furrowed fruit up to 18 inches long, greenish white to white. Used as a salad vegetable.

116740. No. 724. Fruit white, over 2 feet long.

116741. No. 725. Fruit yellow, thick, 8 by 3 to 3½ inches.

116742. *CUCURBITA MOSCHATA* Duchesne.
Cucurbitaceae. **Cushaw.**

No. 564. From Saharanpur, United Provinces, April 17, 1936. Fruit smooth, conspicuously ribbed, 1 foot long by 14 inches across, green, blotched and spotted with yellow brown; flesh yellow; will keep for 6 months.

116743. *CUCURBITA PEPO* L. Cucurbitaceae.
Pumpkin.

No. 729. *Chini Kaddu*. From Amritsar, Punjab, April 24, 1936. A smooth white globose summer squash, the size of a grapefruit.

Nos. 116744 to 116751 were collected at the Saharanpur Gardens, United Provinces, April 17 to 21, 1936.

116744. *DERRIS SCANDENS* (Roxb.) Benth.
Fabaceae.

No. 702. A woody climber with compound leaves 3 to 6 inches long, composed of 9 to 19 leaflets, leathery oblong, and 1 to 2 inches in length. The pale rose flowers are in dense axillary racemes. Native to the East Indies.

For previous introduction see 104663.

116745 and 116746. *DURANTA REPENS* L.
Verbenaceae. **Skyflower.**

An attractive hedge shrub with long racemes of flowers.

116745. No. 704. A purple form.

116746. No. 705. A white form.

116747. *FICUS BENJAMINA COMOSA* (Roxb.)
Kurz. Moraceae.

No. 555. A large tree with a dense spreading top and yellow fruits.

For previous introduction see 99569.

116748. *FRAGARIA VESCA* L. Rosaceae.
Alpine strawberry.

No. 677. A mixed sample, said to have come from Europe.

For previous introduction see 113549.

116749. *HIBISCUS COLLINUS* Roxb. Malvaceae.

No. 699. An arborescent hibiscus with cordate three-lobed leaves about 4 inches long and pink, dark-centered flowers 2 to 3 inches across. Native to the western peninsula of India.

116750. *LAGERSTROEMIA PARVIFLORA* Roxb.
Lythraceae. **Crapemyrtle.**

No. 552. An evergreen timber tree native to the East Indies and closely related to the well-known crapemyrtle (*Lagerstroemia indica*). The white, fragrant flowers, less than an inch across, are in

116713 to 116767—Continued.

terminal or axillary panicles, and the wood is tough, elastic, and durable.

For previous introduction see 61608.

116751. *MACADAMIA TERNIFOLIA* F. Muell.
Proteaceae. **Queensland-nut.**

No. 695. An evergreen tree up to 50 feet high, native to eastern Australia. It is cultivated for its edible nuts which have sweet white flesh with the flavor of chestnuts, incased in a shell which is typically very hard.

For previous introduction see 111419.

116752. *MOMORDICA CHARANTIA* L. Cucurbitaceae. **Balsam-pear.**

No. 676. *Karela*. From Saharanpur, United Provinces, April 20, 1936.

For previous introduction see 116052.

116753. *MORINGA OLEIFERA* Lam. Moringaceae. **Horseradish-tree.**

No. 735. *Shwaniya*. From Amritsar, Punjab, April 26, 1936.

For previous introduction see 116527.

116754. *MORUS NIGRA* L. Moraceae. **Black mulberry.**

No. 712. From Amritsar, Punjab, April 23, 1936.

For previous introduction and description see 116528.

Nos. 116755 to 116760 were collected in the Saharanpur Gardens, April 21, 1936.

116755. *PHLOGACANTHUS THYRSIFLORUS* (Roxb.) Nees. Acanthaceae.

No. 698. A shrub up to 6 feet high, with few shoots from the roots and few branches, but attractive shiny leaves and mahogany flowers. This plant likes shade.

For previous introduction see 103487.

116756. *RIVINA HUMILIS* L. Phytolaccaceae. **Rouge-plant.**

No. 690. A small shrub about 3 feet high, with small pink or nearly white flowers and attractive red berries. Native to the West Indies.

For previous introduction see 34010.

116757. *BRACHYCHITON BIDWILLI* Hook.
Sterculiaceae.

No. 694. An evergreen shrub or small tree native to Queensland, Australia. The alternate leaves are usually deeply three-lobed. The red or pink axillary flowers are tubular and about an inch long.

116758. *TERMINALIA ARJUNA* (Roxb.) Wight and Arn. Combretaceae.

No. 706.

For previous introduction and description see 116065.

116759. *TERMINALIA BELLERICA* (Gaertn.)
Roxb. Combretaceae.

No. 707.

For previous introduction and description see 116099.

116760. *JACQUINIA AURANTIACA* Ait. Theophrastaceae.

No. 691. A dense shrub, 10 feet high, spreading and covered with flowers in

116713 to 116767—Continued.

May. In Hawaii, where this plant is native, it becomes a tree with obovate-lanceolate leaves over an inch long and terminal racemes of small yellow flowers.

116761. TRICHOSANTHES ANGUINA L. Cucurbitaceae. **Snakegourd.**

No. 736. *Chachinda*. From Amritsar, Punjab, April 26, 1936.

For previous introduction and description see 116548.

Nos. 116762 to 116767 were collected at Saharanpur, United Provinces, April 20 and 21, 1936.

116762. VENTILAGO MADRASPATANA Gaertn. Rhamnaceae.

No. 687. From the Saharanpur Gardens. A tropical climbing shrub with alternate leathery, feather-veined leaves and simple paniculate spikes of small greenish flowers. Native to the East Indies.

116763. VERBESINA LINDENII (Schultz Bip.) Blake. Asteraceae.

No. 696. From the Saharanpur Gardens. A tropical herbaceous perennial 8 to 10 feet high, with rough hastate leaves 4 inches long and deep-yellow flower heads. Native to tropical America.

116764 and 116765. VICIA FABA L. Fabaceae. **Broadbean.**

Cultivated for the green beans and possibly a recent European introduction.

116764. No. 679. **116765.** No. 680.

116766. VIGUIERA DENTATA HELIANTHOIDES (H. B. K.) Blake. Asteraceae.

No. 700. From the Saharanpur Gardens. An erect herbaceous perennial up to 6 feet high, with large, ovate-lanceolate or subcordate pubescent leaves and yellow flower heads about 1½ inches across. Native to Cuba.

116767. WOODFORDIA FRUTICOSA (L.) Kurz. Lythraceae.

No. 689. From the Saharanpur Gardens. An attractive spreading bush covered with red flowers.

For previous introduction see 103509.

116768. PHYLLOSTACHYS sp. Poaceae. **Bamboo.**

Plants growing at the Plant Introduction Gardens at Savannah, Ga., and Chico, Calif. Originally collected in China by Frank N. Meyer. Received in June 1908. Renumbered in June 1936.

A hardy running bamboo about 18 feet high, in general habit strongly resembling *Phyllostachys aurea*. The more noticeable differences are in (1) the entire absence in the present species of the shortened internodes in the lower part of the culm, common in *P. aurea*, and (2) the more conspicuous spotting of the culm sheaths. Less apparent but even more important differences are the somewhat more prominent ligules of the leaf sheaths and culm sheaths and the shorter marginal cilia of the culm-sheath ligules.

This bamboo, which cannot be identified with the original introduction number or its Chinese name, has been grown under P. I. No. 23234, the description for which does not fit it.

116769 to 116796.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received June 2, 1936.

Unless otherwise stated, all this material was collected in the Saharanpur Gardens, Saharanpur, United Provinces, April 17 to 19, 1936.

116769. ADINA CORDIFOLIA (Roxb.) Benth. and Hook. Rubiaceae.

No. 558. A large handsome deciduous tree found in the foothills of the Himalayas from Jumna eastward up to 3,000 feet altitude. The leaves are cordate and the yellow flowers are borne in small heads.

For previous introduction see 52282.

116770. ALTHAEA ROSEA (L.) Cav. Malvaceae. **Hollyhock.**

No. 529. From Bikaner, Bikaner State, April 12, 1936.

116771. DALBERGIA SISSOO Roxb. Fabaceae.

No. 602. *Shesham*. A quick-growing, drought-resistant tree, used both as a shade tree and for timber. Common in this region.

For previous introduction see 94180.

116772. ARAUCARIA CUNNINGHAMII Ait. Pinaceae.

No. 556

An evergreen tree up to 200 feet high, with whorled spreading branches and leaves of two kinds; on young trees and lateral branches the leaves are usually lanceolate or triangular, about one-half inch long; on old trees and cone-bearing branches the leaves are shorter, crowded, and overlapping. Native to eastern Australia.

116773 and 116774. BASELLA RUBRA L. Basellaceae.

Pai Sag.

For previous introduction and description see 114864.

116773. No. 662. The common type.

116774. No. 663. A form said to have larger leaves.

116775. BAUHINIA sp. Caesalpinaceae.

No. 573. A huge climber with large leaves.

116776. BOMBAX MALABARICUM DC. Bombacaceae. **Cotton tree.**

No. 575. *Simul*. A very large deciduous tree with branches in whorls, spreading horizontally, and the trunk with large thorny buttresses covered with large corky prickles. The inner bark yields a good fiber, suitable for cordage; the seeds yield the so-called silk-cotton, too short and too soft to be spun, but largely used for stuffing pillows and for gun-cotton. The flower buds are eaten as a potherb. It is native to the hotter forests of India and Burma.

For previous introduction see 50716.

116777. BURSERA SERRATA Wall. Balsameaceae.

No. 577. A large balsamiferous tree with pinnate leaves and very small flow-

116769 to 116796—Continued.

ers in lax axillary panicles. Native to India.

116778. *CASSIA NODOSA* Buch.-Ham. Caesalpinaceae.

No. 562. A moderate-sized, deciduous tree with long drooping branches and glossy bipinnate leaves. In the spring it bears a profusion of beautiful pink, rose-scented flowers in dense, long-stalked racemes. The leaves and flowers appear at the same time. Native to northeastern India.

For previous introduction see 110864.

116779. *CASSIA SURATTENSIS* Burm. f. Caesalpinaceae.

No. 593. A tropical leguminous shrub or small tree up to 15 feet high, with pale-green compound glaucous leaves and clusters of pale-yellow flowers. Native to the East Indies.

For previous introduction see 112082.

116780. *CASUARINA GLAUCA* Sieber. Casuarinaceae. Beefwood.

No. 585. *Pulak*. A small bushy tree.

116781. *EHRETIA LAEVIS* Roxb. Boraginaceae.

No. 553. A subtropical shrub or small tree 12 feet high with white flowers followed by small orange fruits. Native to southern Asia.

For previous introduction see 74697.

116782. *GUAZUMA ULMIFOLIA* Lam. Sterculiaceae.

No. 504. *Ludraksh*. From Jaipur City, April 9, 1936. An evergreen tree 10 to 50 feet high, with ovate to lanceolate leaves 2 to 8 inches long and panicles of very small yellow flowers. Native to tropical America.

116783. *KIGELIA PINNATA* (Jacq.) DC. Bigoniaceae.

No. 567.

For previous introduction see 106507.

116784. *LIVISTONA CHINENSIS* (Jacq.) R. Br. Phoeniceae. Chinese fan palm.

No. 572.

For previous introduction see 105729.

116785. *MIMUSOPS* sp. Sapotaceae.

No. 520. *Kirni*. From Bikaner, Bikaner State, April 11, 1936. An attractive evergreen tree; fruit yellow, elongate, 1½ inches long, sweet, slightly acid, like a persimmon.

116786. *PHASEOLUS COCCINEUS* L. Fabaceae. Scarlet runner bean.

No. 670. From Saharanpur, United Provinces, April 19, 1936. Grown for the pods and green beans. Said to have come from Africa.

116787. *PINUS* sp. Pinaceae.

No. 595. *Chil*. A pine that thrives here, becoming about 60 feet tall.

116788. *PROSOPIS CHILENSIS* (Molina) Stuntz. Mimosaceae. Algaroba.

No. 581.

For previous introduction and description see 116057.

116769 to 116796—Continued.

116789. *PTERYGOTA ALATA* (Roxb.) R. Br. Sterculiaceae.

No. 549. A large tree, native to India, with ash-colored bark and yellow-tomentose branchlets. The large heart-shaped leaves, 10 inches long by 7 inches wide, are clustered at the ends of the branches. The panicles of tomentose flowers, without petals, are shorter than the leaves.

For previous introduction see 97578.

116790. *PRUNUS* sp. Amygdalaceae.

No. 914. From Baijnath, Kangra Valley, Punjab, at 3,000 feet altitude, May 22, 1936. A large attractive well-formed tree 40 feet high with a trunk 2 feet in diameter. Flowers large, pale pink, semi-double. Fruit thin fleshed, bitter. The tree grows to 6,000 feet altitude and in winter is covered with snow.

116791. *SABAL* sp. Phoeniceae.

No. 586. The thatch palm of Bermuda.

116792. *SALVADORA OLEOIDES* Decne. Salvadoraceae.

No. 527. *Jal*. From Bikaner, Bikaner State, April 12, 1936. A large evergreen shrub or small tree found growing in very dry situations, with thick oval leaves about 2 inches long and small greenish-white flowers in erect clustered spikes, followed by translucent drupes. Native to India.

116793. *SCHOTIA BRACHYPETALA* Sond. Caesalpinaceae.

No. 550. A large shrub or small tree with large leathery leaves and showy crimson flowers in dense panicles. Native to southern Africa.

116794. *ERYTHROPSIS PALLENS* Ridl. Sterculiaceae.

No. 591. A tree with oval or rounded, densely hairy leaves, three- to five-lobed, about 8 inches long and axillary panicles of bright-yellow flowers. Native to northwestern India.

116795. *TOONA CILIATA* Roemer. Meliaceae. Toon tree.

No. 590. *Tun*. A large tropical tree 50 to 80 feet high, with nearly evergreen foliage and white, honey-scented flowers. The fine red wood, which is used for furniture, carvings, and for making cigar boxes, is very durable and is not attacked by termites. Native to India.

For previous introduction see 81205.

116796. *ANOGEISSUS PENDULA* Edgeworth. Combretaceae.

No. 563. A bush or small tree with pendulous branches, elliptic leaves about 1 inch long, and small leathery two-winged fruits packed horizontally in dense heads. Native to northwestern India.

116797 to **116801.** *TRITICUM AESTIVUM* L. Poaceae. Common wheat.

From Australia. Seeds presented by the American consulate, Melbourne, Victoria, through the Secretary of State, Washington, D. C. Received June 30, 1936.

Fair average quality Victorian wheat.

116802 to 116853.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received June 16, 1936.

Unless otherwise stated, all of this shipment was collected at Peshawar, North West Frontier Province, May 2 to 4, 1936.

116802 and 116803. *ABELMOSCHUS ESCULENTUS* (L.) Moench. Malvaceae. **Okra.**

116802. No. 793. *Bhendi*. A short, white, spiny form.

116803. No. 794. *Bhendi*. Smooth, green with long pods.

116804 and 116805. *ALLIUM CEPA* L. Liliaceae. **Onion.**

116804. No. 789. *Lal pujaz*. A red onion harvested in May, keeps until October.

116805. No. 804. *Safed pujaz*. A white onion.

116806. *AMYGDALUS PERSICA* L. Amygdalaceae. **Peach.**

No. 819. *Aru*. A native yellow peach, smaller than American peaches.

116807. *BENINCASA HISPIDA* (Thunb.) Cogn. Cucurbitaceae. **Waxgourd.**

No. 795. *Pethi*. An elongate form used for candying in spiced sugar.

For previous introduction see 114866.

116808 to 116810. *BETA VULGARIS* L. Chenopodiaceae. **Common beet.**

116808. No. 797. *Palag*. A large-leaved form that is used as a vegetable all summer.

116809. No. 827. *Khatkan palag*. From Lahore, May 1, 1936. A large-leaved variety, cultivated as a potherb.

116810. No. 835. *Palag*. From Parachinar, Kurran Agency, North West Frontier Province; presented by the Government Gardens. Used as a potherb.

116811 to 116813. *BRASSICA OLERACEA BOTRYTIS* L. Brassicaceae. **Cauliflower.**

116811. No. 805. *Phulgobi*. Said to mature in 3 months.

116812. No. 806. *Phulgobi*. Said to be sown in June and to mature in 4 months in the hottest season.

116813. No. 807. *Phulgobi*. A very large form with heads over 12 inches across.

116814. *CAJANUS INDICUS* Spreng. Fabaceae. **Pigeonpea.**

No. 822. *Harrar*. A shrub, the seeds of which are used for food.

116815. *CANAVALIA ENSIFORMIS* (L.) DC. Fabaceae. **Jackbean.**

No. 786.

116816 and 116817. *CAPSICUM ANNUUM* L. Solanaceae. **Common redpepper.**

116816. No. 823. *Mirch*. Fruits 3 to 4 inches long.

116817. No. 824. *Mirch*. Fruits rounded, 1 inch in diameter.

116818 to 116823. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. **Watermelon.**

116802 to 116853—Continued.

116818. No. 745. From Lahore, Punjab, April 20, 1936. Fruit elongate, up to 20 pounds weight, medium green, finely netted with darker green. Rind thin; flesh red of good texture, sweet.

116819. No. 808. *Tarbuza*. Fruit elongated, sweet, weight up to 20 pounds.

116820. No. 809. A round melon, said to be good.

116821. No. 810. A good round form.

116822. No. 811. From Lahore, Punjab, May 1, 1936. Fruit round, medium green, faintly netted with darker green, weight about 20 pounds.

116823. No. 812. From Lahore, Punjab, May 1, 1936. Fruit rounded, weight up to 20 pounds, medium green, faintly netted with darker green; rind thin; flesh red, sweet, and of good texture.

116824 to 116828. *CUCUMIS MELO* L. Cucurbitaceae. **Muskmelon.**

116824. No. 740. From Lahore, Punjab, April 28, 1936. Fruits somewhat flattened, about 6 inches long by 4 inches thick, pale yellow, coarsely and strongly netted; flesh pale salmon, of good flavor and a good keeper.

116825. No. 796. *Kharbuza* or *kakri*, though the name *kakri* is used elsewhere only for cucumbers. Fruit ellipsoid, about 1 foot long.

116826. No. 803. *Kharbuza*. A round muskmelon.

116827. No. 845. Said to have been imported from somewhere in southern India. Fruits rounded, somewhat flattened, 5 inches through, lemon yellow, more or less blotched with dark green, smooth. Flesh thin, white, usually insipid, but a good shipper.

116828. No. 802. *Sarda*. Described as the "best" of melons, about 1 foot long, green.

116829 and 116830. *CUCUMIS SATIVUS* L. Cucurbitaceae. **Cucumber.**

116829. No. 791. *Khira*. A short thick cucumber, 6 by 2½ by 3 inches.

116830. No. 834. *Khira*. Presented by the Government Gardens at Parachinar, North West Frontier Province. A large round cucumber.

116831. *CUCURBITA MAXIMA* Duchesne. Cucurbitaceae. **Squash.**

No. 799. *Pethi*. A large rounded early form used as a vegetable.

116832 to 116834. *CUCURBITA PEPO* L. Cucurbitaceae. **Pumpkin.**

116832. No. 801. *Kaddu*. A large red-brown form that keeps well.

116833 and 116834. From Parachinar, Kurram Agency, North West Frontier Province, May 8, 1936. Gift of the Government Gardens.

116833. No. 832. **116834.** No. 833.

116835. *DAUCUS CAROTA* L. Apiaceae. **Carrot.**

No. 820. *Pila gadjas*. A yellow carrot.

116802 to 116853—Continued.

116836. DIOSPYROS sp. Diospyraceae.

No. 815. An attractive tree 18 inches or more in diameter, growing in the mountainous districts; fruit about 1 inch in diameter, red, turning black when ripe; sold dried in the market.

116837. DOLICHOS LABLAB L. Fabaceae.
Hyacinth-bean.

No. 790. *Hara sem.* The green pods are used as food, but the flavor is stronger than that of string beans.

116838. FICUS sp. Moraceae.

No. 701. From the Saharanpur Gardens, United Provinces, April 21, 1936. A large spreading evergreen tree up to 50 feet high and 4 feet in diameter.

116839 and 116840. MEDICAGO SATIVA L. Fabaceae.
Alfalfa.

From Lahore, Punjab, May 1, 1936. Native alfalfa, widely used as fodder in the Punjab.

116839. No. 829. 116840. No. 828.

116841. GREWIA ASIATICA L. Tiliaceae.

No. 785. *Phalsi.* From Lahore, Punjab, May 2, 1936. A small hazellike tree about 10 feet high, native to the East Indies and cultivated throughout India. The small dark-purple berry is pleasantly acid and is used in sherbet and for making beverages.

For previous introduction see 51006.

116842. MORUS ALBA L. Moraceae.
White mulberry.

No. 830. *Shahnut.* From Kobat, North West Frontier Province, May 7, 1936. Fruit whitish, 2½ inches long by three-eighths of an inch in diameter, sweet, with a peachlike odor.

116843 and 116844. PISUM SATIVUM L. Fabaceae.
Pea.116843. No. 787. *Mattar.* A short-podded form.116844. No. 788. *Mattar.* A long-podded form with white flowers; considered superior to No. 787 (P. I. 116843).116845. PRUNUS ARMENIACA L. Amygdalaceae.
Apricot.

No. 825. *Kumarie.* A tree up to 30 feet high; fruit said to be inferior to the Afghan sorts.

116846. RHAMNUS sp. Rhamnaceae.

No. 844. *Mamurie.* A dense and leafy attractive shrub up to 5 feet high; the fruits are sold in the market.

116847. SALIX sp. Salicaceae. Willow.

No. 843. From Parachinar, Kurram Agency, North West Frontier Province, May 8, 1936. Presented by the Government Gardens. A well-formed, quick-growing tree.

116848 to 116850. SOLANUM MELONGENA L. Solanaceae.
Eggplant.116848. No. 798. *Bengan.* A long dark-purple form.116849. No. 800. *Bengan.* A round, dark-purple form.

116850. No. 813. From Lahore, Punjab, May 1, 1936. A long black form.

116802 to 116853—Continued.

116851. SPINACIA OLERACEA L. Chenopodiaceae.
Common spinach.

No. 792. *Patag.* Said to be a small-leaved form.

116852. VIGNA SINENSIS (Torner) Savi. Fabaceae.
Cowpea.

No. 821. *Lobia.* Cultivated for the green pods.

116853. ZEA MAYS L. Poaceae. Corn.

No. 814. *Makki.* From the Government Gardens seed stock; the type of corn grown in this region.

116854. AGASTACHE CANA (Hook.) Wootton and Standl. Menthaceae.

From Texas. Seeds presented by Miss Ruth Yeates, El Paso. Received December 1, 1934. Numbered in May 1936.

116855. STRELTIZIA REGINAE BANKS. Musaceae.
Bird-of-paradise-flower.

From Australia. Seeds presented by J. Howard Johnson, St. Peters, South Australia. Received June 30, 1936.

For previous introduction see 78232.

116856 to 116896.

From China. Seeds obtained from Albert N. Steward, Department of Botany, College of Agriculture and Forestry, University of Nanking, Nanking. Received June 30, 1936.

Collected in Hunan Province in October 1935, and, unless otherwise stated, they were collected at Ma-Ling-Tung, Sinning Hsien.

116856. ACTINIDIA sp. Dilleniaceae.

No. 516. A tree 30 feet high, growing in the shade on a slope at 2,000 feet altitude. Fruits edible, greenish, turning dark purple when ripe.

116857. ARISAEMA sp. Araceae.

No. 477. An herb 3 feet high collected in a shady moist valley at 1,875 feet altitude. Fruits greenish.

116858. LINDERA GLAUCA (Sieb. and Zucc.) Blume. Lauraceae.

No. 642. Collected at 1,875 feet altitude. A deciduous shrub up to 12 feet high, with oblong-elliptic leaves, pubescent beneath, 1 to 2 inches long, and small yellow flowers followed by black drupes.

116859. LINDERA REFLEXA Hemsl. Lauraceae.

No. 156. From I-Chia-Ao, Changning Hsien, at 937 feet altitude, on a brushy slope. A shrub about 8 feet high, with membranous rotund-ovate leaves about 3 inches long and red fruits. Native to southern China.

116860. CALLICARPA DICHOTOMA (LOUR.) K. Koch. Verbenaceae.

No. 487. A shrub 5 feet high, with purplish stems and red fruits; collected at 937 feet altitude in a forest.

116861. CALLICARPA GIRALDIANA Hesse. Verbenaceae.

No. 488. From an exposed slope at 937 feet altitude. A deciduous Chinese shrub up to 10 feet high, with membranous light-green leaves, cymes of pink flowers, and dense clusters of round berrylike light-

116856 to 116896—Continued.

purple fruits which hang on after the leaves have fallen.

For previous introduction see 93879.

116862. CASTANEA HENRYI (Skan.) Rehd. and Wils. Fagaceae. Chestnut.

No. 517. A tree 50 feet high found on a slope in the forest at 1,875 feet altitude.

For previous introduction see 114344.

116863. CASTANEA SEGUINII Dode. Fagaceae.

No. 666. A shrub 4 feet high found on a brushy slope at 1,875 feet altitude.

For previous introduction and description see 114345.

116864. CLERODENDRUM CYRTOPHYLLUM Turcz. Verbenaceae.

No. 457. Collected at 1,875 feet altitude. A vigorous spreading shrub from 2 to 3 feet high, sending up many stalks. The leaves are glabrous, light green, and of somewhat fetid odor. The small white flowers with large rosy bracts are followed by blue berries.

For previous introduction see 43021.

116865. CUCUBALUS BACCIFER L. Silenaceae.

No. 543. A pubescent herb with white flowers and green fruits which become black when ripe; collected at 2,000 feet altitude. Native to Europe and northern Asia.

116866. DAPHNIPHYLLUM sp. Euphorbiaceae.

No. 616. A tree 15 feet high, with glabrous leaves and black fruits, found beside a stream in a valley at 1,875 feet altitude.

116867. DICHROA sp. Hydrangeaceae.

No. 473. A shrub 7 feet high, with greenish flowers, found in a forest on a slope at 1,875 feet altitude.

116868. EUONYMUS ACANTHOCARPUS Franch. Celastraceae.

No. 655. Collected on a slope at 1,875 feet altitude. A shrub up to about 12 feet high, with leathery lanceolate or ovate-lanceolate leaves and small greenish flowers. Native to south-central China.

116869. EURYA JAPONICA Thunb. Theaceae.

No. 493. A shrub 5 feet high, with purplish-black fruits, found on a shady slope at 1,875 feet altitude.

For previous introduction see 91249.

116870. EUSCAPHIS JAPONICA (Thunb.) Dipp. Staphyleaceae.

No. 95. From I-Chia-Ao, Changning Hsien, on a bushy slope at 687 feet altitude. A shrub or small tree with compound leaves composed of 7 to 11 ovate-lanceolate serrate leaflets 1 to 3 inches long. The small white flowers, in upright panicles, are followed by brown-red pods which open, exposing the steel-blue fruits.

For previous introduction see 105600.

116871. EVODIA OFFICINALIS Dode. Rutaceae.

No. 180. From Yang-Shan, Changning Hsien, at 2,125 feet altitude. A shrub or small tree up to about 15 feet high, with pinnate leaves having 7 to 15 ovate or

116856 to 116896—Continued.

elliptic ovate leaflets and corymbs of small greenish-yellow or greenish-white flowers followed by small red pods containing black seeds. Native to central and western China.

116872. GLEDITSIA SINENSIS Lam. Caesalpiaceae. Chinese honeylocust.

No. 635. A large tree with pinnate leaves, greenish flowers, and purple-black pods over 10 inches long. Growing along a stream at 1,875 feet altitude.

For previous introduction see 105609.

116873. ILEX sp. Aquifoliaceae.

No. 439. A shrub about 5 feet high, with black fruits, growing on a shady slope at 1,875 feet altitude.

116874. LONICERA MACRANTHA (D. Don) Spreng. Caprifoliaceae. Honeysuckle.

No. 632. A shrubby honeysuckle with rather large white flowers which fade to yellow, and purple black fruits. Found growing along a stream at 1,875 feet altitude.

For previous introduction see 47708.

116875. MELASTOMA DODECANDRUM Lour. Melastomaceae.

No. 2. From I-Chia-Ao, Changning Hsien, on an open grassy slope at 625 feet altitude. A prostrate perennial shrub which bears beautiful pink roselike flowers all summer long. The flowers last only one day, but because of their great number, the shrub is always well covered. The fruits are said to be eaten, but have the lack of flavor so common in Chinese fruits.

For previous introduction see 55443.

116876. MELIOSMA sp. Sabiaceae.

No. 584. A tree about 35 feet high, with deep-red flowers; found on a brushy slope at 2,000 feet altitude.

116877. PAEDERIA FOETIDA L. Rubiaceae.

No. 436. A slender attractive vine with glabrous, ovate or lanceolate leaves, grayish beneath, on long petioles. The small pink flowers are in branching cymes. Any part of the plant, when bruised, emits a most offensive odor. Native to south-eastern Asia.

For previous introduction see 99746.

116878. POLYGONATUM sp. Convallariaceae.

No. 474. An herb with leaves circinate at apex, growing in shade in forests at 1,875 feet altitude.

116879. PYRACANTHA sp. Malaceae.

No. 698. A shrub 3 feet high with red fruits; found on rocky slopes at 1,875 feet altitude.

116880. RHAMNUS CRENATA Sieb. and Zucc. Rhamnaceae. Japanese buckthorn.

No. 440. A shrub 8 feet high with black fruits, growing on an exposed slope at 1,875 feet altitude.

For previous introduction see 99239.

116881. RHAMNUS sp. Rhamnaceae.

No. 676. A shrub 3 feet high with glabrous leaves and deep-red flowers, found on shady slopes at 1,875 feet altitude.

116856 to 116896—Continued.

116882. RHAMNUS sp. Rhamnaceae.

No. 700. A shrub 8 feet high with black fruits; found on rocky slopes in forests at 1,875 feet altitude.

116883. RHUS SYLVESTRIS Sieb. and Zucc. Anacardiaceae.

No. 468. A tree 12 feet high with 7 to 12 ovate-oblong leaflets and loose axillary panicles of small brownish-yellow fruits, more or less flattened. The handsome foliage turns dark-red or scarlet in the autumn. Found on an exposed slope at 1,875 feet altitude.

For previous introduction see 111377.

116884. SMILAX CHINA L. Smilacaceae. Greenbrier.

No. 495. A shrubby species with bright-red fruits, found on an open slope at 1,875 feet altitude. The tuberous rhizome has been used for centuries in medicine and is still recognized as having medicinal value.

For previous introduction see 48743.

116885. SMILAX sp. Smilacaceae.

No. 560. A shrub 3 feet high with deep-blue fruits crowned with the reddish calyx. Found on an exposed slope at 2,030 feet altitude.

116886. SOLANUM DULCAMARA L. Solanaceae. Bitter nightshade.

No. 523. A hairy herb with purplish-red flowers and red fruits, found in shade on a slope at 2,030 feet altitude.

For previous introduction see 116154.

116887. SORBUS sp. Malaceae.

No. 701. A shrub 5 feet high with edible orange fruits, found on a rocky slope at 1,875 feet altitude.

116888. SORBUS sp. Malaceae.

No. 697. A shrub 5 feet high with edible orange fruits; found on a rocky slope at 1,875 feet altitude.

116889. SYMLOCOS LAURINA (Retz.) Wall. Symplocaceae.

No. 472. A shrub 5 feet high with leathery leaves and white flowers; found on an exposed slope at 1,875 feet altitude.

116890. SYMLOCOS sp. Symplocaceae.

No. 687. A shrub 8 feet high with blackish fruits; found near a stream at 1,875 feet altitude.

116891. TAXUS CHINENSIS (Pilger) Rehder. Taxaceae.

No. 644. A tree 30 feet high with edible yellowish fruits, the aril becoming red; found on a slope at 1,875 feet altitude.

For previous introduction see 99228.

116892. VIBURNUM EROSUM Thunb. Caprifoliaceae.

No. 168. From Yang-Shan, Changning Hsien. An upright shrub to 6 feet high, with elliptic-ovate to oblong-obovate leaves about 4 inches long and small white flowers in terminal and lateral cymes up to 2 inches in diameter, followed by small red drupelike fruits; found on a brushy slope at 2,125 feet altitude.

116856 to 116896—Continued.

116893. VIBURNUM sp. Caprifoliaceae.

No. 570. A shrub 5 feet high with red fruits; found on an exposed slope at 1,875 feet altitude.

116894. VIBURNUM sp. Caprifoliaceae.

No. 451. A shrub 8 feet high with leaves tomentose beneath and reddish fruits; found on a brushy slope at 1,875 feet altitude.

116895. VIGNA VEXILLATA (L.) Rich. Fabaceae.

No. 460. A vine with trifoliolate leaves of ovate-oblong pointed leaflets and usually two-flowered peduncles bearing light-purple flowers. Found on a grassy slope at 1,875 feet altitude.

For previous introduction see 89079.

116896. ZANTHOXYLUM ALATUM Roxb. Rutaceae. Prickly-ash.

No. 481. A shrub or small tree 7 feet high, native to the subtropical Himalayas, ascending to 6,000 feet. The compound leaves are made up of 5 to 11 lanceolate to ovate, finely serrate leaflets 1 to 5 inches long on a winged prickly rachis, and the yellow-green flowers in small panicles are followed by fragrant warty red fruits which open and show the lustrous black seeds. Collected in a forest at 1,875 feet altitude.

For previous introduction see 102787.

116897 to 116964.

From India and Afghanistan. Seeds and bulbs collected by Walter Koelz, Bureau of Plant Industry. Received June 26, 1936.

Unless otherwise stated, the material was collected at Kabul, Afghanistan, May 12 to 16, 1936, and was introduced as seeds. Collected at 6,000 feet altitude.

116897 to 116899. ALLIUM CEPA L. Liliaceae. Onion.

116897. No. 840. Bulblets from Parachinar, North West Frontier Province, May 8, 1936.

116898. No. 869. *Safed pujaz*. A flat white onion, 3 inches across.

116899. No. 860. *Surkh pujaz*. A handsome black-red onion, flattened, 3 inches in diameter.

116900. ALLIUM PORRUM L. Liliaceae. Leek.

No. 896. *Gandana*. Widely cultivated; the cut-off tops are sold in the market.

116901. WISTARIA sp. Fabaceae.

No. 912. From Baijnath, Kangra Valley, Punjab, May 22, 1936, at 3,000 feet altitude. A woody climber up to 20 feet, with pinnate leaves a foot long, and flat velvety pods 5 inches long.

116902. WOODFORDIA FRUTICOSA (L.) Kurz. Lythraceae.

No. 919. From Baijnath, Kangra Valley, Punjab, May 23, 1936.

For previous introduction and description see 116767.

116903. (Undetermined.)

No. 904. From Oot, Mandi State, India, May 30, 1936. A medium-sized, well-

116897 to 116964—Continued.

formed tree bearing flowers and later ripening fruit before the leaves appear. The red fruits are often in a radiate cluster of five on a stem. The huge leaves appear as the fruits ripen.

116904. (Undetermined.)

No. 922. From Drang, Mandi State, India, May 24, 1936. A well-formed shrub 6 feet high, with small pecanlike fruits 1 inch long, which, on ripening, split to expose the attractive red seeds; these are soon eaten by birds.

116905. (Undetermined.)

No. 926. From Oot, Mandi State, India, May 30, 1936. A vigorous attractive vine bearing dense clusters of purple and white flowers before the leaves appear. The pods are covered with bristly deciduous hairs.

116906. *BETA VULGARIS* L. Chenopodiaceae. Common beet.

No. 897. *Lablabu*. A red beet, said to be native.

116907. *BRASSICA OLERACEA CAPITATA* L. Brassicaceae. Cabbage.

No. 873. *Karam*. A large flat green cabbage 1 foot across. Said to be indigenous.

116908. *BRASSICA RAPA* L. Brassicaceae. Turnip.

No. 859. *Surkh shelgam*. A sweet turnip.

116909. *CAPSICUM ANNUUM* L. Solanaceae. Common redpepper.

No. 889. *Miris*. A mild red bullnose pepper, 3 by 1½ inches.

116910 to 116914. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. Watermelon.

Tarbutz. These are said to represent the types of melons grown at Kabul; most of them are of great size. The quality is said to be better than the melons grown in Peshawar, India.

116910. No. 872.

116911. No. 876.

116912. No. 877.

116913. No. 878.

116914. No. 879.

116915 to 116919. *CUCUMIS* spp. Cucurbitaceae.

116915 to 116917. *CUCUMIS MELO* L. Muskmelon.

116915. No. 851. *Safed sarda*. A large white melon of excellent quality.

116916. No. 854. *Garma*. A large melon of excellent quality.

116917. No. 855. *Kharbuza sarda*. A large greenish melon of excellent quality.

116918. *CUCUMIS MELO FLEXUOSUS* (L.) Naud.

No. 852. *Taran*. An elongate, ridged, crook-necked melon. Native to the East Indies.

116919. *CUCUMIS SATIVUS* L. Cucumber.

No. 853. *Badrang*. A very good smooth cucumber, 6 by 3½ inches, with soft seeds.

116897 to 116964—Continued.

116920 to 116923. *CUCURBITA* spp. Cucurbitaceae.

116920. *CUCURBITA MAXIMA* Duchesne. Squash.

No. 893. *Turkestan ka ddu*. Fruit ellipsoid, 16 inches long, salmon colored with faint ribs 5 inches apart; flesh rather thick, salmon colored, insipid.

116921. *CUCURBITA MOSCHATA* Duchesne. Cushaw.

No. 866. *Kaddu-i-Turkistan*. Fruit globose, salmon to red, up to 90 pounds in weight; flesh sweet. Said to have been introduced from Turkey.

116922 and 116923. *CUCURBITA PEPO* L. Pumpkin.

116922. No. 831. From Parachinar, Kurram Agency, North West Frontier Province, May 8, 1936. Gift from the Government Gardens; said to represent the locally grown cucurbita.

116923. No. 858. *Kadu-i-Kabal*. A small green globose pumpkin.

116924. *CUPRESSUS FUNEBRIS* Endl. Pinaceae. Mourning cypress.

No. 850. From Jalalabad, Afghanistan, May 11, 1936. An ornamental shrub 20 feet high, with drooping branches.

For previous introduction see 99158.

116925. *CUPRESSUS* sp.

No. 849. *Sabr*. From Mimbla, Afghanistan, May 11, 1936. Very old trees, 50 to 60 feet high, some over 15 feet in circumference. Said to have been planted by the Great Mogul, Babur, in the sixteenth century.

116926. *DAUCUS CAROTA* L. Apiaceae. Carrot.

No. 856. *Sujahi zardak*. An insipid purple-black carrot, probably imported from a warmer region.

116927. *DAUCUS CAROTA* L. Apiaceae. Carrot.

No. 867. *Surkh zardak*. A red carrot.

116928. *ELAEAGNUS* sp. Elaeagnaceae.

No. 880. *Singjhet*. Fruit small, mealy, rather acid, sold dried. Probably from Jalalabad.

116929 and 116930. *IRIS* spp. Iridaceae.

From Parachinar, Kurram Agency, North West Frontier Province, India, May 8, 1936. A dainty and attractive iris with blue-purple flowers. Grows on dry plains or in fields.

116929. No. 836-A. Bulbs.

116930. No. 836-B. Seeds.

116931 and 116932. *JUGLANS REGIA* L. Juglandaceae. Persian walnut.

Girdu. Trees withstand zero temperatures without injury. The nuts are of good flavor, but the shell is hard.

116931. No. 863.

116932. No. 864.

116933. *LACTUCA SATIVA* L. Cichoriaceae. Garden lettuce.

No. 862. *Ka-u*. A head lettuce said to be indigenous. The leaves are tender, but the head is not firm.

116997 to 116964—Continued.

116934 and 116935. *LAGENARIA LEUCANTHA* (Duchesne) Rusby. Cucurbitaceae.
Calabash gourd.

Small gourds are used as containers for small dry objects and liquids.

116934. No. 857. *Kadusrai*.

116935. No. 894. *Kadu nasair*.

116936. *LUFFA ACUTANGULA* (L.) Roxb. Cucurbitaceae. Singkwa towelgourd.

No. 861. *Turi*. Probably like the Indian races. Used as a vegetable.

116937. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

No. 875. *Banjan rawi*.

116938. *MEDICAGO SATIVA* L. Fabaceae. Alfalfa.

No. 882. *Rishka*. One of the common fodder plants of this region.

116939. *MOMORDICA CHARANTIA* L. Cucurbitaceae. Balsam-pear.

No. 868. *Karela*.

116940. *MORUS ALBA* L. Moraceae. White mulberry.

No. 817. *Shahbut*. From Peshawar, North West Frontier Province, India, May 5, 1936. Fruit whitish, 1½ inches long by one-fourth of an inch in diameter, sweet and with an odor of peaches.

116941. *MORUS* sp. Moraceae.

No. 818. From Peshawar, North West Frontier Province, May 5, 1936. Sold in the bazar dried; said to have come from Afghanistan. The dried fruits are sweet and are a good substitute for raisins.

116942. *NARCISSUS* sp. Amaryllidaceae.

No. 846. From Peshawar, North West Frontier Province, May 9, 1936. Bulbs presented by the Government Gardens.

116943. *PAPAYER* sp. Papaveraceae.

No. 838. From Parachinar, Kurram Agency, North West Frontier Province, India. An herb 18 inches high with attractive red flowers; found in fields and on dry plains.

116944. *PISUM SATIVUM* L. Fabaceae. Pea.

No. 847. *Mashang*.

116945 and 116946. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

116945. No. 883. *Zardalu*. A large-beaked apricot, very sweet when dried, usually halved for drying. Withstands zero temperature without injury.

116946. No. 884. *Shakkarpara*. This is a commonly exported apricot, found in all the Indian cities. It is very sweet when dried, and the kernel is edible.

116947 to 116949. *PRUNUS* spp. Amygdalaceae.

116947. *PRUNUS CERASIFERA* Ehrh. Myrobalan plum.

No. 891. A small attractive tree; fruits small, rather sour when dried.

116897 to 116964—Continued.

116948. *PRUNUS CERASUS* L. Sour cherry.

No. 885. *Atubalu*. A small tree covered with large attractive white flowers in spring; fruits dark red, acid when fresh. Sold in the market dried.

For previous introduction see 115000.

116949. *PRUNUS DOMESTICA* L. Common plum.

No. 886. A very sweet plum said to have come from Ghazni. The dried fruit is rather acid.

116950 and 116951. *RAPHANUS SATIVUS* L. Brassicaceae. Radish.

116950. No. 870. *Muli-i-Kabul*. A long white-rooted radish. In the spring the leaves are used as greens.

116951. No. 892. *Herati Muli*. A top-shaped radish with the upper part red-purple.

116952. *SALVIA* sp. Menthaceae.

No. 841. From Parachinar, North West Frontier Province, India, May 8, 1936. An attractive annual that grows on dry slopes and plains. Leaves large, tomentose; flowers pale, blue-purple.

116953 and 116954. *SOLANUM MELONGENA* L. Solanaceae. Eggplant.

116953. No. 874. *Banjan siyahi*. A long black fruit which is alkali tolerant.

116954. No. 895. *Badanjan*. A round red eggplant.

116955. *SPINACIA OLERACEA* L. Chenopodiaceae. Common spinach.

No. 865. *Palag*. A very thrifty broad-leaved spinach.

116956. *SYRINGA* sp. Oleaceae.

No. 890. An attractive plant with slender panicles of rose-purple, very fragrant flowers; grown for hedges.

116957. *TRIFOLIUM* sp. Fabaceae.

No. 881. *Shafbal*. An annual or biennial clover that yields several cuttings a year. The flowers are small, pink, and very fragrant.

116958. *TULIPA* sp. Liliaceae.

No. 839. From Parachinar, North West Frontier Province, India, May 8, 1936. Found on dry slopes and open fields. Bulbs are sold in the bazar, roasted.

116959. *VICIA FABA* L. Fabaceae. Broadbean.

No. 848. *Bakie*. Said to be ground with wheat for bread.

116960 to 116962. *VITIS VINIFERA* L. Vitaceae. European grape.

116960. No. 887. *Munaka*. The famous table raisin throughout the Near East and India.

116961. No. 888. *Abjosh*. Said to have come from Kanduhar. Fruits white, large, of honey sweetness when dried.

116897 to 116964—Continued.

116962. No. 903. "Seedless" raisins said to grow where the winter temperatures are zero. They have been seen as flourishing grapevines with trunks a foot in diameter. The raisins are of fine flavor and high sugar content.

116963. (Undetermined.)

No. 837. From Parachinar, Kurram Agency, North West Frontier Province. Bulbs having blue-purple flowers.

116964. (Undetermined.)

No. 837-B. From Parachinar, Kurram Agency, North West Frontier Province. Seeds of No. 837 [P. I. 116963].

116965. *PHYLLOSTACHYS FLEXUOSA* A and C. Rivière. Poaceae. **Bamboo.**

Plants growing at the Barbour Lathrop Plant Introduction Garden, Savannah, Ga. Numbered in June 1936.

A bamboo about 10 feet high with two or three leaves on a branchlet. The leaves are 2 to 4 inches long by about one-half inch wide. The culm sheaths are a dull green, often suffused with dull brown, and spotted with deeper brown.

These plants have been carried under P. I. No. 38912, but this bamboo is not the species there listed. The original source of the plants is uncertain.

See also P. I. No. 89715.

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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 128



Washington, D. C.

Issued May 1941

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, JULY 1 TO SEPTEMBER 30, 1936 (Nos. 116966 to 118410)

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INTRODUCTORY STATEMENT

Inventory No. 128 is a record of the plant material (Nos. 116966 to 118410) received by the Division of Plant Exploration and Introduction during the period from July 1 to September 30, 1936.

It records the first shipments of seeds and bulbs from H. L. Westover and F. L. Wellman, who left in the spring of 1936 for Turkey and Iran. The colder mountainous regions of these two countries, where agriculture has been the chief occupation for countless generations, offer a promising field for the collection of native strains of vegetables and fruits, especially in the markets and gardens of the more isolated villages and towns. Also included in these shipments were a number of grasses and forage plants from the semiarid parts of these countries.

The three agricultural explorers whose activities were discussed in the introductory statement of the preceding inventory (No. 127), Walter Koelz, W. A. Archer, and Raymond Stadelman, continued to send in material, during this period, from India, Brazil, and western South America, respectively. As before, the nature of the plant material received from them reflects the special needs of plant breeders and geneticists working with important crop plants.

The Department is again indebted to H. R. Wright, Auckland, New Zealand, who, during the past two decades, has presented material of new and little-known fruit varieties from his Avondale nursery. This shipment consists of plants of 25 different varieties of fruits (Nos. 117462 to 117486), including peaches, apples, plums, and several forms of citrus fruits, most of which have not been introduced before into this country.

Those concerned with ornamentals will be served by a rather small but unusual collection of seeds (Nos. 116983 to 116995) presented by Cheverton Buller, Stellenbosch, Union of South Africa. These represent native South African plants, mostly belonging to the Iridaceae and Proteaceae.

The botanical determinations of seeds introduced have been made and the nomenclature determined by Paul Russell, who has had general supervision of this inventory.

B. Y. MORRISON,
Principal Horticulturist, in Charge.

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D. C., June 14, 1940.

I N V E N T O R Y ¹

NOTE.—This inventory is a historical record of plant material introduced for Department and other specialists. It is not to be considered as a list of plant material for distribution.

116966 to 116978.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received July 6, 1936.

116966 and 116967. *ALTHAEA ROSEA* (L.) Cav. Malvaceae. Hollyhock.

116966. No. 205. From the Konya bazar, April 18, 1936.

116967. No. 123. From the Ankara bazar, April 15, 1936.

116968. *ANTIRRHINUM* sp. Scrophulariaceae. Snapdragon.

No. 200. From the Konya bazar, April 18, 1936.

116969. *CISTUS* sp. Cistaceae.

No. 460. Collected 25 km. northwest of Mersin, April 23, 1936.

116970. *CLEMATIS* sp. Ranunculaceae.

No. 324. From 70 km. northwest of Adana, April 24, 1936. A wild plant.

116971. *DELPHINIUM* sp. Ranunculaceae. Larkspur.

No. 206. From the Konya bazar, April 18, 1936.

116972 to 116978. *HELIANTHUS ANNUUS* L. Asteraceae. Common sunflower.

Nos. 116972 to 116974 were from the Ankara bazar, April 15, 1936.

116972. No. 119. *Katmerli*.

116973. No. 130. *Katmersiz*.

116974. No. 126.

116966 to 116978—Continued.

116975. No. 170. From Konya, April 18, 1936.

116976. No. 150. From Afyon, April 17, 1936.

116977. No. 237. From Tarsus, April 26, 1936.

116978. No. 458. From Kayseri, May 7, 1936.

116979. *NERINE FLEXUOSA* (Jacq.) Herb. Amaryllidaceae.

From the Union of South Africa. Seeds purchased from the Winton Nurseries, Bonnie Vale, Cape Province. Received July 31, 1936.

A South African bulbous perennial with four to six bright-green linear leaves a foot long and a scape 2 to 3 feet high, bearing an umbel of 10 to 20 pale-pink flowers an inch long.

116980. *MEDICAGO SATIVA* L. Fabaceae. Alfalfa.

From Chile. Seeds purchased from Raymond Du Belloy, Santiago. Received July 29, 1936.

Native-grown Chilean alfalfa.

116981. *DUCHESNEA INDICA* (Andrews) Focke. Rosaceae.

From Peru. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received July 14, 1936.

Collected May 21, 1936, at Huarás, Ancash, at 3,000 m. altitude.

¹ It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Plant Exploration and 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 seed samples or 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 identification, 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

116982. VACCINIUM ARCTOSTAPHYLOS L.
Vacciniaceae.**Caucasian whortleberry.**

From the Union of Soviet Socialist Republics, Institute of Agriculture, Moscow, through Dr. G. L. Slate, New York Experiment Station, Geneva, N. Y. Received August 8, 1936.

A deciduous shrub up to 10 feet high, native to the Caucasus region. The oblong-ovate, finely toothed leaves are 2 to 4 inches long and turn purple red in the autumn. The small bell-shaped flowers are borne in racemes 2 inches long and are white with a purple tinge. The globose purple edible berries are neatly one-half inch in diameter.

For previous introduction see 101920.

116983 to 116995.

From the Union of South Africa. Seeds presented by Cheverton Buller, Stellenbosch, Cape Province. Received July 15, 1936.

A collection of plants native to southern Africa.

116983 to 116985. GLADIOLUS spp. Iridaceae.**116983. GLADIOLUS ALATUS L.**

A gladiolus with flowers of a delightful fragrance not unlike that of the sweet briar. The three upper petals are bright orange scarlet and the three lower ones are yellowish tipped with orange scarlet. The bulbs are not larger than ordinary peas and cannot survive long out of the ground.

For previous introduction see 106736.

116984. GLADIOLUS BLANDUS Ait.

A species with sword-shaped leaves somewhat shorter than the stem, which is from 6 inches to 24 inches and bears 3 to 10 white or reddish-tinted scentless flowers, each over an inch long.

For previous introduction see 113567.

116985. GLADIOLUS PSITTACINUS Hook.
Parrot gladiolus.

A gladiolus with a stout stem 3 feet or more in length and usually 4 rigid swordlike leaves up to 2 feet long. The many-flowered spike reaches a foot or more in length. The flowers are a rich yellow, grained and overlain with red, particularly about the margins of the segments.

For previous introduction see 110831.

116986. MIMETES HIRTA (L.) Knight. Proteaceae.

A very striking shrub 3 to 4 feet high, with leathery ovate-elliptic to oblanceolate leaves about 1 inch long and showy, bright-carmine bracts.

116987. ORNITHOGALUM SAUNDERSIAE Baker.
Liliaceae. Star-of-Bethlehem.

A bulbous plant with lanceolate leaves up to a foot long and white or yellow flowers in a dense raceme on a scape a foot or more high.

For previous introduction see 115827.

116988 to 116994. PROTEA spp. Proteaceae.**116983 to 116995—Continued.****116988. PROTEA BARBIGERA Meisn.**

An evergreen shrub up to 9 feet high with oblong-lanceolate leaves 3 to 7 inches long, sessile flower heads about 6 inches across, with conspicuously bearded involucre bracts, the whitish hairs about 2 inches long.

116989. PROTEA COMPACTA R. Br.

A shrub with strongly imbricated, ovate-lanceolate, coriaceous leaves 3 to 5 inches long and sessile flower heads 4 inches long and 2 inches broad. The outer bracts have a dense fringe of woolly hairs, the inner are flesh-colored to carmine, and the flowers are tawny to purplish tomentose with the stamens densely covered with long light-golden hairs.

For previous introduction see 102799.

116990. PROTEA CYNAROIDES L.

This is, perhaps, the finest of all the proteas and becomes 6 feet tall. The leaves vary from nearly orbicular to ovate, are 2 to 6 inches long, and have petioles from 2 to 5 inches long. The glabrous surfaces are prominently and reticulately veined on both sides. The sessile flower heads are 5 to 8 inches long and broad, and the ovate-lanceolate bracts in this form are clear pink and dove gray.

For previous introduction see 102800.

116991. PROTEA GRANDIFLORA Thunb.

A shrub or small tree 3 to 10 feet high, with oblong sessile shining leaves and large white flower heads which resemble a globe artichoke in appearance.

For previous introduction see 25847.

116992 and 116993. PROTEA MELLIFERA Thunb.
Sugarbush.

A glabrous shrub or small tree with narrowly lanceolate and rather blunt leaves. The whitish flower head is cup-shaped, 4 inches long and 3 inches wide. The inner bracts are rather longer than the pistils and the outer ones are short and wide, all very viscid and usually rosy pink. During the time of flowering the involucre is filled with sweet watery liquor which is an allurement to bees and to a host of other insects.

For previous introduction see 26207.

116992. A form with white bracts.

116993. A form with rose-pink bracts.

116994. PROTEA sp.

A form with rose-pink, black-hairy bracts.

116995. WATSONIA DENSIFLORA Baker.
Iridaceae. Buglelily.

Variety *alba*. A watsonia with stiff ensiform leaves up to 3 feet high and simple dense spikes about as tall with many pure-white flowers.

116996 and 116997. ZEPHYRANTHES spp.
Amaryllidaceae.

From Mexico. Bulbs purchased from Dr. C. A. Purpus, Zacuapam, Huatusco, Veracruz. Received August 11, 1936.

116996. Collected at 900 m. altitude near Zacuapam.

116996 and 116997—Continued.

116997. Collected at 2,000 m. altitude, Salto de Agua.

116998. *CHAMAELAUCIUM UNCINATUM* Schauer. Myrtaceae.

From California. Plant presented by Eric Walther, Golden Gate Park, San Francisco. Received July 29, 1936.

An erect bushy heathlike shrub with opposite hook-shaped linear leaves less than an inch long and small terminal corymbs of cream-colored flowers. Native to Western Australia.

For previous introduction see 86710.

116999. *ARISTOLOCHIA PAULISTANA* Hoehne. Aristolochiaceae.

From Brazil. Seeds presented by the Biological Institute of São Paulo, through F. G. Walsingham, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba. Received July 23, 1936.

A high-climbing tropical vine with triangular-cordate leaves, obtuse at the apex, 3 to 6 inches long. The flower, yellowish purple spotted with blackish purple, has an ovate lip that is narrowed into a linear limb up to 8 inches in length. Native to São Paulo, Brazil.

117000. *SACCHARUM*. Poaceae.

Sugarcane.

From Trinidad, British West Indies. Cuttings presented by the Imperial College of Tropical Agriculture. Received July 3, 1936.

No. B. 2935.

117001 to 117004. *ELAEAGNUS* spp. Elaeagnaceae.

From the Union of Soviet Socialist Republics. Cuttings presented through Dr. I. M. Vavilov, Chief, Institute of Plant Industry, Leningrad. Received July 6, 1936.

117001. No. 24.

117002. No. 92. *Bepa*.

117003. No. 93. *Abahfapa*.

117004. No. 94.

117005 to 117012. *IPOMOEA BATATAS* (L.) Lam. Convolvulaceae. Sweetpotato.

From Australia. Tubers presented by Dr. H. Wenzholz, Director of Plant Breeding, New South Wales Department of Agriculture, Sydney. Received July 9, 1936.

A collection of locally grown varieties from Hawkesbury Agricultural College.

117005. *Ashburn*.

117006. *Early Butter*.

117007. *Farmer's Special*.

117008. *H. H. C. Pink*.

117009. *Quaker*.

117010. *Rosella*.

117011. *White Maltese*.

117012. *Wannop*.

117013 to 117015. *MEDICAGO SATIVA* L. Fabaceae. Alfalfa.

From Turkey. Plants collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received July 11, 1936.

117013. No. 891-A. Wild alfalfa collected in the hills near Gemlik, June 20, 1936.

117014. No. 892. Wild alfalfa collected 25 km. north of Bursa, June 20, 1936.

117015. No. 893. Wild alfalfa collected 10 km. south of Bursa on the slopes of Mount Olympus, June 19, 1936.

117016. *PUCCINELLIA KENGIANA* Ohwi. (*Puccinellia stricta* Keng). Poaceae. Grass.

From China. Seeds presented by Y. L. Keng, Academia Sinica, National Research Institute of Biology, Nanking. Received July 1, 1936.

From Luho Ku, Kiangsu Province, May 23, 1936. Seeds collected in wheatfields by Charles E. DeVol. A loosely tufted, erect or decumbent annual grass about 18 inches tall. Native to Kiangsu Province, China.

117017 and 117018. *TRITICUM AESTIVUM* L. Poaceae. Common wheat.

From Australia. Seeds presented by the American consulate, Melbourne, Victoria, through the Secretary of State, Washington, D. C. Received July 13, 1936.

Fair average quality Victorian wheat.

117019. *OCHROMA BICOLOR* Rowlee. Bombacaceae.

From Mexico. Seeds presented by Prof. M. Martinez, Mexico, D. F. Received July 1, 1936.

A tall tree, native to Costa Rica; one of the sources of the balsa wood of commerce.

117020 to 117040. *NICOTIANA* spp. Solanaceae. Tobacco.

From Peru. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received July 14, 1936.

Nos. 117020 to 117028 were collected in the Departamento Ancash.

117020 and 117021. *NICOTIANA GLUTINOSA* L.

117020. No. 142. May 25, 1936. From the Cañon del Pato, Rio Santa, between 1,500 and 1,800 m. altitude.

117021. No. 143. From Mayucayan at 1,400 m. altitude May 25, 1936.

117022 to 117039. *NICOTIANA TABACUM* L. Common tobacco.

Nos. 117022 and 117023 were collected at Huarás, May 21, 1936, at 3,025 m. altitude.

117022. No. 135. 117023. No. 136.

117024. No. 137. From Sacsacpampa, near Huarás, May 22, 1936, at 3,000 m. altitude.

117025. No. 138. From Huarás, May 22, 1936, at 3,025 m. altitude.

117026. No. 139. From Paria Huanca, May 24, 1936, at 2,800 m. altitude.

117020 to 117040—Continued.

117027. No. 140. From Macasca, May 23, 1936, at 3,300 m. altitude.

117028. No. 141. From Carhuaz, May 25, 1936, at 2,300 m. altitude.

Nos. 117029 to 117032 were collected in the Departamento Lambayeque, May 29 and 30, 1936.

117029. No. 144. From Motupe, at 150 m. altitude.

117030. No. 145. Syrian tobacco from Hacienda Cayalti, Saña, at 50 m. altitude.

117031. No. 146. *Monte Libano*. From the Hacienda Cayalti, Saña, at 50 m. altitude.

117032. No. 147. From Chiclayo, June 1, 1936. Seed of the 1932 Tumbes harvest.

Nos. 117033 and 117034 were collected in Bellavista, Provincia Jaen, Departamento Cajamarca, June 2, 1936, at 400 m. altitude.

117033. No. 148. 117034. No. 149.

117035. No. 150. From the Hacienda Pátapo, Chiclayo, Departamento Lambayeque, June 3, 1936, at 25 m. altitude.

Nos. 117036 to 117038 were collected in Tumbes, Departamento Piura, June 8, 1936, at 50 m. altitude.

117036. No. 151. From the Hacienda La Noria.

117037. No. 152. *Amarilla*. From the Estanco del Tabaco.

117038. No. 153. From the Sarumilla River.

117039. No. 154. From Colegio Seminario, Huarás, Departamento Ancash, May 23, 1936, at 3,025 m. altitude.

117040. *NICOTIANA UNDULATA* Ruiz and Pav.

No. 134. From Huarás, Departamento Ancash, May 21, 1936, at 3,025 m. altitude.

117041. *CRINUM* sp. Amaryllidaceae.

From Florida. Seeds presented by Wyndham Hayward, Winter Park. Received July 13, 1936.

Originally from Burma. A low-growing plant; the white flowers have linear petals very attractive and dainty; may be used as a pot plant.

117042. *ARISTEA* sp. Iridaceae.

From Florida. Seeds presented by Hamilton P. Traub, American Amaryllis Society, Orlando. Received July 8, 1936.

Originally from near St. Lucia Bay, Zululand. A variety with beautiful small blue flowers produced in wide sprays; an excellent bedding plant.

117043 to 117045.

From the Union of Soviet Socialist Republics. Seeds presented by Dr. A. Sementchenko, Director, North Caucasian Institute of Special and Technical Cultures, Krasnodar. Received July 13, 1936.

117043 and 117044. *ARACHIS HYPOGAEA* L. Fabaceae. Peanut.

117043. No. 3952. 117044. No. 3951.

117043 to 117045—Continued.

117045. *LALLEMANTIA IBERICA* (Bieb.) Fisch. and Mey. Menthaceae.

No. 3958. A blue-flowered, herbaceous perennial, native to semi-arid regions in Asia Minor and Syria, whose seeds yield what is said to be a high-grade drying oil.

For previous introduction see 115193.

117046 to 117049.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received July 13, 1936.

117046. *ALBIZZIA SASSA* (Willd.) Macbride. Mimosaceae.

Presented by the Agricultural Research Station, Tanganyika Territory, Africa. A large handsome tree with attractive bipinnate foliage and numerous fasciated heads of white flowers with crimson-tipped stamens. Native to tropical Africa.

117047. *ALBIZZIA* sp. Mimosaceae.

Presented by the Agricultural Research Station, Tanganyika Territory, Africa.

117048. *CORDIA HOLSTII* Gurke. Boraginaceae.

Presented by A. Bircher, El Saff, Egypt. A catalpa-like tree with broad leaves and very delicate lacelike white flowers. The tree is used for planting along avenues.

For previous introduction see 51551.

117049. *MARKHAMIA HILDEBRANDTII* (Baker) Sprague. Bignoniaceae.

Presented by A. Bircher, El Saff, Egypt. A shrub or small tree with pinnate leaves 6 to 10 inches long and showy yellow flowers about 1½ inches long, in terminal and axillary panicles. Native to eastern tropical Africa.

117050 to 117081.

From Japan. Seeds presented by Dr. T. Nakai, Director, Botanic Garden of the University of Tokyo. Received July 1, 1936.

117050 to 117054. *BETULA* spp. Betulaceae. Birch.

117050. *BETULA ERMANI COMMUNIS* Koidz.

A variety differing from the type by its broad ovate leaves. Native to Japan.

117051. *BETULA ERMANI GANJUENSIS* (Koidz.) Nakai.

A variety differing from the type by its longer cones. Native to Japan.

117052. *BETULA SCHMIDTII* Regel.

A Japanese tree 65 feet high, with a trunk 3 to 7 feet in diameter, and black bark which falls off in thick, rather small plates. The finely-serrate leaves are short-stemmed, and the catkins are narrow, stiff, and erect.

For previous introduction see 76052.

117053. *BETULA MANDSHURICA JAPONICA* (Miq.) Rehd.

A hardy ornamental birch native to Japan, up to 75 feet high with broadly oval leaves.

For previous introduction see 82066.

117050 to 117081—Continued.

117054. *BETULA ULMIFOLIA* Sieb. and Zucc.

A large handsome tree up to 50 feet high, with yellowish-brown bark, ovate, irregularly doubly serrate, long-acuminate leaves 2 to 3½ inches long. Native to Japan and Manchuria.

For previous introduction see 104908.

117055. *HOMIOCELTIS ASPERA* (Thunb.) Blume. Ulmaceae.

An ornamental deciduous tree up to 60 feet high, with slender branches forming a dense head. The leaves are serrate ovate to ovate-oblong, broadly wedge-shaped at the base, long acuminate, and 3 to 3½ inches long. This tree is easily distinguished from *Celtis sinensis*, with which it is often confused, by the leaves with straight veins ending in the teeth. The small black drupes are inconspicuous. Native to Japan.

For previous introduction see 41391.

117056 to 117058. *HOSTA* spp. Liliaceae.

117056. *HOSTA GLAUCA* (Miq.) Stearn.

A perennial herb, native to Japan, with very glaucous cordate leaves 10 to 15 inches long. The slender pale-lilac, drooping flowers are borne on short stalks usually shorter than the leaves.

For previous introduction see 98325.

117057. *HOSTA JAPONICA TARDIFLORA* (Leichtlin) Bailey.

A form of the narrow-leaved plantainily with dark-green, long-pointed leaves on short, margined petioles and light-purple flowers appearing in autumn in branched racemes sometimes bearing as many as 50 flowers.

For previous introduction see 101781.

117058. *HOSTA VENTRICOSA* (Salisb.) Stearn.

A plantainily with broad cordate-ovate leaf blades about 10 inches long and lavender-purple flowers about 2 inches long in elongated racemes on scapes up to 3 feet tall. Native to China.

117059. *CELTIS SINENSIS* Pers. Ulmaceae.
Chinese hackberry.

A tree, native to China and Japan, which grows to a height of 60 feet. The broadly ovate leaves, 2 to 4 inches long, are cordate at the base and acuminate at the apex, with serrate-dentate margins. The solitary dull orange-red fruits are borne on stalks about as long as the petioles.

For previous introduction see 92047.

117060. *ILEX GENICULATA* Maxim. Aquifoliaceae.
Holly.

A slender-branched ornamental Japanese shrub, with deciduous ovate leaves which turn yellow in autumn, and bright red berries on slender pendulous stalks.

For previous introduction see 77165.

117061 to 117065. *IRIS* spp. Iridaceae.

117061 and 117062. *IRIS KAEMPFERI* Sieb. Japanese iris.

For previous introduction see 81669.

117050 to 117081—Continued.

117063. *IRIS LAEVIGATA* Fisch. Rabbit-ear iris.

For previous introduction see 114509.

117064. *IRIS SIBIRICA SANGUINEA* (Donn) Ker.

Received as *Iris nertchinskia*.

117065. *IRIS SETOSA* Pall. Arctic iris.

For previous introduction see 106559.

117066 to 117076. *RHODODENDRON* spp. Ericaceae.

117066. *RHODODENDRON ALBRECHTII* Maxim.

A shrub 3 to 5 feet high with obovate to oblanceolate membranous leaves which turn yellow in autumn. The rotate-campanulate, red-purple flowers, 2 inches across, in clusters of three to five, appear with the leaves. It is somewhat like *Rhododendron schlippenbachii* and is native to Japan.

For previous introduction see 114671.

117067. *RHODODENDRON DEGRONIANUM* Carr.

A native Japanese species, differing from *Rhododendron metternichii* in having a five-lobed corolla. *R. metternichii* is an evergreen shrub up to 4 feet high with oblong leaves 3 to 6 inches long, covered with rusty tomentum beneath. The campanulate, rose-colored, usually seven-lobed flowers are 1 to 2 inches across, spotted with purple and borne in clusters of 8 to 15.

For previous introduction see 98136.

117068. *RHODODENDRON FAURIAE* Franch.

A shrub 5 to 10 feet high, native to Japan, the branchlets clothed with thin loose white floccose tomentum. The oblong-elliptic to obovate leaves are 3 to 6 inches long, and the funnel-campanulate flowers, 1 inch long, borne in racemes of 12 to 15, are white or cream with a pink flush on the median lines of the petals and spotted inside with numerous green spots.

For previous introduction see 101228.

117069. *RHODODENDRON PENTAPHYLLUM* Maxim. Fiveleaf azalea.

A deciduous shrub up to 25 feet high, with, usually, five elliptic-lanceolate leaves at the ends of the branches. The rose-pink flowers, 1 to 2 inches across, are solitary or in twos, appearing before or with the leaves, which turn orange or crimson in the autumn. Native to Japan.

For previous introduction see 101961.

117070. *RHODODENDRON PULCHRUM* Sweet.

A handsome shrub with spreading hairy branches, elliptic leaves densely hairy beneath, and two or three terminal rosy-purple flowers 2 inches or more across. A hybrid between *Rhododendron ledifolium* and *R. indicum*.

For previous introduction see 78541.

117071. *RHODODENDRON QUINQUEFOLIUM* Biss. and Moore. Cork azalea.

A deciduous shrub or small tree up to 25 feet high, with broad-elliptic to

117050 to 117081—Continued.

ovate leaves about 2 inches long and white, green-spotted campanulate flowers about 2 inches across. Native to Japan.

For previous introduction see 114674.

117072. RHODODENDRON SEMIBARBATUM Maxim.

A deciduous shrub 2 to 10 feet high, with oval to ovate lanceolate leaves up to 2 inches long and solitary red-spotted white flowers about 1 inch across. It is related to *Rhododendron albiflorum* and is native to Japan.

117073. RHODODENDRON WEYRICHII Maxim.

A deciduous shrub up to 15 feet high, native to Japan and China. The broadly ovate to rhombic leaves, 1 to 3 inches long, are in clusters of 2 or 3 at the tips of the branchlets and turn vinous purple in autumn. The rotate-funneliform red flowers, 1 to 3 inches across, appear before or with the leaves.

For previous introduction see 102741.

117074. RHODODENDRON SUBLANCEOLATUM Miq.

An azalea, allied to *Rhododendron poukhanense*, with narrow elliptic to oblanceolate leaves up to 2 inches long and funneliform, rosy-red to crimson flowers about 3 inches across. Native to Japan.

117075. RHODODENDRON TSCHONOSKII Maxim.

A forest shrub, native to Japan, with flaky bark, elliptic leaves one-third of an inch long, and heads of one to four small white flowers.

For previous introduction see 114675.

117076. RHODODENDRON RETICULATUM D. Don.

A much-branched deciduous Japanese shrub up to 25 feet high, with yellow-brown branchlets and reticulate, broadly ovate leaves 2 to 3 inches long, in clusters of two to three. The slightly two-lipped rotate campanulate flowers are rosy purple to magenta and appear before the leaves. There are two forms, the ordinary form with 10 stamens, the so-called *Rhododendron rhombicum*, and a form with 5 stamens, the so-called *R. dilatatum*.

For previous introduction see 97401.

117077. ROMULEA PARLATORII Todaro. Iridaceae.

A crocuslike plant with narrow leaves and few small bright-lilac flowers. Allied to *Romulea ramiflora*. Native to the Mediterranean region.

117078. ROSA UCHIYAMANA Makino. Rosaceae. Rose.

A densely branched shrub about 6 feet high, with four to six leaflets and short few-flowered corymbose clusters of pink flowers about 2 inches across. It is related to *Rosa multiflora*. Native to Japan.

117079. STEWARTIA PSEUDO-CAMELLIA Maxim. Theaceae. Japanese stewartia.

A handsome tree, native to Japan, 50 feet high, with erect branches and red

117050 to 117081—Continued.

bark. The thickish obovate-lanceolate leaves are bright green, and the large white flowers are borne in summer.

For previous introduction see 102262.

117080. STYRAX SHIRAIANA Makino. Sty-racaceae.

A small tree with coarsely dentate, orbicular-ovate to rhombic-ovate leaves 2 to 3 inches long and showy white tubular flowers about two-thirds of an inch long in small crowded racemes. Native to Japan.

117081. ULMUS PARVIFOLIA Jacq. Ulma-ceae. Leatherleaf elm.

Received as *Ulmus sieboldii*, which is now referred to *U. parvifolia*.

117082 to 117084.

From Australia. Plants presented by George W. Althofer, "Nindethana," Dripstone, New South Wales. Received July 20, 1936.

117082. AMYGDALUS PERSICA L. Amygda-laceae. Peach.

Glen Ora.

117083 and 117084. MALUS SYLVESTRIS Mill. Malaceae. Apple.

117083. *Statesman.* **117084.** *Warrior.*

117085 to 117094. PRISTACIA VERA L. Anacardiaceae. Pistachio.

From the Union of Soviet Socialist Republics. Seeds presented by Miss Vera Gorbunova, Institute of Plant Industry, Leningrad. Received July 17, 1936.

Seeds collected in gardens of the Apshe-ron Peninsula, Caucasus region, by Miss Vera Gorbunova.

117085. No. 24. **117090.** No. 167.

117086. No. 132. **117091.** No. 171.

117087. No. 133. **117092.** No. 177.

117088. No. 146. **117093.** No. 186.

117089. No. 165. **117094.** No. 188.

117095 to 117297.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received July 2, 1936.

117095 to 117097. ABELMOSCHUS ESCULEN-TUS (L.) Moench. Malvaceae. Okra.

117095. No. 551. *Bamyas*. From the Eskisehir bazar, April 16, 1936.

117096. No. 120. *Bamyas*. From the Ankara bazar, April 15, 1936.

117097. No. 210. From Adana, April 20, 1936.

117098 to 117108. ALLIUM spp. Liliaceae.

117098 to 117103. ALLIUM CEPA L. Onion.

117098. No. 163. *Sogans*. From Afyon, April 17, 1936.

117099. No. 274. From Gaziantep, April 30, 1936. A red onion.

117100. No. 272. From Gaziantep, April 30, 1936. A white onion.

117095 to 117297—Continued.

117101. No. 293. From Kayseri, May 6, 1936.
117102. No. 96. From the Ankara bazar, April 15, 1936.
117103. No. 181. From Konya, April 18, 1936.
- 117104 and 117105. *ALLIUM PORRUM* L. **Leek.**
117104. No. 540. *Pirasa*. From the Eskisehir bazar, April 16, 1936.
117105. No. 111. *Pirasa*. From the Ankara bazar, April 15, 1936.
- Nos. 117106 to 117108 were collected near Gaziantep, May 2, 1936.
117106. *ALLIUM* sp.
No. 465-A.
117107. *ALLIUM* sp.
No. 480-A.
117108. *ALLIUM* sp.
No. 487-A.
- 117109 to 117112. *APIUM GRAVEOLENS* L. **Celery.**
Apiaceae.
- Nos. 117109 and 117110 were from the Ankara bazar, April 15, 1936.
117109. No. 87. 117110. No. 131.
117111. No. 239. From Tarsus, April 26, 1936.
117112. No. 267. From Gaziantep, April 20, 1936.
- 117113 to 117117. *BETA VULGARIS* L. **Common beet.**
Chenopodiaceae.
117113. No. 189. From Konya, April 18, 1936. Red beets.
117114. No. 247. From Tarsus, April 26, 1936.
117115. No. 281. From Gaziantep bazar, April 30, 1936.
- 117116 and 117117. From Kayseri bazar, May 6, 1936.
117116. No. 296. 117117. No. 299.
- 117118 to 117126. *BRASSICA* spp. **Brassicaceae.**
- 117118 and 117119. *BRASSICA OLERACEA CAPITATA* L. **Cabbage.**
117118. No. 255. From Gaziantep, April 30, 1936.
117119. No. 98. *Lahma*. From the Ankara bazar, May 15, 1936.
- 117120 to 117126. *BRASSICA RAPA* L. **Turnip.**
117120. No. 164. From Afyon, April 17, 1936. A red turnip.
- 117121 to 117123. From Konya, April 18, 1936.
117121. No. 166.
117122. No. 173.
117123. No. 182. A red turnip.
117124. No. 208. From the Adana bazar, April 20, 1936.

117095 to 117297—Continued.

117125. No. 292. From Kayseri, May 6, 1936.
117126. No. 148. From Afyon, April 17, 1936.
- 117127 to 117142. *CAPSICUM ANNUM* L. **Common redpepper.**
Solanaceae.
- 117127 and 117128. From the Ankara bazar, April 15, 1936.
117127. No. 97. A large pepper.
117128. No. 121. A long pepper.
- 117129 and 117130. From Afyon, April 17, 1936.
117129. No. 146. A long green pepper.
117130. No. 149. A large pepper.
- 117131 and 117132. From Konya, April 18, 1936.
117131. No. 178. A large pepper.
117132. No. 187. A long pepper.
- 117133 and 117134. From the Adana bazar, April 20, 1936.
117133. No. 211. A white pepper.
117134. No. 218. Mixed sample.
117135. No. 240. From the Tarsus bazar, April 26, 1936.
- 117136 and 117137. From Gaziantep, April 30, 1936.
117136. No. 275.
117137. No. 290. A large pepper.
- 117138 and 117139. From Kayseri, May 6, 1936.
117138. No. 294. A large red pepper.
117139. No. 310. A small pencil pepper.
117140. No. 392. From Afyon, April 17, 1936.
- 117141 and 117142. From the Eskisehir bazar, April 16, 1936.
117141. No. 526. *Tursuluk biber*.
117142. No. 536. *Dolmalik biber*.
117143. *CICER ARIETINUM* L. **Chickpea.**
Fabaceae.
- No. 550. From the Eskisehir bazar, April 16, 1936.
- 117144 to 117156. *CITRULLUS VULGARIS* Schrad. **Watermelon.**
Cucurbitaceae.
- 117144 to 117146. From the Ankara bazar, April 15, 1936.
117144. No. 102. A melon with black seeds.
117145. No. 105. A melon with white seeds.
117146. No. 135. *Kayuz*.
- 117147 to 117149. From Afyon, April 17, 1936.
117147. No. 143. A white watermelon.
117148. No. 151. A melon stored for winter use.
117149. No. 152. A melon with black seeds.

117095 to 117297—Continued.

- 117150 and 117151. From Konya, April 18, 1936.
 117150. No. 183.
 117151. No. 193. A melon with white seeds.
 117152. No. 2223. From the Adana bazar, April 20, 1936.
 117153. No. 246. From Tarsus, April 26, 1936.
 117154. No. 271. From Gaziantep, April 30, 1936.
 117155. No. 188. From Konya, April 18, 1936.
 117156. No. 527. *Karpus*. From the Eskisehir bazar, April 16, 1936.
 117157 to 117185. *CUCUMIS* spp. Cucurbitaceae.
 117157 to 117168. *CUCUMIS* MELO L. Muskmelon.
 117157. No. 547. From the Eskisehir bazar, May 16, 1936.
 117158. No. 124. From Ankara bazar, May 15, 1936.
 117159 and 117160. From Afyon, April 17, 1936.
 117159. No. 147. *Kirkagaç* or *kaoun*.
 117160. No. 154. *Siyah kabuklu hasan bey kaoun*.
 117161. No. 172. *Karun*. From Konya, April 18, 1936.
 117162. No. 209. A sweet melon from Adana, April 20, 1936.
 117163 and 117164. From Tarsus, April 26, 1936.
 117163. No. 243. 117164. No. 249.
 117165 to 117167. From Gaziantep, April 30, 1936.
 117165. No. 254. *Kilis*.
 117166. No. 259. *Aci kaoun*.
 117167. No. 279. *Bal kaoun*.
 117168. No. 517. From the Eskisehir bazar, April 16, 1936.
 117169 to 117185. *CUCUMIS* SATIVUS L. Cucumber.
 117169. No. 85. From the Ankara bazar, April 15, 1936.
 117170. No. 171. From Konya, April 18, 1936. A long cucumber.
 117171. No. 144. *Hiyar*. From Afyon, April 17, 1936.
 117172 and 117173. From Konya, April 18, 1936.
 117172. No. 177. A long cucumber.
 117173. No. 195. A short cucumber.
 117174 to 117176. From the Adana bazar, April 20, 1936.
 117174. No. 212.
 117175. No. 220. A long cucumber.
 117176. No. 224.
 247648—41—2

117095 to 117297—Continued.

- 117177 to 117179. From Tarsus, April 26, 1936.
 117177. No. 230.
 117178. No. 231. Seed imported from Arabia.
 117179. No. 233. Seed imported from Arabia.
 117180 to 117183. From Gaziantep, April 30, 1936.
 117180. No. 260. A cucumber used with a meat dressing.
 117181. No. 264. A green cucumber.
 117182. No. 268. A white cucumber.
 117183. No. 306. From the Kayseri bazar, May 6, 1936.
 117184. No. 535. From the Eskisehir bazar, May 16, 1936.
 117185. No. 280. From Gaziantep, April 30, 1936.
 117186 to 117199. *CUCURBITA* spp. Cucurbitaceae.
 117186 to 117189. *CUCURBITA* MAXIMA Duchesne. Squash.
 117186. No. 107. *Bal kaleak*. From the Ankara bazar, April 15, 1936.
 117187. No. 156. From Afyon, April 17, 1936.
 117188. No. 229. From Tarsus, April 26, 1936.
 117189. No. 539. *Bal kabagi*. From Eskisehir, April 16, 1936.
 117190. *CUCURBITA* MOSCHATA Duchesne. Cushaw.
 No. 261. From Gaziantep. A winter squash.
 117191 to 117199. *CUCURBITA* PEPO L. Pumpkin.
 117191. No. 125. *Dalmo kaleak*. From the Ankara bazar, April 15, 1936.
 117192. No. 142. From Afyon, April 17, 1936. A large pumpkin.
 117193. No. 219. From the Adana bazar, April 20, 1936.
 117194. No. 235. From the Tarsus bazar, April 26, 1936.
 117195 and 117196. From Gaziantep, April 30, 1936.
 117195. No. 270.
 117196. No. 284. *Kosesefer*.
 117197 and 117198. From Kayseri, May 6, 1936.
 117197. No. 309. 117198. No. 311.
 117199. No. 533. *Sakiz kabagi*. From the Eskisehir bazar, April 16, 1936.
 117200 to 117204. *DAUCUS* CAROTA L. Apiaceae. Carrot.
 117200. No. 115. From the Ankara bazar, April 15, 1936.

117095 to 117297—Continued.

117201. No. 300. From the Kayseri bazar, May 5, 1936.
117202. No. 180. From Konya, April 18, 1936.
117203. No. 207. From the Adana bazar, April 20, 1936.
117204. No. 538. *Havuç*. From the Eskisehir bazar, May 16, 1936.
- 117205 and 117206. *FRAGARIA* spp. **Rose-Strawberry.**
Obtained in a restaurant in Mersin, April 27, 1936.
117205. *FRAGARIA* sp.
No. 413. A strawberry with pink flesh.
117206. *FRAGARIA* sp.
No. 416. A long red strawberry.
117207. *IPOMOEA* sp. **Convolvulaceae.**
No. 134. From the Ankara bazar, April 15, 1936.
- 117208 to 117216. *LACTUCA SATIVA* L. **Garden lettuce.**
Cichoriaceae.
- 117208 to 117210. From the Ankara bazar, April 15, 1936.
117208. No. 90.
117209. No. 100.
117210. No. 112. A curly lettuce.
117211. No. 179. From Konya, April 18, 1936.
117212. No. 226. From the Adana bazar, April 20, 1936.
117213. No. 242. From Tarsus, April 26, 1936.
- 117214 and 117215. From the Eskisehir bazar, April 16, 1936.
117214. No. 521. *Salatalik marul*.
117215. No. 531. *Marul*.
117216. No. 308. From Kayseri, May 6, 1936.
- 117217 and 117218. *LAGENARIA LEUCANTHA* (Duchesne) Rusby. **Cucurbitaceae.**
Calabash gourd.
117217. No. 278. From Gaziantep, April 30, 1936. A dry-land squash.
117218. No. 518. *Bu kabagi*. From Eskisehir, April 16, 1936.
- 117219 to 117221. *LENS ESCULENTA* Moench. **Lentil.**
Fabaceae.
117219. No. 266. From Gaziantep, April 30, 1936.
117220. No. 253. From Gaziantep, April 30, 1936.
117221. No. 529. *Marcimek*. From Eskisehir, April 16, 1936.
- 117222 to 117228. *LYCOPERSICON ESCULENTUM* Mill. **Tomato.**
Solanaceae.
117222. No. 110. From the Ankara bazar, April 15, 1936. A red tomato.
117223. No. 128. From the Ankara bazar, April 15, 1936.
117224. No. 140. From Afyon, April 17, 1936.

117095 to 117297—Continued.

117225. No. 245. From Tarsus, April 26, 1936.
117226. No. 190. From Konya, April 18, 1936.
117227. No. 289. From Gaziantep, April 30, 1936.
117228. No. 295. From Kayseri, June 6, 1936.
117229. *PASTINACA SATIVA* L. **Apiaceae.**
Farsnip.
No. 157. *Maydarroz*. From Afyon, April 17, 1936.
- 117230 to 117258. *PHASEOLUS* spp. **Fabaceae.**
- 117230 and 117231. *PHASEOLUS COCCINEUS* L. **Scarlet runner bean.**
Tezyinatla kullanılan fasulya. From the Eskisehir bazar, April 16, 1936.
117230. No. 546. 117231. No. 546-A.
- 117232 to 117258. *PHASEOLUS VULGARIS* L. **Common bean.**
- 117232 to 117238. From the Eskisehir bazar, April 16, 1936.
117232. No. 522. *Yıldız fasulyasi.*
117233. No. 528. *Sarı bodur fasulya.*
117234. No. 537. *Aise kadidin fasulyasi.*
117235. No. 542. *Barbunya fasulya.*
117236. No. 543. *Serit fasulyasi.*
117237. No. 544. *Sarı kilçiksiz uzun fasulya.*
117238. No. 552. *Beyaz fasulya.*
- 117239 to 117244. From Gaziantep, April 30, 1936.
117239. No. 251. *Aysıkadin.*
117240. No. 251-A. *Aysıkadin.*
117241. No. 251-B. French beans.
117242. No. 251-C. White beans.
117243. No. 251-D. Bush beans.
117244. No. 251-E. *Waun.*
117245. No. 291. From Kayseri, May 6, 1936.
- 117246 to 117248. From the Ankara bazar, April 15, 1936.
117246. No. 94.
117247. No. 104.
117248. No. 106. White beans.
- 117249 to 117254. From Afyon, April 17, 1936.
117249. No. 138. *Fasulya.*
117250. No. 138-A.
117251. No. 138-B.
117252. No. 138-C.
117253. No. 138-D.
117254. No. 155. *Fasulya.* Dwarf beans.
117255. No. 185. From Konya, April 18, 1936.

117095 to 117297—Continued.

117256. No. 216. From the Adana bazar, April 20, 1936.
117257. No. 217. From the Adana bazar, April 20, 1936.
117258. No. 132. From the Ankara bazar, April 15, 1936.
- 117259 to 117261. *PISUM ELATIUS* Bieb. Fabaceae. Pea.
117259. No. 321. From Adana, April 20, 1936.
117260. No. 385. From the Cotton Experiment Station, Adana, April 28, 1936. A form with yellow flowers.
117261. No. 394. Collected along the road from Mersin to Selefke, April 26, 1936.
- 117262 to 117268. *PISUM SATIVUM* L. Fabaceae. Pea.
117262. No. 320. From Adana, April 20, 1936.
117263. No. 325. From a garden 5 km. north of Adana, April 21, 1936.
117264. No. 215. From the Adana bazar, April 20, 1936.
117265. No. 174. From Konya, April 18, 1936.
117266. No. 244. From Tarsus, April 26, 1936.
117267. No. 391. *Konya* pea. From the Cotton Experiment Station, Adana, April 28, 1936.
117268. No. 459. From the market at Kayseri, May 7, 1936.
117269. *APIUM GRAVEOLENS* L. Apiaceae. Celery.
- No. 222. From the Adana bazar, April 20, 1936.
- 117270 to 117278. *RAPHANUS SATIVUS* L. Brassicaceae. Radish.
- 117270 and 117271. From the Ankara bazar, April 15, 1936.
117270. No. 101. A black radish.
117271. No. 133. A red radish.
117272. No. 141. From Afyon, April 17, 1936.
117273. No. 241. From Tarsus, April 26, 1936.
- 117274 and 117275. From Gaziantep, April 30, 1936.
117274. No. 276. 117275. No. 285.
- 117276 and 117277. From the Eskisehir bazar, April 16, 1936.
117276. No. 524. *Kirmizi turp*.
117277. No. 532. *Turp*.
117278. No. 359. Collected south of Adana, April 21, 1936. A wild radish with yellow flowers.
117279. *SISYMBRIUM IRIO* L. Brassicaceae.
- No. 393. From Tarsus, April 25, 1936. Wild mustard, a biennial, native to the Mediterranean region.

117095 to 117297—Continued.

- 117280 to 117283. *SOLANUM MELONGENA* L. Solanaceae. Eggplant.
- 117280 and 117281. From the Ankara bazar, April 15, 1936.
117280. No. 114. *Pathican Kucuk*.
117281. No. 116. *Pathican Birjuk*. A large eggplant.
- 117282 and 117283. From Kayseri, May 6, 1936.
117282. No. 303. A short white and red eggplant.
117283. No. 307. A purple eggplant.
- 117284 to 117295. *SPINACIA OLERACEA* L. Chenopodiaceae. Common spinach.
- 117284 and 117285. From the Ankara bazar, April 15, 1936.
117284. No. 89. 117285. No. 127.
117286. No. 158. *Ispanak*. From Afyon, April 17, 1936.
117287. No. 186. From Konya, April 18, 1936.
117288. No. 227. From the Adana bazar, April 20, 1936.
- 117289 and 117290. From the Tarsus bazar, April 26, 1936.
117289. No. 234. 117290. No. 236.
- 117291 and 117292. From Gaziantep, April 30, 1936.
117291. No. 262. 117292. No. 283.
117293. No. 332. From Adana, April 19, 1936.
117294. No. 360. From Adana, April 28, 1936. Probably escaped from cultivation.
117295. No. 519. *Ispanak*. From the Eskisehir bazar, April 16, 1936.
117296. *VICIA FABA* L. Fabaceae. Broadbean.
- No. 541. *Adi bakla*. From the Eskisehir bazar, April 16, 1936.
117297. *ARRHENATHERUM ELATIUS* BULBOSUM (Willd.) Spenner. Grass.
- No. 467. From Gaziantep, May 2, 1936. A bulbous grass.
- For previous introduction see 22666.
- 117298 to 117318. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.
- From Venezuela and Peru. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received August 4, 1936.
- Unless otherwise stated, all of this material was collected in Venezuela.
- Nos. 117298 to 117301 were collected at El Hatillo, Miranda, at 1,000 m. altitude, July 14, 1936. Mixed samples.
117298. No. 155. *Cola de Gallo*; *pinar del Rio*; *pata pelona*.
117299. No. 156. *Cola de Gallo*; *pinar del Rio*.
117300. No. 157. *Cola de Gallo*; *pinar del Rio*.
117301. No. 158. *Cola de Gallo*; *pata pelona*.
- Nos. 117302 to 117305 were collected at Ocumare del Tuy, Miranda, at 1,000 m. altitude, July 15, 1936.

117298 to 117318—Continued.

117302. No. 159. Seed originally from Altagracia.
117303. No. 160.
117304. No. 161. *Cola de Gallo*.
117305. No. 162. *Enano*.
117306. No. 163. From Yare, Miranda, July 16, 1936.
117307. No. 164. *Pailón*. From Ocumare del Tuy, Miranda, July 16, 1936.
- Nos. 117308 to 117314 were collected at El Consejo, Aragua, July 17, 1936.
117308. No. 165. Mixed seeds.
117309. No. 166. Mixed seeds.
117310. No. 167. Mixed seeds.
117311. No. 168. *Aparecido*.
117312. No. 169. *Virginia*, imported seed.
117313. No. 170. *Aparecido*.
117314. No. 171. *Aparecido*.
117315. No. 172. From El Hatillo, Miranda.
117316. No. 173. From El Consejo, Aragua. Mixed seeds.
- Nos. 117317 and 117318 were collected at Eten, Peru.
117317. No. 174. *Cacerío de Songoy*.
117318. No. 175. *Cacerío de Cojal*.

117319 to 117438.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received July 10, 1936.

117319. *ALOPECURUS MYOSUROIDES* Huds. Poaceae. **Grass.**
No. 386. From the Cotton Experiment Station, Adana, April 28, 1936. A tufted perennial grass native to Europe.
117320. *ANTIRRHINUM MAJUS* L. Scrophulariaceae. **Common snapdragon.**
No. 534. *Aralan agzi*. From the Eskisehir bazar, April 16, 1936.
For previous introduction see 104949.
117321. *ARRHENATHERUM ERIANTHUM* Boiss. and Reut. Poaceae. **Grass.**
No. 454. From Gaziantep, May 2, 1936.
117322. *ASTRAGALUS* sp. Fabaceae.
No. 346. Collected 6 miles north of Adana, April 21, 1936.
117323. *ASTRAGALUS* sp. Fabaceae.
No. 356. From Adana, April 20, 1936.
- 117324 to 117326. *BETA VULGARIS* L. Chenopodiaceae. **Common beet.**
117324. No. 167. From Konya, April 18, 1936. Sugar beet.
117325. No. 145. From Afyon, April 17, 1936. Sugar beet.
117326. No. 103. From the Ankara bazar, April 15, 1936. Sugar beet.
117327. *CANAVALIA GLADIATA* (Jacq.) DC. Fabaceae. **Swordbean.**
No. 214. From the Adana bazar, April 20, 1936.

117319 to 117438—Continued.

117328. *CANNABIS SATIVA* L. Moraceae. **Hemp.**
No. 95. *Keudye*. From the Ankara bazar, April 15, 1936.
117329. *CICER ARIETINUM* L. Fabaceae. **Chickpea.**
No. 277. From Gaziantep, April 30, 1936.
117330. *CORONILLA* sp. Fabaceae.
No. 341. From Adana, April 22, 1936.
117331. *CORONILLA* sp. Fabaceae.
No. 406. Collected 35 km. west of Mersin, April 26, 1936.
117332. *CORONILLA* sp. Fabaceae.
No. 399. Collected 40 km. west of Mersin, April 26, 1936.
117333. *CORONILLA* sp. Fabaceae.
No. 350-A. From Adana, April 20, 1936. A mixed sample.
117334. *CROTALARIA* sp. Fabaceae.
No. 314. From Adana, April 20, 1936.
117335. *CROTALARIA* sp. Fabaceae.
No. 362. From Adana, April 20, 1936.
117336. *FOENICULUM VULGARE* Hill. Apiaceae. **Fennel.**
No. 113. From the Ankara bazar, April 15, 1936.
117337. *HIPPOCREPIS* sp. Fabaceae.
No. 343. From Adana, April 20, 1936.
117338. *HIPPOCREPIS* sp. Fabaceae.
No. 426. From 40 km. east of Gaziantep, May 3, 1936.
117339. *KOELERIA PHLEOIDES* (Vill.) Pers. Poaceae.
No. 403. From 25 km. west of Mersin, April 26, 1936.
For previous introduction see 107065.
- 117340 to 117349. *HORDEUM* spp. Poaceae.
117340. *HORDEUM BULBOSUM* L.
No. 323. Collected 6 miles north of Adana, April 21, 1936.
For previous introduction see 109503.
- 117341 to 117349. *HORDEUM VULGARE* L. **Barley.**
117341 and 117342. From Gaziantep, April 30, 1936.
117341. No. 286.
117342. No. 258. Black winter barley.
117343 to 117345. From Konya, April 18, 1936.
117343. No. 165. Black barley.
117344. No. 194. A mixed sample.
117345. No. 184. White barley.
117346. No. 305. From the Kayseri bazar, May 6, 1936.
117347 and 117348. From Konya, April 18, 1936.
No. 176. A mixed sample.
No. 192. Black barley.
117349. No. 160. From Afyon, April 17, 1936.

117319 to 117438—Continued.

117350. *LAGURUS OVATUS* L. Poaceae.
Rabbittail grass.
No. 407. Collected 40 km. west of Mersin, April 26, 1936.
117351. *VICIA ERVILIA* (L.) Willd. Fabaceae.
Vetch.
No. 257. *Kushne*. From Gaziantep, April 30, 1936. Used as stock feed.
117352. *LATHYRUS GORGONI* Parl. Fabaceae.
No. 287. From the Gaziantep bazar, April 30, 1936. Used as stock feed.
- 117353 and 117354. *LATHYRUS ANNUUS* Hoejer. Fabaceae.
Pea.
117353. No. 358. From Adana, April 21, 1936. A form with orange-brown flowers.
117354. No. 414. From Mersin, April 27, 1936.
117355. *LINUM USITATISSIMUM* L. Linaceae.
Flax.
No. 161. From Afyon, April 17, 1936. Flax grown for oil.
117356. *LOTUS* sp. Fabaceae.
No. 366. From Misis, April 22, 1936.
117357. *LOTUS* sp. Fabaceae.
No. 425. Collected 40 km. east of Gaziantep, May 3, 1936.
117358. *LOTUS* sp. Fabaceae.
No. 412. Collected 13 km. northwest of Mersin, April 27, 1936.
117359. *LUFFA CYLINDRICA* (L.) Roemer. Cucurbitaceae.
Suakwa towelgourd.
No. 225. From Adana, April 20, 1936.
- 117360 to 117375. *MEDICAGO* spp. Fabaceae.
Medick.
117360. *MEDICAGO ARABICA* (L.) All.
No. 329. From Adana, April 21, 1936.
117361. *MEDICAGO HISPIDA* Gaertn.
No. 315. Bur clover from Adana, April 20, 1936.
- 117362 to 117369. *MEDICAGO SATIVA* L. Alfalfa.
117362. No. 256. From Gaziantep, April 30, 1936.
- 117363 to 117366. From Kayseri, May 6, 1936.
117363. No. 297.
117364. No. 301.
117365. No. 304.
117366. No. 302.
- 117367 and 117368. From Konya, April 18, 1936.
117367. No. 192-A.
117368. No. 169.
117369. No. 137. *Yanca*. From Afyon, April 17, 1936.
117370. *MEDICAGO SCUTELLATA* (L.) Mill. Snail medick.
No. 384. From Adana, April 20, 1936.

For previous introduction see 90027.

117319 to 117438—Continued.

117371. *MEDICAGO* sp.
No. 445. From 45 km. east of Gaziantep, May 3, 1936.
117372. *MEDICAGO* sp.
No. 405. From 15 km. northwest of Mersin, April 27, 1936.
117373. *MEDICAGO* sp.
No. 351. From Adana, April 20, 1936.
117374. *MEDICAGO* sp.
No. 418. From 40 km. east of Gaziantep, May 3, 1936.
117375. *MEDICAGO* sp.
No. 338. From Adana, April 20, 1936.
117376. *MELICA MINUTA* L. Poaceae.
Grass.
No. 352. Collected 6 km. north of Adana, April 21, 1936. A tufted perennial grass up to about 1 foot high. Native to the Mediterranean region.
117377. *MELICA* sp. Poaceae.
Grass.
No. 357. From 60 km. northwest of Adana, April 23, 1936.
117378. *NICOTIANA TABACUM* L. Solanaceae.
Common tobacco.
No. 273. From Gaziantep, April 30, 1936. Chewing tobacco.
117379. *ONOBRYCHIS CAPUTGALLI* (L.) Lam. Fabaceae.
No. 319. From Adana, April 20, 1936.
- 117380 to 117384. *ORYZOPSIS COERULESCENS* (Desf.) Hack. Poaceae.
117380. No. 401. Collected 15 km. northwest of Mersin, April 27, 1936.
117381. No. 374. From a rocky slope near Geyhan, April 22, 1936.
117382. No. 330. Collected 60 km. northwest of Adana, April 23, 1936.
117383. No. 333. Collected 9 km. north of Adana, April 21, 1936.
117384. No. 348. Collected 7 km. north of Adana, April 21, 1936.
117385. *PETROSELINUM CRISPUM* (Mill.) Nym. Apiaceae.
Farsley.
No. 523. *Maydanoz*. From the Eskisehir bazar, April 16, 1936.
117386. *PHALARIS TUBEROSA* L. Poaceae.
No. 382. From the Cotton Experiment Station, Adana, April 28, 1936.
- 117387 to 117389. *PHASEOLUS* spp. Fabaceae.
Bean.
117387. *PHASEOLUS* sp.
No. 389. From the Cotton Experiment Station, Adana, April 28, 1936.
117388. *PHASEOLUS COCCINEUS* L. Scarlet runner bean.
No. 162. From Afyon, April 17, 1936.
117389. *PHASEOLUS* sp.
No. 390. *Elasis* bean (mung type). From the Cotton Experiment Station, Adana, April 28, 1936.

117319 to 117438—Continued.

117390. *PISUM SATIVUM* L. Fabaceae. **Pea.**
No. 350. From Adana, April 28, 1936.
117391. *POA BULBOSA* L. Poaceae. **Grass.**
No. 456. *Ali* or *dag*. From near Kayseri, May 6, 1936.
117392. *POA BULBOSA* L. Poaceae. **Grass.**
No. 337. Collected 10 km. northwest of Adana, April 23, 1936.
- 117393 to 117395. *RAPHANUS RAPHANISTRUM* L. Brassicaceae. **Radish.**
117393. No. 397. Collected 4 km. east of Selifke, April 26, 1936. A cultivated radish.
117394. No. 377. From Geyhan, April 22, 1936.
117395. No. 361. Collected 15 km. south of Adana, April 28, 1936. A yellow-flowered form.
117396. *SESAMUM ORIENTALE* L. Pedalia-Sesameae.
No. 282. From Gaziantep, April 30, 1936.
- 117397 to 117399. *SORGHUM VULGARE* Pers. Poaceae. **Sorghum.**
117397. No. 264-A. From Gaziantep, April 30, 1936. A white-seeded variety.
117398. No. 136. From the Ankara bazar, April 15, 1936.
117399. No. 232. From Tarsus, April 26, 1936.
- 117400 to 117417. *TRIFOLIUM* spp. Fabaceae. **Clover.**
117400. *TRIFOLIUM INCARNATUM* L. **Crimson clover.**
No. 441. Collected 20 km. south of Narle, May 4, 1936. A wild red clover.
- 117401 to 117403. *TRIFOLIUM PILULARE* Boiss.
Collected 20 km. south of Narle, May 4, 1936.
For previous introduction see 30100.
117401. No. 431.
117402. No. 437.
117403. No. 439.
- Nos. 117404 to 117407 were collected at Adana, April 20, 1936.
117404. *TRIFOLIUM* sp.
No. 334.
117405. *TRIFOLIUM* sp.
No. 335.
117406. *TRIFOLIUM* sp.
No. 336.
117407. *TRIFOLIUM* sp.
No. 355.
- Nos. 117408 to 117410 were collected between 25 km. and 40 km. west of Mersin, April 26, 1936.
117408. *TRIFOLIUM* sp.
No. 404.
117409. *TRIFOLIUM* sp.
No. 409.

117319 to 117438—Continued.

117410. *TRIFOLIUM* sp.
No. 411.
Nos. 117411 to 117413 were collected 20 km. south of Narle, May 4, 1936.
117411. *TRIFOLIUM* sp.
No. 432.
117412. *TRIFOLIUM* sp.
No. 436.
117413. *TRIFOLIUM* sp.
No. 442.
117414. *TRIFOLIUM* sp.
No. 462. From Adana, April 20, 1936.
117415. *TRIFOLIUM* sp.
No. 419. From Gaziantep, May 1, 1936.
117416. *TRIFOLIUM* sp.
No. 328. *Hop clover*. Collected 40 km. northwest of Adana, April 23, 1936.
117417. *TRIFOLIUM* sp.
No. 443. From 20 km. south of Narle, May 4, 1936.
117418. *TRIGONELLA FOENUM-GRÆCUM* L. Fabaceae. **Fenugreek.**
No. 298. *Chaman*. From Kayseri, May 6, 1936.
For previous introduction see 114457.
- 117419 to 117423. *TRITICUM AESTIVUM* L. Poaceae. **Common wheat.**
117419. No. 159. From Afyon, April 17, 1936.
A mixed sample.
Nos. 117420 to 117423 were collected at Gaziantep, April 30, 1936.
117420. No. 269. *White Harran* wheat.
117421. No. 263. Summer wheat.
117422. No. 288. *Red Urfa* wheat.
117423. No. 252. *Red Harran* wheat.
- 117424 to 117432. *VICIA* spp. Fabaceae. **Vetch.**
117424. *VICIA ANGUSTIFOLIA* Grufberg.
No. 318. From Adana, April 22, 1936.
- 117425 to 117430. *VICIA SATIVA* L. **Common vetch.**
117425. No. 420. Collected 40 km. east of Gaziantep, May 3, 1936.
Nos. 117426 to 117430 were collected at the Cotton Experiment Station, Adana, April 28, 1936.
117426. No. 383.
117427. No. 381. *Bulgarian* No. 3.
117428. No. 380. *Bulgarian* No. 5.
117429. No. 387. *Bulgarian* No. 1.
117430. No. 388. *Bulgarian* No. 4.
117431. *VICIA ERVILIA* (L.) Willd.
No. 168. Konya, April 18, 1936. Used as stock feed.

117319 to 117438—Continued.

117432. *VICIA PEREGRINA* L.

No. 340. From Adana, April 20, 1936.

117433. *LATHYRUS GORGONI* Parl. Fabaceae.

No. 353. From Adana, April 20, 1936.

117434 to 117438. *ZEA MAYS* L. Poaceae. Corn.117434. No. 520. *Cin misiri*. From the Eskisehir bazar, April 16, 1936.

117435. No. 109. From the Ankara bazar, April 15, 1936.

117436. No. 153. *Misir*. From Afyon, April 17, 1936.117437. No. 530. *Misir*. From the Eskisehir bazar, April 16, 1936.

117438. No. 250. From Gaziantep, April 30, 1936.

117439 to 117459.

From India and Afghanistan. Seeds and bulbs collected by Walter Koelz, Bureau of Plant Industry. Received July 18, 1936.

Unless otherwise stated, this material was received as seeds from India.

117439. *BAUHINIA VARIEGATA* L. Caesalpiniaceae.

No. 927. From Oot, Mandi State, May 30, 1936 at 3,500 feet altitude. A tree which becomes 30 feet high, with leaves 3 to 4 inches wide and five-petaled flowers 4 inches across in short racemes, the lowest petal of each strongly marked with crimson. The rose-colored veins are variegated with red and yellow. The pod is 1 to 2 feet long. Native to India.

117440. *BOMBAX* sp. Bombacaceae.

No. 917. *Shirmi*. From Baijnath, Kangra Valley, Punjab, May 22, 1936. A large handsome tree which becomes 75 feet high and 2½ feet in diameter, with branches at the top. The flowers are larger and more attractive than those of *Bombax malabaricum*, and the tree will tolerate a light frost.

117441. *CENTAUREA* sp. Asteraceae.

No. 906. *Gundung ghul*. From Kabul, Afghanistan, at 600 feet altitude, May 17, 1936. A plant with very large, bright-cobalt blue flower heads; said to be wild.

117442 to 117444. *CUCUMIS MELO* L. Cucurbitaceae. Muskmelon.

Collected at Lahore, Punjab, May 20, 1936.

117442. No. 909. *Lucknow kharbuza*. Said to have come from Lucknow. Fruits golden yellow, smooth, half compressed, 6 inches in diameter, no conspicuous ribs; strong musky odor, not unpleasant. Flesh 1 inch thick, white to salmon, sweet, edible to the papery skin. A splendid keeper.

117443. No. 910. Said to have come from Montgomery, Punjab. Fruit smooth, rounded, 6 by 4 inches, yellow with or without broad green rib lines; ribs more or less conspicuous; flesh 1½ inches thick, usually salmon, sweet and fragrant. A good keeper.

117439 to 117459—Continued.

117444. No. 911. Variety *Pathankat*.

Said to have come from Montgomery, Punjab. Fruit smooth, not ribbed, 7 by 4 inches, yellow, fragrant; flesh three-fourths of an inch thick; salmon, rather acid but agreeable.

117445. *ERYTHRINA* sp. Fabaceae.

No. 923. From Oot, Mandi State, May 30, 1936. A tree up to 40 feet with thorny branches. The attractive scarlet flowers appear in the spring before the leaves.

117446. *FICUS* sp. Moraceae.

No. 918. *Jangli anjir*. From Baijnath, Kangra Valley, Punjab, at 3,000 feet altitude, May 22, 1936. An ornamental tree with large soft leaves; fruit large, 2 inches long, rose purple, insipid, and borne on the trunk.

117447. *DUCHESNEA INDICA* (Andrews) Focke. Rosaceae.

No. 930. From Bandrole, Kulu, Punjab.

117448. *GREWIA ASIATICA* L. Tiliaceae.

No. 928. *Kopal*. From Mandi, Mandi State, May 30, 1936. Fruit deep rose-purple, elongate, three-fourths of an inch long, pleasantly acid. Sold in the market in large quantities.

117449. *HOLARRHENA ANTIDYSENTERICA* (Roth) Wall. Apocynaceae.

No. 921. From Baijnath, Kangra Valley, Punjab, at 3,000 feet altitude May 23, 1936. A small ornamental tree whose leaves are fed to cattle. Flowers white to cream-colored, very fragrant. Native throughout India.

For previous introduction see 61607.

117450. *MORUS ALBA* L. Moraceae. White mulberry.

No. 904. *Tut*. From Nimle, Afghanistan, May 17, 1936. Tree 2½ feet in diameter, attractive form and foliage; fruit nearly an inch long, white, some carpels tinted pink purple, exceedingly sweet.

117451. *NARCISSUS* sp. Amaryllidaceae.

No. 932. *Bhote phul*. From Kulu, Kulu, Punjab, June 1, 1936. Bulbs of a plant with attractive heads of yellow-cupped, fragrant white flowers, borne abundantly in November in the lower limits of the range, in March in the upper range; will not stand freezing.

117452. *OUGEINIA DALBERGIOIDES* Benth. Fabaceae.

No. 925. From Oot, Mandi State, May 30, 1936. A small tree, covered in early spring with large pink flowers. The leaves are pinnately three-foliolate, with rigid, leathery rounded leaflets. Native to northern India up to 4,000 feet altitude.

117453. *PAPAVER* sp. Papaveraceae.

No. 908. From Nimle, Afghanistan, May 17, 1936. A plant 5 feet high, with pink, very double flowers 4 inches in diameter; collected in a garden.

117439 to 117459—Continued.

117454. *PRUNUS ARMENIACA* L. Amygdalaceae.
Apricot.

No. 929. *Sharra*. From Kulu, Kulu, Punjab, at 4,000 feet altitude, May 31, 1936. Tree up to 30 feet high, vigorous and productive; fruit usually about 1 inch in diameter.

117455 to 117457. *RUBUS* spp. Rosaceae.

From Baijnath, Kangra Valley, Punjab, at 3,000 feet altitude. May 22 and 23, 1936.

117455. *RUBUS ELLIPTICUS* J. E. Smith.
Yellow Himalayan raspberry.

No. 913. A compact scandent shrub 10 feet high, which bears large numbers of golden-yellow fruits about three-eighths of an inch in diameter; these are small-seeded, subacid, not strongly fragrant, but very pleasant. The plant tolerates light frost and is found in the Himalayas from about 3,000 to 5,000 feet altitude.

For previous introduction see 115987.

117456. *RUBUS RUGOSUS* J. E. Smith.

No. 915. A scandent shrub sometimes 30 feet tall, with very small, blackish fruits rather insipid in flavor. Native to the temperate Himalayas from 3,000 to 7,000 feet altitude.

For previous introduction see 32450.

117457. *RUBUS* sp.

No. 920. Fruits very small, black-purple, of good flavor but not freely borne.

117458. *SAPINDUS EMARGINATA* Vahl. Sapindaceae.
Soapberry.

No. 931. *Ritha*. From Bandrole, Kulu, Punjab, May 31, 1936. A large attractive deciduous tree with small fruits which, when dried and pulverized, are used as a substitute for soap.

117459. *SOLANUM* sp. Solanaceae.

No. 916. From Baijnath, Kangra Valley, Punjab, at 3,000 feet altitude, May 22, 1936. A shrub 4 feet high with bright-orange fruits about one-fourth of an inch in diameter.

117460 and 117461.

From Cuba. Seeds presented by Robert M. Grey. Superintendent. Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received August 11, 1936.

117460. *CEPHALOCEREUS BROOKSIANUS* Britt. and Rose. Cactaceae.

A stout columnar cactus up to about 18 feet high, much branched at the base, with 8 or 9 obtuse ribs, yellow acicular spines, and small white night-blooming flowers. Native to Cuba.

117461. *HARRISIA FERNOWI* Britton. Cactaceae.

A night-flowering cactus with slender upright cylindrical stems to about 9 feet high and large white funnel-form flowers borne singly near the ends of the branches. Native to Cuba.

117462 to 117486.

From New Zealand. Plants presented by H. R. Wright, Avondale, Auckland. Received August 19, 1936.

117462 to 117464. *AMYGDALUS PERSICA* L. Amygdalaceae.
Peach.

117462. *Early Elberta Cling*. A clingstone, color and quality very fine and nearly as large as *J. H. Hale*.

117463. *Purple Gem*. A cross between *Amygdalus persica* var. *Rubra*, an ornamental red-foliaged peach, and a yellow-fleshed commercial variety. Although not large, this fruit has a particularly fine flavor and is a very juicy freestone with cream-colored flesh. The tree is an immense cropper and ornamental, with its red foliage and bark in the spring.

117464. *Quality Queen*. A superb canning or bottling peach; color and texture excellent.

117465 to 117473. *CITRUS* spp. Rutaceae.

117465. *CITRUS GRANDIS* (L.) Osbeck.
Grapefruit.

Merthyr. Originally from Australia.

117466. *CITRUS SINENSIS* (L.) Osbeck.
Orange.

Chaffey's Late. Originally from Australia.

117467. *CITRUS NOBILIS DELICIOSA* (Ten.) Swingle.
Mandarin orange.

Sovereign. Originally from Australia.

117468 and 117469. *CITRUS SINENSIS* (L.) Osbeck.
Orange.

117468. *Wright's Navel*. A new Zealand variety.

117469. *Harvard's Late*. A new Zealand variety.

117470. *CITRUS* sp.

Yuzu. Originally from Japan.

117471. *CITRUS* sp.

Daidai. Originally from Japan.

117472. *CITRUS* sp.

Yankan. Originally from Taiwan.

117473. *CITRUS* sp.

Mediterranean Blood. Originally from India.

117474. *CITRUS* sp.

Dehra Dun. Originally from India.

117475. *CITRUS* sp.

Excelsior. Originally from India.

117476. *CITRUS* sp.

Butwal. Originally from India.

117477. *CITRUS* sp.

Chinese Everbearing. Originally from India.

117478. *CITRUS* sp.

Colombia. Originally from India.

117479 to 117484. *MALUS SYLVESTRIS* Mill. Malaceae.
Apple.

117479. No. 1. Three-blooded *Delicious* seedling from New Zealand, first *Spy* × *Ribstone Pip*, then back on *Delicious*.

117462 to 117486—Continued.

117480. *Paradise* on aphid-proof stock from Australia.
 117481. *Glengyle Red* on *English Paradise* Malling No. 2.
 117482. *Glengyle Red* on aphid-proof stock, *Spy* × *Ribstone Pip*.
 117483. *Glengyle Red* on aphid-proof stock, *Inn's Seedling*.
 117484. *Irish* apple. Originally from Ireland.
 117485. *PRUNUS* sp. Amygdalaceae. *Allobokhara*. An Indian plum.
 117486. *PRUNUS* sp. Amygdalaceae. *Latest of All*. A New Zealand variety.

117487. *MANGIFERA INDICA* L. Anacardiaceae. **Mango.**

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received August 14, 1936.
 From Bombay.

117488. *AMYGDALUS PERSICA* L. Amygdalaceae. **Peach.**

From Canada. Budsticks presented by Howard Fisher, Dulverton Fruit Farm, Queenston, Ontario. Received August 22, 1936.

Howard Fisher. A sport of the *Valiant* peach.

117489 to 117506. *TRITICUM AESTIVUM* L. Poaceae. **Common wheat.**

From Australia. Seeds grown at the Glen Innes Experiment Farm and presented through Dr. H. Wenzholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received August 26, 1936.

A collection of wheats which have proved resistant to leaf rust at the Glen Innes Experiment Farm.

117489. *Argentine* C 8681.
 117490. *Argentine* C 9556.
 117491. *Argentine* K 33, C 9655.
 117492. *Argentine* K 40, C 9658.
 117493. *Ceres* × *Hope* × *Florence* C 10038.
 117494. *Greek* 10, C 7135.
 117495. *Greek* 18, C 7142.
 117496. *Minor* C 9142.
 117497. *Mocho* C 9693.
 117498. *Portugal* 65, C 7897.
 117499. *Portugal* 90, C 7921.
 117500. *San Martin* C 9657.
 117501. *Uruguay* C 10835.
 117502. *Uruguay* C 10836.
 117503. *Uruguay* 386, C 10838.
 117504. *Uruguay* 392, C 10837.
 117505. *Varonne* C 6146.
 117506. *Vencedor* C 9654.

117507 to 117510. *MANGIFERA INDICA* L. Anacardiaceae. **Mango.**

From Jamaica. Budsticks presented by Miss Zora Neale Hurston, Kingston. Received August 28, 1936.

117507. *Calcutta*.
 117508. *Governor*.
 117509. *Paw Paw*.

117510. *St. Julian*. A very sweet, highly flavored variety which begins to bear at an early age.

117511. *RUBUS PHOENICOLASIVS* Maxim. Rosaceae. **Wineberry.**

From China. Seeds presented by H. K. Fu, Director, Botanic Garden, the Sun Yat-Sen Tomb and Memorial Park Commission. Received August 22, 1936.

A tall subscented Japanese bramble with slender branches, trifoliolate leaves 5 to 7 inches long, and small pink flowers. The ovoid-oblong fruits are scarlet, three-fourths of an inch long, and edible but without much flavor.

For previous introduction see 92300.

117512 to 117529. *TRITICUM AESTIVUM* L. Poaceae. **Common wheat.**

From Australia. Seeds grown at the Glen Innes Experiment Farm and presented through Dr. H. Wenzholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received August 28, 1936.

117512. *Currawa* × *Hope* F_g, G 94-58-D1-G4-0.
 117513. *Federation* × *Hope* S. U. C. 9545.
 117514. *Federation* × *Webster* S. U. C. 9458.
 117515. *R. L. 723* × *H. Federation* F₆, G 4-1-1-0.
 117516. *Hope* × *Currawa* F₇, G 240-14-0-11.
 117517. *Hope* × *Currawa* × *Dundee* F₇, G 319-33-0-c2-e₂0, 428E₂35.
 117518. *Hope* × *Currawa* × *Dundee* F₆, G 319-22-2-0.
 117519. *Hope* × *Currawa* × *Dundee* F₆, G 319-23-2-0.
 117520. *Hope* × *Currawa* × *Dundee* F₇, G 319-0-c2-g0.
 117521. *Hope* × *Waratah* F_g, C5-G7-0-0-c1-E₂0.
 117522. *Hope* × *Waratah* F_g, C5-G3-0-1-D1-G0.
 117523. *Hope* × *Waratah* F₇, G 306-0-0-c3-G0.
 117524. *Hope* × *Yandilla King* F_g, C2-gi-2-1-c2-D0.
 117525. *Hope* × *Yandilla King* F_g, C2-gi-2-0-c2-e₂0.
 117526. *Kenya* C 9968.
 117527. *Kenya* C 10854.
 117528. *Kenya* C 10856.
 117529. *Kenya* C 10863.

117530 to 117532.

From Burma. Seeds from the Tavoy District, presented by C. E. Parkinson, Forest Botanist, Forest Research Institute, Dehra Dun. Received August 6, 1936.

117530. *BAMBUSA LONGISPICULATA* Gamble. Poaceae. **Bamboo.**

Tabindaing bamboo.

117531. *CEPHALOSTACHYUM BURMANICUM* Parker and Parkinson. Poaceae. **Bamboo.**

Kyatwa bamboo. A clump bamboo similar to *Cephalostachyum pergracile*, but larger. The deep rich green, erect culms are more than 40 feet tall. Native to Burma.

117532. *DENDROCHLOA DISTANS* Parkinson. Poaceae. **Bamboo.**

Tamyin. A bamboo forming loose clumps with stems reaching a maximum height of 60 feet, very long internodes, and linear-lanceolate leaves about 2 feet long. Native to Burma.

117533 to 117573.

From Brazil. Seeds collected at Rio de Janeiro by W. A. Archer, Bureau of Plant Industry. Received August 17, 1936.

117533 and 117534. *ABELMOSCHUS ESCULENTUS* (L.) Moench. Malvaceae. **Okra.**

Cultivated okra collected July 23, 1936.

117533. No. 3486. *Quiabo chifre veado*.

117534. No. 3470. *Quiabo*.

117535. *ALLIUM CEPA* L. Liliaceae. **Onion.**

No. 3478. *Cebolla Rio Grande*. An onion with golden yellow skin; the only onion sold in the market; July 23, 1936.

117536 and 117537. *ALLIUM SATIVUM* L. Liliaceae. **Garlic.**

Purchased in the market, July 25, 1936.

117536. No. 3497. 117537. No. 3498.

117538. *ALLIUM SCHOENOPRASUM* L. Liliaceae. **Chives.**

No. 3479. *Cebolinho*. From the market, July 23, 1936.

117539 to 117543. *ARACHIS HYPOGAEA* L. Fabaceae. **Peanut.**

Purchased from wholesale houses at Rio de Janeiro, Brazil, July 25 and 28, 1936.

117539. No. 3499. A cultivated peanut grown in the State of Minas Geraes.

117540. No. 3500. *Tatú*. From the State of São Paulo; considered to be the best quality.

117541. No. 3501. *Tatú*. Common grade of peanut, from Santa Catharina.

117542. No. 3502. *Paraguay* type. Considered better than *Tatú*. From Rio Grande do Sul.

117543. No. 3503. A cultivated peanut said to have come from the State of São Paulo.

117544. *ASPARAGUS OFFICINALIS* L. Convallariaceae. **Garden asparagus.**

No. 3492. *Esparagos*. From the general market at Rio de Janeiro, July 23, 1936.

117533 to 117573—Continued.

117545. *AVENA SATIVA* L. Poaceae. **Oats.**

No. 3477. *Aveia*. From a seed store in Rio de Janeiro, July 23, 1936, but said to have come originally from Peru.

117546 to 117549. *BRASSICA* spp. Brassicaceae.

From a seed store in Rio de Janeiro, July 23, 1936.

117546. *BRASSICA CAMPESTRIS* L. **Rutabaga.**

No. 3496. *Nabiça*. A cultivated turnip.

117547. *BRASSICA RAPA* L. **Turnip.**

No. 3495. *Couve nabica*. A cultivated turnip.

117548. *BRASSICA CAMPESTRIS* L. **Rutabaga.**

No. 3473. *Nabiça*. A cultivated turnip.

117549. *BRASSICA* sp.

No. 3493. *Couve manteiga*. Resembles kale.

117550. *FRAGARIA VESCA* L. Rosaceae. **Strawberry.**

No. 3465. A cultivated strawberry of good flavor; said to be grown in the Federal District. From a seed store in Rio de Janeiro, July 23, 1936.

117551 and 117552. *BRASSICA* spp. Brassicaceae.

Purchased in a seed store, July 23, 1936.

117551. *BRASSICA OLERACEA BOTRYTIS* L. **Broccoli.**

No. 3482. *Couve brocolo*. A cultivated broccoli.

117552. *BRASSICA PEKINENSIS* (Lour.) Rupr. **Petsai.**

No. 3483. *Couve da China Gak-Choy*. Cultivated Chinese cabbage.

117553. *CANAVALLIA ENSIFORMIS* (L.) DC. Fabaceae. **Jackbean.**

No. 3475. *Feijão mucuna branco*. Used as a forage plant. From a seed store in Rio de Janeiro, July 23, 1936; originally from Peru.

117554 and 117555. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. **Watermelon.**

From a seed store in Rio de Janeiro, July 23, 1936.

117554. No. 3480. *Melancia Santa Barbara*.

117555. No. 3474. *Melancia do Rio Grande*.

117556 and 117557. *CUCUMIS ANGURIA* L. Cucurbitaceae. **West Indian gherkin.**

Mexico. From a seed store in Rio de Janeiro, July 23, 1936. A small fruit like a round spiny cucumber, used boiled as a vegetable.

117556. No. 3469. 117557. No. 3494.

117558 and 117559. *CUCUMIS MELO* L. Cucurbitaceae. **Muskmelon.**

From a seed store in Rio de Janeiro, July 23, 1936.

117558. No. 3468. *Melão*.

117559. No. 3487. *Melão cavillon*.

117533 to 117573—Continued.

117560 and 117561. *CUCUMIS SATIVUS* L. Cucurbitaceae. **Cucumber.**

From the general market at Rio de Janeiro, July 23, 1936.

117560. No. 3485. *Pepino para conserva*. A form used for pickling.

117561. No. 3471. *Pepinos*.

117562. *CUCURBITA PEPO* L. Cucurbitaceae. **Pumpkin.**

No. 3488. *Abobora Brasileira Assucarada*. From the market at Rio de Janeiro, July 23, 1936.

117563 to 117567. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. **Tomato.**

From the general market, Rio de Janeiro, July 23, 1936.

117563. No. 3464. *São Paulo*. A common and popular red variety resembling a plum, irregularly globose and bilocular.

117564. No. 3472. *Tomate grande*.

117565. No. 3490. *Tomate Rio Grande de Fosso*.

117566. No. 3489. *Tomate garrafinha*.

117567. No. 3491. *Tomate Paulista Japonês*.

117568 and 117569. *NICOTIANA TABACUM* L. Solanaceae. **Tobacco.**

117568. No. 3484. *Fumo*. From the general market at Rio de Janeiro, July 23, 1936. Said to be mixed varieties of cultivated tobacco grown in the Federal District.

117569. No. 3506. *São Gonçalo*. Presented by the Brazilian Department of Agriculture in Rio de Janeiro, July 29, 1936. Seed originally from the State of Bahia where the best grades of tobacco are grown.

117570 and 117571. *PISUM SATIVUM* L. Fabaceae. **Pea.**

Ervilha. From the general market, Rio de Janeiro, July 23, 1936. Pods flat, twice as large as ordinary green peas; when half mature the pods are cooked as a vegetable.

117570. No. 3466. 117571. No. 3467.

117572. *SOLANUM MELONGENA* L. Solanaceae. **Eggplant.**

No. 3481. *Gilo*. From the general market Rio de Janeiro, July 23, 1936.

117573. *STIZOLOBIUM ATERRIMUM* Piper and Tracy. Fabaceae. **Velvetbean.**

No. 3476. *Mucuna preta*. From the general market, Rio de Janeiro, July 23, 1936. Cultivated as a forage plant; seed originally from Peru.

117574 to 117585.

From South America. Seeds and bulbs collected by Mrs. Ynez Mexia, Bureau of Plant Industry. Received August 27, 1936.

Unless otherwise stated, the material collected was seeds.

117574 to 117585—Continued.

117574. *AGROSTIS PALUSTRIS* Huds. Poaceae. **Creeping bent.**

No. 7940-A. From Tierra del Fuego, eastern coast of Argentina. Found in open places in *Nothofagus* woods.

117575. *ARAUCARIA* sp. Pinaceae.

No. 8024-A. From Arequipa, Peru, April 29, 1936, at 2,400 m. altitude. A tree about 18 m. high found on a rocky hill in the garden of the old observatory.

117576. *CYPELLA HERRERAE* Diels. Iridaceae.

No. 8025-A. *Michi-Michi*. *Supay-Ttica*. May 1936. From the fortress Sacsahuaman, Departamento Cuzco, Peru, between 3,000 and 3,600 m. altitude. A *Cypella* with stiff stems up to 1 m. high, long linear leaves, and violet-blue flowers. Native to Peru.

117577. *CYPELLA* sp. Iridaceae.

No. 8079-A. May 16, 1936. From Cerro Macchu-Picchu, Provincia Urubamba, Peru, at 3,200 m. altitude. A perennial herb 4 to 6 dm. high. Flowers not seen.

117578. *DESCHAMPSIA PULCHRA* Nees and Mey. Poaceae. **Grass.**

No. 7984-A. April 9, 1936. From the Last Hope Inlet, Terretoria Magallanes, Chile, on a marshy flat at the foot of Mount Dorothy. A tall tufted grass native to Chile.

117579. *ELYMUS ANTARCTICUS* Hook. f. Poaceae. **Grass.**

No. 7946-A. From Tierra del Fuego, eastern coast of Argentina. An erect grass about 6 dm. high with leathery leaves. Native to southern South America.

117580. *HYMENOCALLIS AMANCAES* (Ruiz and Pav.) Nichols. Amaryllidaceae. **Spiderlily.**

No. 8099. Bulbs collected June 21, 1936, in Provincia Pachacamac, Departamento Lima, Peru, in dry washes of arid coastal foot hills. Flowers large, canary yellow with green ribs.

117581. *MIKANIA* sp. Asteraceae.

No. 7857-A. February 15, 1936. Departamento Curico, Chile, on the road to Argentina, at 1,200 m. altitude. A scandent shrub with pink, slightly fragrant flowers.

117582. *MUCUNA* sp. Fabaceae.

No. 8037-A. *Aguacengua*. From Heda, on the Rio Sembra, La Selva Valley, Provincia La Convencion, Peru, at 1,500 m. altitude. A vine with huge clusters of gorgeous scarlet flowers.

117583. *URCEOLINA* sp. Amaryllidaceae.

No. 7871-A. February 13, 1936. Bulbs collected on the road from Curico to Argentina beyond Los Queñes, Departamento Curico, Chile, at 1,200 m. altitude. A common plant with crimson flowers fading to green at the base.

117584. (Undetermined.)

No. 7994-A. April 9, 1936. From the Last Hope Inlet, Terretoria Magallanes, Chile, at the base of Mount Dorothy. A perennial herb said to have pink, very fragrant flowers.

117574 to 117585—Continued.

117585. (Undetermined.)

No. 7945-A. March 18, 1936. From Viamonte, south of Cabo Penas, east coast of Tierra del Fuego, Argentina. A perennial herb with yellow flowers found in a meadow near a pond at 20 m. altitude.

117586. CITRUS sp. Rutaceae.

From Egypt. Budwood presented by Thomas W. Brown, Horticultural Section, Ministry of Agriculture, Giza. Received September 10, 1936.

Persian seedless lime.

117587. GOSSYPIUM BARBADENSE L. Malvaceae. Sea-island cotton.

From the British West Indies. Seeds presented by S. H. Evelyn, Cotton Research Officer, Cotton Experiment Station, Empire Cotton Growing Corporation, St. Vincent. Received August 24, 1936.

Strain A N. (Selfed seed.)

117588 and 117589.

From Argentina. Seeds presented by the Director of Agriculture, Buenos Aires, through Samuel J. Record, Yale University, New Haven Conn. Received September 5, 1936.

117588. ARAUCARIA RAUCANA (Molina) Koch. (*A. imbricata* Pav.). Pinaceae.

117589. MAYTENUS BOARIA Molina. Celastraceae. **Mayten.**

For previous introduction see 52591.

117590. LALLEMANTIA IBERICA (Bieb.) Fisch. and Mey. Menthaceae.

From the Union of Soviet Socialist Republics. Seeds presented by the Director, Botanic Garden, Kiev, Ukraine. Received September 9, 1936.

For previous introduction and description see 117045.

117591. ARTOCARPUS COMMUNIS Forst. Moraceae. Breadfruit.

From Puerto Rico. Cuttings presented by Atherton Lee, Puerto Rico Agricultural Experiment Station, Mayaguez. Received September 16, 1936.

A tree, native to the East Indies, 30 to 40 feet high, with viscid milky juice and leathery ovate leaves 3 feet long, entire at the base but divided above into three to nine lobes. The large fruits, 4 to 6 inches in diameter, are often seedless, but when seeds are present they are much the size, shape, and flavor of chestnuts.

For previous introduction see 105735.

117592 to 117595.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received September 4, 1936.

117592. FRITILLARIA sp. Liliaceae.

No. 903-A. From Birtüjek, July 22, 1936.

117593. GAGEA sp. Liliaceae.

No. 908-A. From 10 km. southeast of Gaziantep.

117592 to 117595—Continued.

117594. MUSCARI sp. Liliaceae.

No. 928-A. From 44 km. northeast of Malatya, July 17, 1936.

117595. (Undetermined.)

No. 905-A. From Birtüjek, July 22, 1936.

117596. VITIS VINIFERA L. Vitaceae. European grape.

From the Union of South Africa. Cuttings presented by J. C. van Jaansveld, Government Viticultural Station, Paarl, Cape Province, through Prof. A. I. Perold, Stellenbosch University, Cape Colony. Received September 19, 1936.

Bonnet De Retord.

117597. HIPPEASTRUM PSITTACINUM (Ker.) Herb. Amaryllidaceae.

From Brazil. Bulbs collected by W. A. Archer, Bureau of Plant Industry. Received September 19, 1936.

No. 3690. Collected August 14, 1936, at Rio de Janeiro. A hippeastrum with six to eight leaves over 1 foot long and a stout scape 2 to 3 feet long, bearing an umbel of two to four flowers with oblong undulate perianth segments 4 to 5 inches long, green with crimson stripes and edges. Native to Brazil.

117598. CURIMA COLOPHYLLA O. F. Cook. Phoenicaceae. Palm.

From Puerto Rico. Seeds presented by Atherton Lee, Superintendent, Puerto Rico Agricultural Experiment Station, Mayaguez. Received September 16, 1936.

A spiny palm, endemic to the limestone hills of northern Puerto Rico, a region of about 70 inches rainfall. The trunk grows 20 to 30 feet tall with a diameter of 5 or 6 inches. The pinnae of the leaves are broad and truncate as in *Tillia*, but are evenly set along the rachis instead of being clustered. The fruits, borne in large clusters, are round and red like cherries, with a red acid pulp surrounding the hard black seeds.

117599. COMBRETUM sp. Combretaceae.

From China. Seeds presented by A. N. Steward, Department of Botany, College of Agriculture and Forestry, University of Nanking, Nanking. Received April 30, 1934. Numbered in September 1936.

F. 59. Collected at Chang An, Yung Hsien.

117600 to 117653. TRITICUM AESTIVUM L. Poaceae. Common wheat.

From Australia. Seeds presented by Dr. H. Wenholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received August 28, 1936.

117600. *Currawa* × *Hope* 8th. Gen. No. 7099.

117601. *Federation* × *Hope* S. U. C 9545.

117602. *Federation* × *Webster* S. U. C 9458.

117603. *Ford.*

117604. *Geeralying* × *Kenya*, 2053.

117605. *Greek* 10, C 7135.

117600 to 117653—Continued.

117606. *Greek* 18, C 7142.
 117607. *Hope* × *Currawa*. 3085.
 117608. *Hope* × *Currawa* × *Dundee*.
 7506.
 117609. *Hope* × *Currawa* × *Dundee*.
 868.
 117610. *Hope* × *Currawa* × *Dundee*.
 428 E₂.
 117611. *Hope* × *Currawa* × *Dundee*.
 5517.
 117612. *Hope* × *Waratah*. 2716.
 117613. *Hope* × *Waratah*. 437.
 117614. *Hope* × *Waratah*. 5550.
 117615. *Hope* × *Yandilla King*. 508d.
 117616. *Hope* × *Yandilla King*. 433 E₂.
 117617. *Kenya* C 9906.
 117618. *Kenya* C 9967.
 117619. *Kenya* C 10854.
 117620. *Kenya* C 10857 (Has Marquis
 parentage.)
 117621. *Kenya* C 10859.
 117622. *Kenya* C 10860 (Has Marquis
 parentage.)
 117623. *Kenya* C 10863.
 117624. *Kenya* × *Baringa*, 6th. Gen. 182
 E₂, '35.
 117625. *Kenya* × *Baringa*, 6th. Gen. 492
 E₂, '35.
 117626. *Kenya* × *Florence* × *Dundee*,
 5th. Gen. No. 5130.
 117627. *Kenya* × *Florence* × *Dundee*,
 5th. Gen. No. 261, D '35.
 117628. *Kenya* × *Florence* × *Dundee*,
 5th. Gen. No. 5148. '35.
 117629. *Kenya* × *Florence* × *Dundee*,
 5th. Gen. No. 5266. '35.
 117630. *Kenya* × *Florence* × *Dundee*,
 5th. Gen. No. 4995. '35.
 117631. *Kenya* × *Florence* × *Dundee*,
 5th. Gen. No. 5144. '35.
 117632. *Kenya* × *Florence* × *Dundee*,
 5th. Gen. No. 5147. '35.
 117633. *Kenya* × *Florence* × *Dundee*,
 5th. Gen. G0-D8-Go.
 117634. *Kenya* × *Florence* × *Dundee*,
 5th. Gen. No. 5135. '35.
 117635. *Kenya* × *Florence* × *Dundee*,
 257 D.
 117636. *Kenya* × *Florence* × *Dundee*,
 264 D.
 117637. *Kenya* × *Florence* × *Dundee*,
 273 D.
 117638. *Kenya* × *Florence* × *Dundee*,
 118 E₂.
 117639. *Kenya* × *Florence* × *Dundee*,
 5150.
 117640. *Kenya* × *Gular*, 4902.
 117641. *Kenya* × *Gular*, 4913.
 117642. *Kenya* × *Gular*, 5939.
 117643. *Kenya* × *Gular*, 5963.
 117644. *Kenya* × *Merridan*, 2199.

117600 to 117653—Continued.

117645. *Kenya* × *Pusa*, 5297.
 117646. *Kenya* × *Pusa* 190, 2038.
 117647. *Kenya* × *Pusa* 4 × *Riverina* ×
Wandilla, 1989.
 117648. *Kenya* × *Pusa* 4 × *Riverina* ×
Wandilla, 1996.
 117649. *Kenya* × *Pusa* 4 × *Nabawa* ×
Ghurka, 2089.
 117650. *Kenya* × *Pusa* 4 × *Nabawa* ×
Ghurka, 2095.
 117651. *Marquillo* × *Bobin*, 2547.
 117652. *Pentad* × *Marquis R. L. 723* ×
Hard Federation, 3222A.
 117653. *Three Seas*. C 5870.
117654 to 117677. NICOTIANA TABACUM
L. Solanaceae. Common tobacco.
 From Brazil. Seeds collected by W. A.
 Archer, Bureau of Plant Industry. Re-
 ceived August 28, 1936.
 Nos. 117654 to 117674 were collected in
 the State of Minas Geraes in August 1936.
 117654. No. 3617. From Lagoa Santa.
 Volunteer tobacco 8 feet tall; leaves
 slightly viscid; corolla margins dark
 red.
 117655. No. 3618. From Venda Nova.
 Volunteer tobacco 8 feet tall, leaves
 slightly viscid; corolla greenish below,
 dirty white above.
 117656. No. 3619. From Venda Nova.
 Volunteer tobacco, 8 feet high, leaves
 slightly viscid; corolla greenish at first
 and then pink-lipped.
117657 to 117671. From Bello Horizonte,
August 3, and 8, 1936. Cultivated to-
bacco presented by Abelardo de Albu-
querque Sarmaneto, Chief of the Ser-
viço de Fomento do Fumo, Secretaria
de Agricultura do Estado de Minas
Geraes.
 117657. No. 3620. *Caethé*.
 117658. No. 3621. *Matta*.
 117659. No. 3622. *Pitanguy*.
 117660. No. 3623. *Descalvado*.
 117661. No. 3624. *Azul*.
 117662. No. 3625. *Oliveira*.
 117663. No. 3626. *Ouro*.
 117664. No. 3627. *Belém*. Originally
 from Bahia.
 117665. No. 3628. *Amaro*. Originally
 from Bahia.
 117666. No. 3629. *Cachoeira*. Orig-
 inally from Bahia.
 117667. No. 3630. *Cruz das Almas*.
 Originally from Bahia.
 117668. No. 3631. *São Gonçalo*. Orig-
 inally from Bahia.
 117669. No. 3632. *Goyano*. One of the
 more important and well-known types.
 117670. No. 3633. *Mariense*. One of
 the more important and well-known
 types.
 117671. No. 3634. *Paraense*. One of
 the more important and well-known
 types.

117654 to 117677—Continued.

117672. No. 3663. *Chinese*. Introduced from China; the cured leaf is bright yellow.

117673. No. 3664. *Amarelinho*. Leaves bright yellow when cured.

117674. No. 3665. *Samsun*. Turkish tobacco. The cured leaf is bright yellow.

117675. No. 3671. *Mata garrapata*. From Cajeo do Sol, Serra de Cipó, August 5, 1936. A plant 5 feet tall with narrow lanceolate leaves; corolla whitish below, cerise above; leaves slightly viscid, young fruits and stems very viscid. This volunteer tobacco is used for smoking by the country people.

117676. No. 3672. *Mata garrapata*. From Cajeo do Sol, Serra do Cipó, August 5, 1936. A volunteer tobacco 5 to 7 feet tall with leaves broader than No. 3671 [P. I. 117675]; young fruits and stems very viscid, leaves only slightly so; corolla green above, pink below.

117677. No. 3507. Volunteer tobacco from a dooryard in Quintino Bocaiuva, a station on the interurban railway between Rio de Janeiro and Belém, July 29, 1936.

117678. × PRUNUS DASYCARPA Ehrh. Amygdalaceae. Plum-apricot.

From the Union of Soviet Socialist Republics. Cuttings presented by N. I. Sharapov, Department of New Cultures and Introduction, Institute of Plant Industry, Leningrad. Received February 13, 1936. Numbered in September 1936.

For previous introduction see 113534.

117679 to 117682.

From the Union of Soviet Socialist Republics. Scions presented by N. I. Sharapov, Department of New Cultures, Institute of Plant Industry. Received March 15, 1932. Numbered in September 1936.

117679. AMYGDALUS PERSICA L. Amygdalaceae. Peach.
No. 01370.

117680 to 117682. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.

117680. *Shirassky*, 2748.

117681. *Badeni Erik*, 2556.

117682. *Black Alexander*.

117683. DIOSPYROS sp. Diospyraceae.

From Japan. Scions presented by Seizo Endo, Kagawa-ken, through Prof. F. T. Bioletti, University of California, Berkeley, Calif. Received March 15, 1932. Numbered in September 1936.

Takura.

117684 to 117702.

From Morocco. Plants presented by H. Bravard, Directeur, Station Experimentale de Marrakech. Received March 9, 1936. Numbered in September 1936.

117684 to 117690. AMYGDALUS spp. Amygdalaceae.

117684 and 117685. AMYGDALUS COMMUNIS L. Almond.

117684. *Dorée No. 6*.

117685. *Tardive Bordou*.

117684 to 117702—Continued.

117686 to 117689. AMYGDALUS PERSICA L. Peach.

117686. *Louis Grognet*.

117687. *Directeur*.

117688. *Grosse Elvighdhe*.

117689. *Antoine Giroux*.

117690. AMYGDALUS COMMUNIS L. Almond.

Lauzan.

117691 to 117696. MALUS SYLVESTRIS Mill. Malaceae. Apple.

117691. *Transparente de Zurich*.

117692. *Rambour d'Allemagne*.

117693. *Comte d'Orloff*.

117694. *Belle de Mai*.

117695. *Jaune hatif*.

117696. *St. Germain*.

117697 to 117702. PRUNUS ARMENIACA L. Apricot.

117697. *Precoce espéren*.

117698. *Muscat pêche*.

117699. *Pelissier*.

117700. *Rouge du Roussillon*.

117701. *Grosse St. Jean*.

117702. *Guiditta Langione*.

117703. TEPHROSIA VOGELII Hook. f. Fabaceae.

From Kenya Colony, Africa. Seeds purchased from the Mount Elgon Nurseries, Kama Kola, Mount Elgon, Kitale. Received September 26, 1936.

A variety with purple flowers.

117704 to 117711.

From Egypt. Seeds presented by Thomas W. Brown, Director, Horticultural Section, Ministry of Agriculture, Giza. Received September 28, 1936.

117704. ANTIGONON LEPTOPUS Hook. and Arn. Polygonaceae. *Rosa-de-montana*.

A handsome summer-blooming climber, native to Mexico, and adapted for greenhouse culture or for growing out-of-doors in the far south. The flowers, with rose-pink sepals, are in many-flowered racemes.

For previous introduction see 111207.

117705. CARICA PAPAYA L. Papayaceae. Papaya.

117706. OLEA EUROPAEA L. Oleaceae. Olive.

117707 to 117711. SOLANUM spp. Solanaceae.

117707. SOLANUM INDICUM L.

A much-branched, prickly undershrub up to 8 feet high, with sinuate or lobed, ovate leaves 3 to 6 inches long and lateral racemes of many blue flowers with corollas about 1 inch across. Native to tropical India.

117704 to 117711—Continued.

117708. SOLANUM MACRANTHUM Dunal.
Nightshade.

A very rapid-growing tree with large dark-green spiny leaves and a great profusion of large blue-violet flowers which change color from day to day, becoming a pale blue and later fading to white.

For previous introduction see 101294.

117709. SOLANUM PYRACANTHUM Jacq.
Nightshade.

A prickly evergreen bush about 3 feet high, with blue flowers in racemes sometimes 6 inches long. The bright-red, round fruits are edible. Probably native to tropical Africa.

For previous introduction see 115288.

117710. SOLANUM TORVUM Swartz.
Nightshade.

117711. SOLANUM WARSCEWICZII Lambert.
Nightshade.

An erect spiny shrubby nightshade about 6 feet high, with large soft green leaves and racemes of many large white flowers followed by shining pale-yellow fruits. Probably native to South America.

117712 to 117739. TRITICUM AESTIVUM L.
Poaceae. Common wheat.

From Australia. Seeds presented by Dr. H. Wenholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received September 2, 1936.

117712. Clarendon × Hope. No. 5557.

117713. Currawa × Dundee × Marquillo.
No. 5244.

117714. Currawa × Hope. No. 7099.

117715. Federation × Hope. C. 9545.

117716. Ford.

117717. Hope × Clarendon. No. 1629.

117718. Hope × Currawa. No. 3085.

117719. Hope × Currawa. No. 7099.

117720. Hope × Currawa. No. 3093.

117721. Hope × Currawa. No. 3081.

117722. Hope × Currawa × Dundee. No. 865.

117723. Hope × Currawa × Dundee. No. 868.

117724. Hope × Currawa × Dundee. No. 428 E₂.

117725. Hope × Currawa × Dundee. No. 7506.

117726. Hope × Currawa × Dundee. No. 5517.

117727. Hope × Waratah. No. 2716.

117728. Hope × Waratah. No. 5550.

117729. Hope × Waratah. No. 7113.

117730. Hope × Yandilla King. No. 433 E₂.

117731. Hope × Yandilla King. No. 508 D.

117732. Kenya × Florence × Dundee.
No. 273 D.

117712 to 117739—Continued.

117733. Kenya × Florence × Dundee.
No. 5135.

117734. Kenya × Florence × Dundee.
No. 5131.

117735. Kenya × Florence × Dundee.
No. 5144.

117736. Kenya × Florence × Dundee.
No. 5147.

117737. R. I. 595 × Florence. No. 3264b.

117738. R. I. 595 × Florence. No. 3263a.

117739. R. I. 723 × Hard Federation.
No. 3222a.

117740 and 117741.

From Jamaica, British West Indies. Seeds presented by Miss Zora Neale Hurston, Kingston. Received September 25, 1936.

117740. PANICUM MAXIMUM Jacq. Poaceae.
Guinea grass.

An erect perennial bunch grass 4 to 6 feet high, with open spreading panicles of spikelets. It is native to Africa and has been introduced into tropical America where it is cultivated for forage, furnishing pasture and green feed.

For previous introduction see 87464.

117741. SOLANUM sp. Solanaceae.

Susoomba.

117742 to 117749.

From China. Seeds presented by Y. K. Yang, Agronomy Department, National Szechwan University, Chengtu. Received September 24, 1936.

117742 to 117745. SOJA MAX (L.) Piper.
Fabaceae. Soybean.

117742. S. A. H. 111.

117743. S. A. H. 112.

117744. S. A. H. 95.

117745. S. A. H. 101.

117746 to 117749. TRITICUM AESTIVUM L.
Poaceae. Common wheat.

117746. S. A. B. 128.

117747. S. A. B. 77.

117748. S. A. B. 129.

117749. S. A. B. 63.

117750 to 117808. TRITICUM AESTIVUM L.
Poaceae. Common wheat.

From Australia. Seeds presented by Dr. H. Wenholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received September 3, 1936.

A collection of wheats which are of promise from a rust-resistance standpoint.

117750. Currawa × Hope. No. 7099.

117751. Federation × Hope. C 9545.

117752. Federation × Webster. C 9458.

117753. Ford.

117754. Greek 10. C 7135.

117755. Greek 18. C 7142.

117756. Geeralying × Kenya. No. 2053.

117757. Hope × Currawa. No. 3085.

117750 to 117808—Continued.

117758. *Hope* × *Currawa* × *Dundee*, 428 E₂.
 117759. *Hope* × *Currawa* × *Dundee*. 868.
 117790. *Hope* × *Currawa* × *Dundee*. No. 5517.
 117761. *Hope* × *Currawa* × *Dundee*. No. 7506.
 117762. *Hope* × *Waratah*. No. 2716.
 117763. *Hope* × *Waratah*. No. 5550.
 117764. *Hope* × *Waratah*. No. 437 E₂.
 117765. *Hope* × *Yandilla King*. No. 508 d.
 117766. *Hope* × *Yandilla King*. 433 E₂.
 117767. *Kenya* C 9724.
 117768. *Kenya* C 9906.
 117769. *Kenya* C 9967.
 117770. *Kenya* C 10854.
 117771. *Kenya* C 10857 (Marquis parentage).
 117772. *Kenya* C 10859.
 117773. *Kenya* C 10860 (Marquis parentage).
 117774. *Kenya* C 10863.
 117775. *Kenya* C 10866.
 117776. *Kenya* × *Baranga*. 182 E₂.
 117777. *Kenya* × *Baranga*. 494 E₂.
 117778. *Kenya* × *Florence* × *Dundee*.
 117779. *Kenya* × *Florence* × *Dundee*.
 117780. *Kenya* × *Florence* × *Dundee*. 257 D.
 117781. *Kenya* × *Florence* × *Dundee*. 261 D.
 117782. *Kenya* × *Florence* × *Dundee*. 264 D.
 117783. *Kenya* × *Florence* × *Dundee*. 273 D.
 117784. *Kenya* × *Florence* × *Dundee*. 4995.
 117785. *Kenya* × *Florence* × *Dundee*. 5144.
 117786. *Kenya* × *Florence* × *Dundee*. 5130.
 117787. *Kenya* × *Florence* × *Dundee*. 5135.
 117788. *Kenya* × *Florence* × *Dundee*. 5147.
 117789. *Kenya* × *Florence* × *Dundee*. 5148.
 117790. *Kenya* × *Florence* × *Dundee*. 5150.
 117791. *Kenya* × *Florence* × *Dundee*. 5266.
 117792. *Kenya* × *Gular*. 4902.
 117793. *Kenya* × *Gular*. 4913.
 117794. *Kenya* × *Gular*. 5935.
 117795. *Kenya* × *Gular*. 5963.
 117796. *Kenya* × *Merridan*. 2199.
 117797. *Kenya* × *Merridan*. 2203.
 117798. *Kenya* × *Pusa 190*. No. 2038.

117750 to 117808—Continued.

117799. *Kenya* × *Pusa 4*. 5297.
 117800. *Kenya* × *Pusa* × *Riverina* × *Wandilla*. 1996.
 117801. *Kenya* × *Pusa 4* × *Riverina* × *Wandilla*. 1989.
 117802. *Kenya* × *Pusa* × *Nabawa* × *Ghurka*. 2095.
 117803. *Kenya* × *Pusa 4* × *Nabawa* × *Ghurka*. 2089.
 117804. *Marquillo* × *Bobin*. 2547.
 117805. *Pentad* × *Marquis*. C 5975.
 117806. *Pentad* × *Marquis*, R. L. 723 × *H. Federation*.
 117807. *Portugal* C 7897.
 117808. *Three Seas* C 5870.
 117809 to 117837. *ALLIUM* spp. *Liliaceae*.
 From Turkey. Bulbs and seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received in July 1936.
 Unless otherwise stated, this material was received as bulbs.
 117809. *ALLIUM* sp.
 No. 465. From Gaziantep, May 2, 1936.
 117810. *ALLIUM* sp.
 (No field number.) From north of Adana.
 117811. *ALLIUM* sp.
 No. 478. From Aristef, 40 km. east of Gaziantep, May 3, 1936.
 117812. *ALLIUM* sp.
 No. 480. From 35 km. south of Gaziantep, May 1, 1936.
 117813. *ALLIUM* sp.
 No. 483. From 20 km. south of Gaziantep, May 1, 1936.
 117814. *ALLIUM* sp.
 No. 487. Bulbs and seeds from 25 km. northwest of Gaziantep, May 2, 1936.
 117815. *ALLIUM* sp.
 No. 506. From Ali Dag, near Talas, May 7, 1936.
 117816. *ALLIUM* sp.
 No. 508-A. From 10 km. west of Gaziantep.
 117817. *ALLIUM* sp.
 No. 553. From along the road to Urub, May 7, 1936.
 117818. *ALLIUM* sp.
 No. 828. From dry hills, 30 km. east of Milas, May 26, 1936.
 117819. *ALLIUM* sp.
 No. 840. From 10 km. south of Denizli, May 30, 1936.
 117820. *ALLIUM PULCHELLUM* Don.
 No. 844. From 15 km. east of Milas, May 26, 1936.
 117821. *ALLIUM* sp.
 No. 845. From 35 km. north of Antatya.

117809 to 117837—Continued.

117822. *ALLIUM* sp.
No. 845-A. Seeds from 35 km. north of Antatya.
117823. *ALLIUM PALLASHI* Murr.
No. 846. From 10 km. northwest of Denizli, May 31, 1936. A white onion with narrow linear leaves; cylindrical stems about a foot high and an umbel of many small flowers. It is related to *Allium macrostemon* and native to Turkistan.
117824. *ALLIUM* sp.
No. 848. From near Mulga, May 28, 1936.
117825. *ALLIUM* sp.
No. 847. From 5 km. northwest of Denizli, May 31, 1936. An allium with pink flowers.
117826. *ALLIUM* sp.
No. 855. From 35 km. west of Balikesir, June 16, 1936.
117827. *ALLIUM* sp.
No. 858. From 5 km. east of Kirpapak, June 11, 1936. A white-flowered onion whose bulbs have no odor.
117828. *ALLIUM* sp.
No. 859. From near Lire, May 25, 1936.
117829. *ALLIUM* sp.
No. 862. From rocky mountains 25 km. west of Aydin, May 25, 1936.
117830. *ALLIUM* sp.
No. 863. From Ephesus, May 24, 1936.
117831. *ALLIUM* sp.
No. 876. From near Aydin, May 26, 1936.
117832. *ALLIUM* sp.
No. 882. From 50 km. northwest of Izmir, June 10, 1936.
117833. *ALLIUM* sp.
No. 888. From 20 km. west of Yenisehir, June 19, 1936.
117834. *ALLIUM* sp.
No. 891. From a field 20 km. west of Bursa, June 18, 1936.
117835. *ALLIUM* sp.
No. 843. From mountainous country 15 km. south of Denizli, May 30, 1936.
117836. *ALLIUM* sp.
No. 830. From a valley near Isparta, June 2, 1936.
117837. *ALLIUM* sp.
No. 881. From a valley near Isparta, June 2, 1936.
- 117838 to 117967.
- From Brazil. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received August 28, 1936.
- A collection of cultivated vegetables from the seed stores at Bello Horizonte, State of Minas Geraes, August 1, 1936.
117838. *ABELMOSCHUS ESCULENTUS* (L.) Moench. Malvaceae. Okra.
No. 3577.

117838 to 117967—Continued.

- 117839 to 117843. *ALLIUM CEPA* L. Liliaceae. Onion.
117839. No. 3528. *Cebola branca*, a white onion.
117840. No. 3538. *Cebola amarella das Canarias*, a yellow onion.
117841. No. 3537. *Cebola rixa*, a red onion.
117842. No. 3564. *Cebola amarella*, a yellow onion.
117843. No. 3565. *Cebola branca Italiana*, an Italian white onion.
117844. *APIUM GRAVEOLENS* L. Apiaceae. Celery.
No. 3524. *Aipo branco*.
- 117845 to 117850. *ARACHIS* spp. Fabaceae. Peanut.
117845. *ARACHIS*.
No. 3660. *Amendoim paulista; gamelleira*. Said to be a cross between *Arachis nambyquarae* and *A. hypogaea* var. *Jumbo*.
- 117846 to 117850. *ARACHIS HYPOGAEA* L.
117846. No. 3582. Said to have been grown in the State of São Paulo.
117847. No. 3587. Grown in the State of Minas Geraes.
117848. No. 3588. Grown in the State of São Paulo.
117849. No. 3589. Grown in the State of Minas Geraes.
117850. No. 3590. Grown in the State of Minas Geraes.
117851. *ALLIUM PORRUM* L. Liliaceae. Leek.
No. 3554. *Alho porro*.
117852. *ASPARAGUS OFFICINALIS* L. Con-vallariaceae. Garden asparagus.
No. 3525. *Asparagos*.
- 117853 to 117871. *BRASSICA* spp. Brassica-ceae.
117853 and 117854. *BRASSICA CAMPESTRIS* L. Rutabaga.
117853. No. 3512. *Nabo Japonês*. A cultivated Japanese turnip.
117854. No. 3546. *Nabiça*.
- 117855 to 117858. *BRASSICA JUNCEA* (L.) Coss. Chinese mustard.
117855. No. 3516. *Mostarda lisa*, a smooth mustard.
117856. No. 3567. *Mostarda crespa da China*. A curly Chinese mustard.
117857. No. 3563. *Mostardão Beliche*.
117858. No. 3540. *Mostarda crespa*, a curly mustard.
- 117859 to 117862. *BRASSICA OLERACEA* BOTRYTIS L.
117859. No. 3509. *Couve broculos*. Broccoli.
117860. No. 3549. *Couve flor gigante*. Cauliflower.
117861. No. 3533. *Couve flor de Al-geria*. Cauliflower.
117862. No. 3579. *Couve flor Philomena*. Cauliflower.

117838 to 117967—Continued.

- 117863 to 117869. BRASSICA OLERACEA
CAPITATA L. Cabbage.
117863. No. 3556. *Repolho rôxo*, a red cabbage.
117864. No. 3514. *Repolho crespo*, a curly cabbage.
117865. No. 3578. *Repolho novidade*.
117866. No. 3578-A. *Repolho alemão branco*, white German cabbage.
117867. No. 3581. *Repolho de S. Diniz*.
117868. No. 3550. *Couve todo anno*.
117869. No. 3534. *Couve tronchuda*.
117870. BRASSICA OLERACEA GONGYLODES L. Kohlrabi.
- No. 3532. *Couve rabano rôxa*.
117871. BRASSICA RAPA L. Turnip.
- No. 3513. *Nabo rôxo*, a red turnip.
117872. CAPSICUM ANNUM L. Solanaceae. Common redpepper.
- No. 3511. *Pimentão gigante*.
- 117873 to 117876. CICHORIUM ENDIVIA L. Cichoriaceae. Endive.
117873. No. 3568. *Almeirão branco*, a white endive.
117874. No. 3535. *Almeirão branco*, a white endive.
117875. No. 3529. *Almeirão Italiana*, Italian endive.
117876. No. 3574. *Chicorea crespa*.
- 117877 and 117878. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.
117877. No. 3526. *Melancia*.
117878. No. 3571. *Melancia*.
- 117879 to 117883. CUCUMIS spp. Cucurbitaceae.
117879. CUCUMIS MELO L. Muskmelon.
- No. 3520. *Melão casca de carvalho*.
- 117880 to 117883. CUCUMIS SATIVUS L. Cucumber.
117880. No. 3547. *Pepino para conserva*. A cucumber used for pickling.
117881. No. 3555. *Pepino verde comprido*. A long green cucumber.
117882. No. 3569. *Pepino Italiano verde comprido*. A long green Italian cucumber.
117883. No. 3515. *Pepino*.
117884. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. Cushaw.
- No. 3531. *Abobora menina*.
- 117885 to 117889. CUCURBITA PEPO L. Cucurbitaceae. Pumpkin.
117885. No. 3517. *Abobora Italiana*, Italian pumpkin.
117886. No. 3518. *Abobora amarella*, A yellow pumpkin.
117887. No. 3551. *Abobora balcia*, Giant pumpkin.

117838 to 117967—Continued.

117888. No. 3572. *Abobora não lastra*.
117889. No. 3573. *Courge d'Italie ou Coucourzelle*.
- 117890 and 117891. DAUCUS CAROTA L. Apiaceae. Carrot.
117890. No. 3530. *Cenoura meia longa*. A medium long carrot.
117891. No. 3575. *Cenoura vermelha comprico*. A medium long carrot.
- 117892 to 117895. LACTUCA SATIVA L. Cichoriaceae. Garden lettuce.
117892. No. 3536. *Alface repolhuda*, a head lettuce.
117893. No. 3527. *Alface sem rival*.
117894. No. 3602. *Alface romana*.
117895. No. 3576. *Alface São Francisco*.
117896. LEPIDIUM SATIVUM L. Brassicaceae. Garden cress.
- No. 3523. *Agrião da terra*. Cultivated as a garnish.
- 117897 to 117900. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.
117897. No. 3543. *Tomate péra*.
117898. No. 3544. *Tomate grande liso*.
117899. No. 3552. *Tomate Rei Umberto*.
117900. No. 3580. *Tomate liso vermelho*. A smooth crimson tomato.
- 117901 to 117906. PHASEOLUS spp. Fabaceae. Bean.
117901. PHASEOLUS LUNATUS L. Lima bean.
- No. 3646. Cultivated for forage.
- 117902 to 117905. PHASEOLUS VULGARIS L. Common bean.
117902. No. 3548. *Feijão de vagem*. A green bean.
117903. No. 3539. *Feijão anão*. A dwarf bean.
117904. No. 3598. *Feijão carioca*. Grown locally.
117905. No. 3599. *Feijão enoifre*. Grown locally.
117906. PHASEOLUS sp.
- No. 3662. *Oró*. Soil-binding drought-resistant plant, cultivated for forage.
- 117907 to 117910. PISUM SATIVUM L. Fabaceae. Pea.
117907. No. 3600. *Ervilha*. Grown locally.
117908. No. 3558. *Ervilha torta de flor rôxa*. A pea with red flowers.
117909. No. 3562. *Ervilha torta*. A red-flowered pea.
117910. No. 3541. *Ervilha anã*. A dwarf pea.
117911. NASTURTIUM OFFICINALE R. Br. Brassicaceae. Watercress.
- No. 3522. *Agrião d'agua*.

117838 to 117967—Continued.

- 117912 to 117914. *RAPHANUS SATIVUS* L. Brassicaceae. Radish.
117912. No. 3553. *Rabinete longo*. A long radish.
117913. No. 3566. *Rabinete Isaías*.
117914. No. 3510. *Rabinete comprido*. A long radish.
117915. *RUMEX ACETOSA* L. Polygonaceae. No. 3537. *Azedinha*. Cultivated as greens in Brazil. For previous introduction see 55605.
- 117916 to 117918. *SOLANUM MELONGENA* L. Solanaceae. Eggplant.
117916. No. 3519. *Giló branco*. A white eggplant.
117917. No. 3542. *Beringela róxa redonda*. A round red eggplant.
117918. No. 3570. *Beringela róxa comprida*. A long red eggplant.
- 117919 and 117920. *SPINACIA OLERACEA* L. Chenopodiaceae. Common spinach.
117919. No. 3521. *Espinafre*.
117920. No. 3545. *Espinafre perpetual*. A perennial spinach.
117921. *VICIA FABA* L. Fabaceae. Broadbean. No. 3583. *Fabas*. Grown at Capella Nova.
117922. *VICIA ANGUSTIFOLIA* Grufberg. Fabaceae. Vetch. No. 3658. Grown for forage.
117923. *VIGNA SINENSIS* (Torner) Savi. Fabaceae. Cowpea. No. 3597. *Feijão miúdo*. Grown locally.
117924. *ACROCOMIA SCLEROCARPA* Mart. Phoenicaceae. Macauba palm. No. 3669. *Coco macahuba*. A beautiful palm 40 feet high, with a very spiny trunk, particularly when young. The finely pinnate leaves are graceful and drooping, and the large bunches of fruit, green with brown scurfy hairs at the basal portion, are valued for the oil they produce. For previous introduction see 98483.
117925. *ARAUCARIA BRASILIANA* A. Rich. Pinaceae. Brazilian araucaria. No. 3585. *Pinhão de Barbacena*. Native to Minas Geraes. The edible nuts are sold in the markets. For previous introduction see 43383.
117926. *CENTROSEMA PUBESCENS* Benth. Fabaceae. No. 3640. For previous introduction see 110898.
- 117927 and 117928. *PACHYRHIZUS EROSUS* (L.) Urban. Fabaceae. No. 3638. A red-seeded variety native to Brazil.
117928. No. 3639. *Jacatupé*, a black-seeded variety.

117838 to 117967—Continued.

117929. *CALOPOGONIUM BRACHYCARPUM* Benth. Fabaceae. No. 3641. *Oró falso*. Presented by the State Experiment Station "Fazenda de Gamelleira," Bello Horizonte, State of Minas Geraes, August 8, 1936. A small often prostrate twining vine with trifoliate leaves and small violet or purple flowers. Native to tropical America.
117930. *CLITORIA TERNATEA* L. Fabaceae. No. 3661. A cultivated forage plant. For previous introduction see 110178.
117931. *TEPHROSIA ADUNCA* Benth. Fabaceae. No. 3635. A prostrate perennial with compound leaves; cultivated as a cover crop. For previous introduction see 64033.
117932. *TEPHROSIA PURPUREA* (L.) Pers. Fabaceae. No. 3613. From Lagoa Santa, August 3, 1936. A prostrate perennial with compound leaves; cultivated as a cover crop. For previous introduction see 103629.
- 117933 to 117938. *CROTALARIA* spp. Fabaceae.
117933. *CROTALARIA ANAGYROIDES* H. B. K. No. 3655. Cultivated as forage.
117934. *CROTALARIA JUNCEA* L. Sunn-hemp. No. 3645. Cultivated as forage and for its fiber. For previous introduction see 98841.
117935. *CROTALARIA RETUSA* L. No. 3653. Cultivated as forage and for its fiber. For previous introduction see 107463.
117936. *CROTALARIA STRIATA* DC. No. 3652. Cultivated for forage.
117937. *CROTALARIA USARAMOENSIS* Baker f. No. 3656. Cultivated for forage.
117938. *CROTALARIA* sp. No. 3637. Forage crop, native to Brazil.
117939. *DAHLIA*. Asteraceae. No. 3561. A hybrid dahlia of unknown parentage, with single flower heads of various color combinations.
- 117940 and 117941. *DIANTHUS CARYOPHYLLUS* L. Silenaceae. Carnation. No. 3559. *Cravos extra*.
117941. No. 3560. *Cravos dobrados variados*. (Mixed colors.)
117942. *ERIOSEMA BENTHAMIANUM* Mart. Fabaceae. No. 3610. A shrubby legume 2 to 3 feet high, native to Brazil.
117943. *EUCHLAENA MEXICANA* Schrad. Poaceae. Teosinte. No. 3644. Cultivated as forage.

117838 to 117967—Continued.

- 117944 and 117945. *HELIANTHUS ANNUUS* L. Asteraceae. Common sunflower.
117944. No. 3651. *Girasol branco*; a selected strain cultivated for the oil of the seed.
117945. No. 3647. *Girasol preto*. Cultivated for the oil of the seed, but considered not so good as No. 3651. [P. I. 117944.]
117946. *LUPINUS MUTABILIS* Sweet. Fabaceae. South American lupine. No. 3584. *Tremoço*. From Argentina.
117947. *MAURITIA FLEXUOSA* L. f. Phoenicaceae. Palm. No. 3670. *Coco Burity*. A palm, native to tropical Brazil, which grows to a height of 150 feet with a trunk 30 inches in diameter. The leaves are from 9 to 16 feet long. This is one of the so-called ivory-nut palms. The fruit is spherical, about the size of a small apple, and covered with smooth reticulated scales. The spadix, loaded with fruit, is of immense weight, often more than two men can carry. For previous introduction see 98522.
117948. *DESMODIUM BARBATUM* (L.) Benth. Fabaceae. No. 3643. *Barbadinho*. A tropical American legume up to 2 feet high, used as forage.
117949. *ORBIGNYA MACROCARPA* Barb.-Rodr. Phoenicaceae. Palm. No. 3668. *Côco babassú*. One of the large forest palms of Brazil, with oil-bearing seeds which are collected and exported in large quantities to Europe and the United States. The oil is used in the same manner as coconut oil.
- 117950 *ORBIGNYA* sp. Phoenicaceae. Palm. No. 3667. *Côco tudeyá*.
- 117951 and 117952. *ORYZA SATIVA* L. Poaceae. Rice. Grown in the State of Minas Geraes.
117951. No. 3592. *Triangulo*.
117952. No. 3591. *Minera*.
- 117953 and 117954. *PANICUM MAXIMUM* Jacq. Poaceae. Guinea grass. Cultivated as forage.
117953. No. 3649. *Capim murumbú* or *capim colônião*. Native to the northern part of the State of Minas Geraes.
117954. No. 3642. *Capim sempre verde*.
117955. *PASPALUM MANDIOCANUM* Trin. Poaceae. No. 3657. *Capim gengibre*. Cultivated as forage. A slender-stemmed grass about 2 feet high. Native to Brazil.
117956. *PENNISETUM SETOSUM* (Swartz) L. Rich. Poaceae. Grass. No. 3648. *Capim elefante brasileiro*. Cultivated as forage.
117957. *PHASEOLUS CALCARATUS* Roxb. Fabaceae. Rice bean. No. 3659. *Feijão chinéz*.

117838 to 117967—Continued.

117958. *SESBANIA* sp. Fabaceae. No. 3650. *Cabralia*. Cultivated as forage.
- 117959 and 117960. *TRIMEZA JUNCIFOLIA* (Klatt) Benth. and Hook. Iridaceae. From Serra de Cipó, State of Minas Geraes. An iris-like plant with one to three rigid cylindrical leaves 1 to 2 feet high and a shorter leafless stem with a single cluster of bright-yellow fugitive flowers about an inch long. Native to Brazil, where it grows in sandy rocky soil.
117959. No. 3676.
117960. No. 3675. (Bulbs.)
- 117961 to 117967. *ZEA MAYS* L. Poaceae. Corn.
117961. No. 3593. *Milho alho*. Locally grown.
117962. No. 3594. *Milho pipoco*. Cultivated popcorn.
117963. No. 3595. *Milho pipoco*. Cultivated popcorn.
117964. No. 3596. *Milho alho*. Locally grown.
117965. No. 3601. *Milho pipoco*. Grown at Serra Mines.
117966. No. 3654. *Milho indigeno* (*Milho alho*).
117967. No. 3666. *Milho crystal*. This strain bears four full-sized ears on each stalk.
- 117968 to 117987. From Turkey. Seeds and bulbs collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received September 4, 1936. Nos. 117968 to 117978 were received as bulbs.
- 117968 to 117986. *ALLIUM* spp. Liliaceae.
117968. *ALLIUM* sp. No. 911. From 25 km. southeast of the Elaziz Mountains, July 13, 1936.
117969. *ALLIUM* sp. No. 912. From 25 km. southeast of the Elaziz Mountains, July 13, 1936.
117970. *ALLIUM* sp. No. 913. From 30 km. southeast of the Elaziz Mountains, July 13, 1936.
117971. *ALLIUM* sp. No. 914. From 52 km. southwest of Elaziz, July 14, 1936.
117972. *ALLIUM* sp. No. 916. From 50 km. north of Malatya, July 17, 1936.
117973. *ALLIUM* sp. No. 921. From Buruyek, July 22, 1936.
117974. *ALLIUM* sp. No. 922. From 45 km. north of Nigde, July 26, 1936.
117975. *ALLIUM* sp. No. 923-A. From 10 km. northwest of Buruyek, July 23, 1936.

117968 to 117987—Continued.

117976. *ALLIUM* sp.

No. 924-B. From 10 km. northwest of Buruyck, July 23, 1936.

117977. *ALLIUM* sp.

No. 925-C. From 10 km. northwest of Buruyck, July 23, 1936.

117978. *ALLIUM* sp.

No. 926-D. From 10 km. northwest of Buruyck, July 23, 1936.

Nos. 117979 to 117987 were received as seeds.

117979. *ALLIUM* sp.

No. 911-A. From southeast of Elaziz, July 13, 1936.

117980. *ALLIUM* sp.

No. 912-A. From 25 km. southeast of Elaziz, July 13, 1936.

117981. *ALLIUM* sp.

No. 913-A. From 30 km. southeast of Elaziz, July 13, 1936.

117982. *ALLIUM* sp.

No. 914-A. From 52 km. southwest of Elaziz, July 14, 1936.

117983. *ALLIUM* sp.

No. 916-A. From 50 km. north of Malatya, July 17, 1936.

117984. *ALLIUM* sp.

No. 921-A. From Buruyck, July 22, 1936.

117985. *ALLIUM* sp.

No. 922-A. From 45 km. north of Nigde, July 26, 1936.

117986. *ALLIUM* sp.

No. 923-A. From 10 km. northwest of Buruyck, July 23, 1936.

117987. *AMYGDALUS* sp. Amygdalaceae.

No. 910. From 5 km. east of Buruyck, July 6, 1936.

117988 to 118000.

From Brazil. Seeds and plants collected by W. A. Archer, Bureau of Plant Industry. Received September 9, 1936.

Unless otherwise mentioned, the material was received as seeds.

117988. *ANANAS COMOSUS* (L.) Merr. Bromeliaceae. Pineapple.

No. 3689. From the Serra do Cipó, eastern Minas Geraes, August 5, 1936. Suckers of a cultivated pineapple; the fruits are small but of extremely good flavor and the flesh is white. Apparently a local variety and long cultivated here.

117989. *ARACHIS HYPOGAEA* L. Fabaceae. Peanut.

No. 3688. From Itãocara, State of Rio de Janeiro, August 13, 1936. Presented by the agency of Secretaria de Agricultura in Rio de Janeiro.

117990. *BARBACENIA* sp. Velloziaceae.

No. 3691. From Serra do Cipó, eastern Minas Geraes, August 5, 1936. A species with scented leaves, found in barren soil among rocks.

117988 to 118000—Continued.

117991. *GALACTIA SCARLATINA* (Mart.) Taub. Fabaceae.

No. 3693. From Serra do Cipó, eastern Minas Geraes, August 5, 1936. A twining suffrutescent vine with trifoliolate leaves, the elliptic leaflets about 2 inches long, and numerous showy red flowers in axillary clusters. Native to Brazil.

117992. *LAVOISIERA FRANCAVILLANA* Cogn. Melastomaceae.

No. 3692. From Serra do Cipó, State of Minas Geraes, August 5, 1936. Received as "variety longiciliata," for which a place of publication has not been found. A shrub about 3 feet high, with leathery oblong-lanceolate, light-green leaves, covered with long silky hairs, appressed against the stem. The flowers are rose-colored.

117993 to 117996. *NICOTIANA TABACUM* L. Solanaceae. Tobacco.

117993. No. 3687. *Salomichi*. Cultivated tobacco from Serra do Cipó, eastern Minas Geraes, August 5, 1936. Seed apparently from Europe.

117994. No. 3586. From Bello Horizonte, Minas Geraes, August 2, 1936. Volunteer tobacco, 8 feet high, leaves slightly gummy; flowers pale green, edges of corolla tinged dull pink.

117995. No. 3616. From Lagoa Santo, State of Minas Geraes, August 3, 1936. Volunteer tobacco 3 feet high; corolla greenish white below, mottled red above; leaves slightly viscid.

117996. No. 3686. *Goumã*. From Serra do Cipó, eastern Minas Geraes, August 5, 1936. Cultivated tobacco; seed apparently from Europe.

117997. *PHYSOCALYX* sp. Scrophulariaceae.

No. 3694. From Serra do Cipó, eastern Minas Geraes, August 5, 1936. An attractive shrub with showy flowers in terminal, leafy racemes.

117998. *PISUM SATIVUM* L. Fabaceae. Pea.

No. 3685. *Ervilha torta flor róxa*. From Serra do Cipó, Minas Geraes, August 5, 1936. A cultivated pea, said to have been imported from Europe, cooked in the pod as a vegetable.

117999. *TRIMEZA JUNCIFOLIA* (Klatt) Benth. and Hook. Iridaceae.

No. 3675. From Serra do Cipó, Minas Geraes, August 5, 1936. Found growing in sandy soil.

For previous introduction and description see 117960.

118000. *ZEA MAYS* L. Poaceae. Corn.

No. 3684. From Rio de Janeiro, August 12, 1936. Cultivated popcorn.

118001. *STROPANTHUS GRATUS* (Wall. and Hook.) Baill. Apocynaceae.

From Cuba. Seeds presented by the Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received September 18, 1936.

Presented by the Department of Agriculture, Gold Coast, West Africa. A rank-growing woody creeper, with pinkish-white flowers in terminal clusters and enormous fruits nearly 3 feet long. Native to tropical Africa.

118001—Continued.

For previous introduction see 67745.

118002 to 118004. FRAGARIA VESCA L.
Rosaceae. **Strawberry.**

From Switzerland. Seeds presented by Emil Mauser, Samenhandlung, Rathausbrocke, Zürich. Received September 28, 1936.

118002. Rügen. An everbearing variety.

118003. Baron Solemacher. An everbearing variety, of large size.

118004. Baron Solemacher Weiss. A light-colored variety.

118005 and 118006. ALLIUM spp. Liliaceae.

From Turkey. Bulbs and seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received September 4, 1936.

From 10 km. northwest of Buruyek, in the Toros Mountains, July 23, 1936.

118005. ALLIUM sp.
No. 900. (Bulbs.)

118006. ALLIUM sp.
No. 926-A. (Seeds.)

118007 to 118098.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received September 3, 1936.

118007 to 118010. AMYGDALUS spp. Amygdalaceae.

118007 to 118009. AMYGDALUS PERSICA L.
Peach.

118007. No. 974. Aru. From Chamba, Chamba State, at 3,000 feet altitude, July 12, 1936. A small tree 8 inches in diameter, fruit white, freestone, 1½ inches in diameter, of good flavor.

118008. No. 975. Aru. From Chamba, Chamba State. A yellow-fleshed, beaked, clingstone peach, 2¼ inches in diameter. This variety is found from 3,000 to 7,500 feet altitude.

118009. No. 1008. Aru. From Srinagar, Kashmir, July 20, 1936. Presented by the Government Gardens. Fruit well marked with crimson, 1½ inches in diameter; a white-fleshed freestone of good quality. Said to be one of the Saharanpur varieties and, as such, grows in extreme heat. Here it tolerates mild freezes.

118010. AMYGDALUS sp.

No. 939. From Kukti, Chamba State, July 4, 1936, at 9,000 feet altitude. Tall slender trees, 3 or 4 inches in diameter and 40 feet high, which resemble willows from a distance. Fruit 1 inch in diameter. Should be a fine ornamental.

118011. ANDROSACE sp. Primulaceae.

No. 936. *Kukti Nulla*; From Lahul, Punjab, July 1, 1936. An herb with attractive heads of pink flowers, found on dry ground.

118007 to 118098—Continued.

118012. ANEMONE sp. Ranunculaceae.

No. 937. From Reling, Chamba State, July 2, 1936, at 14,000 feet altitude. Flowers yellow, backed more or less with indigo. Attractive clumps to 2 feet.

118013. AQUILEGIA sp. Ranunculaceae.

No. 981. From the Kalatop Forest, Dalhousie, Punjab, July 12, 1936. A plant 2½ feet high, with glaucous foliage, found in the shade. The few flowers are deep wine colored without fragrance and appear early.

118014 and 118015. BRASSICA RAPA L.
Brassicaceae. **Turnip.**

From Partan, Kashmir, July 22, 1936. Collected in the market.

118014. No. 1023. A greenish rutabaga, common on the market, up to 4 inches in diameter, mild and of good flavor.

118015. No. 1022. Said to be red-rooted and globular.

118016. CAESALPINIA SEPIARIA Roxb. Caesalpiniaceae. **Mysore thorn.**

No. 978. From Khajjar, Chamba State, July 11, 1936. A thorny shrub sometimes 10 feet high, semiscandent, with long racemes of orange or yellow flowers.

For previous introduction see 103116.

118017 to 118023. CITRULLUS VULGARIS
Schrad. Cucurbitaceae. **Watermelon.**

118017 to 118021. *Tarbusa*. From Lahore, Punjab, July 14, 1936, but of unknown source.

118017. No. 984. Fruit elongate, 16 inches long, pale green, lightly and finely netted. Flesh of good quality, but low in sugar.

118018. No. 985. A pale-green elongate fruit 18 inches long with longitudinal blotching. Flesh good, but not very sweet.

118019. No. 986. A dark-green globular fruit, 18 inches in diameter, with red flesh.

118020. No. 987. A dark-green globular fruit 12 inches in diameter; flesh of good texture and sweet.

118021. No. 991. A pale-green sub-globose fruit 8 inches in diameter, lightly netted.

118022. No. 1005. *Tarbusa*. From Lake Dal, Kashmir, July 19, 1936. A dark-green globose fruit 12 inches in diameter which is indistinguishable externally from the regular red-seeded form.

118023. No. 1037. *Hendvend*. From Srinagar, Kashmir, at 5,200 feet altitude, July 24, 1936. A pale-green elongated fruit 18 inches long, with cloud stripes of darker green. Grown on rafts in the lake.

118024. CORYLUS sp. Betulaceae.

No. 969. *Tangi*. From Chamba, Chamba State, July 12, 1936. Said to have come from Pangli. A large ornamental tree that grows in the walnut-fir zone. The nuts have a good flavor and are not so woody as our bush hazels.

118007 to 118098—Continued.

118025 to 118031. *CUCUMIS* spp. Cucurbitaceae.

118025 to 118029. *CUCUMIS* MELO L. Muskmelon.

118025. No. 967. *Kharbuza*. From Chamba, Chamba State, July 12, 1936. A smooth, nearly globular orange fruit, 6 inches in diameter, with pronounced ribs and fragrant orange flesh.

Nos. 118026 to 118028 were from Lahore, Punjab, July 14, 1936.

118026. No. 988. *Kharbuza*. Said to have come from Neahey. A smooth globular orange fruit with prominent ribs. The fragrant orange flesh is sweet with no musky flavor.

118027. No. 989. *Kharbuza*. Said to have come from Lucknow. A smooth yellow compressed fruit 8 by 4 inches, nearly unribbed, and sometimes netted with green. Flesh white to salmon, but the white flesh is usually the best; sweet with attractive flavor.

118028. No. 992. *Lada*. Said to have come from Chaman. Fruit elongate, 18 inches long, yellow to gold, well netted. A variety of very favorable reputation.

118029. No. 999. *Kharbuza*. Said to have come from Kobat, North West Frontier Province. A pale-yellow, slightly netted cigarlike fruit, 1 foot long, with sweet and very attractive yellow flesh.

118030 and 118031. *CUCUMIS SATIVUS* L. Cucumber.

118030. No. 952. *Kakri*. From Chamba Brahmaur, Chamba State, July 7, 1936. Said to be a cucumber of ordinary size and shape.

118031. No. 1038. *Dadar*. From Srinagar, Kashmir, July 25, 1936. A water-grown cucumber; planted on floating rafts.

118032 to 118034. *CUCURBITA* spp. Cucurbitaceae.

118032. *CUCURBITA MAXIMA* Duchesne. Squash.

No. 972. From Chamba, Chamba State, July 12, 1936. Described as a squash that attains a very large size.

118033 and 118034. *CUCURBITA PEPO* L. Pumpkin.

From Chamba, Chamba State, July 12, 1936.

118033. No. 971. Said to have an elongate fruit which weighs 30 pounds. Vines very vigorous and climb over houses and trees.

118034. No. 970. Said to be a small turban-squash, cream-colored to deep orange, 6 inches in diameter.

118035. *DAUCUS CAROTA* L. Apiaceae. Carrot.

No. 961. *Gadjar*. From Chamba, Chamba State, July 10, 1936. Said to be a mixture of local races.

118007 to 118098—Continued.

118036. *DELPHINIUM* sp. Ranunculaceae. Larkspur.

No. 953. From Brahmaur, Chamba State, July 7, 1936. A perennial about 3 feet high, found usually on dry grassy slopes. The flowers are beautiful deep sky blue.

118037 to 118039. *FRAGARIA* spp. Rosaceae. Strawberry.

118037. *FRAGARIA* sp.

No. 935. *Paljur*. From Kukti Nulla, Lahul, Punjab, June 30, 1936. Small fruits, one-half inch in diameter and of poor flavor.

118038. *FRAGARIA* sp.

No. 940. From Kukti, Chamba State, July 4, 1936, at 9,600 feet altitude. Growing in pine forest; fruits in clusters of 1 to 3 and one-fourth inch in diameter; sweet and well-flavored.

118039. *FRAGARIA* sp.

No. 980. From Dalhousie, Punjab, in the Kalatop Forest, at 7,000 feet altitude, July 12, 1936. Plants up to 8 inches in height, with sweet crimson fruits one-half inch in diameter.

118040. *HAMAMELIS* sp. Hamamelidaceae.

No. 950. From Hursar, Chamba State, July 5, 1936. An enormous shrub 20 feet high, with branches 6 inches in diameter. Grows in shade or sun. Attractive form and leaves. All plants seen were laden with fruit.

118041. *HYPERICUM* sp. Hypericaceae.

No. 977. From Khajvas, Chamba State, 6,500 feet altitude, July 11, 1936. A dense ornamental shrub 3½ feet high, with abundant golden flowers. Grows in part shade or sun.

118042. *IRIS* sp. Iridaceae.

No. 1015. From Partan, Kashmir, July 22, 1936, at 5,000 feet altitude.

118043. *LONICERA* sp. Caprifoliaceae.

No. 976. From Chamba, Chamba State, July 12, 1936. Found in dense forest at 5,000 feet altitude. A scraggly shrub about 10 feet high, with very attractive scarlet berries.

118044 and 118045. *MANGIFERA INDICA* L. Anacardiaceae. Mango.

Aru. From Jammu State, July 16, 1936. Fruits almond-shaped, sweet, but with little flesh. All the wild northern forms are "suckling mangoes" and have much fiber, but are cold tolerant.

118044. No. 996. Fruits green, 2½ inches high.

118045. No. 997. Fruits green, yellow and scarlet, about 1¾ inches high.

118046. *MORUS* sp. Moraceae.

No. 954. From Brahmaur, Chamba State, July 7, 1936, at 7,500 feet altitude. A huge tree over 30 feet in circumference with attractive foliage. The small red fruits, about 1 inch long, are said to be very good. The tree tolerates snow for 3 months and probably zero Fahrenheit, but the ground freezes only about 12 inches. The tree grows also at lower elevations and could probably be used as an ornamental.

118007 to 118098—Continued.

- 118047 to 118054. *ORYZA SATIVA* L. Poaceae. Rice.
118047. No. 983. *Lal chaul*. From Chamba, Chamba State, July 11, 1936. A wet rice with low heat requirements. Planted now and harvested in October.
118048. No. 1000. *Nwar*. From Verinag, Kashmir, July 16, 1936, at 6,400 feet altitude. One of the good rices of the State, and there are said to be about 200 varieties.
118049. No. 1001. *Dad Kaver*. From Verinag, Kashmir, July 16, 1936, at 6,400 feet altitude. A red rice, not widely cultivated here.
118050. No. 1017. *Bozan*. From Partan, Kashmir, July 22, 1936, at 5,000 feet altitude. Said to be a white rice, but not particularly recommended. Grown in water.
118051. No. 1018. *Babri Biol*. From Partan, Kashmir, July 22, 1936, at 5,000 feet altitude. A wet rice, described as one of the best grown in Kashmir.
118052. No. 1019. *Moghul biol*. From Partan, Kashmir, July 22, 1936, at 5,000 feet altitude. A wet rice, said to be one of the best white rices grown in Kashmir.
118053. No. 1020. *Bava*. From Partan, Kashmir, July 22, 1936, at 5,000 feet altitude. A wet rice, said to be one of the best grown in Kashmir.
118054. No. 1035. *Lulanza*. From the Srinagar bazar, Kashmir, July 23, 1936. Said to be one of the best of the Kashmir rices.
118055. *PEDICULARIS* sp. Scrophulariaceae. No. 946. From Kukti, Chamba State, July 5, 1936, at 10,000 feet altitude. A perennial with very attractive large yellow flowers in heads 6 inches long. Most species of *Pedicularis* here grow in wet peaty soil.
- 118056 to 118065. *PHASEOLUS VULGARIS* L. Fabaceae. Common bean.
- 118056 to 118060. *Rong*. Climbing beans with edible pods. Nos. 118056 and 118057 were collected at Brahmaur, Chamba State, July 7, 1936.
118056. No. 956. 118057. No. 957.
- 118058 to 118060. From Chamba, Chamba State, July 10, 1936.
118058. No. 960.
118059. No. 968.
118060. No. 982.
- 118061 to 118065. *Razma*. From Srinagar, Kashmir, July 7 to 23, 1936. Used as green beans and also as dried beans.
118061. No. 1027.
118062. No. 1028.
118063. No. 1029.
118064. No. 1030.
118065. No. 1031.

118007 to 118098—Continued.

118066. *PINUS GERARDIANA* Wall. Pinaceae. No. 964. *Nezoa*. From Chamba, Chamba State, July 11, 1936, but said to be from Brahmaur at 7,500 feet altitude. An attractive tree with sycamorelike bark and edible seeds which are exported in quantities.
118067. *PISUM SATIVUM* L. Fabaceae. Pea. No. 1021. *Kara*. From Srinagar, Kashmir, July 23, 1936. Eaten roasted or boiled, both green and dried.
118068. *POPULUS* sp. Salicaceae. No. 949. From Hursar, Chamba State, July 6, 1936. A tree 60 feet high and 3 feet in diameter, found growing in river bottoms and plantations. It is a fast grower and does not seem to spread from the roots.
118069. *PRIMULA* sp. Primulaceae. No. 938. From Reling, Chamba State, July 2, 1936, at 1,400 feet altitude. Plants 8 to 10 inches high. The large purple flowers, one-half inch across, have white eyes.
118070. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot. No. 955. From Brahmaur, Chamba State, July 7, 1936, at 8,000 feet altitude. Tree between 2 and 3 feet high, with fruit 1 inch in diameter.
118071. *PRUNUS ARMENIACA* L. Amygdalaceae. No. 990. *Chuli*. From Lahore, Punjab, July 14, 1936, but said to have come originally from Baluchistan. Fruits 1 inch in diameter, the color of a greengage plum, very sweet and pleasant.
118072. *PRUNUS CERASIFERA* Ehrh. Amygdalaceae. Myrobalan plum. No. 994. *Alucha*. From Jammu, Jammu State, July 16, 1936. Yellow fruits 1 inch in diameter, rather flavorless.
118073. *RAPHANUS SATIVUS* L. Brassicaceae. Radish. No. 965. *Muli*. From Chamba, Chamba State, July 12, 1936. A long white radish; used fresh or in curry.
- 118074 to 118080. *RUBUS* spp. Rosaceae. 118074. *RUBUS* sp. No. 944. From Kukti, Chamba State, July 4, 1936. A large well-formed bush 6 feet high, growing in pine forest. Fruits not ripe but probably blackish.
118075. *RUBUS* sp. No. 945. From Kukti, Chamba State, July 5, 1936, at 9,000 feet altitude. A small plant between 3 and 4 feet high, with scarlet to crimson fruits one-fourth inch across which are sweet and pleasant.
118076. *RUBUS* sp. No. 948. From Hursar, Chamba State, July 5, 1936. A bush about 5 feet high with small, few-seeded fruits.
118077. *RUBUS NIVEUS* Thunb. Rosaceae. No. 979. From Dalhousie, Punjab, July 12, 1936, at 7,000 feet altitude. Sweet crimson fruits from a bush 4 feet high.

118007 to 118098—Continued.

118078. *RUBUS* sp.

No. 1002. From Harwan, Kashmir, July 19, 1936, at 7,000 feet altitude. Sweet purple-black fruits, one-half inch in diameter.

118079. *RUBUS* sp.

No. 1003. From Nishat Gardens, Kashmir, July 19, 1936. Fruits sweet, crimson, but a bit watery, one-half inch across; purchased from a native.

118080. *RUBUS ULMIFOLIUS* Schott.

No. 1012. From Srinagar, Kashmir, July 22, 1936, at 5,200 feet altitude. Well rounded, dense, heavily armed shrubs up to 8 feet high, with rose-colored flowers, borne in profusion. Fruits black, one-half inch in diameter, and of good flavor.

118081 to 118083. *SALVIA* spp. *Mentha*-*ceae*.

118081. *SALVIA MOORCROFTIANA* Wall.

No. 958. From near Brahmaur, Chamba State, July 8, 1936, at 7,000 feet altitude. An herb about 2 feet high, with spikes of large blue-purple flowers and large woolly leaves; related to *Salvia sclarea*. It will tolerate hot sun and a dry situation.

For previous introduction see 101795.

118082. *SALVIA VERBENACA OBLONGIFOLIA* Benth.

No. 1010. From Sopor, Kashmir, July 22, 1936, at 5,000 feet altitude. A plant 18 inches high with spikes of attractive blue-purple flowers and thick rugose leaves. It prefers rather dry open ground.

118083. *SALVIA SCLAREA* L.

No. 1011. From Sopor, Kashmir, July 22, 1936, at 5,000 feet altitude. Plant 18 inches high with spikes of large pale-purple-blue flowers and thick rugose leaves. Prefers rather dry open ground.

118084. *SEDUM* sp. *Crassulaceae*.

No. 943. From Kukti, Chamba State, July 4, 1936. A small plant 4 inches high with leaves one-fourth inch long and white flowers. Grows on mossy cliffs; a rock garden plant.

118085. *SOLANUM MELONGENA* L. *Solana*-*ceae*. **Eggplant.**

No. 966. *Bengan*. From Chamba, Chamba State, July 12, 1936. Said to be a long purple variety.

118086. *SOPHORA* sp. *Fabaceae*.

No. 959. From near Brahmaur, Chamba State, July 8, 1936, at 7,000 feet altitude. A leguminous shrub about 5 feet high, found on hot dry slopes. Leaves glaucous, pinnate, and 4 inches long. A possible ornamental for semiarid, hot situations.

118087 and 118088. *SPINACIA OLERACEA* L. *Chenopodiaceae*. **Common spinach.**

Palag. From Chamba, Chamba State, July 11, 1936. A potheib.

118087. No. 963. 118088. No. 962.

118007 to 118098—Continued.

118089. *VIBURNUM* sp. *Caprifoliaceae*.

No. 941. From Kukti, Chamba State, July 4, 1936, at 9,000 feet altitude. A shrub 7 feet high, with attractive white to pink flowers which appear as the snow begins to melt. The flowers have a pleasant scent, like that of trailing-arbutus.

118090. *VIBURNUM* sp. *Caprifoliaceae*.

No. 1009. From Pir Pinjal, Kashmir, June 16, 1936, at 9,000 feet altitude. Shrubs 5 feet high, said to have fragrant pink flowers borne early in the spring.

118091 and 118092. *VICIA FABA* L. *Faba*-*ceae*. **Broadbean.**

From the bazar at Srinagar, Kashmir, July 23, 1936; a form used dry, like pigeonpeas.

118091. No. 1033. 118092. No. 1034.

118093 to 118095. *VIGNA CYLINDRICA* (Stickm.) Skeels. *Fabaceae*. **Catjang.**

118093. No. 1026. *Wair mut*. From Srinagar, Kashmir, July 23, 1936. Used as green pods and dried beans.

118094. No. 973. From Chamba, Chamba State, July 12, 1936. Said to be a climbing bean with long edible pods.

118095. No. 1025. *Wair mut* or *loba*. From Srinagar, Kashmir, July 23, 1936. A climbing bean with edible pods 18 inches long. The beans are also used dried.

118096 to 118098. *VIOLA* spp. *Violaceae*.

118096. *VIOLA* sp.

No. 942. From Kukti, Chamba State, July 5, 1936.

118097. *VIOLA* sp.

No. 947. From Hursar, Chamba State, July 5, 1936.

118098. *VIOLA* sp.

No. 951. From Brahmaur, Chamba State, July 7, 1936.

118099 and 118100.

From Brazil. Seeds presented by J. W. T. Duvel. Commodity Exchange Administration. United States Department of Agriculture. Received September 26, 1936.

118099. *ASTROCARYUM TUCUMA* Mart. *Phoenicaceae*. **Palm.**

For previous introduction see 97803.

118100. *ORBIGNYA* sp. *Phoenicaceae*. **Palm.**

The orbignyas are oil-bearing palms, native to the northern part of South America.

118101 to 118104.

From India. Bulbs and seeds collected by Walter Koelz, Bureau of Plant Industry. Received September 15, 1936.

118101. *ALLIUM SATIVUM* L. *Liliaceae*. **Garlic.**

No. 1036. *Rohan*. Bulbs from the Srinagar bazar, Kashmir, July 23, 1936. Said to be locally grown.

118102. *NELUMBO NUCIFERA* Gaertn. *Nymphaeaceae*. **Hindu lotus.**

No. 1044. *Pamposh*. From Srinagar, Kashmir, July 27, 1936.

118101 to 118104—Continued.

118103. *NYMPHAEA ALBA* L. Nymphaeaceae.
European white waterlily.

No. 1041. *Buimposh*. Seeds from Dal Lake, Kashmir, at 5,200 feet altitude. The flowers are dainty, white, and the largest are 2 inches across.

118104. *NYMPHAEA* sp. Nymphaeaceae.

No. 1042. *Buimposh*. Seeds from Dal Lake, Kashmir, at 5,200 feet altitude. This plant is considered identical with No. 1041 [P. I. 118103], but the seeds are red instead of blackish and have no gelatinous envelope.

118105 to 118181. *NICOTTANA TABACUM* L. Solanaceae. Common tobacco.

From Venezuela. Seeds collected by Raymond Stadelman. Bureau of Plant Industry. Received September 26, 1936.

118105 to 118108. From the Valle de la Pascua, Guárico, July 25, 1936.

118105. No. 176. 118107. No. 178.

118106. No. 177. 118108. No. 179.

118109. No. 180. From La Mal Querida, Guárico, July 26, 1936.

118110. No. 181. From Santa Maria de Ipire, Guárico, July 27, 1936.

118111. No. 182. *Guácharo*. From Paria-guan, Anzoategui, July 27, 1936.

118112. No. 183. From Canraura, Anzoategui, between 250 m. and 300 m. altitude, July 28, 1936.

118113. No. 184. *Rabo de gallo*. From El Purgatorio, Monagas, at 380 m. altitude, July 28, 1936.

118114 and 118115. From Bejucales, near Caicara, Monagas, at 200 m. altitude, August 1, 1936.

118114. No. 185. *Puya*.

118115. No. 186. *Guácharo*.

118116. No. 187. *Tabaco negro*. From Caicara, Monagas, at 200 m. altitude, August 2, 1936.

118117 and 118118. From San Félix, Monagas, at 250 m. altitude, August 2, 1936.

118117. No. 188. *Tabaco blanco*.

118118. No. 189. *Tabaco negro*.

118119 and 118120. From Las Merellas, near San Félix, Monagas, August 2, 1936, at 250 m. altitude.

118119. No. 190. 118120. No. 191.

118121. No. 192. *Puya*. From San Félix, Monagas, at 250 m. altitude, August 2, 1936.

118122. No. 197. *Zambo*. From the Colorado River near San Antonio, Monagas, August 3, 1936, at 250 m. altitude.

118123. No. 198. *Zambo calado*. From near San Antonio, Monagas, August 3, 1936, at 250 m. altitude.

118124 and 118125. From La Fantasma, near San Antonio, Monagas, at 250 m. altitude, August 3, 1936.

118124. No. 199. *Tabaco negro*.

118125. No. 200. *Tabaco blanco*.

118126. No. 201. From La Soledad, south of San Antonio, on the way to Cumanao, at 250 m. altitude, August 3, 1936.

118105 to 118181—Continued.

118127 and 118128. *Tabaco negro*. From Clavellines, near Santa Cruz, Sucre, at 250 m. altitude, August 8, 1936.

118127. No. 202. 118128. No. 203.

118129. No. 204. *Tabaco negro*. From Los Cavimbos, near Santa Maria, Sucre, at 300 m. altitude, August 8, 1936.

118130. No. 205. *Tabaco negro*. From Sabana de Piedras, Sucre, at 1,000 m. altitude, August 9, 1936.

118131. No. 206. *Tabaco negro*. From Cueva del Guácharo, near Caripe, Monagas, at 950 m. altitude, August 10, 1936.

118132 and 118133. *Guácharo*. From Guácharo, Monagas, at 800 m. altitude, August 10, 1936.

118132. No. 207. 118133. No. 208.

118134 to 118137. From Amanitas, near Caripe, Monagas, at 750 m. altitude, August 11, 1936.

118134. No. 209. *Tabaco negro*.

118135. No. 210. *Zambo calado*.

118136. No. 211. *Guácharo*.

118137. No. 212. *Tabaco negro*.

118138. No. 213. *Tabaco negro*. From Boqueron, near San Agustín, Sucre, at 1,000 m. altitude, August 11, 1936.

118139 and 118140. From Santa Maria, Sucre, at 300 m. altitude, August 11, 1936.

118139. No. 214. *Guácharo*.

118140. No. 215. *Tabaco negro*.

118141. No. 216. *Uracoa*. From Santa Cruz, at 250 m. altitude, August 12, 1936.

118142 and 118143. *Tabaco negro*. From El Toro, near Santa Cruz, Sucre, at 260 m. altitude, August 12, 1936.

118142. No. 217. 118143. No. 218.

118144 and 118145. *Tabaco negro*. From Catuaro, Sucre, at 340 m. altitude, August 12, 1936.

118144. No. 219. 118145. No. 220.

118146. No. 221. *Tabaco negro*. From La Horquita, near Catuaro, Sucre, at 330 m. altitude, August 12, 1936.

118147 and 118148. From Caigüire, near Cumanacoa, Sucre, at 220 m. altitude, August 19, 1936.

118147. No. 220. *Tabaco negro*.

118148. No. 223. *Tabaco negro* or *Satom*.

118149 to 118151. From La Rinconada, near Cumanacoa, Sucre, at 230 m. August 19, 1936.

118149. No. 224.

118150. No. 225. *Tabaco blanco*.

118151. No. 226. *Tabaco negro*.

118152. No. 227. *Cola de gallo*. From Los Altos, near Barcelona, Anzoategui, at 600 m. altitude, August 11, 1936.

118153. No. 228. *Cubano*. From Pachquito, near Piritu, Anzoategui, at 120 m. altitude, August 11, 1936.

118105 to 118181—Continued.

- 118154 to 118157. From Guanape, Anzoategui, August 15 and 16, 1936, at 180 m. altitude.
118154. No. 229. *Gacho*.
118155. No. 230. *Virginia*.
118156. No. 231. *Caraqueño*.
118157. No. 232. *Uvero*.
- 118158 and 118159. *Rabo de gallo*. From El Guamo, near Guanape, Anzoategui, at 110 m. altitude, August 15, 1936.
118158. No. 233. 118159. No. 234.
118160. No. 235. *Rabo de gallo* and *Virginia*. From Campo Alegre near El Valle, Anzoategui, at 140 m. altitude, August 15, 1936.
118161. No. 236. *Capadare*. From Las Cruces, near El Valle, Anzoategui, at 280 m. altitude, August 15, 1936.
118162. No. 237. *Capadare* and *Virginia*. From Santa Rosa, near El Valle, Anzoategui, at 237 m. altitude, August 15, 1936.
- 118163 to 118166. From El Placer, near El Valle, Anzoategui, from 260 to 270 m. altitude, August 16, 1936.
118163. No. 238. *Cubano*.
118164. No. 239. *Cubano*.
118165. No. 240. *Capadare*.
118166. No. 241. *Cubano*.
- 118167 and 118168. From La Chaguarama, near El Valle, at 280 m. altitude, August 16, 1936.
118167. No. 242. *Capadare* and *Rabo de gallo*.
118168. No. 243. *Uvero*, *Caujaro*, and *Capadare*.
- 118169 to 118171. From San José de Guárico, Guárico, August 16, 1936, at 260 m. altitude.
118169. No. 244. *Caujaro*, *Pailon*, *Gacho*, and *Rabo de gallo*.
118170. No. 245. *Pylon*.
118171. No. 246. *Caujaro*.
118172. No. 247. A locally grown strain. From El Guamo, near Guanape, Anzoategui, at 160 m. altitude, August 17, 1936.
118173. No. 248. From El Chaparral, near Guanta, Anzoategui, at 160 m. altitude, August 20, 1936.
118174. No. 249. A mixture of No. 227 and No. 228.
- 118175 to 118177. From Cocoyal, near San Antonio, Monagas, at 1,500 m. altitude, August 21, 1936.
118175. No. 250. *Tabaco negro*.
118176. No. 251. *Tabaco negro*.
118177. No. 252. *Guácharo*.
118178. No. 253. *Tabaco negro*. From El Hato de la Cuesta, near San Antonio, at 1,500 m. altitude, August 21, 1936.
- 118179 and 118180. From Guanaguana, Monagas, at 440 m. altitude, August 22, 1936.
118179. No. 254. *Guácharo*.
118180. No. 255. *Tabaco común*.

118105 to 118181—Continued.

118181. No. 256. A mixed sample.
118182. SACCHARUM OFFICINARUM L. Poaceae. Sugarcane. From Papeete, Tahiti, Society Islands. Cuttings obtained through the Division of Sugar Investigation, Bureau of Plant Industry. Received September 29, 1936. *Rutu*.
118183. PHOENIX HANCEANA Naudin. Phoenicaceae. Date palm. From Japan. Seeds presented by Prof. Tyōzaburō Tanaka, Taihoku Imperial University, Taiwan. Received September 24, 1936. A Chinese relative of the date palm which has short, tufted stems and pinnate foliage. For previous introduction see 101094.
118184. AMYGDALUS PERSICA L. Amygdalaceae. Peach. From China. Seeds presented by Miss B. C. Patterson, Tenghsien, Shantung. Received September 24, 1936. A wild peach which becomes a tree 35 feet high, with fruits little larger than a cherry.
- 118185 to 118356. From Brazil. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received September 21, 1936. Unless otherwise stated, these were all purchased in seed stores in São Paulo, August 28, 1936.
- 118185 to 118191. ALLIUM CEPA L. Liliaceae. Onion.
118185. No. 3818. *Cebola branca Italiana*.
118186. No. 3819. *Cebolas do Rio Grande*.
118187. No. 3820. *Cebola vermelha das Canarias*.
118188. No. 3821. *Cebola das Canarias amarella*.
118189. No. 3822. *Cebola branca rainha*. Used for pickling.
118190. No. 3834. *Cebola piriforme do Rio Grande*. Seeds grown on the island of Tenerife, Canary Islands.
118191. No. 3935. *Cebola do Rio Grande*, grown in Brazil.
118192. ALLIUM PORRUM L. Liliaceae. Leek. No. 3823. *Cebolinha de todo anno*.
- 118193 to 118196. APIUM GRAVEOLENS L. Apiaceae. Celery.
118193. No. 3894. *Aipo salsaõ branco cheio da America*. Seeds grown on the island of Tenerife, Canary Islands.
118194. No. 3792. *Salsaõ aipo branco cheio*.
118195. No. 3893. *Aipo salsaõ tronchudo sem rival*.
118196. No. 3791. *Aipo rabano tronchudo*.

118185 to 118356—Continued.

- 118197 to 118201. *ARACHIS HYPOGAEA* L. Fabaceae. Peanut.
118197. No. 3741. From a farm south of São Paulo, August 26, 1936. Pods small, integument black, seeds short, ovoid.
118198. No. 3936. *Jumbo*. From the Instituto Biológico, São Paulo, August 28, 1936.
- 118199 to 118201. *Tatu*. From São Miguel, south of São Paulo, August 26, 1936.
118199. No. 3742.
118200. No. 3743.
118201. No. 3744.
118202. *ASPARAGUS OFFICINALIS* L. Con-vallariaceae. Garden asparagus. No. 3881. *Espargo da Espanha*.
- 118203 and 118204. *BETA VULGARIS* L. Chenopodiaceae. Common beet.
118203. No. 3759. *Beteraba vermelha*.
118204. No. 3760. *Beteraba redondo vermelha*.
118205. *BETA VULGARIS* CICLA L. Chenopodiaceae. Swiss chard. No. 3830. *Acelga branca tronchuda*.
- 118206 to 118250. *BRASSICA* spp. Brassicaceae.
118206. *BRASSICA CAMPESTRIS* L. Rutabaga. No. 3788. *Nabo japonex*.
- 118207 to 118210. *BRASSICA JUNCEA* (L.) Coss. Chinese mustard.
118207. No. 3816. *Mostarda Lisa da China*.
- 118208 and 118209. Grown on the island of Tenerife, Canary Islands.
118208. No. 3817. *Mostarda crespa da China*.
118209. No. 3853. *Mostarda da China de folhas de couve*.
118210. No. 3854. *Mostarda crespa da China*.
- 118211 to 118219. *BRASSICA OLERACEA* BUTRYTIS L.
118211. No. 3777. *Couve brocoli rc.co*. Broccoli.
118212. No. 3778. *Couve brocoli branco*. Broccoli.
118213. No. 3779. *Couve flor d'Algeria*. Cauliflower.
118214. No. 3780. *Couve flor gigante de Napoles*. Cauliflower.
118215. No. 3781. *Couve flor lenormand*. Cauliflower.
118216. No. 3782. *Couve flor especial S. Pasqua*. Cauliflower.
- Nos. 118217 to 118219 were grown on the island of Tenerife, Canary Islands.
118217. No. 3855. *Couve flor gigante Catalana*. Cauliflower.
118218. No. 3856. *Couve flor de inverno*, or *Couve brocoli de curto branco monstruoso*. Cauliflower.
118219. No. 3857. *Couve flor alva costal*. Cauliflower.

118185 to 118356—Continued.

- 118220 to 118232. *BRASSICA OLERACEA* CAPITATA L. Cabbage.
- Said to be imported seed.
118220. No. 3776. *Couve tronchuda Portuguesa*.
118221. No. 3797. *Repolho schwenfurt*.
118222. No. 3798. *Repolho grespo grande de milão*.
118223. No. 3799. *Repolho quarentino crespo*.
118224. No. 3800. *Repolho roxo grande*.
118225. No. 3801. *Repolho Saint-Dinis*.
118226. No. 3802. *Repolho grande coração de boi*.
118227. No. 3803. *Repolho chato da Hollanda*.
118228. No. 3804. *Repolho allemão branco*.
118229. No. 3805. *Repolho chato do quintal*.
118230. No. 3842. *Repolho de 7 semanas*.
118231. No. 3874. *Repolho volumoso das Canarias*.
118232. No. 3930. *Couve tronchuda Portuguesa*.
- 118233 to 118235. *BRASSICA OLERACEA* VIRIDIS L. Collard.
118233. No. 3775. *Couve de todo anno*. Said to be imported; used in colder climates as forage and greens.
118234. No. 3827. *Couve gallega de folha larga*.
118235. No. 3931. *Couve manteiga*.
- 118236 and 118237. *BRASSICA PEKINENSIS* (Lour.) Rupr. Petai. Seed grown on the island of Tenerife, Canary Islands.
118236. No. 3895. *Couve Chosen*.
118237. No. 3896. *Couve chakushina*.
- 118238 to 118246. *BRASSICA RAPA* L. Turnip.
- Seeds said to be imported.
118238. No. 3783. *Nabo branco meio comprido*.
118239. No. 3784. *Nabo amarelo de milão*.
118240. No. 3785. *Nabo chato branco Francez*.
118241. No. 3786. *Nabica de terra*.
118242. No. 3871. *Nabo do Japão*.
118243. No. 3902. *Nabo branco chato tennoji*.
118244. No. 3903. *Nabo branco chato shogoin*.
118245. No. 3904. *Nabo branco tokinashi*.
118246. No. 3787. *Couve nabo branco*.

118185 to 118356—Continued.

- 118247 to 118250. BRASSICA OLERACEA
GONGYLODES L. Kohlrabi.
- Nos. 118247 and 118248 were said to be imported seed.
118247. No. 3789. *Couve rabano branco*.
118248. No. 3790. *Couve rabano rôxo*.
- Nos. 118249 and 118250 were grown on the island of Tenerife, Canary Islands.
118249. No. 3872. *Couve rabano rôxo goliath*.
118250. No. 3873. *Couve rabano branco*.
- 118251 to 118259. CAPSICUM ANNUUM L. Solanaceae. Common redpepper.
118251. No. 3761. *Pimentão doce monstruoso*.
118252. No. 3762. *Pimentão doce quadrado*.
118253. No. 3763. *Pimentão doce de hespanha*.
118254. No. 3764. *Pimenta cayenna forte*.
- Nos. 118255 to 118259 were grown on the island of Tenerife, Canary Islands.
118255. No. 3863. *Pimentão doce grande amarello ouro*.
118256. No. 3864. *Pimenta ou pimentão grande commun*.
118257. No. 3865. *Pimenta cereja*.
118258. No. 3866. *Pimenta malagueta do Chile*.
118259. No. 3867. *Pimenta cayenna*.
- 118260 to 118263. CICHORIUM ENDIVIA L. Cichoriaceae. Endive.
118260. No. 3773. *Chicoria lisa escarola*.
118261. No. 3907. *Almeirão de folha larga verde erecta*.
118262. No. 3908. *Almeirão pão de asucar*.
118263. No. 3769. *Chicoria crespa branca*.
- 118264 to 118267. CICHORIUM INTYBUS L. Cichoriaceae. Chicory.
118264. No. 3770. *Chicoria rôxa Italiana*.
118265. No. 3771. *Chicoria amarga de raiz*.
118266. No. 3772. *Chicoria amarga*.
118267. No. 3828. *Almeirão de folha larga (radicchio)*.
118268. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.
- No. 3862. *Melancia americana de Santa Barbara*. Seeds grown in Brazil.
118269. CRAMBE MARITIMA L. Brassicaceae. Common sea-kale.
- No. 3906. *Couve maritima*. From the island of Tenerife, Canary Islands.

118185 to 118356—Continued.

- 118270 to 118283. CUCUMIS spp. Cucurbitaceae.
- 118270 to 118276. CUCUMIS MELO L. Muskmelon.
118270. No. 3749. *Melão cavailon* (casca amarella).
118271. No. 3752. *Melão* (cascade carvalho).
118272. No. 3753. *Melão cantaloup*.
118273. No. 3859. *Melão maravilha das canarias*.
118274. No. 3860. *Melão grande Prescott*.
118275. No. 3861. *Melão precoce d'Algeria*.
118276. No. 3929. *Melão casca de carvalho*.
- 118277 to 118283. CUCUMIS SATIVUS L. Cucumber.
118277. No. 3750. *Pepino pequeno para conserva*.
118278. No. 3751. *Pepino Italiano verde comprido*.
118279. No. 3868. *Pepino verde comprido*.
118280. No. 3869. *Pepino cornichon para conserva*.
118281. No. 3870. *Pepino verde grande*.
118282. No. 3927. *Pepino Japonês*.
118283. No. 3928. *Pepino verde comprido*.
- 118284 to 118296. CUCURBITA spp. Cucurbitaceae.
- 118284 to 118289. CUCURBITA MAXIMA Duchesne. Squash.
118284. No. 3824. *Abobora morango*.
118285. No. 3826. *Giraumon (Bonet de Turco)*.
118286. No. 3883. *Abobora moranga verde de Espanha*.
118287. No. 3884. *Abobora moranga amarella monstruosa*.
118288. No. 3887. *Abobora moranga vermelha girimú*.
118289. No. 3889. *Abobora moranga de Portugal*.
- 118290 to 118293. CUCURBITA MOSCHATA Duchesne. Cushaw.
118290. No. 3882. *Abobora menina*.
118291. No. 3888. *Abobora mala ou cheia*.
118292. No. 3890. *Abobora Argentina*.
118293. No. 3892. *Abobora assucarada do Brazil*.
- 118294 to 118296. CUCURBITA PEPO L. Pumpkin.
118294. No. 3825. *Abobrinha Italiana verde (Não lastra)*.
118295. No. 3886. *Abobora verde de Canarias (Não lastra)*.
118296. No. 3891. *Abobora citronella*.

118185 to 118356—Continued.

- 118297 and 118298. *CYNARA CARDUNCULUS* L. Asteraceae. **Cardoon.**
118297. No. 3832. *Cardão da Hespanha.*
118298. No. 3905. *Cardo da Espanha sem espinhos.*
- 118299 to 118301. *CYNARA SCOLYMUS* L. Asteraceae. **Artichoke.**
118299. No. 3765. *Alcachofra verde.*
118300. No. 3836. *Alcachofra grande verde de Leon.*
118301. No. 3837. *Alcachofra róxa precoc.*
118302. *DAUCUS CAROTA* L. Apiaceae. **Carrot.**
- No. 3755. *Cenoura vermelha meia comprida.*
118303. *ERUCA SATIVA* Hill. Brassicaceae. **Roquette.**
- No. 3774. *Rucola (Pinhão).*
118304. *FRAGARIA* sp. Rosaceae.
- No. 3835. *Morangos costal.*
118305. *FRAGARIA* sp.
- No. 3754. *Morangos.*
- 118306 to 118321. *LACTUCA SATIVA* L. Cichoriaceae. **Garden lettuce.**
118306. No. 3809-A. *Alface repolhuda Franceza.*
118307. No. 3810-A. *Alface repolhuda de Berlin.*
118308. No. 3811-A. *Alface repolhuda cresp verano.*
118309. No. 3812-A. *Alface repolhuda imperial.*
118310. No. 3813-A. *Alface romana balão.*
118311. No. 3814-A. *Alface romana.*
118312. No. 3843-A. *Alface cresp repolhuda de Batavia.*
118313. No. 3845-A. *Alface rosada 4 estações.*
118314. No. 3846-A. *Alface cresp repolhuda.*
118315. No. 3847-A. *Alface loura repolhuda sem rival.*
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118317. No. 3849-A. *Alface repolhuda grioula.*
118318. No. 3850-A. *Alface branca repolhuda Franceza extra.*
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118320. No. 3852-A. *Alface romana balão.*
118321. No. 3934. *Alface repolhuda São Caetano.*
118322. *LAGENARIA LEUCANTHA* (Duchesne) Rusby. Cucurbitaceae. **Calabash gourd.**
- No. 3885. *Abobora cabaca grande.*
118323. *LEPIDIUM SATIVUM* L. Brassicaceae. **Garden cress.**
- No. 3831. *Agrião secco de Jardim.*

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- 118324 to 118328. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. **Tomato.**
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118325. No. 3807-A. *Tomate pera.*
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118327. No. 3840. *Tomate grande vermelho liso.*
118328. No. 3841. *Tomate grande vermelho lobado.*
- 118329 to 118331. *PASTINACA SATIVA* L. Apiaceae. **Parsnip.**
118329. No. 3758. *Pastinaca comprida.*
118330. No. 3838. *Pastinaca temporã meio curta.*
118331. No. 3839. *Pastinaca comprida.*
118332. *PETROSELINUM CRISPUM* (Mill.) Nym. Apiaceae. **Parsley.**
- No. 3829-A. *Salsa commum lisa.*
- 118333 and 118334. *PISUM SATIVUM* L. Fabaceae. **Pea.**
118333. No. 3766. *Ervilha para debrulhar.*
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- 118335 to 118343. *RAPHANUS SATIVUS* L. Brassicaceae. **Radish.**
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118344. *RHEUM RHAPONTICUM* L. Polygonaceae. **Common rhubarb.**
- No. 3875. *Rhuibarbo róxo melhorado.*
118345. *SCOLYMUS HISPANICUS* L. Cichoriaceae. **Spanish oysterplant.**
- No. 3914. *Cardilho (Escotimo da Espanha).* A biennial cultivated for its edible taproot. Native to southern Europe.
- 118346 to 118348. *SOLANUM MELONGENA* L. Solanaceae. **Eggplant.**
118346. No. 3876. *Beringela branca (Giló).*
118347. No. 3877. *Beringela vermelha (Giló).*
118348. No. 3878. *Beringela monstruosa das Canarias.*
- 118349 and 118350. *SPINACIA OLERACEA* L. Chenopodiaceae. **Common spinach.**
118349. No. 3815. *Espinafre rasteiro viroflay.*
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118185 to 118356—Continued.

118351. TETRAGONIA EXPANSA Murr. & Murray.
Aizoaceae. **New Zealand spinach.**
No. 3879. *Espinafre de Nova Zelandia.*

118352 to 118354. TRAGOPOGON PORRIFOLIUS L.
Cichoriaceae. **Vegetable oyster.**

118352. No. 3757. *Salsifis branco.*

118353. No. 3911. *Escorcionero da Espanha.*

118354. No. 3912. *Salsifis branco.*

118355. VALERIANELLA OLITORIA Pollich.
Valerianaceae.

No. 3844. *Alface do campo verde plena.*

118356. VICIA FABA L. Fabaceae. **Broadbean.**

No. 3768. *Favas de sevilha.*

118357 to 118362.

From the Union of Soviet Socialist Republics. Seeds presented by the Director, All-Union Research Institute of Humid Subtropics, Sukhum, Transcaucasus. Received September 23, 1936.

118357. ACER CAPPADOCICUM Gleditsch.
Aceraceae. **Coliseum maple.**

A tree which becomes 50 feet high, native to the Caucasus region and eastward to western China. The five- to seven-lobed, cordate leaves are 3 to 6 inches wide, and the greenish yellow flowers, in upright corymbs, are followed by spreading winged fruits.

For previous introduction see 98308.

118358. ACER VELUTINUM Boiss. Aceraceae. **Maple.**

A large tree with deeply cordate leaves, 5 to 10 inches across, having coarsely crenate-serrate lobes. The flowers are borne in large erect panicles. It is native to the Caucasus region and northern Iran (Persia).

For previous introduction see 95564.

118359. ALNUS GLUTINOSA BARBATA (C. A. Mey.) Ledeb. Betulaceae.

An alder up to about 75 feet high, of narrow pyramidal habit with dark-green, ovate-oblong leaves. Native to the Caucasus region.

118360. GLEDITSIA CASPICA Desf. Caesalpiniaceae. **Honeylocust.**

A very spiny tree, 30 to 40 feet high, the spines branched and slightly flattened, 6 inches or more long. The pinnate or bipinnate leaves are 6 to 10 inches long, and the green flowers, almost sessile, are in dense downy racemes 2 to 4 inches long. The scimitar-shaped pods are about 8 inches long and 1 inch wide. Native to northern Iran (Persia).

For previous introduction see 42777.

118361. PARROTIA PERSICA (DC.) Meyer. Hamamelidaceae.

A shrub or small tree up to 15 feet high, with spreading branches and ovate-oblong, coarsely crenate leaves, 3 to 4 inches long, which turn scarlet, yellow, and orange in the autumn and remain on the branches a long time. The flower heads, which appear in March before the leaves, are rather inconspicuous except for the pendent purple stamens; the ovoid fruits are half an inch long with two recurved lobes. Native to Iran (Persia).

For previous introduction see 81354.

118357 to 118362—Continued.

118362. PTEROCARYA PRAXINIFOLIA (Lam.) Spach. Juglandaceae. **Caucasian wingnut.**

A handsome spreading tree which becomes 60 feet high, with attractive dark-green pinnate leaves about 1 foot long. It is native to the Caucasus region.

For previous introduction see 74596.

118363. HIBISCUS sp. Malvaceae.

From Argentina. Seeds presented by Dr. Arturo Donat, Botanico del Parque Nacional de Nahuel Huapi, Bariloche, Rio Negro. Received September 28, 1936.

Seeds from a plant growing near Napalpi, Chaco, in a nearly dried swamp, and apparently very rare in that region.

118364 to 118402.

From Brazil. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received September 19, 1936.

Unless otherwise mentioned, all of this material was purchased in seed stores in São Paulo, August 28, 1936.

118364. ALSTROEMERIA sp. Amaryllidaceae.

No. 3947. Presented by Dr. F. C. Hoehne, Instituto Biologico, São Paulo, August 28, 1936. Received as *Alstroemeria insignis* Kraenzl, an invalid name.

118365. ANTHRISCUS CEREFOLIUM (L.) Hoffm. Apiaceae. **Chervil.**

No. 3918. *Cerfolio comum.*

118366. ARAUJIA SERICIFERA Brot. Asclepiadaceae.

No. 3945. A twining vine with nearly glabrous, oblong-acuminate leaves 3 inches long and cymes of faintly odorous, saucer-shaped white flowers, which are pale rose in bud. Native to southern Brazil, where the fiber around the seed is used locally in the manufacture of paper.

For previous introduction see 88685.

118367. ARISTOLOCHIA ARCUATA Mast. Aristolochiaceae.

No. 3950. From the Instituto Biologico, São Paulo, August 28, 1936. A perennial twiner with membranous, deltoid-ovate leaves 2 to 4 inches long and large solitary axillary brownish flowers. Native to east-central Brazil.

118368. ARTEMISIA ABSINTHIUM L. Asteraceae. **Common wormwood.**

No. 3910. *Losna. (Absinthio officinal.)* A cultivated herb.

118369. BOMBAX CYATHOPHORUM (Casar.) K. Schum. Bombacaceae.

No. 3943. From the Instituto Biologico, São Paulo, August 28, 1936. An ornamental tree up to about 20 feet high, with digitate leaves, the oblong leaflets 4 to 6 inches long, and showy flowers about 7 inches long. A kapoklike fiber is obtained from the pods. Native to Brazil.

118370. BORAGO OFFICINALIS L. Boraginaceae. **Common borage.**

No. 3916. *Borragem. (Boraja da Espanha.)*

118364 to 118402—Continued.

118371. *BYRSONIMA LIGUSTRIFOLIA* A. Juss.
Malpighiaceae.

No. 3956. An evergreen tree about 20 feet high, with leathery oblong or lanceolate leaves about 2 inches long and terminal racemes of small rose-colored flowers. Native to Brazil.

118372. *CARPOTROCHE BRASILIENSIS* (Raddi) Endl. Flacourtiaceae.
Sapucainha.

No. 3941. A tropical tree 30 to 50 feet high, with oblong leaves about 4 inches long and few-flowered racemes of small white flowers. The fruits are about 4 inches in diameter. A sirup used in treating leprosy is prepared from the seeds.

For previous introduction see 103624.

118373. *CHAEROPHYLLUM BULBOSUM* L.
Apiaceae. Turnip-chervil.

No. 3917. *Cerafolio bulboso*.

For previous introduction see 29816.

118374. *CHORISIA SPECIOSA* St. Hil. Bombacaceae.
Floss-silk-tree.

No. 3926. *Paineiro*. A timber tree; the floss from the seed pods is used locally like kapok.

For previous introduction see 104108.

118375. *CUPRESSUS* sp. Pinaceae.

No. 3925. *Cedrinho*.

118376. *RHYNCHOSIA MINIMA* (L.) DC.
Fabaceae.

No. 3953. From the Instituto Biologico, São Paulo, August 28, 1936.

118377. *RHYNCHOSIA PHASEOLOIDES* (Sw.) DC. Fabaceae.

No. 3954. From the Instituto Biologico, São Paulo, August 28, 1936.

118378. *RHYNCHOSIA RETICULATA* (Sw.) DC. Fabaceae.

No. 3955. From the Instituto Biologico, São Paulo, August 28, 1936.

118379. *ERYTHRINA RETICULATA* Presl.
Fabaceae.

No. 3952. From the Instituto Biologico, São Paulo, August 28, 1936. A spiny shrub up to 6 feet high, with leathery leaves of three leaflets and showy scarlet flowers in erect racemes about 5 inches long. It is used as an ornamental hedge plant in Brazil, where it is native.

118380 to 118383. *EUCALYPTUS* spp. Myrtaceae.

118380. *EUCALYPTUS BOTRYOIDES* J. E. Smith.
Bangalay.

No. 5924. A tall handsome tree, native to Australia, with beautiful dark-green horizontal lanceolate leaves, umbels of small sessile white flowers, and obovate fruits. Used in Australia as a windbreak and as a shade tree. The wood is hard, tough, and durable.

For previous introduction see 77609.

118381. *EUCALYPTUS LONGIFOLIA* Link.

No. 3922.

118364 to 118402—Continued.

118382. *EUCALYPTUS LONGIROSTRIS* F. Muell.
Creek gum.

No. 3923. In Australia, where this tree is native, it becomes 200 feet high, with smooth dark-gray bark, narrowly lanceolate leaves 6 inches or more long, stalked umbels of small white flowers, attractive to bees, and globular fruits with conical tops. The heavy red wood is durable both above and below the ground and is used for railroad ties, piles, and fence posts.

For previous introduction see 77610.

118383. *EUCALYPTUS TERETICORNIS* J. E. Smith.
Slaty gum.

No. 3921. This evergreen tree is usually not more than 100 feet high in Australia, where it is native. It is closely related to *Eucalyptus longirostris*, differing only in minor botanical characteristics.

For previous introduction see 50347.

118384. *FOENICULUM VULGARE* Hill. Apiaceae.
Fennel.

No. 3756. *Funcho (Herba doce)*.

118385. *HIPPEASTRUM AULICUM ROBUSTUM* (A. Dietr.) Voss. Amaryllidaceae.

No. 3940. From the Instituto Biologico, São Paulo, August 28, 1936. A variety which is distinguished by its more vigorous growth and broader perianth segments. The large crimson flowers are produced in spring and autumn. Native to Brazil.

118386. *HUBERIA SEMISERRATA* DC. Melastomaceae.

No. 3944. From the Instituto Biologico, São Paulo, August 28, 1936. An ornamental shrub or small tree with leathery lanceolate or ovate-lanceolate leaves about 4 inches long and small white flowers. Native to Brazil.

118387. *LUPINUS* sp. Fabaceae.

No. 3932. An annual lupine.

118388. *MAYTENUS ALATERNOIDES ANGSTIFOLIA* Reiss. Celastraceae.

No. 3946. From the Instituto Biologico, São Paulo, August 28, 1936. An evergreen shrub or small tree with narrow-lanceolate or oblong leaves $1\frac{1}{2}$ to 3 inches long and small whitish flowers. Native to Brazil.

118389. *MELINIS MINUTIFLORA* Beauv.
Poaceae. Molasses grass.

No. 3748. *Capim catiqueiro*.

118390. *MIMOSA BRACAATINGA* Hoehne.
Mimosaceae.

No. 3937. From the Instituto Biologico, São Paulo, August 28, 1936.

For previous introduction see 92939.

118391. *NICOTIANA TABACUM* L. Solanaceae.
Common tobacco.

No. 3745. Volunteer tobacco, collected in a vacant lot in São Paulo, August 28, 1936.

118392. *NICOTIANA LANGSDORFII* Schrank.
Solanaceae. Tobacco.

No. 3746. Presented by Ricardo Azzi, Seccão de Fumo, Secretaria de Agricultura; grown in Pico de Yaragua, Serra da Mantiqueira.

118364 to 118402—Continued.

118393. *OCIMUM BASILICUM* L. Mentha-
ceae. Common basil.

No. 3833. *Mangericão* (Basilico).

118394. *PIMPINELLA ANISUM* L. Apiaceae.
Anise.

No. 3915. *Aniz verde*.

118395. *PAULLINIA TRIGONIA* Vell. Sapin-
daceae.

No. 3948. From the Instituto Biológico,
São Paulo, August 28, 1936. A climbing
evergreen shrub with biternate, rarely pin-
nate leaves and clusters of small white
flowers. Native to Brazil.

118396. *PHOENIX SPINOSA* Schum. Phoe-
nicaceae. Palm.

No. 3747. From one of the city parks,
São Paulo, August 28, 1936. A bushy or
a small erect arborescent palm up to 20
feet high, with less spiny leaves and much
smaller fruits than those of *Phoenix dac-
tylifera*. Native to tropical Africa.

118397. *RUMEX ACETOSA* L. Polygonaceae.

No. 3913. *Azeda de folha larga*.

118398. *SALVIA OFFICINALIS* L. Mentha-
ceae. Garden sage.

No. 3909. *Salvia rivaz*.

118399. *SATUREJA HORTENSIS* L. Mentha-
ceae. Summer savory.

No. 3858. *Segurelha das hortas*.

118400. *SERJANIA RETICULATA* Cambess.
Sapindaceae.

No. 3949. From the Instituto Biológico,
São Paulo, August 28, 1936. A climbing
shrub with biternate, evergreen leaves and
small white flowers, solitary or in com-
pound racemes. Native to Brazil.

118364 to 118402—Continued.

118401. *TABEBUIA IPE* (Mart.) Standl.
Bignoniaceae.

No. 3939. From the Instituto Biológico,
São Paulo, August 28, 1936. A large
Brazilian tree, with digitate leaves and
showy red flowers in terminal clusters.

118402. *MYROXYLON PEREIRAE* (Royle)
Klotzsch. Fabaceae. Balsam-of-Peru.

No. 3942. From the Instituto Biológico,
São Paulo, August 28, 1936. A handsome
leguminous tree with glossy green pinnate
leaves and racemes of white flowers. The
balsam-of-Peru of commerce is obtained
from the lower part of the trunk.

For previous introduction see 104163.

118403 to 118410.

From Venezuela. Seeds collected by Ray-
mond Stadelman, Bureau of Plant Indus-
try. Received September 25, 1936.

118403 to 118409. *LYCOPERSICON ESCULEN-
TUM* Mill. Solanaceae. Tomato.

118403. From Rio Colorado, Monagas,
August 3, 1936.

118404. From Bejucal, near Monagas,
August 1, 1936.

118405. From Muelle de Cariaco, State
of Sucre.

118406. From Cumaná, State of Sucre,
August 5, 1936.

118407. From Las Mercedes, Guárico,
July 25, 1936.

118408. From Cantaura, Anzoategui,
July 28, 1936.

118409. From Muelle de Cariaco, State
of Sucre, August 12, 1936.

118410. *SOLANUM MELONGENA* L. Solana-
ceae. Eggplant.

From Las Mercedes, Guárico, July 25,
1936.

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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 129



Washington, D. C.

Issued May, 1941

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, OCTOBER 1 TO DECEMBER 31, 1936 (Nos. 118411-119266)

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INTRODUCTORY STATEMENT

This inventory, No. 129, records the plant material (Nos. 118411-119266) received by the Division of Plant Exploration and Introduction during the period from October 1 to December 31, 1936.

The greater part of this inventory may be considered essentially as a continuation of the preceding inventory, as the agricultural explorers discussed in No. 128, H. L. Westover and F. L. Wellman, Walter Koelz, W. A. Archer, and Raymond Stadelman) continued to send in material during this period from Turkey, India, Brazil, and western South America, respectively.

Although the general nature of the plant material received from these expeditions remained the same, it is of interest to note, in Dr. Archer's collections from Brazil, the increased proportion of peanut varieties (*Arachis hypogaea*) and also of other *Arachis*. This chief objective of Dr. Archer's South American trip was to get material of as many as possible of the wild species of *Arachis*, and also of the cultivated forms of the common peanut, for the particular use of Department specialists.

The genetics and pathology of the cultivated snapdragon have received much attention during the past decade, and the interests of specialists working with these projects are being served by the introduction of seeds of nearly 50 species and varieties of *Antirrhinum* (Nos. 118940-118986), presented by the Director of the Kaiser Wilhelm Institute, Müncheberg, Germany.

The botanical determinations of seeds introduced have been made and the nomenclature determined by Paul Russell, who has had general supervision of this inventory.

B. Y. MORRISON,
Principal Horticulturist, in Charge.

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D. C., September 3, 1940.

INVENTORY¹

NOTE.—This inventory is a historical record of plant material introduced for Department and other specialists. It is not to be considered as a list of plant material for distribution.

118411. ZEPHYRANTHES sp. Amaryllidaceae.

From Mexico. Bulbs purchased from Dr. C. A. Purpus, Zacuapam, Huatusco, Veracruz. Received October 15, 1936.

Salto de Agua. From the high sierra north of the volcano Orizaba.

118412. COCCOCYPSELUM LANCEOLATUM (Ruiz and Pav.) Pers. Rubiaceae.

From Brazil. Seeds collected by Dr. Doris Cochran, Smithsonian Institution, Washington, D. C. Received November 11, 1935. Numbered in October 1936.

A herbaceous creeper, densely pubescent throughout, with opposite, lanceolate, acute leaves, pale-violet flowers in small umbels, and small brilliant blue berries. Native to Peru.

118413. MESEMBRYANTHEMUM. Aizoaceae.

From California. Plants presented by Morris Schick, Glendale. Received October 19, 1936.

A hybrid mesembryanthemum (*Mesembryanthemum linguiforme* × *echinatum*), freely branching, forming a low mound of weak terete stems, yellow-green to bright-green falcate leaves, and light-yellow flowers.

118414. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

From Mexico. Seeds received through the American Legation, Mexico City, D. F., at the request of W. A. Archer, Bureau of Plant Industry. Received October 20, 1936.

Tabaco Habanero.

118415 and 118416. CASSIA spp. Caesalpinaceae.

From Australia. Seeds presented by J. Howard Johnson, St. Peters, South Australia. Received October 13, 1936.

118415. CASSIA EREMOPHILA A. Cunn.

An Australian shrub 8 to 10 feet high, with 2 pairs of long narrow terete leaflets and yellow flowers. Found growing in red sandy soil on limestone at Murray Bridge. The shrub has a long blooming season and the leaves and pods are eaten by stock.

For previous introduction see 113760.

118416. CASSIA STURTHI R. Br.

A bushy attractive evergreen shrub 3 to 6 feet high, with pinnate leaves of 3 to 5 pairs of linear to almost obovate leaflets and short dense axillary racemes of small yellow flowers. Native to Australia.

118417. ALLIUM sp. Liliaceae.

From Ankara, Turkey. Bulbs collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received October 7, 1936.

No. 940. From the Erzinjan bazar, August 8, 1936. Wild garlic brought in from the mountains.

118418. DILLENIA INDICA L. Dilleniaceae. Indian dillenia.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received June 26, 1936. Numbered in October 1936.

No. 709. From the Saharanpur Gardens, United Provinces, April 21, 1936. A handsome medium-sized tree with a round com-

¹ It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Plant Exploration and 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 seed samples or 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 identification, 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

118418—Continued.

pact crown; the dark-green leaves are 15 inches long and 3 inches wide. The large white flowers are fragrant and very attractive; and the smooth, greenish, heart-shaped fruits, 3 inches long and 4 inches wide, are produced in great profusion, maturing in September and October. The edible part consists of the large fleshy sepals which enclose the carpels and are pleasantly acid. In India the sepals are used in making jelly and cooling drinks and are also used in curries.

For previous introduction see 56791.

118419. JARILLA HETEROPHYLLA (Llave) Rusby. Papayaceae.

From Mexico. Seeds presented by Dr. G. Gandra, Department of Agriculture, Mexico, D. F. Received October 30, 1936.

Jarrilla or *bonete*. A climbing herbaceous perennial about 3 feet high, with a large tuberous root, hastate leaves up to 5 inches long, and subglobose pendent fruits about 1 inch in diameter with short, thick, fleshy appendages. These have a lemonlike odor and are used for making preserves. Native to Mexico.

118420 and 118421.

From Kenya Colony, Africa. Seeds purchased from the Mount Elgon Nurseries, Kitale. Received October 19, 1936.

118420. GLORIOSA VIRESCENS Lindl. (*G. simplex* L.). Melanthiaceae. Glorylily.

A vinelike perennial, which supports itself by the tendril-bearing tips of the oblong-lanceolate leaves 3 to 6 inches long. The yellow and red flowers, 3 inches across and borne in a lax terminal corymb, are reflexed and slightly undulate.

For previous introduction see 113843.

118421. HAEMANTHUS MULTIFLORUS Martyn. Amaryllidaceae. Bloodlily.

A tropical African species with 3 to 4 oblong leaves 6 to 12 inches long, on a short separate stem and a straight scape, 1 to 3 feet high, bearing a large umbel of 30 to 100 usually blood-red flowers with long exserted filaments and prominent yellow anthers.

118422 to 118430.

From the State of Minas Geraes, Brazil. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received October 23, 1936.

118422 to 118428. ARACHIS HYPOGAEA L. Fabaceae. Peanut.

Nos. 118422 to 118424 were collected at Lavras, October 19, 1936; cultivated peanuts.

118422. No. 4033.

118423. No. 4045.

118424. No. 4046. From the Escola Agrícola de Lavras.

118425. No. 4047. From Fazenda Morro Redondo near Lavras, September 20, 1936.

118426. No. 4058. From Lavras, September 20, 1936. A common type in this locality.

118427. No. 4061. From Diamantina, September 23, 1936; grown at Rio Vermelho.

118428. No. 4113. Cultivated peanuts from Diamantina, September 25, 1936.

118422 to 118430—Continued.

118429 and 118430. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

118429. No. 4080. Volunteer tobacco found near a house at Mandaniya, September 24, 1936. The plants were 5 feet high; flowers white, tinged or mottled with very pale pink.

118430. No. 4082. From Diamantina, September 24, 1936. Slender plants, 5 feet tall, with sticky leaves and white flowers tinged with pink.

118431. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

From Santiago, Chile. Purchased from W. R. Grace & Cia., New York, N. Y. Received October 20, 1936.

Huasco variety of Chilean alfalfa.

118432. PHYTOLACCA DIOICA L. Phytolaccaceae. Pokeberry.

From California. Seeds presented by E. O. Orpet, Santa Barbara. Received May 27, 1936. Numbered in October 1936.

Ombu. An evergreen tree, native to Argentina, which develops, eventually, a thick trunk and a large crown. The slender-stemmed leaves are elliptic to oval, and the small greenish-white, inconspicuous flowers are in pendulous racemes. The chief value of this tree is for shade; in its native country it is called "bella sombra" (handsome shade).

For previous introduction see 66817.

118433. DIOSPYROS DISCOLOR Willd. Diospyraceae. Mabolo.

Plant growing at the United States Plant Introduction Garden, Coconut Grove, Fla. Numbered in October 1936.

P. I. G. No. 1238. A medium-sized tree, native to the Philippine Islands, with shining leaves 5 to 10 inches long, pubescent beneath. The velvety, dull-reddish, thin-skinned fruits, 3 inches long and nearly 4 inches in diameter, have firm, rather dry flesh of a rather indefinite sweet flavor and 4 to 8 large seeds.

For previous introduction see 106988.

118434 to 118436. ALLIUM spp. Liliaceae.

From Greece and Turkey. Bulbs collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received October 22, 1936.

118434. ALLIUM sp.

No. 996. From Mount Olympus, Greece, September 9, 1936.

118435. ALLIUM sp.

No. 993. From the sea beach, 1 km. west of Yalove, Turkey, September 12, 1936.

118436. ALLIUM sp.

No. 994. From the slopes of Mount Olympus, Greece, September 8, 1936. An ornamental with yellow flowers.

118437 to 118443. HIPPEASTRUM spp. Amaryllidaceae.

From Brazil. Bulbs purchased by W. A. Archer, Bureau of Plant Industry. Received October 9, 1936.

118437. HIPPEASTRUM EQUESTRE (L. f.) Herb.

No. 3957. From Tres Lagoas, Matto Grosso, August 31, 1936. A cultivated plant with salmon flowers.

118437 to 118443—Continued.

118438 and 118439. HIPPEASTRUM.

Hybrid hippeastrums purchased at São Paulo, September 14, 1936. Cultivated types.

118438. No. 4015. Flowers dark red.

118439. No. 4016. Flowers pink.

118440. HIPPEASTRUM PSITTACINUM (Ker) Herb.

No. 4017. From São Paulo, September 14, 1936. A robust hippeastrum with 6 to 8 strap-shaped leaves about 2 feet long and a 2- to 4-flowered umbel on a stout peduncle. The perianth limb is 4 to 5 inches long, and the segments are apple-green with profuse crimson markings. Native to Brazil.

118441. HIPPEASTRUM CALYPTRATUM (Ker) Herb.

No. 4018. From São Paulo, September 14, 1936. A Brazilian hippeastrum with 5 or 6 strap-shaped leaves up to 2 feet long and an equally long peduncle with 2 or 3 pale-yellow flowers with green stripes; the segments are about 1½ inches wide.

118442. HIPPEASTRUM DECORATUM Lem.

No. 4019. A Brazilian hippeastrum closely allied to *Hippeastrum psittacinum*. It has about 10 linear leaves over 2 feet long and large flowers with pale-green segments tipped with purplish red.

118443. HIPPEASTRUM.

No. 4020. A hybrid hippeastrum with white and yellow flowers with red stripes.

118444 and 118445. ARTOCARPUS COMMUNIS FORST. (*Artocarpus incisa* L. f.). Moraceae. Breadfruit.

From Trinidad, British West Indies. Root cuttings presented by the manager of the St. Augustine Nursery. Received November 2, 1936.

118444. A white variety.

118445. A yellow variety.

118446. ARTOCARPUS sp. Moraceae.

From China. Seeds presented by F. G. Walsingham, Atkins Institution of the Arnold Arboretum, Soledad Cienfuegos, Cuba. Received October 30, 1936.

Originally from the Botanical Gardens, Hong Kong, China.

118447. PAEONIA sp. Ranunculaceae.

Peony.

From Turkey. Roots collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received November 2, 1936.

No. 1046. From the mountains 20 km. south of Inebolu, near Samsun, August 14, 1936.

118448. COFFEA ARABICA L. Rubiaceae. Arabian coffee.

From Puerto Rico. Seeds presented by the Agricultural Experiment Station, Mayaguez, and grown at the United States Plant Introduction Garden, Coconut Grove, Fla. Numbered in October 1936.

Variety *Erecta*. This species, as it grows wild is a handsome small tree, 10 to 15 feet high, with somewhat thin, oblong, glossy leaves 3 to 6 inches long and about

118448—Continued.

one-third as wide, abruptly narrowed to a rather short point at the apex. The fragrant white flowers are clustered in the axils. The variety *Erecta* is described as having a more upright habit, smaller leaves, and shorter joints than the type and is supposed to be better adapted to situations exposed to wind.

118449. INODES EXUL O. F. Cook. Phoenicaceae. Victoria palmetto.

Plants growing at the United States Plant Introduction Garden, Coconut Grove, Fla. Numbered in October 1936.

P. I. G. Nos 7786 and 7787. This is a new palmetto occurring in cultivation in some parts of Texas. It is distinguished from related species by its large size, the deep-green foliage, the thickened branchlets of the inflorescence, the solitary fruit, and the large seed, not wrinkled above nor hollowed out below.

For previous introduction see 44345.

118450. STYLOMA sp. Phoenicaceae.

Palm.

From Washington, D. C. Seeds collected at the National Botanic Garden, Washington, by O. F. Cook, Bureau of Plant Industry. Received October 8, 1936.

Fruits ripened in the United States Botanic Garden, October 1936. This is one of the Pacific Island palms, of the group commercially known as Pritchardia, probably from one of the eastern archipelagos—Tabiti, Marquesas, or Hawaii.

The leaves are smaller than those of *Styloma pacifica*, the segments more deeply divided, and split at the ends. The fruits have a soft fibrous pericarp instead of the thick woody shell of many of the Hawaiian *S. eriophora*, including a brown tomentum covering the leaf sheaths, petioles, and inflorescences, and the calyx is not swollen nor indurated.

118451 to 118463. ARACHIS spp. Fabaceae. Peanut.

From Brazil. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received October 9, 1936.

118451. ARACHIS HYPOGAEA L.

No. 3963. From Campo Grande, eastern Matto Grosso, September 1, 1936. A cultivated peanut.

118452. ARACHIS sp.

No. 3965. From the streets of Campo Grande, eastern Matto Grosso, September 2, 1936. Received under the specific name "rastrero," for which a place of publication has not been found.

118453 to 118455. ARACHIS DIOGOI Hoehne.

A prostrate herb about 1 foot long, with leaves composed of 4 linear-oblong leaflets and yellow flowers in small axillary clusters. Native to Brazil.

118453. No. 3966. From Campo Grande, eastern Matto Grosso, September 2, 1936. Collected along the streets.

118454. No. 3967. From Fazenda Narqueada Velha, Campo Grande, eastern Matto Grosso, September 3, 1936. Four pods were double-seeded.

118455. No. 3968. Variety Minor. From Lagoinha, on the road between Campo Grande and Capão, eastern Matto Grosso, September 6, 1936.

118451 to 118463—Continued.

118456. ARACHIS sp.

No. 3982. From Capão Bonita, eastern Matto Grosso, September 5, 1936. A peanut with tuberlike roots found in a pasture on hard red clay mixed with sand below.

118457. ARACHIS GLABRATA Benth.

No. 3990. From Campo Grande, Matto Grosso, September 9, 1936. Found in rich black earth, in the streets of the town. A dwarf perennial with a glabrous ascending stem, oblong-elliptical leaflets about one-half inch long, and small yellow flowers. Native to Brazil.

118458. ARACHIS sp.

No. 3992. Found growing in sand at Fazenda das Mocas, near Campo Grande, Matto Grosso, September 9, 1936.

118459. ARACHIS sp.

No. 3994. Found in sandy soil near Yaraguari, about 60 km. north of Campo Grande, Matto Grosso, September 10, 1936.

118460 to 118463. ARACHIS HYPOGAEA L.

118460 No. 3996. Purchased in a store at Yaraguari, Matto Grosso, September 11, 1936.

Nos. 118461 to 118463 were purchased in the market at Campinas, eastern São Paulo, September 15, 1936.

118461. No. 4028.

118462. No. 4029.

118463. No. 4030.

118464. PASPALUM NOTATUM Fluegge.
Poaceae. Bahia grass.

From Cuba. Seeds presented by R. Lopez Adams, Casa Blanca, through the Division of Forage Crops and Diseases. Received October 2, 1936.

A perennial tropical American grass which has shown promise as a pasture grass in the southern United States.

118465 and 118466. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

From Brazil. Seeds presented by the Departamento de Produção Vegetal, through W. A. Archer, Bureau of Plant Industry. Received October 20, 1936.

118465. *Goiano amarelo*.

118466. *Jalo branco*.

118467 to 118506.

From Brazil. Bulbs and seeds collected in the State of São Paulo by W. A. Archer, Bureau of Plant Industry. Received October 5, 1936.

Unless otherwise stated, this material was received as seeds.

118467 and 118468. ALLIUM SATIVUM L. Liliaceae. Garlic.

Bulbs purchased in the general market at São Paulo, August 21, 1936.

118467. No. 3698. *Alho grande*. Sweeter and less strong than the ordinary type. A white variety.

118468. No. 3699. *Alho grande*. Purplish.

118467 to 118506—Continued.

118469 to 118482. ARACHIS HYPOGAEA L. Fabaceae. Peanut.

Nos. 118469 to 118476 were purchased in the general market of São Paulo, August 21, 1936.

118469. No. 3700. *Amendoim branca*. Seed oblong, integument whitish, pod crooked with prominent crest and deep reticulations and constrictions.

118470. No. 3701. *Amendoim tatu*. Seed coat pink, seed strongly compressed, semicylindrical; pods straight, smooth.

118471. No. 3702. Apparently "tatu" type.

118472. No. 3703. Seed oblong, integument red, pods deeply reticulated and somewhat crooked.

118473. No. 3704. Apparently the same as No. 3701 [P. I. 118470].

118474. No. 3705. Some seeds compressed cylindrical; others oblong and not compressed.

118475. No. 3706. Apparently "tatu" type.

118476. No. 3707.

118477. No. 3730. Seeds grown at the Botanical Garden, São Paulo, and presented by Dr. F. C. Hoehne. Received as *Arachis nambiquarae*.

118478. No. 3731. From a store, São Paulo, August 23, 1936. A peanut with an oblong seed, pale integument, and a rough crooked pod.

Nos. 118479 to 118482 were collected in a wholesale house at São Paulo, August 25, 1936.

118479. No. 3737. Seeds oblong, integument pale, pods small, dark.

118480. No. 3738. *Tatu*.

118481. No. 3739. *Tatu*.

118482. No. 3740. *Tatu*.

118483. CARICA PAPAYA L. Papayaceae. Papaya.

No. 3697. *Mamão vermelho*. A red-fleshed papaya from the general market at São Paulo, August 21, 1936.

118484 and 118485. CICER ARIETINUM L. Fabaceae. Chickpea.

From the general market at São Paulo, August 21, 1936.

118484. No. 3713. *Grão de bico nacional*.

118485. No. 3714. *Grão de grande bico*. This is the Spanish "garbanzo." The seeds are roasted and eaten like peanuts.

118486. CICHORIUM INTYBUS L. Cichoriaceae. Chicory.

No. 3727. *Catalonha*. From a seed store in São Paulo, August 25, 1936. A cultivated vegetable that is used for salads. Introduced from Italy.

118487. HORDEUM DISTICHON L. Poaceae. Barley.

No. 3710. *Cebada*. A cultivated barley from the general market at São Paulo, August 21, 1936.

118467 to 118506—Continued.

118488 and 118489. *ORYZA SATIVA* L. Poaceae. Rice.

Cultivated rice from the general market at São Paulo, August 21, 1936.

118488. No. 3708.

118489. No. 3709. *Arroz argulho*.

118490. *PHASEOLUS LUNATUS* L. Fabaceae. Lima bean.

No. 3733. *Feijão branco*. From a store in São Paulo, August 23, 1936.

118491 to 118500. *PHASEOLUS VULGARIS* L. Fabaceae. Common bean.

From the general market at São Paulo, August 21, 1936.

118491. No. 3715. *Feijão de vara branca*. A climbing bean.

118492. No. 3716. *Feijão de vara maron*. A climbing bean.

118493. No. 3717. *Feijão preto*.

118494. No. 3718. *Feijão branco*.

118495. No. 3719. *Feijão chumbinho*.

118496. No. 3720. *Feijão manteiga riscado*.

118497. No. 3721. *Feijão manteiga*.

118498. No. 3722. *Feijão mulatinho*.

118499. No. 3723. *Feijão branco miúdo*.

118500. No. 3724. *Feijão côr de vinha*.

118501. *PISUM SATIVUM* L. Fabaceae. Pea.

No. 3711. *Ervilha branca*. From the general market at São Paulo, August 21, 1936.

118502. *SCLEROBIUM DENUDATUM* Vog. Caesalpinaceae.

No. 3734. From the Botanical Garden, São Paulo, August 24, 1936. A handsome ornamental tree with leathery leaves composed of 2 to 5 obovate or lanceolate, oblong leaflets $1\frac{1}{2}$ to 4 inches long and terminal panicles of small, yellow, fragrant flowers. Native to southern Brazil.

118503. *TRITICUM AESTIVUM* L. Poaceae. Common wheat.

No. 3732. Cultivated wheat purchased in a store at São Paulo, August 23, 1936.

118504. *VIGNA SINENSIS* (Torner) Savi. Fabaceae. Cowpea.

No. 3712. *Feijão frade*. From the general market at São Paulo, August 21, 1936.

118505 and 118506. *ZEA MAYS* L. Poaceae. Corn.

Milho pipoco. Cultivated popcorn from the general market at São Paulo, August 21, 1936.

118505. No. 3695. A variety with yellow grains.

118506. No. 3696. A variety with red grains.

118507 to 118555. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

From Venezuela. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received October 23, 1936.

118507 to 118555—Continued.

Nos. 118507 to 118511. From Yagua, Carabobo.

118507. No. 257. *Habano*.

118508. No. 258.

118509. No. 259. *Americano and Cubano*.

118510. No. 260. *Americano*.

118511. No. 261.

Nos. 118512 and 118513. From Magdalena, Aragua.

118512. No. 262.

118513. No. 263.

118514. No. 264. From San Joachim, Carabobo.

Nos. 118515 to 118518. From Miranda, Carabobo.

118515. No. 265. 118517. No. 267.

118516. No. 266. 118518. No. 268.

Nos. 118519 and 118520. From El Zimbron (Miranda), Carabobo.

118519. No. 269. *Guacharo*.

118520. No. 270. *Capadare*.

Nos. 118521 to 118524. From Hato Viejo, Carabobo.

118521. No. 271. *Guacharo*.

118522. No. 272. *Guacharo*.

118523. No. 273. *Guacharo and Capadare*.

118524. No. 274. *Guacharo and Capadare*.

Nos. 118525 and 118526. From Salom, Yaracuy.

118525. No. 275. *Capadare*.

118526. No. 276. *Guacharo*.

Nos. 118527 to 118529. From Cocorote, Yaracuy.

118527. No. 277. *Rabo de gallo negro*.

118528. No. 278. *Rabo de gallo negro*.

118529. No. 279. *Rabo de gallo negro*.

Nos. 118530 to 118533. From Guama, Yaracuy.

118530. No. 280. *Capadare*.

118531. No. 281. *Rabo de gallo negro*.

118532. No. 282. *Rabo de gallo negro*.

118533. No. 283. *Rabo de gallo negro*.

Nos. 118534 to 118539. From Yaritagua, Yaracuy.

118534. No. 284. *Rabo de gallo negro and Congo*.

118535. No. 285. *Virginia*.

118536. No. 286. *Congo*.

118537. No. 287. *Congo*.

118538. No. 288. *Congo*.

118539. No. 289. Mixed varieties.

Nos. 118540 and 118541. *Maporito*. From Las Palmitas, Lara.

118540. No. 290. 118541. No. 291.

118542. No. 292. Mixed varieties from El Toro (Duaca) Lara.

118507 to 118555—Continued.

118543. No. 293. *Cocuzo* and *Maporito*. From Cordero (Barguisimeto) Lara.

118544. No. 294. *Virginia*. From Pirita, Falcon.

Nos. 118545 to 118551. From Mirimire, Falcon.

118545. No. 295. Mixed varieties.

118546. No. 296. *Negro*.

118547. No. 297. *Virginia corta*.

118548. No. 298. *Amarillo*.

118549. No. 299.

118550. No. 300. *Virginia*.

118551. No. 301. *Virginia*.

Nos. 118552 and 118553. From Capadare, Falcon.

118552. No. 302. *Planton*.

118553. No. 303. *Cola de gallo*.

118554. No. 304. *Rabo de gallo*. From Tocuyo, Falcon.

118555. No. 305. *Cocoroteno*. From Na-guanagua, Aragua.

118556 to 118661.

From the State of Kashmir, India. Seeds and bulbs collected by Walter Koelz, Bureau of Plant Industry. Received October 1, 1936.

Unless otherwise mentioned, the material was received as seeds.

118556 to 118563. ALLIUM spp. Liliaceae.

118556 and 118557. ALLIUM CEPA L.

Onion.

118556. No. 1143. From Skardo, Baltistan Province, August 15, 1936, at 6,500 feet altitude. A flattened white onion, strong, of good quality, and said to be a good keeper.

118557. No. 1144. From Skardo, Baltistan Province, August 14, 1936, at 6,500 feet altitude. A mixed sample of red and white onions, the two varieties grown in this region.

118558. ALLIUM SATIVUM L. Garlic.

No. 1140. *Asgakpa*. Bulbs from Skardo, Baltistan Province, August 14, 1936 at 6,500 feet altitude. Used for flavoring.

118559. ALLIUM sp.

No. 1070. From above Tarakbal, at 10,000 feet altitude in an alpine meadow, July 21, 1936. An ornamental plant about 6 inches high.

118560. ALLIUM sp.

No. 1094. From Burzil, in an alpine meadow at 10,000 feet altitude, August 5, 1936. An ornamental plant with a head of yellow flowers.

118561. ALLIUM sp.

No. 1122. From Sodpur, Baltistan Province, at 7,500 feet altitude, August 10, 1936. A plant 18 inches high with heads of fragrant white flowers; found along a watercourse.

118562. ALLIUM sp.

No. 1105. Bulbs from Burzil, August 6, 1936, at 11,000 feet altitude. A plant about 2 feet high with rose-purple flowers; grows best in dry rocky places.

118556 to 118661—Continued.

118563. ALLIUM sp.

No. 1057. *Pran*. From Bandipur, July 29, 1936, at 5,200 feet altitude. An onion described as small but strong scented.

118564. ANDROSACE sp. Primulaceae.

No. 1085. From Charban, August 3, 1936, at 8,000 feet altitude. A plant with a compact rosette of leaves and a flower stalk 1 foot high, with a terminal cluster of flowers.

118565. ANDROSACE sp. Primulaceae.

No. 1088. From a mountain slope, 11,000 feet altitude near Burzil, August 5, 1936. A rock plant 2 inches high, found growing in mats. The flowers are pink, with a darker eye.

118566. ANEMONE sp. Ranunculaceae.

No. 1098. From an alpine meadow at 10,000 feet altitude, near Burzil, August 6, 1936. A bushy ornamental plant up to 19 inches high, with large, semidouble, yellow or white flowers over an inch across.

118567 to 118569. AQUILEGIA spp. Ranunculaceae. Columbine.

118567. AQUILEGIA VULGARIS L.

No. 1074. From above Tarakbal, July 31, 1936, at 10,000 feet altitude, in a damp fir forest. A very attractive plant nearly 4 feet high, with fragrant flowers 2 inches across; spurs white or tinged rose or purple, petals yellowish.

118568. AQUILEGIA sp.

No. 1082. From near Charban, August 3, 1936, on a dry open slope at 8,000 feet altitude. A plant 18 inches high found growing in clumps with abundant, very fragrant flowers; petals yellow and spurs tipped with rose.

118569. AQUILEGIA sp.

No. 1091. From an alpine meadow near Burzil, at 9,000 feet altitude, August 5, 1936. A plant 18 inches high with very attractive flowers, 1½ inches across; sepals deep blue purple, petals rich wine-colored.

118570. ASTRAGALUS sp. Fabaceae.

No. 1103. From Burzil, August 6, 1936, at 10,000 feet altitude. A plant 4 feet tall, found in clumps in dry open places. The flowers, whitish tinged with red, are in long spikes.

118571. BRASSICA OLERACEA VIRIDIS L. Brassicaceae. Kale.

No. 1043. *Karum Sag*. From Srinagar, July 27, 1936. Purchased in the bazar. The leaves are picked all summer for greens; by autumn the plant may be 5 feet tall.

118572. BRASSICA RAPA L. Brassicaceae. Turnip.

No. 1136. From Skardo, Baltistan Province, August 12, 1936, at 6,500 feet altitude. Said to be a round, sweet, white turnip of superior quality.

118573. CALTHA PALUSTRIS L. Ranunculaceae. Marshmarigold.

No. 1072. Variety *Alba*. From above Tarakbal, at 10,000 feet altitude in the dry, rocky bed of a spring freshet, August 1, 1936. A white-flowered form.

118556 to 118661—Continued.

118574. *CAPSICUM ANNUM L.* Solanaceae.
Common redpepper.

No. 1050. *Marzuwangun.* From Srinagar, July 27, 1936. Seeds taken from dried fruits purchased in the bazar. Fruits to 6 inches long, sharp, red, and 1½ inches wide.

118575. *CHENOPODIUM ALBUM L.* Chenopodiaceae.

No. 1051. *Ostahak.* Seeds purchased in the market at Srinagar, July 27, 1936. Plant over 6 feet high; leaves used as a potherb.

For previous introduction see 115889.

118576 to 118578. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. Watermelon.

118576. No. 1004. *Tarbus; handvend.* From Dal Lake, July 19, 1936. Fruit subglobose, 14 inches long, dark green with thick rind and pink flesh; fairly sweet, but with large air spaces. The plants are grown on rafts in the water; the floating rafts are made by piling dirt and pond weeds, bulrushes, cattails, etc., on sticks, and the ripe fruits often seem half in the water.

118577. No. 1039. *Handvend.* From Srinagar, July 25, 1936, at 5,200 feet altitude. Fruit globose, 14 inches long, pale green with faint fine mottling; flesh particularly sweet and air spaces particularly large. Grown on a floating raft in Lake Dal.

118578. No. 1045. *Handvend.* From the market at Srinagar, July 27, 1936. Fruit dark green, 10 inches in diameter; rind tough and hard; flesh sweet and very seedy; seeds red and black.

118579. *CODONOPSIS* sp. Campanulaceae.

No. 1081. From Gurez, August 2, 1936, at 8,500 feet altitude. Plant grows 3 feet high in dry or damp open situations and has attractive bell-like, purple-blue flowers.

118580. *COLUTEA* sp. Fabaceae.

No. 1108. From Sodpur, Baltistan Province, August 10, 1936, on a dry slope at 7,000 feet altitude. A shrub up to 5 feet high, with thick glaucous pinnate leaves and yellow flowers, but it is chiefly interesting for the large inflated pods that remain till winter.

118581. *CUCUMIS MELO L.* Cucurbitaceae.
Muskmelon.

No. 998. *Karbuza.* From Srinagar, July 17, 1936, at 5,000 feet altitude. Fruits 18 inches long, ellipsoid, yellow, decidedly but sparsely netted, fragrant and of fair flavor. Its chief quality is its adaptability to wet conditions. Grown on the floating raft gardens in Lake Dal.

118582. *CUCUMIS MELO L.* Cucurbitaceae.
Muskmelon.

No. 1046. *Sarda.* Fruit bought in the bazar at Srinagar, July 27, 1936, but probably of western origin. Fruit yellow, nearly smooth, elongate or round, 1 foot long; fragrant with thick sweet flesh.

118583. *CUCUMIS SATIVUS L.* Cucurbitaceae.
Cucumber.

No. 1007. From Dal Lake, July 20, 1936. Fruit 2 feet long and 4 inches through, smooth, pale green, becoming netted and golden brown when ripe. Plants grown on floating rafts.

118556 to 118661—Continued.

118584. *CUCUMIS SATIVUS L.* Cucurbitaceae.
Cucumber.

No. 1059. From Bandipur, July 31, 1936. A wild fruit, the shape and size of an egg, pale green, and the pulp not acid.

118585. *DAUCUS CAROTA L.* Apiaceae.
Carrot.

No. 1134. *Wapalu.* From Skardo, Baltistan Province, at 6,500 feet altitude, August 12, 1936. Probably a mixture of two extremes; one yellow, one white, but both woody and watery.

118586. *DELPHINIUM* sp. Ranunculaceae.
Larkspur.

No. 1063. From above Bandipur, July 30, 1936, in a pine forest. A very attractive plant 3 feet high, with sky-blue flowers; growing on a dry rocky slope.

118587. *DIANTHUS* sp. Silenaceae.

No. 1064. From above Bandipur, July 20, 1936. Plants 19 inches high with large, attractive, unscented white flowers. Found growing in clumps on a dry rocky slope near a pine forest.

118588. *DIANTHUS* sp. Silenaceae.

No. 1129. From Skardo, Baltistan Province, at 6,500 feet altitude, August 12, 1936. Plant 1 foot high with narrow glaucous basal leaves and white single flowers 1¼ inches across. Found on dry open plain.

118589. *EPHEDRA* sp. Gnetaceae.

No. 1084. From Peshwari, at 8,500 feet altitude, August 4, 1936. An ornamental plant 6 inches high, laden with red berries, found growing on a dry open slope.

118590. *EREMURUS HIMALAICUS* Baker.
Liliaceae. Himalayan desertcandle.

No. 1087. From Mimarg, August 4, 1936, at 8,500 feet altitude. Plants 5 feet high, with creamy white flowers.

118591. *FRAGARIA* sp. Rosaceae.

No. 1071. July 31, 1936. From above Tarakbal at 10,000 feet altitude. Plants 6 inches high, with pleasant crimson fruits one-half inch in diameter.

118592. *FRTLILLARIA* sp. Liliaceae.

No. 1096. August 5, 1936. From Burzil, in alpine meadows at 10,000 feet altitude. Bulbs of plants 2½ to 3 inches high.

118593. *GENTIANA* sp. Gentianaceae.

No. 1104. From Burzil, August 6, 1936, at 10,000 feet altitude. Plants 18 inches high, with attractive wine to purplish flowers. Found growing in rather dry places.

118594. *IMPATIENS* sp. Impatiensaceae.

No. 1077. August 1, 1936. From Karagabal, at 8,000 feet altitude. Attractive plants over 3 feet high, covered with a succession of large rose-colored flowers 1 by 1½ inches wide; often found on dry open ground in pure colonies.

118595. *IMPATIENS* sp. Impatiensaceae.

No. 1068. July 31, 1936, above Tarakbal at 10,000 feet altitude. Plants 3 feet high, found in pure colonies on dry ground in openings in fir forest. The attractive deep old-rose flowers, 1 to 1½ inches across, are borne in clusters.

118556 to 118661—Continued.

118596 to 118599. IRIS spp. Iridaceae.

118596. IRIS KUMAONENSIS Wall.

No. 1099. From Burzil, August 5, 1936, in alpine meadows at 10,000 feet altitude.

For previous introduction see 110098.

118597. IRIS sp.

No. 1060. From Bandipur, July 30, 1936. A wild iris of the Apogon section.

118598. IRIS sp.

No. 1013. From Partan, July 22, 1936, at 5,000 feet altitude. Plants 4 feet high growing in semishade on damp ground, with several flowers on each stalk; Apogon section.

118599. IRIS sp.

No. 1014. From Partan, July 22, 1936, at 5,000 feet altitude. Plants in masses, often filling the whole roadside; clusters up to 2½ feet high; Apogon section.

118600. JUGLANS REGIA L. Juglandaceae.
Persian walnut.

No. 1080. From Gurez, Kashmir, August 2, 1936, at 8,500 feet altitude. Stunted trees usually not over 25 feet high and 1 foot in diameter, found in groves in ravines along the river on the isolated slopes that have otherwise practically no trees. The season is short, and the winters are said to be very cold.

118601 to 118604. LACTUCA spp. Cichoriaceae.
Lettuce.

118601. LACTUCA SATIVA L. Garden lettuce.

No. 1127. *Dum.* From Skardo, Baltistan Province, August 12, 1936, at 6,500 feet altitude. A native head lettuce, now going to seed; plants 3 feet high, seeds white.

118602. LACTUCA sp.

No. 1055. From Bandipur, July 29, 1936.

118603. LACTUCA sp.

No. 1062. July 30, 1936. Above Bandipur in pine forest at 7,000 feet altitude. A wild plant 3 feet high, with purple flowers.

118604. LACTUCA sp.

No. 1126. *Dum.* From Skardo, Baltistan Province, August 12, 1936, at 6,500 feet altitude. A native head lettuce, now going to seed; plants 3 feet high, seeds black.

118605. ALTHAEA ROSEA (L.) Cav. Malvaceae.
Hollyhock.

No. 1053. From Bandipur, July 29, 1936, at 5,200 feet altitude.

118606. LAVATERA sp. Malvaceae.

No. 1075. From Karagbal, August 1, 1936, at 8,000 feet altitude. A very attractive plant, 4 feet high, covered with lovely rose-pink flowers 3 inches across. Found growing in clumps and not so scraggly as most of our mallows. Tolerant of heat and drought.

118556 to 118661—Continued.

118607. LLOYDIA sp. Liliaceae.

No. 1095. From Burzil, August 5, 1936, on a mountain slope at 11,000 feet altitude. An onionlike plant 9 inches high; flowers probably yellowish with purple markings.

118608 to 118610. LONICERA spp. Cadi-foliaceae.

118608. LONICERA sp.

No. 1109. August 10, 1936. From above Sodpur, Baltistan Province, at 12,000 feet altitude, on a dry slope along a stream. A well-formed attractive shrub 8 feet high, with small pale-green leaves and lovely orange to orange-red berries.

118609. LONICERA sp.

No. 1110. August 10, 1936. From above Sodpur, Baltistan Province, at 12,000 feet altitude, on dry ground. A well-formed shrub 4 feet high, with stiff, bristly-edged leaves and attractive orange berries.

118610. LONICERA sp.

No. 1118. August 10, 1936. From above Sodpur, Baltistan Province, at 12,000 feet altitude on a dry slope. An ornamental well-branched shrub, 4 feet high, with attractive red berries.

118611. LYCOPERSICON ESCULENTUM Mill. Solanaceae.
Tomato.

No. 1006. From Dal Lake, July 19, 1936. Red fruits 1½ inches in diameter, flattened to one-half inch. Grown on the floating rafts along with cattails and bulrushes.

118612. MALVA SYLVESTRIS L. Malvaceae.

No. 1124. From Skardo, Baltistan Province, August 11, 1936, in a garden at 6,500 feet altitude. A cultivated bushy plant 3 feet high, with rose-purple flowers 1½ to 2 inches across.

118613. MECONOPSIS sp. Papaveraceae.

No. 1100. From Burzil, August 5, 1936, at 10,000 feet altitude. A plant 2 feet high, which grows under ledges or in the open; flowers blue-purple or tinged with wine red.

118614. MEDICAGO SATIVA L. Fabaceae.
Alfalfa.

No. 1154-A. From Skardo, Baltistan Province, August 15, 1936, at 6,500 feet altitude. Said to be very good.

118615. MELILOTUS sp. Fabaceae.

No. 1154-B. From Skardo, Baltistan Province, August 15, 1936, at 6,500 feet altitude. A form with yellow flowers; "said to be poisonous unless watered before it is fed to stock."

118616. MEDICAGO SATIVA L. Fabaceae.
Alfalfa.

No. 1154-C. From Skardo, Baltistan Province, August 15, 1936, at 6,500 feet altitude; said to be Gilgiti in origin and to give three or four cuttings a year.

118617. MEDICAGO SATIVA L. Fabaceae.
Alfalfa.

No. 1154-D. From Skardo, Baltistan Province August 15, 1936, at 6,500 feet altitude; said to be a tall Yarkand sort.

118556 to 118661—Continued.

118618. *MEDICAGO SATIVA* L. Fabaceae.
Alfalfa.

No. 1056. From Bandipur, July 29, 1936. An alfalfa that becomes 6 feet high; said to be an excellent fodder.

118619. *MOMORDICA CHARANTIA* L. Cucurbitaceae.
Balsam-pear.

No. 1040. *Karela*. From Srinagar, July 26, 1936, at 5,200 feet altitude. Fruit 6 inches long, tender and only moderately bitter; watery with large flattened tubercules.

For previous introduction see 116939.

118620. *MOMORDICA* sp. Cucurbitaceae.

No. 993. *Kakari*. From Lahore, Punjab, July 14, 1936. A rather top-shaped fruit 2 inches in diameter, papillose, green turning yellow, while the seeds are in a red matrix. The bitter fruit is used as a vegetable.

118621 to 118623. *MORUS* spp. Moraceae.
Mulberry.

From Skardo, Baltistan Province, August 12 to 14, 1936, at 6,500 feet altitude.

118621. *MORUS* sp.

No. 1128. Fruit 1 to 1½ inches long, resembling a loganberry in form, color, and taste. One of the best mulberries found.

118622. *MORUS* sp.

No. 1135. Fruit 1 inch long and one-half inch wide, white with large druplets; sweet and rich-flavored.

118623. *MORUS* sp.

No. 1146. Fruit 1½ inches long and five-eighths of an inch wide, lavender purple to black, resembling a blackberry. Seeds small and inconspicuous. Fruit very sweet.

118624. *MYRICARIA* sp. Tamaricaceae.

No. 1116. From Sodpur, Baltistan Province, August 11, 1936, at 7,000 feet altitude, along a lake. An ornamental shrub about 6 feet high, with long graceful branches, small, thick, pale-green leaves, and terminal spikes of pink flowers.

118625. *MYRICARIA* sp. Tamaricaceae.

No. 1120. From Sodpur, Baltistan Province, August 10, 1936, at 12,500 feet altitude, along a stream. A useful ornamental which resembles the tamarisk in form, but has larger leaves.

118626. *MYOSOTIS SYLVATICA* Hoffm. Boraginaceae.
Forget-me-not.

No. 1067. From above Tarakbal, July 31, 1936, at 10,000 feet altitude.

118627. *NARCISSUS* sp. Amaryllidaceae.

No. 1058. Bulbs from Srinagar, July 30, 1936. Said to be native.

118628. *OCIMUM* sp. Menthaceae.

No. 1047. From the market at Srinagar, July 27, 1936.

118629. *OCIMUM* sp. Menthaceae.

No. 1048. From the market at Srinagar, July 27, 1936.

118556 to 118661—Continued.

118630 to 118632. *PAPAVER* spp. Papavera-
ceae.
Poppy.

118630. *PAPAVER SOMNIFERUM* L.
Opium poppy.

No. 1132. *Lamgan*. From Skardo, Baltistan Province, August 12, 1936, at 6,500 feet altitude. A variety with large, double, crimson flowers 3 to 4 inches across.

118631. *PAPAVER RHOEAS* L.

No. 1125. From Skardo, Baltistan Province, August 12, 1936, at 6,500 feet altitude. A cultivated annual 3 feet high, with fully double, deep crimson to pink flowers 2 inches across. Said to have come from Iran (Persia).

118632. *PAPAVER SOMNIFERUM* L.
Opium poppy.

No. 1133. From a garden at Skardo, Baltistan Province, August 12, 1936, at 6,500 feet altitude. Said to be an annual with double pink flowers of medium size.

118633. *PARAQUILEGLIA* sp. Ranunculaceae.

No. 1093. From Burzil, August 5, 1936, at 11,000 feet altitude. Plants growing in clumps on the mountain peak; flowers probably pale blue purple.

118634. *PISUM SATIVUM* L. Fabaceae. Pea.

No. 1141. *Pokshang*. From Skardo, Baltistan Province, August 14, 1936, at 6,500 feet altitude.

118635. *PLANTAGO OVATA* Forsk. Plantagi-
naceae.

No. 1049. *Ismogul*. From the market at Srinagar, July 27, 1936. An annual plantain, the seeds of which are used medicinally. Native to the Mediterranean region.

For previous introduction see 5441.

118636. *POLEMONIUM* sp. Polemoniaceae.

No. 1079. From Gurez, August 2, 1936, at 8,500 feet altitude. Plant 3½ feet high, found on damp ground in both open places and shade. The terminal clusters of large blue-purple flowers are very attractive.

118637. *PORTULACA* sp. Portulacaceae.

No. 1131. From a garden at Skardo, Baltistan Province, August 12, 1936, at 6,500 feet altitude. The flowers of this species here are all alike; nearly 2 inches across, deep rose magenta with a white throat.

118638. *PRANGOS* sp. Apiaceae.

No. 1097. *Palangos*. From Peshwari, August 3, 1936, at 8,500 feet altitude. A bushy plant with long, finely divided basal leaves and a flower stalk 3 feet high, with yellow flowers. When dry the plant is cut for fodder and is said to be relished by all stock except horses. Found on dry hill-sides and said to be tolerant of heat, drought, and low temperatures.

118639 to 118643. *PRIMULA* spp. Primu-
laceae.
Primrose.

From near Burzil, August 5, 1936, along streams.

118556 to 118661—Continued.

118639 to 118643—Continued.

118639. PRIMULA sp.

No. 1089. Plant 3 feet high, with blue-purple or purple flowers with yellow eyes, in heads 2 inches across; found at 9,000 feet altitude.

118640. PRIMULA sp.

No. 1090. Plant 3 feet high, flowers probably white, tinged with pink; found at 10,000 feet altitude.

118641. PRIMULA sp.

No. 1092. Plant 6 inches high, leaves whitish beneath, flowers not seen; from 11,000 feet altitude.

118642. PRIMULA sp.

No. 1101. Plant up to 18 inches high, with head of large purplish flowers with lighter eye; very attractive, will grow on high ground, but does best with roots in cold water.

118643. PRIMULA ROSEA Royle.

No. 1102. From 11,000 feet altitude, just below the snow line. A primula that often forms large tufts 4 to 8 inches high, with oblong-ovate or oblanceolate, crenulate, or small-toothed leaves and few to many rose-red flowers in a loose head, before the leaves. Native to the western Himalayas.

For previous introduction see 28232.

118644. RIBES sp. Grossulariaceae.

No. 1121. From Sodpur, Baltistan Province, August 11, 1936, at 11,000 feet altitude. A compact bush up to 6 feet high, well-laden with orange-red fruits; sweet but with large seeds; used for jams and jellies. The plant, with its persistent fruit and strong green leaves, is distinctly ornamental.

118645. ROSA sp. Rosaceae.

No. 1061. From above Bandipur, July 30, 1936, at 6,000 feet altitude. Dense, rounded, free-flowering bushes 5 feet high, growing wild on a dry isolated slope.

118646. RUBUS sp. Rosaceae.

No. 1075. From near Karagbal, August 1, 1936, at 9,000 feet altitude, on a dry slope at the edge of a fir forest. Bushes 2 feet high, bearing sweet, fragrant, red fruits one-half inch in diameter.

118647. RUBUS sp. Rosaceae.

No. 1086. From Peshwari, August 3, 1936, at 8,500 feet altitude. Plant 1 foot high, found growing in deep shade in fir forest. The few fruits were red, acid, and about one-half inch in diameter.

118648. NEPETA ERECTA (Royale) Benth. Menthaceae.

No. 1073. Above Karagbal, July 31, 1936, at 10,000 feet altitude. An herb 18 inches tall with ovate or oblong acute leaves and many small blue-purple flowers in axillary or terminal spikes. Found growing in fir forest. Native to the Himalayan region.

118649. SAMBUCUS WIGHTIANA Wall. Caprifoliaceae.

No. 1005. From above Bandipur, July 30, 1936, in pine forest in shade and sun. A shrubby plant with herbaceous stems 4 to 5 feet high, large pinnatifid leaves, and corymbs of creamy, heavy-scented flowers, followed by small, orange, edible berries. Native to India.

118556 to 118661—Continued.

118650. BERGENIA sp. Saxifragaceae.

No. 1113. From a dry slope above Sodpur, Baltistan Province, August 10, 1936, at 11,000 feet altitude. A perennial with 2 or 3 large shining leaves and a spray of white to pink flowers. The leaves turn red in the autumn.

118651. SEDUM sp. Crassulaceae.

No. 1083. From Charban, August 3, 1936, at 8,000 feet altitude, on a dry open slope. Plants 8 inches high with a rosette of fleshy leaves and pinkish flowers.

118652. SOLANUM MELONGENA L. Solanaceae. Eggplant.

No. 1156. Paghan. From Skardo, Baltistan Province, August 5, 1936, at 6,500 feet altitude. Medium-sized green fruits more or less tinged with purple; of fair quality.

118653. SPINACIA OLERACEA L. Chenopodiaceae. Common spinach.

No. 1153. From Skardo, Baltistan Province, August 15, 1936, at 6,500 feet altitude. Grown as a potherb.

118654. SPINACIA OLERACEA L. Chenopodiaceae. Common spinach.

No. 1052. From Srinagar, July 27, 1936. Purchased in the market. Grown as a potherb.

118655. SPIRAEA CRENATA L. Rosaceae. Snow spirea.

No. 1117. From Sodpur, Baltistan Province, August 10, 1936, at 12,000 feet altitude, along a stream. An ornamental shrub 7 feet high, with well-formed, graceful branches and dense umbels of small white flowers. Native from southeastern Europe to the Caucasus region.

118656. TROLLIUS sp. Ranunculaceae.

No. 1066. From above Tarakbal, July 31, 1936, at 10,000 feet altitude in alpine meadow. A plant 2 feet high.

118657. VIBURNUM NERVOSUM D. Don. Caprifoliaceae.

No. 1078. From near Karagbal, August 2, 1936, from fruit growing in the open along a stream. A large shrub or small tree with elliptic-oblong, shiny green leaves about 3 inches long and cymes of a few small rose-colored flowers followed by purple-black drupes. Native to the Himalayas at altitudes of 10,000 to 13,000 feet.

118658. VIOLA sp. Violaceae. Violet.

No. 1106. From Deosai Plain, Baltistan Province, in a meadow at 12,000 feet altitude, August 8, 1936. Plants small and bushy, growing in clumps 6 inches across and 2 or 3 inches high. The purple flowers have a white spot on the lower petal and are veined with darker purple.

118659. (Undetermined.)

No. 1115. From Sodpur, Baltistan Province, August 10, 1936, at 7,500 feet altitude. An attractive shrubby perennial up to 5 feet high, which grows on dry or damp ground and, in season, is covered with fine purple flowers in long loose spikes.

118660. (Undetermined.)

No. 1119. From below Sodpur, Baltistan Province, August 11, 1936, at 7,000 feet altitude in a stream bed. An ornamental bush 3 feet high, with thick, pale-green, elliptic leaves and white flowers followed by large orange-red berries.

118556 to 118661—Continued.

118661. (Undetermined.)
No. 1107. From Deosai Plain, Baltistan Province, August 7, 1936, at 12,000 feet altitude. An attractive plant 18 inches high, with thick, shiny leaves and long heads of very fragrant white flowers; found growing in clumps.
- 118662 to 118694.
From the State of Matto Grosso, Brazil. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received October 9, 1936.
118662. *ACROCOMIA* sp. Phoenicaceae. Palm.
No. 3987. *Bacahuba*. From Capão Bonito, September 5, 1936.
118663. *ARISTOLOCHIA* sp. Aristolochiaceae.
No. 3961. From Capão Grande, September 1, 1936. A tropical twiner with slender stems, leathery, broad-ovate leaves about 2 inches long, and large yellow solitary flowers. Native to Brazil.
118664. *ASPIDOSPERMA* sp. Apocynaceae.
No. 3976. From Fazenda das Moças, near Campo Grande, September 6, 1936.
118665. *ATTALEA* sp. Phoenicaceae. Palm.
No. 3964. *Pindoba*. From Nova Niponica, August 31, 1936. A small palm 20 feet high, whose leaves are used as forage.
118666. *ATTALEA* sp. Phoenicaceae. Palm.
No. 3988. From Capão Bonito, September 5, 1936.
- 118667 and 118668. *BETA VULGARIS* L. Chenopodiaceae. Common beet.
Purchased in a shop in Campo Grande, September 9, 1936.
118667. No. 4009. *Beterraba vermelha comprida*.
118668. No. 4010. *Beterraba roxa redonda*.
- 118669 and 118670. *BRASSICA OLERACEA CAPITATA* L. Brassicaceae. Cabbage.
Purchased in a shop in Campo Grande, September 9, 1936.
118669. No. 3998. *Repolho crespo de Milão*.
118670. No. 3999. *Repolho pé curto de Hollanda*.
118671. *CAPSICUM ANNUUM* L. Solanaceae. Common redpepper.
No. 4008. *Pimentão doce da Hespanha*. Purchased in a shop in Campo Grande, September 9, 1936.
118672. *CARICA PAPAYA* L. Papayaceae. Papaya.
No. 3962. From Campo Grande, September 1, 1936. A cultivated fruit with yellow flesh.
- 118673 and 118674. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. Watermelon.
Purchased in a shop in Campo Grande, September 9, 1936.
118673. No. 4013. *Melancia de Santa Barbara*.
118674. No. 4014. *Melancia favorita*.

118662 to 118694—Continued.

118675. *COCOS* sp. Phoenicaceae. Palm.
No. 3986. Collected halfway between Campo Grande and Capão Bonito, September 4, 1936.
118676. *TEPHEROSIA CANDIDA* DC. Fabaceae.
No. 4024. From the Instituto Agronomico, Campinas, September 15, 1936.
- 118677 and 118678. *CUCUMIS SATIVUS* L. Cucurbitaceae. Cucumber.
Purchased in a shop in Campo Grande, September 9, 1936.
118677. No. 4011. *Pepino pequeno cor-nichon*.
118678. No. 4012. *Pepino verde grande*.
118679. *DAUCUS CAROTA* L. Apiaceae. Carrot.
No. 4007. *Cenoura vermelho 1/2 comprida*. Purchased in a shop in Campo Grande, September 9, 1936.
118680. *FICUS* sp. Moraceae. Fig.
No. 3971. From Lagoinho, on the road between Campo Grande and Capão Bonito, September 4, 1936. A large tree whose fruits are hard and green when ripe.
118681. *GOSSYPIUM* sp. Malvaceae. Cotton.
No. 3972. From Boliche Boa Vista, on the road between Campo Grande and Capão Bonito, September 4, 1936.
118682. *GOSSYPIUM* sp. Malvaceae. Cotton.
No. 4025. *Goyas*. From the Instituto Agronomico, Campinas, September 15, 1936. The fiber is brown.
- 118683 and 118684. *LACTUCA SATIVA* L. Cichoriaceae. Garden lettuce.
Purchased in a shop in Campo Grande, September 9, 1936.
118683. No. 4005. *Alface repolhuda des estações*.
118684. No. 4006. *Alface romana*.
- 118685 and 118686. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.
Purchased in a shop in Campo Grande, September 9, 1936.
118685. No. 4003. *Tomate liso grande*.
118686. No. 4004. *Tomate grande vermelho*.
118687. *MELANCIUM CAMPESTRIS* Naud. Cucurbitaceae.
No. 3959. From Campo Grande, September 1, 1936. A decumbent annual with 3- to 5-lobed leaves about 2 inches long and small yellow flowers. The vine and fruit resemble those of the watermelon, and the fruit is sweet scented. Native to Brazil.
118688. *OPUNTIA* sp. Cactaceae.
No. 3958. From Campo Grande, September 1, 1936. A native arborescent species which endures freezing.
118689. *PASSIFLORA ALATA* Curtis. Passifloraceae. Passionflower.
No. 3960. From Campo Grande, September 1, 1936. An evergreen climber with winged stems, oval to ovate entire leaves, large fragrant blue-green flowers, the segments carmine within, and edible fruits about 5 inches long. Native to Brazil.

118662 to 118694—Continued.

118690. *PHASEOLUS VULGARIS* L. Fabaceae.
Common bean.

No. 4000. *Feijão amarelo manteiga*.
Purchased in a shop in Campo Grande,
September 9, 1936.

118691 and 118692. *PISUM SATIVUM* L. Fa-
baceae. Pea.

Purchased in a shop in Campo Grande,
September 9, 1936.

118691. No. 4001. *Ervilha torta flor*
branca.

118692. No. 4002. *Ervilha ãna para*
grão.

118693. *ROLLINIA* sp. Annonaceae.

No. 3973. From Lagoinha, near Campo
Grande, September 6, 1936.

118694. *ROLLINIA* sp. Annonaceae.

No. 3974. From Capão Bonito, Septem-
ber 6, 1936. A medium-sized tree.

118695 to 118715.

From Brazil. Seeds collected by Graham Bell
Fairchild. Received October 5, 1936.

118695. *BAUHINIA* sp. Caesalpinaceae.

From Cambará, Paraná, August 1936.
A small forest tree; flowers not seen, but
at this season the tree is a mass of pinkish
fluff, very ornamental.

118696. *CITRULLUS VULGARIS* Schrad. Cu-
cubitaceae. Watermelon.

From Anapolis, Goyaz. A very sweet
melon with small seeds.

118697 to 118700. *CROTALARIA* spp. Faba-
ceae.

From Anapolis, Goyaz.

118697. A purple-flowered legume.

118698. A legume with small heavy pods.

118699. A shrubby ornamental legume
with yellow flowers.

118700. [No data.]

118701. *EUTERPE* sp. Phoenicaceae. Palm.

Collected in Cambará, Paraná.

118702. *GALACTIA* sp. Fabaceae.

A silver-leaved legume.

118703. *HELIOCARPUS* sp. Tiliaceae.

The tropical American genus *Heliocar-*
pus is composed of trees and shrubs with
usually trilobate leaves and small yellow
or greenish flowers. The wood is soft
and light.

118704. *INDIGOFERA* sp. Fabaceae.

118705 and 118706. *MICONIA* spp. Melasto-
maceae.

From Anapolis, Goyaz. The miconias
are tropical American trees and shrubs
with large, prominently veined leaves and
rather small white, rose, purple, or yel-
low flowers in corymbs and panicles.

118705. A shrub with purple flowers.

118706. An ornamental shrub with dark-
green leaves, rufous hairy beneath,
and spikes of purple berries.

118707. *NICOTIANA TABACUM* L. Solanaceae.
Common tobacco.

From Anapolis, Goyaz. Collected in an
old garden.

118695 to 118715—Continued.

118708. *PHYSALIS* sp. Solanaceae.

From Anapolis, Goyaz. A sweet edible
tomatolike fruit.

118709. *PASSIFLORA* sp. Passifloraceae.

From Anapolis, Goyaz. A large-fruited
passionflower.

118710. *PITHECELLOBIUM* sp. Mimosaceae.

From Cambará, northern Paraná.

118711. *RUBUS* sp. Rosaceae.

From Anapolis, Goyaz. The fruit is
green when ripe, sweet, aromatic, and
seedy.

118712. *TECOMA* sp. Bignoniaceae.

From Cambará, Paraná, August 5,
1936.

Nos. 118713 to 118715 were collected at
Anapolis, Goyaz.

118713. (Undetermined.)

A tree with small pinnate leaves and
seed pods in long racemes. Flowers not
seen.

118714. (Undetermined.)

A plant with gingerlike red fruits.

118715. (Undetermined.)

A plant with blue flowers.

118716 to 118730.

From Honan, China. Seeds presented by
George D. Schlosser, Greenville, Ill. Re-
ceived October 15, 1936.

118716. *HORDEUM VULGARE* COELESTE L.
Poaceae. Six-rowed barley.

A bearded, white, hull-less barley.

118717. *HORDEUM VULGARE TRIFURCATUM*
(Schlecht.) Beauv. Poaceae. Barley.

A white, beardless and hull-less barley.

118718 to 118724. *SETARIA ITALICA* (L.)
Beauv. Poaceae. Millet.

From the Experiment College farm, Kai-
feng, Honan.

118718. [No data.]

118719. Common white millet.

118720. Yellow millet.

118721. Good early millet.

118722. Small yellow millet.

118723. An early millet.

118724. A small yellow millet.

118725 to 118728. *TRITICUM AESTIVUM* L.
Poaceae. Common wheat.

From the Experiment College farm, Kai-
feng, Honan.

118725. An early, drought-resistant, soft
wheat.

118726. No. 12-13. A very good and
early beardless wheat with strong
stems.

118727. No. 124. An early wheat.

118728. A good Chinese wheat.

118729. *ZEA MAYS* L. Poaceae. Corn.

Yellow corn from Honan, drought-re-
sistant and very early. There are 2 ears
on each stalk, and the plant does not grow
suckers.

118716 to 118730—Continued.

118730. *ZEA MAYS* L. Poaceae. Corn.

An early white variety of excellent flint corn from north-central China near the Yellow River.

118731 to 118754.

From the Estado de São Paulo, Brazil. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received November 2, 1936.

118731. *ARACHIS HYPOGAEA* L. Fabaceae. Peanut.

No. 4125. *Jambo*. October 7, 1936. From the Estação Biológico do Alto de Serra.

118732. *ARACHIS HYPOGAEA* L. Fabaceae. Peanut.

No. 4126. October 7, 1936. From the peanut oil mill of Giorgi, Picosse & Cia.

118733 to 118754. *NICOTIANA* spp. Solanaceae. Tobacco.118733. *NICOTIANA ALATA* GRANDIFLORA Comes.

No. 4129. Purchased October 8, 1936, from Dierberger & Cia.

118734 to 118753. *NICOTIANA TABACUM* L. Common tobacco.

Presented by the Instituto Agronomico do Estado de São Paulo, Campinas, October 1936.

118734. No. 4160. *Virginia Bright*. From the fazenda Santa Eliza, in 1932.118735. No. 4161. *São Gonçalo*. From Estação Experimental de São Gonçalo dos Campos, Bahia, in 1933.118736. No. 4162. *Yanhi Yaká*. From Directorie de Inspeção e Fomento Agricolas, São Paulo, in 1932.118737. No. 4163. *Brazil Bahia*. From the Instituto Bahiano de Fumo, Bahia, in 1935.118738. No. 4164. *Cubano*. From the Fazenda Santa Eliza, in 1932.118739. No. 4165. *Verpelet*. From Estação Experimental de São Gonçalo dos Campos, Bahia, in 1935.118740. No. 4166. *Georgia*. From Escola Superior de Agricultura de Viçosa, Minas Geraes.118741. No. 4167. *Gober Peloss*. From Buitenzorg, Java, in 1933.118742. No. 4168. *Gober Koenjit*. From Buitenzorg, Java, in 1933.

118743 to 118745. From Estação Experimental de Cana de Assucar, Piracicaba, São Paulo, in 1933.

118743. No. 4169. *Hickory Pryor*.118744. No. 4170. *Habano Colorado*.118745. No. 4171. *Heavy Drooping Leaf*.118746. No. 4172. *Porsutian*. From Italy in 1933.

118747 to 118749. From Tripoli in 1933.

118747. No. 4173. *Fazzani*.118748. No. 4174. *Salento*.118749. No. 4175. *Tripoli*.118750. No. 4176. *Perustitzia*. From Italy in 1933.

118731 to 118754—Continued.

118733 to 118754—Continued.

118734 to 118753—Continued.

118751. No. 4177. *Samsoum*. From Italy in 1933.118752. No. 4178. *Goyano*. From Estação Experimental de Limeira, São Paulo, 1936.118753. No. 4179. *Habana*. From Afonso Penna, Bahia, in 1935.118754. *NICOTIANA SYLVESTRIS* Spegaz.

No. 4128. Purchased from Dierberger & Cia., São Paulo, October 8, 1936.

118755. *CLADRASTIS PLATYCARPA* (Maxim.) Mak. Fabaceae.

From Jamaica Plain, Mass. Plant presented by William H. Judd, Arnold Arboretum. Received November 2, 1936.

A deciduous tree up to about 60 feet high, with rather large pinnate leaves and many small white flowers in large upright pyramidal panicles. This is a Japanese relative of the yellow-wood (*Cladrastis lutea*) of the eastern United States.

118756. *MEDICAGO SATIVA* L. Fabaceae. Alfalfa.

From Turkey. Roots collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received November 2, 1936.

No. 1050. Wild alfalfa, collected October 12, 1936, 39 km. north of Kastamonu.

118757. *CORYDALIS DIPHYLLIA* Wall. Papaveraceae.

From India. Bulbs purchased from Mrs. P. Kohli, Baramulla, Kashmir. Received November 3, 1936.

A low herbaceous perennial about 2 feet high, with triternate leaves about 1 inch long and yellowish flowers tipped with purple, in racemes 1 to 2 inches long. Native to the Himalayan region.

118758. *RUBUS PROBUS* Bailey. Rosaceae. Raspberry.

From Puerto Rico. Plants presented by Atherton Lee, Agricultural Experiment Station, Mayaguez. Received November 4, 1936.

The so-called "Queensland" raspberry, which is related to *Rubus rosaeifolius* but is less thorny and has glabrous leaves and pedicels, with usually 7 leaflets which are relatively broader than those of *R. rosaeifolius*. The plant is upright, about 8 feet high, and the canes are not perennial. This is a cultivated plant in Puerto Rico, where it has been grown for some years, and is probably originally from Queensland.

For previous introduction see 66088.

118759. *DACTYLIS GLOMERATA* L. Poaceae. Orchard grass.

From New Zealand. Seeds presented by the Canterbury Agricultural College, Lincoln. Received November 4, 1936.

Cocksfoot Akroa.

118760. *RAPHANUS SATIVUS* L. Brassicaceae. Radish.

From Honan, China. Seeds presented by George D. Schlosser, Greenville, Ill. Received November 3, 1936.

A large fall or winter radish.

118761 to 118765. CALLISTEMON spp.
Myrtaceae.

Seedlings growing at the United States Plant Introduction Garden, Chico, Calif. Numbered in November 1936.

118761. CALLISTEMON CITRINUS (Curtis) Skeels.

(Lath house.) Selection No. 1 of P. I. No. 90845.

118762. CALLISTEMON.

(Arboretum.) Selection No. 1 of P. I. No. 90845.

118763. CALLISTEMON.

(Lath house.) Selection No. 5 of P. I. No. 90845.

118764. CALLISTEMON.

(Testing beds.) Selection No. 1 of P. I. No. 90847. A handsome shrub of drooping habit that has reached a height of 5½ feet with a spread of 7 feet. The foliage is dense and the individual leaves resemble those of *Callistemon acuminatus*. The flowers, with very dark red stamens an inch long, are in dense spikes 3 to 5 inches long and appear during April and May. This is a selection from second-generation seedlings of a cross between *C. citrinus* and *C. acuminatus*.

118765. CALLISTEMON.

(Testing beds.) Selection No. 3 of P. I. No. 90847.

118766. HAEMANTHUS NATALENSIS
Pape. Amaryllidaceae.

From South Africa. Seeds purchased from the Winton Nurseries, Bonnie Vale, Cape Province. Received November 9, 1936.

A haemanthus with 8 or 9 membranous, bright-green leaves more than a foot long, the lower ones spotted on the back with red-brown. The small flowers, in a very dense globose mass, 3 to 4 inches in diameter, surrounded by several large, deep-purple bracts, are obscured by the long scarlet filaments and bright yellow anthers. Native to southern Africa.

118767 to 118781.

From Brazil. Seeds and bulbs collected by W. A. Archer, Bureau of Plant Industry. Received November 20, 1936.

Unless otherwise mentioned, the material was received as seeds.

118767. ACROCOMIA MOKAYAYBA Barb. Rodr.
Phoenicaceae. Palm.

No. 4127. From Capão Bonito, Minas Geraes. A pinnate-leaved palm 12 to 20 feet high, with a dense terminal crown of leaves about 6 feet long and linear leaflets. Native to Brazil.

118768. ACROCOMIA sp. Phoenicaceae. Palm.

No. 4059. From Lavras, eastern Minas Geraes, September 20, 1936.

118769. ARISTOLOCHIA GALEATA Mart. and Zucc. Aristolochiaceae.

No. 4073. From near Mendanha, along a road in eastern Minas Geraes, September 24, 1936. A twining aristolochia allied to *A. brasiliensis*, with broad cordate leaves about 3 inches long and large solitary flowers, green and dark purple. Native to Brazil.

118767 to 118781—Continued.

118770. CORCHORUS CAPSULARIS L. Tiliaceae. Jute.

No. 4038. *Yassourão*. From the Escola Agricola de Lavras, Minas Geraes, September 19, 1936. Used as a substitute for flax.

118771. CUCUMIS MELO L. Cucurbitaceae. Muskmelon.

No. 4031. From the market at São Paulo, September 14, 1936. This melon is now arriving from Portugal, being shipped in large quantities by boat. Each fruit is wrapped in cellophane.

118772. FICUS NITIDA Thunb. Moraceae. Fig.

No. 4039. From the Escola Agricola de Lavras, September 19, 1936. A tree 20 feet high; reproduced by cuttings.

118773. FRAGARIA VESCA L. Rosaceae. Strawberry.

No. 4027. From the market at Campinas, eastern São Paulo, September 15, 1936.

118774. FREESIA REFRACTA (Jacq.) Klatt. Iridaceae.

No. 4130. Purchased from Dierberger & Cia., São Paulo, October 8, 1936. Flowers were varicolored, pink, white, blue, etc.

118775. GOSSYPIUM PERUVIANUM Cav. Malvaceae. Cotton.

No. 4081. *Rim de Boi*. From near Mendanha, Minas Geraes. Plant 15 feet high, flowers pale yellow tinged with pink.

118776. HIPPEASTRUM ORGANENSE Hook. Amaryllidaceae.

No. 4115. From Serra de Piedade, September 1936. Bulbs of a Brazilian hippeastrum with 5 or 6 lorate, purple-glaucous leaves about a foot long and a stout peduncle usually bearing 2 large bright-crimson flowers with a green mark on each segment.

118777. INDIGOFERA ENDECAPHYLLA Jacq. Fabaceae. Indigo.

No. 4116. From the Fazenda Gamelleira of the Secretaria de Agricultura, Bello Horizonte, eastern Minas Geraes, August 24, 1936. An annual or biennial tropical African prostrate legume 2 to 3 feet long, with 7 to 9 oblong leaflets and a dense raceme of violet purple flowers. Used as a cover crop.

For previous introduction see 77296.

118778. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

No. 4070. Near Mendanha, along a road in eastern Minas Geraes, September 24, 1936; near a long-abandoned camp.

118779. ZEA MAYS L. Poaceae. Corn.

No. 4232. *Milho cravo*. From Lavras, eastern Minas Geraes, September 19, 1936.

118780. ZEPHYRANTHES COMMERSONIANA Herbert. Amaryllidaceae.

No. 4114. From Sierra de Piedade, eastern Minas Geraes, September 1936. Bulbs of a zephyranthes with 3 or 4 narrow linear leaves about 8 inches long and flowers over an inch long with bright-red limbs, yellow at the base. Native to Argentina and Uruguay.

118767 to 118781—Continued.

118781. ZEPHYRANTHES CARINATA Herbert. Zephyrilly. Amaryllidaceae.

No. 4091. Bulbs collected along the highway between Diamantina and Guinda, eastern Minas Geraes, March 25, 1936. A bulbous perennial with linear leaves and a scape about a foot high, bearing a single rosy flower. Said to be the largest and choicest of the rosy-flowered zephyrillies and blooms in the summer. Native to the West Indies.

For previous introduction see 112351.

118782 to 118790. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

From Venezuela. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received November 2, 1936.

118782. No. 1. From La Victoria, Aragua, July 22, 1936.

118783. No. 2. *Riñon*. From Yaritagua, Yaracuy, at 374 m. altitude, September 23, 1936.

118784. No. 3. From El Cordero, Lara, at 580 m. altitude. September 25, 1936. A very small variety.

118785. No. 4. *Liso*. From Yaritagua, Yaracuy, at 374 m. altitude, September 23, 1936.

118786. No. 5. *Jobo*. From Yaritagua, Yaracuy, at 374 m. altitude, September 23, 1936.

118787. No. 6. From Yagua, Carabobo, at 450 m. altitude, September 15, 1936.

118788. No. 7. *Isteña*. From Yagua, Carabobo, at 450 m. altitude, September 15, 1936.

118789. No. 8. From Yagua, Carabobo, at 450 m. altitude September 15, 1936.

118790. No. 9. From Yagua, Carabobo, at 450 m. altitude, September 15, 1936.

118791 and 118792. SACCHARUM. Poaceae. Sugarcane.

From Australia. Cuttings presented by the Bureau of Sugar Experiment Stations, Brisbane, at the request of E. W. Brandes, Bureau of Plant Industry. Received November 10, 1936.

118791. N. G. 15 × 28 N. G. 251.

118792. *Oramboo* × 28 N. G. 251.

118793. HYPARRHENIA RUF A (Nees) Stapf. Poaceae. Jaragua grass.

From São Paulo, Brazil. Seeds presented by J. F. Tippet, New York City, N. Y., through H. N. Vinall, Bureau of Plant Industry. Received November 12, 1936.

A perennial grass, native to Brazil and cultivated there and at other places in the American Tropics. It is a leafy bunchgrass, the tussocks of which become a foot or so in diameter and the numerous leafy culms 6 to 10 feet high. It is primarily a hay grass.

For previous introduction see 54679.

118794. LILIUM BROWNII Poit. Liliaceae. Browns lily.

From China. Seeds presented by Dr. Andrew Tze, Hong Kong. Received November 13, 1936.

Seed from plants growing wild in the hills of Hong Kong. A Chinese lily with

118794—Continued.

stem 2 to 3 feet high and lanceolate leaves 3 to 5 inches long. The trumpet-shaped flowers, usually solitary but sometimes 2 to 4 together, are 6 to 8 inches long and nearly as wide and are delicately fragrant. The waxy segments are creamy white inside, fading to pure white and tinged with yellow at the base. Outside they are white with brown-purple midribs, the 3 outer ones variably tinged with brownish purple.

For previous introduction see 105324.

118795 and 118796.

From Nebraska. Seeds purchased from J. B. E. Wernecke, Royal, Nebr. Received November 9, 1936.

118795. AMORPHA CANESCENS Pursh. Fabaceae.

118796. AMORPHA FRUTICOSA L. Fabaceae. Indigobush.

For previous introduction see 107651.

118797 to 118800. CINCHONA spp. Rubiaceae.

From Tanganyika Territory, Africa. Seeds presented by the East African Agricultural Research Station, Amani. Received November 11, 1936.

118797. CINCHONA OFFICINALIS L.

A tree, native to the Andes, yielding a bark remarkably rich in quinine which crystallizes readily as quinine sulfate.

For previous introduction see 104220.

118798. CINCHONA PUBESCENS Vahl.

For previous introduction see 104224.

118799. CINCHONA PUBESCENS × OFFICINALIS.

Introduced under the specific name "robusta," for which a place of publication has not been found.

118800. CINCHONA OFFICINALIS × PUBESCENS.

For previous introduction see 104222.

118801 to 188808.

From Brooklyn, N. Y. Plants presented by the Brooklyn Botanic Garden, Brooklyn. Received November 16, 1936.

118801. ACTINIDIA CALLOSA Lindl. Dilleniaceae.

A climbing shrub, becoming 20 feet or more long, with conspicuous lenticels on the branchlets. The oval to oblong, serrulate acuminate leaves are 3 to 5 inches long, and the small white flowers, one-half inch across, are followed by ovoid spotted fruits 1 inch long. Native to the Himalayas and southwestern China.

For previous introduction see 114707.

118802. EUPTELEA POLYANDRA Sieb. and Zucc. Tro hodendraceae.

A shrub or small tree to 30 feet high, with roundish-ovate, dentate leaves 2 to 4 inches long and precocious flowers, conspicuous by their red anthers. Native to Japan.

118803. EUROTIA EVERSMANNIANA Stzchégel. Chenopodiaceae.

A shrub to about 6 feet high, with small oval or oblong-ovate rigid leaves. Native to western Asia.

118801 to 118808—Continued.

118804. *EVODIA HUPEHENSIS* Dode. **Ruta-**
Evodia. **ceae.**

A common tree in the woodlands of western Hupeh, China, where it grows to a height of 20 to 40 feet. It has smooth gray bark, spreading branches, and white flowers in large flat corymbs.

For previous introduction see 90143.

118805. *LONICERA HETEROLOBA* Batalin. **Caprifoliaceae.**

A shrub similar to *Lonicera tatsienensis*, but with smaller, more hairy leaves. Native to northwestern China.

118806. *RUBUS FLOSCULOSUS* Focke. **Rosa-**
ceae.

A deciduous shrub up to 12 feet in height, with stout erect stems arching at the much-branched top. The pinnate leaves, 4 to 7 inches long, are smooth above and covered beneath with a close white felt. The small pink flowers, in narrow racemes, 2 to 4 inches long, are succeeded by small, very dark-red or black edible fruits of agreeable flavor. Native to central and western China.

For previous introduction see 66605.

118807. *RUBUS XANTHOCARPUS* Bur. and Franch. **Rosaceae.**

A perennial Chinese climber, 1 to 4 feet long, sparsely prickly or unarmed, which dies to the ground every year. The edible fruits are golden yellow. Native to central and western China.

For previous introduction see 92796.

118808. *STYRAX DASYANTHA* Perkins. **Sty-**
racaceae. **Snowbell.**

An ornamental Chinese shrub or small tree up to 25 feet high, with oblong-elliptic leaves about 3 inches long and showy white flowers in slender racemes.

For previous introduction see 104208.

118809 to 118823.

From Brazil. Seeds and bulbs collected by W. A. Archer, Bureau of Plant Industry. Received November 6, 1936.

118809. *ARACHIS HYPOGAEA* L. **Fabaceae.**
Peanut.

No. 4212. From Usina, 9 km. west of Santa Cruz de Rio Pardo, São Paulo, October 12, 1936.

118810. *Cocos* sp. **Phoenicaceae.** **Palm.**

No. 4214. From Usina, 9 km. west of Santa Cruz de Rio Pardo, São Paulo, October 12, 1936.

118811. *Cocos* sp. **Phoenicaceae.** **Palm.**

No. 4213. From Usina, 9 km. west of Santa Cruz de Rio Pardo, São Paulo, October 12, 1936.

118812. *GOSYPIUM HIRSUTUM* L. **Malva-**
ceae. **Upland cotton.**

No. 4200. From Usina, 9 km. west of Santa Cruz de Rio Pardo, São Paulo, October 12, 1936.

118813 to 118819. *HIPPEASTRUM* spp. **Amaryllidaceae.**

Nos. 118813 to 118818. Bulbs presented by Dr. F. C. Hoehne, Estação Biológico de Alto de Serra, city of São Paulo, October 8, 1936.

118809 to 118823—Continued.

118813 to 118819—Continued.

118813. *HIPPEASTRUM AULICUM* ROBUSTUM (A. Dietr.) Voss.

No. 4154. Flowers red; said to be native in this region.

For previous introduction see 118385.

118814. *HIPPEASTRUM BLUMENAVIA* (Carr.) Sealy.

No. 4153. A hippeastrum allied to *H. vittatum*, with smaller narrow-oblong to broad oblong-oval petiolate leaves and 4 or 5 white or pale reddinged flowers 2 inches long. Native to southeastern Brazil.

118815. *HIPPEASTRUM CALYPTRATUM* (Ker) Herbert.

No. 4158.

For previous introduction and description see 118441.

118816. *HIPPEASTRUM PSITTACINUM* (Ker) Herbert.

No. 4157. A robust hippeastrum with 6 to 8 strap-shaped leaves about 2 feet long and a 2- to 4-flowered umbel on a stout peduncle. The perianth limb is 4 to 5 inches long, and the segments are apple green with profuse crimson markings. Native to Brazil.

118817. *HIPPEASTRUM PUNICEUM* BARBATUM (Herbert) Voss.

No. 4155. A variety with umbels of about 3 white flowers. Native to tropical South America.

118818. *HIPPEASTRUM RUTILUM* CROCATUM (Ker) Baker.

No. 4156. A variety differing from the type in having bright-orange flowers, more undulate segments, larger leaves, and a taller stem.

118819. *HIPPEASTRUM PSITTACINUM* (Ker) Herbert.

No. 4139. Bulbs from Bututan, São Paulo, October 8, 1936.

For previous introduction and description see 118816.

118820. *TRITONIA HYALINA* (L.) Baker. **Iridaceae.**

No. 4118. Bulbs purchased from Dierberger & Cia., city of São Paulo, October 6, 1936. A tritonia with slender or branched stems about 1 foot high; flowers pale salmon, marked with white outside, in a raceme. Native to South Africa.

118821. *ZEPHYRANTHES CANDIDA* (Lindl.) Herbert. **Amaryllidaceae.**

No. 4159. Bulbs presented by Dr. F. C. Hoehne, Estação Biológico de Alto de Serra, city of São Paulo, October 8, 1936. A subtropical white-flowered species with linear leaves a foot long appearing with the flowers; the flowers are often rose tinted on the outside and about 2 inches long. Native to Argentina.

For previous introduction see 112350.

118822. *ZEPHYRANTHES* sp. **Amaryllidaceae.**

No. 4182. Bulbs presented by Augusto Gehrt, city of São Paulo, October 8, 1936. A variety with pink flowers.

118809 to 118823—Continued.

118823. ZEPHYRANTHES CARINATA Herbert.
Amaryllidaceae. Zephyrilly.

No. 4119. Bulbs purchased from Dierberger & Cia., city of São Paulo, October 6, 1936.

For previous introduction and description see 118781.

118824 and 118825.

From the Union of Soviet Socialist Republics. Scions presented by the Institute of Plant Industry, Leningrad. Received January 18, 1936. Numbered in November 1936.

118824. PRUNUS ARMENIACA L. Amygdalaceae.
Apricot.

Shirassky.

118825. PRUNUS SIMONII Carr. Amygdalaceae.
Simon plum.

118826. PRUNUS ARMENIACA L. Amygdalaceae.
Apricot.

From Morocco. Tree presented by H. Brayard, Directeur de la Station Experimentale, Marrakech. Received April 9, 1936. Numbered in November 1936.

Jusseie No. 13.

118827 to 118895.

From Mexico. Seeds collected by J. H. Kempton, Bureau of Plant Industry. Received November 2, 1936.

118827. CENTAUREA sp. Asteraceae.

From Arroya Rosilla, Durango.

118828 to 118841. DATURA spp. Solanaceae.

From Los Herreras, Durango.

118828. No. 1. 118835. No. 8.

118829. No. 2. 118836. No. 9.

118830. No. 3. 118837. No. 10.

118831. No. 4. 118838. No. 11.

118832. No. 5. 118839. No. 12.

118833. No. 6. 118840. No. 13.

118834. No. 7. 118841. No. 14.

118842 to 118872. EUCHLAENA MEXICANA Schrad. Poaceae. Teosinte.

118842. From Cerro Prieto, Durango.

118843 to 118845. From Nobogame, Chihuahua.

118843. No. 1.

118844. No. 2.

118845. No. 3.

118846. From San Lorenzo, Durango.

118847 to 118849. From Arroya de Tarahumaras.

118847. No. 1.

118848. No. 2.

118849. No. 3.

118850 to 118862. From Nobogame, Chihuahua.

118850. No. 1. 118857. No. 8.

118851. No. 2. 118858. No. 9.

118852. No. 3. 118859. No. 10.

118853. No. 4. 118860. No. 11.

118827 to 118895—Continued.

118842 to 118872—Continued.

118854. No. 5. 118861. No. 12.

118855. No. 6. 118862. No. 13.

118856. No. 7.

118863 to 118872. From Cerro Prieto, Durango.

118863. No. 1. 118868. No. 6.

118864. No. 2. 118869. No. 7.

118865. No. 3. 118870. No. 8.

118866. No. 4. 118871. No. 9.

118867. No. 5. 118872. No. 10.

118873. HORDEUM VULGARE L. Poaceae.
Barley.

From San Pedro, near Guanacera, Durango.

118874 to 118876. SENECIO spp. Asteraceae.

From Arroya Rosilla, Durango.

118874. No. 1.

118875. No. 2.

118876. No. 3.

118877. TRIPSACUM sp. Poaceae.

From near Cienaga Prieta, Chihuahua.

118878 to 118895. ZEA MAYS L. Poaceae.
Corn.

118878. From Tarahumara, San Pedro. October 12, 1936.

118879. From Cienaga Prieta. White corn.

118880. From Cienaga Prieta.

118881. From Ojo Frio.

118882. From Cienaga Prieta.

118883. From Cienaga Prieta.

118884. From Cienaga Prieta.

118885. From Cienaga Prieta.

118886. From Trampas, Durango.

118887. From Trampas, Durango.

118888. From Cienaga Prieta.

118889. From Nobogame.

118890. From Nobogame.

118891. From Nobogame.

118892. From Arroya de Tarahumaras.

118893. From Cienaga Prieta.

118894. From Cienaga Prieta.

118895. From Cienaga Prieta.

118896 to 118904. TRITICUM AESTIVUM L. Poaceae. Common wheat.

From Australia. Seeds presented by Dr. H. Wenholz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received November 21, 1936.

Kenya wheat. From the Glen Innes Experiment Farm; introduced for its high resistance to stem rust.

118896. No. C. 9906. 118901. No. C. 10862.

118897. No. C. 9965. 118902. No. C. 10863.

118898. No. C. 9968. 118903. No. C. 10865.

118899. No. C. 10854. 118904. No. C. 10866.

118900. No. C. 10857.

118905 to 118919. PHASEOLUS VULGARIS
L. Fabaceae. **Common bean.**

From the Union of Soviet Socialist Republics. Seeds presented through the Institute of Plant Industry, Leningrad. Received November 18, 1936.

A collection of beans which have proved resistant to mosaic disease and bacteriosis, from the Ukraine and Transcaucasus.

118905. No. 1458.	118913. No. 3393.
118906. No. 1475.	118914. No. 3688.
118907. No. 1527.	118915. No. 4889.
118908. No. 1571.	118916. No. 4891.
118909. No. 3009.	118917. No. 4904.
118910. No. 3076.	118918. No. 6732.
118911. No. 3078.	118919. No. 6900.
118912. No. 1921.	

118920 to 118925.

From Turkey. Bulbs and seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received November 13, 1936.

118920. *ALLIUM* sp. Liliaceae.

No. 1028. Bulbs collected 32 km. east of Chanakkale, September 19, 1936.

118921. *ALLIUM* sp. Liliaceae.

No. 1019. A mixed collection of bulbs from the mountains 35 km. east of Chanakkale, September 19, 1936.

118922. *CASTANEA SATIVA* Mill. Fagaceae. Spanish chestnut.

No. 1025. Purchased in Istanbul; (originally from large trees at Burma). September 30, 1936.

For previous introduction see 103975.

118923. *PINUS HALEPENSIS* Mill. Pinaceae. Aleppo pine.

No. 1026. From the mountains 17 km. north of Izmir, September 24, 1936.

118924. *PISTACIA* sp. Anacardiaceae.

No. 1018. From large shade trees in a park at Balikesir, September 20, 1936.

118925. *QUERCUS COCCIFERA* L. Fagaceae. Kermes oak.

No. 1014. From 7 km. southeast of Kemal Pasha, September 25, 1936. An evergreen shrub or small tree of dense habit with stiff, spiny, broad-elliptic to ovate-oblong, hollylike leaves one-half to 1½ inches long. Native to the Mediterranean region.

118926. *PHYLLOSTACHYS* sp. Poaceae. **Bamboo.**

From Canada. Plants presented by J. Basil Keys, Victoria, British Columbia. Received November 24, 1936.

A moderately hardy bamboo obtained several years ago, under the name *Phyllostachys mitis*, by Mr. Keys from a local nursery.

118927. *SECURIDACA LONGIPEDUNCULATA* Fres. Polygalaceae.

Rhodesia violet-tree.

From Southern Rhodesia, Africa. Seeds presented by R. H. B. Dickson, Maienji, Odzi. Received November 24, 1936.

118927—Continued.

A much-branched divaricate shrub or small tree native to tropical Africa. The coriaceous leaves are ovate-elliptic, and the flowers, in terminal spreading racemes, are rose, shades of purple, or violet and variegated with white.

For previous introduction see 103920.

118928. *CITRUS LIMONIA* Osbeck. Rutaceae. **Lemon.**

From the Union of Soviet Socialist Republics. Budsticks presented by A. M. Troyer, Institute of Wet Subtropics, Sukhum, Abkhazia. Received November 24, 1936.

Kusner. A lemon reputed to be considerably more hardy than the *Eureka* or *Lisbon*.

118929 to 118932.

From California. Seeds collected in Death Valley by French Gilman, of the National Park Service. Received November 11, 1936.

118929. *ARCTOMECON MERRIAMII* Coville. Papaveraceae.

118930. *ENCELOPISIS COVILLEI* (A. Nels.) Blake. Asteraceae.

118931. *SALVIA FUNEREA* M. E. Jones. Menthaceae.

118932. *SALVIA PACHYPHYLLA* Epling. Menthaceae.

118933 and 118934.

From Peru. Bulbs collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received November 21, 1936.

118933. *HIPPEASTRUM REGINAE* (L.) Herbert. Amaryllidaceae.

No. 8211-A. *Cebolleta*. September 18, 1936. Hacienda San Carlos, Distrito Churubamba, Departamento Huanuco, along the trail from Rio Ysabel to San Carlos, in an open field at 1,450 m. altitude. Flowers crimson with white at the center.

118934. *URCEOLINA URCEOLATA* (Ruiz and Pav.) Asch. and Graebn. Amaryllidaceae.

No. 8305-A. October 17, 1936. From the Departamento Huanuco, along the left bank of the Rio Huallaza, among rocks in dense forest, at 805 m. altitude. A tender bulbous plant with wide oblong leaves 1 foot long and a solitary scape with an umbel of 4 to 6 nodding canary-yellow flowers striped with pale green. Native to the Andes of Peru.

118935. *COTONEASTER* sp. Malaceae.

From England. Plants presented by Sir Lionel de Rothschild, St. Swithins Lane, London. Received November 27, 1936.

Received under the specific name "cornubia," for which a place of publication has not been found. Said to be a handsome cotoneaster closely allied to *C. frigida*, but it is much more fructiferous, with larger and brighter berries, and has smaller, more acuminate leaves.

118936 to 118939. *CINCHONA* spp. Rubiaceae.

From the Philippine Islands. Seeds presented by Arthur P. Fischer, Director of Forestry, Bureau of Forestry, Manila. Received November 23, 1936.

118936. *CINCHONA OFFICINALIS* L.

For previous introduction and description see 118797.

118936 to 118939—Continued.

118937. *CINCHONA PUBESCENS* Vahl.

For previous introduction see 118798.

118938. *CINCHONA OFFICINALIS* × *PUBESCENS*.118939. *CINCHONA* sp.118940 to 118986. *ANTIRRHINUM* spp.
Scrophulariaceae. **Snapdragon.**

From Germany. Seeds presented by Dr. Husfeld, Director, Kaiser Wilhelm Institute, Müncheberg, Mark. Received November 23, 1936.

118940 and 118941. *ANTIRRHINUM BARBELLIERI* Boi.118942. *ANTIRRHINUM CALYCNINUM* Russ.118943. *ANTIRRHINUM CHARIDEMI* Lange.118944. *ANTIRRHINUM CHRYSOTHALES* Font Quer.118945 to 118954. *ANTIRRHINUM GLUTINOSUM* Boiss. and Reut.

A wild Spanish antirrhinum.

For previous introduction see 100955.

118945. *Alhama* (hairy).118946. *Alhama* (glabrous).118947. *Alhambra*.118948. *Baryacas*.118949. *Capileira*.118950. *Genital*.118951. *Silla del Moro*.118952. *Mulhacén* (Lagerfels).118953. *Orgiva*.118954. *Pampaneira* (hairy).118955 and 118956. *ANTIRRHINUM HISPANICUM* Chav.

A wild snapdragon, native to Spain.

For previous introduction see 100956.

118955. *Cetorico*.118956. *Savogia*.118957 and 118958. *ANTIRRHINUM LATIFOLIUM* Mill.

A wild snapdragon, native to Spain.

For previous introduction see 104924.

118957. *Mentone*.118958. *Villefranche*.118959. *ANTIRRHINUM LINKIANUM* Boiss. and Reut.*Cintra*.118960. *ANTIRRHINUM LITIGIOSUM* Pau.*Chorro*.118961 to 118973. *ANTIRRHINUM MAJUS* L.
Common snapdragon.

For previous introduction see 117320.

118961. *Algier*.118962. *Bussaco*.118963. *Coimbra*.118964. *Estremadura*.118965. *Loja*.118966. *Mancha I*.

118940 to 118986—Continued.

118961 to 118973—Continued.

118967. *Mancha II*.118968. *Marokko*.118969. *Ragusa*.118970. *Ronda*.118971. *Spit*.118972. *Trier*.118973. *Xanen*.118974. *ANTIRRHINUM MEONANTHUM* Hoffm. and Link.*Pancarbo*. A wild antirrhinum native to Spain.

For previous introduction see 100961.

118975 to 118978. *ANTIRRHINUM MOLLE* L.118975. *Braganza*.118976. *Lerida*.118977. *Monsec*.118978. *Mollissimum*.118979. *ANTIRRHINUM ORONTIUM* L.

20493/49a.

118980. *ANTIRRHINUM SEMPERVIRENS* Lapeyr.118981. *ANTIRRHINUM SICULUM* Mill.

A wild antirrhinum, native to Spain.

118982. *ANTIRRHINUM TORTUOSUM* Bosc.

A wild antirrhinum, native to Spain.

For previous introduction see 100963.

118983. *ANTIRRHINUM VALENTINUM* Font Quer.A shrubby snapdragon with elliptic or roundish leaves and small white flowers. It is allied to *Antirrhinum sempervirens*. Native to Spain.

For previous introduction see 100964.

118984. *ANTIRRHINUM* sp.*Cartagena*. Received under the specific name "ibanjezi," for which a place of publication has not been found.118985. *ANTIRRHINUM* sp.

Received under the specific name "kerynia," for which a place of publication has not been found.

118986. *ANTIRRHINUM* sp.

Received under the specific name "lapithos," for which a place of publication has not been found.

118987 to 118998. *ARACHIS HYPOGAEA* L. Fabaceae. **Peanut.**

From the State of Rio Grande do Sul, Brazil. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received November 30, 1936.

118987. No. 4221. From Marcelino Ramos, October 19, 1936. A cultivated peanut.

118988. No. 4252. From the market at Porto Alegre, October 22, 1936.

Nos. 118989 to 118998 were purchased in shops in Porto Alegre, October 23, 1936.

118989. No. 4255.

118990. No. 4256. *Muido* or *Commum*.118991. No. 4257. *Muido* or *Commum*.

118987 to 118998—Continued.

118992. No. 4258.
 118993. No. 4259. Said to be volunteer plants.
 118994. No. 4260.
 118995. No. 4261.
 118996. No. 4262.
 118997. No. 4263.
 118998. No. 4264.

118999. *MEDICAGO SATIVA* L. Fabaceae.
Alfalfa.

From Chile. Seeds presented by Salvador Izquierdo S., Santiago. Received November 23, 1936.

Huasco alfalfa. From the northern part of Chile, where it has been cultivated since ancient times.

119000. *ARISTOLOCHIA BRASILIENSIS* MACROPHYLLA Duchatre. Aristolochiaceae.

From Cuba. Seeds presented by F. G. Walsingham, Atkins Institution of the Arnold Arboretum. Received November 25, 1936.

Originally presented by the Forest Botanist, Forest Research Institute, Dehra Dun, United Provinces, India. A stout woody climber with large, gray-green, cordate-reniform leaves. The flowers, difficult to describe, are basically green, with nettings and reticulations of chocolate brown or purplish brown, rather dull on the outer surfaces, but often becoming velvety in patterns on the inner surfaces and deep within the flowers. The upper lip is 5 inches long, projects from the inflated tube like the beak of a bird, and the lower lip expands into a flattened wavy limb 4 to 6 inches across. Native to Brazil.

119001. *VITIS POPENOEI* Fennell. Vitaceae. Grape.

From Puerto Mexico, Veracruz, Mexico. Seeds presented by Wilson Popenoe, United Fruit Co. Received November 11, 1936.

Totoloche. A slender vine with small to medium, usually cordate-ovate leaves and bunches of 5 to 10 dark maroon-red, thick, and rather tough-skinned fruit, of fair flavor, one-half inch in diameter. Related to *Vitis rotundifolia*. Native to Veracruz.

119002. *CINCHONA* sp. Rubiaceae.

From Peru. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received December 4, 1936.

No. 8170-A. *Azhar*. From the Hacienda Mercedes, Distrito Churubamba, Departamento Huancu, along the trail to Balsa Playa, through virgin forest on a slope above the Rio Cayumba, at 1,200 m. altitude. A forest tree, 30 m. tall, with the seeds in pale green capsules.

119003 to 119006.

From Istanbul, Turkey. Seeds and plants collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received November 30, 1936.

119003 and 119004. *CASTANEA SATIVA* Mill. Fagaceae. Spanish chestnut.

From the Inebolu bazar, October 13, 1936.

For previous introduction see 118922.

119003. No. 1042. 119004. No. 1043.

119003 to 119006—Continued.

119005. *PAEONIA* sp. Ranunculaceae.

No. 1044. Plants collected in the hills between Haydarfrasha and Shile, October 25, 1936.

119006. *PISTACIA VERA* L. Anacardiaceae. Pistachio.

No. 1059. From the Istanbul bazar, October 24, 1936.

119007 to 119023.

From Brazil. Seeds and bulbs collected by W. A. Archer, Bureau of Plant Industry. Received November 30, 1936.

Nos. 119007 to 119019 were collected at Porto Alegre, Rio Grande do Sul, October 22 and 23, 1936.

119007 and 119008. *AMYGDALUS COMMUNIS* L. Amygdalaceae. Almond.

Cultivated almonds.

119007. No. 4242. 119008. No. 4243.

119009. *AVENA SATIVA* L. Poaceae. Oats. No. 4266. Cultivated oats.

119010 and 119011. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. Watermelon.

Locally grown seed.

119010. No. 4244. 119011. No. 4248.

119012 and 119013. *CUCUMIS MELO* L. Cucurbitaceae. Muskmelon.

119012. No. 4249. Seed grown locally; the fruit is said to be large, oblong, with greenish rind.

119013. No. 4246. *Melão portuguez*. Fruit small, round.

119014. *CUCUMIS SATIVUS* L. Cucurbitaceae. Cucumber.

No. 4250. Seed grown locally.

119015. *CUCURBITA MOSCHATA* Duchesne. Cucurbitaceae. Cushman.

No. 4250. Seed grown locally.

119016. *CORYLUS AVELLANA* L. Betulaceae. Filbert.

No. 4245. Seed imported from Portugal.

For previous introduction see 104742.

119017. *FRAGARIA* sp. Rosaceae. Strawberry.

No. 4253. A cultivated strawberry.

119018. *FRAGARIA VESCA* L. Rosaceae. Strawberry.

No. 4254. A cultivated strawberry.

119019. *JUGLANS REGIA* L. Juglandaceae. Persian walnut.

No. 4241. A cultivated thin-shelled variety.

119020. *MEDICAGO ARABICA* (L.) All. Fabaceae. Medick.

No. 4228. From Marcelino Ramos, Rio Grande do Sul, October 19, 1936. A prostrate plant found growing on embankments and even in cinders along the railroad track.

For previous introduction see 36136.

119021. *MEDICAGO SATIVA* L. Fabaceae. Alfalfa.

No. 4265. Purchased in a shop at Porto Alegre, Rio Grande do Sul. Cultivated alfalfa, imported from Argentina.

119007 to 119023—Continued.

119022. *SOJA MAX* (L.) Piper. Fabaceae.
Soybean.

No. 4251. From the market at Porto Alegre, Rio Grande do Sul.

119023. *CALYDOREA CAMPESTRIS* (Saub.) Baker. Iridaceae.

No. 4230. From Cruz Alta, Rio Grande do Sul, October 20, 1936. Bulbs of a plant 6 to 9 inches high with 1 to 3 blue flowers one-half inch long. Native to southern Brazil, Uruguay, and Paraguay.

119024 to 119035. *TRITICUM AESTIVUM* L. Poaceae. Wheat.

From the Union of Soviet Socialist Republics. Seeds presented by the Administration for Grain and Oil Culture, Saratov Selection Station, Saratov. Received November 24, 1936.

119024 to 119026. *Erythrospermum*.

119024. No. 118.

119025. No. 46/131.

119026. No. 46/112.

119027. *Gracuum*, No. 17/64.

119028 and 119029. *Hostianum*.

119028. No. 122/76.

119029. No. 0237.

119030 to 119035. *Lutescens*.

119030. No. 27/36. 119033. No. 434/154.

119031. No. 0329. 119034. No. 1060/10.

119032. No. 527/30. 119035. No. 0121.

119036. *RIBES* sp. Grossulariaceae.

From Germany. Plants purchased from Julius Hönings, Neuss am Rhein. Received December 14, 1936.

Rheinland currant.

119037. *AGAVE ATROVIRENS* Karw. Amaryllidaceae. Pulque agave.

From Mexico. Plants presented by Dr. José Figueroa, Instituto Biotecnico Colonia Anahuac, D. F. Received December 15, 1936.

An agave with very large lanceolate leaves up to about 8 feet long and large yellow flowers in open panicles. Native to Mexico, where it is the principal source of pulque.

119038. *BRASSICA OLERACEA CAPITATA* L. Brassicaceae. Cabbage.

From Japan. Seeds purchased from the Japan Seed & Plant Co., Tokyo. Received December 10, 1936.

Improved Succession Reselected.

119039. *ARAUCARIA BRASILIANA* A. Rich. Pinaceae.

From Oklahoma. Seeds presented by Ralph Bienfang, School of Pharmacy, University of Oklahoma, Norman. Received December 14, 1936.

An evergreen tree native to Brazil.

For previous introduction see 117925.

119040. *NAUCLEA ESCULENTA* (Afzel.) Merr. (*Sarcocephalus esculentus* Afzel.). Rubiaceae.

From Africa. Seeds presented by the Director of Agriculture, Freetown, Sierra Leone. Received December 17, 1936.

Sierra Leone peach. From Njala. A scandent shrub or tree up to 25 feet high, native to tropical Africa. The sharp-pointed elliptical leaves are 2 to 8 inches long, and the white, yellowish, or pale-pink fragrant flowers are in dense heads. The fruiting head, 2 to 4 inches in diameter, is deep red with a brown-granulated surface and a solid edible core which occupies about a quarter of the diameter.

119041 to 119044. *CASTANEA CRENATA* Sieb. and Zucc. Fagaceae. Japanese chestnut.

From Japan. Plants presented by the Mutual Supply Co., San Francisco, Calif. Received December 28, 1936.

119041. *Gin Yose*.

119042. *Nakade Tamba*.

119043. *Taisho Wase*.

119044. *Tayotama Wase*.

119045. *CITRUS LIMONIA* Osbeck. Rutaceae. Lemon.

From India. Bud sticks collected by Walter Koelz, Bureau of Plant Industry. Received December 29, 1936.

No. 1743. *Gombru*. From Bandrole, Kulu, Punjab, November 14, 1936. The fruit, said to come true from seed, is of large size and will keep for a year in ordinary storage. The attractive, quick-growing tree withstands a temperature of about 22° F.

119046. *CROTALARIA* sp. Fabaceae.

From the Philippine Islands. Seeds presented by F. W. McCarthy, Iloilo. Received December 23, 1936.

A plant which grows and seeds, sometimes in pure river sand, during the dry season which, in Iloilo, sometimes lasts 2 months.

119047 and 119048.

From Africa. Plants presented by the Director of Agriculture, Freetown, Sierra Leone. Received December 28, 1936.

119047. *ANANAS COMOSUS* (L.) Merr. Bromeliaceae. Pineapple.

A small tender pineapple.

119048. *MUSA PARADISIACA SAPIENTUM* (L.) Kuntze. Musaceae. Banana.

Silver banana.

119049 to 119086. *ARACHIS HYPOGAEA* L. Fabaceae. Peanut.

From Brazil. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received December 7, 1936.

Nos. 119049 to 119051 were purchased in seed stores in Pelotas, Rio Grande do Sul, November 2, 1936.

119049. No. 4306.

119050. No. 4321.

119049 to 119086—Continued.

119051. No. 4323.

Nos. 119052 to 119086 were strains presented by Dr. Grosman, Instituto Borges de Medeiros, Porto Alegre, Rio Grande do Sul.

119052. No. 4364. 119070. No. 4382.

119053. No. 4365. 119071. No. 4383.

119054. No. 4366. 119072. No. 4384.

119055. No. 4367. 119073. No. 4385.

119056. No. 4368. 119074. No. 4386.

119057. No. 4369. 119075. No. 4387.

119058. No. 4370. 119076. No. 4388.

119059. No. 4371. 119077. No. 4389.

119060. No. 4372. 119078. No. 4390.

119061. No. 4373. 119079. No. 4391.

119062. No. 4374. 119080. No. 4392.

119063. No. 4375. 119081. No. 4393.

119064. No. 4376. 119082. No. 4394.

119065. No. 4377. 119083. No. 4395.

119066. No. 4378. 119084. No. 4396.

119067. No. 4379. 119085. No. 4397.

119068. No. 4380. 119086. No. 4398.

119069. No. 4381.

119087. TEPHROSIA VOGELII Hook. f.
Fabaceae.

From Africa. Seeds purchased from the Mount Elgon Nurseries, Kenya Colony. Received December 5, 1936.

Variety *Alba*. A white-flowered variety.

119088 and 119089. POLYTOCA spp. Poaceae.
Grass.

From Java. Seeds presented by the Director, Botanic Gardens, Buitenzorg. Received December 4, 1936.

119088. POLYTOCA DIGITATA (L. f.) Druce.

A tall branching grass, native to India.

119089. POLYTOCA MACROPHYLLA Benth.

A perennial grass up to 10 feet high. Native of the Louisiade Archipelago.

119090 to 119127.

From Brazil. Seeds and roots collected by W. A. Archer, Bureau of Plant Industry. Received December 2, 1936.

Unless otherwise stated, this material was collected in the State of Rio Grande do Sul and was received as seeds.

119090. ALLIUM CEPA L. Liliaceae. Onion.

No. 4317. *Cebolas peras*, a pear-shaped onion. Purchased in a store at Pelotas, November 2, 1936.

119091. CICER ARIETINUM L. Fabaceae.
Chickpea.

No. 4361. Presented by the Instituto Borges de Medeiros, Viamão, near Porto Alegre, November 3, 1936.

119092 to 119096. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.

Purchased in stores at Pelotas, November 2, 1936.

119092. No. 4307.

119093. No. 4308.

119090 to 119127—Continued.

119092 to 119096—Continued.

119094. No. 4309. *Melancia americana*.119095. No. 4310. *Melancia rei de carlo*.119096. No. 4311. *Melancia valencia*.119097. ARECASTRUM ROMANZOFFIANUM (Cham.) Becc. (*Cocos romanzoffiana* Cham.). Phoeniceaceae. Palm.

No. 4269. From the garden of the Hotel Grande, Porto Alegre, October 29, 1936. A palm, native to Brazil, with an unarmed trunk about 20 feet high and 1 foot in diameter, bearing a crown of plumelike leaves 12 to 15 feet long. The fruit is a pale-orange drupe about the size of a large acorn, enclosing a bony seed which has 3 eyes near the base.

For previous introduction see 94765.

119098 and 119099. CUCUMIS MELO L. Cucurbitaceae. Muskmelon.

Purchased in stores at Pelotas, November 2, 1936.

119098. No. 4318. *Melão banana*.119099. No. 4319. *Melão carvalho*.

119100. CUCURBITA MAXIMA Duchesne. Cucurbitaceae. Squash.

No. 4314. *Abobora para porco*. Purchased in a store at Pelotas, November 2, 1936. A forage pumpkin.

119101. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. Cushaw.

No. 4316. *Abobora menina*. Purchased in a store at Pelotas, November 2, 1936.

119102. CUCURBITA PEPO L. Cucurbitaceae. Pumpkin.

No. 4315. *Abobora Verde Paris*. Purchased in a store at Pelotas, November 2, 1936.

119103. FRAGARIA sp. Rosaceae. Strawberry.

No. 4320. Purchased in a store at Pelotas, November 2, 1936.

119104 and 119105. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

Purchased in a store at Pelotas, November 2, 1936.

119104. No. 4312. *Perfeição*.119105. No. 4313. *Retiro*. Apparently a local selection by the Retiro nursery.

119106 and 119107. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

119106. No. 4211. Volunteer tobacco from the streets in Santa Cruz do Rio Pardo, State of São Paulo, October 12, 1936. Plants 6 feet high; inflorescence resinous, but not the stems or leaves; flowers pale greenish at first, changing to pink on lip.

119107. No. 4220. From Marcelino Ramos, October 10, 1936. Plants 1 to 3 feet high; corolla pale greenish white below, lip pure white inside; stem and leaves resinous.

119108 to 119126. PHASEOLUS spp. Fabaceae. Bean.

Presented by the Instituto Borges de Medeiros, Viamão, November 3, 1936.

119108 and 119109. PHASEOLUS CALCARATUS Roxb. Rice bean.

119108. No. 4345.

119109. No. 4355.

119090 to 119127—Continued.

119108 to 119126—Continued.

119110 and 119111. *PHASEOLUS LUNATUS* L. Lima bean.

A variety which produces bacterial nodules of 5 to 6 cm. in diameter on the roots.

119110. No. 4362. A variety with black and white seeds.

119111. No. 4363. A variety with red and white seeds.

119112 to 119126. *PHASEOLUS VULGARIS* L. Common bean.

119112. No. 4344. 119120. No. 4353.

119113. No. 4346. 119121. No. 4354.

119114. No. 4347. 119122. No. 4356.

119115. No. 4348. 119123. No. 4357.

119116. No. 4349. 119124. No. 4358.

119117. No. 4350. 119125. No. 4359.

119118. No. 4351. 119126. No. 4360.

119119. No. 4352.

119127. *HERBERTIA PULCHELLA* Sweet. Iridaceae.

No. 4274. From the Escola Aprendizado Agrícola do Rio Grande do Sul; near Pelotas, October 31, 1936. A South American plant allied to *Tigrida*, with about 4 long narrow leaves 3 to 6 inches long and several fugitive blue flowers from a single terminal spathe. The outer flower segments are marked with a central white line.

119128 to 119139. *TRITICUM AESTIVUM* L. Poaceae. Common wheat.

From China. Seeds presented by Raymond T. Moyer, Oberlin Shansi Memorial Schools, Taiku, Shansi. Received December 17, 1936.

A collection of drought-resistant winter wheats.

119128. No. 33. 119134. No. 204.

119129. No. 87. 119135. No. 298.

119130. No. 140. 119136. No. 1035.

119131. No. 169. 119137. No. 1050.

119132. No. 171. 119138. No. 1274.

119133. No. 203. 119139. No. 1376.

119140 to 119150.

From Brazil. Seeds and bulbs collected by W. A. Archer, Bureau of Plant Industry. Received December 15, 1936.

This material was collected in the State of Rio Grande do Sul and, unless otherwise mentioned, was received as seeds.

119140 and 119141. *ARACHIS HYPOGAEA* L. Fabaceae. Peanut.

From Rio Pardo, November 7, 1936.

119140. No. 4406.

119141. No. 4407.

119142. *CANNA* sp. Cannaceae.

No. 4423. From wasteland near Rio Pardo, November 8, 1936. Plants 3 feet high, with orange-red flowers; very common in this State.

119140 to 119150—Continued.

119143 and 119144. From the fazenda of Col. José Antonio, Pereira Rego, 23 km. east of Rio Pardo, November 8, 1936.

119143. *ARECASTRUM ROMANZOFFIANUM* (Cham.) Becc. (*Cocos romanzoffiana* Cham.). Phoenicaceae. Palm.

No. 4427. *Geriva*. A palm about 25 feet high, with a smooth trunk. The foliage is used extensively as cattle forage.

119144. *Cocos* sp. Phoenicaceae. Palm.

No. 4428. *Butia*. A palm about 15 feet high, with persistent petioles.

119145. *MEDICAGO HISPIDA* *RETICULATA* (Benth.) Urban. Fabaceae.

No. 4329. From Viamão, November 5, 1936. An excellent forage plant.

119146 and 119147. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

119146. No. 4273. From the streets in Porto Alegre, October 30, 1936. Plants 2 feet high.

119147. No. 4276. From an arroyo near Pelotas, October 31, 1936.

119148. *ORYZA SATIVA* L. Poaceae. Rice.

No. 4426. *Arroz Santa Maria*. From Rio Pardo, November 2, 1936. A variety said to be superior in size and quality to other known types.

119149. *TRACHYCARPUS EXCELSUS* (Thunb.) Wendl. Phoenicaceae. Palm.

No. 4420. From the streets of Rio Pardo, November 8, 1936.

For previous introduction see 66766.

119150. *PHALOCALLIS HERBERTII* (Herbert) Kuntze. Iridaceae.

No. 4409. From the Fazenda of Col. José Antonio Pereira Rego, 23 km. east of Rio Pardo, November 8, 1936. A bulbous plant, native to moist open places in Argentina. The linear plaited leaves are about a foot long, and the branching scape, 2 to 3 feet high, bears brown flowers about 2 inches across.

For previous introduction see 77593.

119151 to 119154. *GOSSYPIUM* spp. Malvaceae. Cotton.

From Peru. Seeds collected by James West and presented through the University of California Botanical Garden Expedition to the Andes, 1935-36. Received December 18, 1936.

Collected in the Urubamba Valley, Departamento Cuzco, in September 1936.

119151. *GOSSYPIUM BARBADENSE* L. Sea-island cotton.

No. 8069. From the Hacienda Alcu-sama, at 900 m. altitude. A cultivated cotton.

119152. *GOSSYPIUM PERUVIANUM* Cav.

No. 8070. At 1,000 m. altitude.

119153. *GOSSYPIUM* sp.

No. 8072. At 1,000 m. altitude.

119154. *GOSSYPIUM* sp.

No. 8071. From Poronococ, at 1,000 m. altitude.

119155 to 119197. *NICOTIANA TABACUM*
L. Solanaceae. Common tobacco.

From Venezuela. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received December 29, 1936.

Nos. 119155 to 119157. Collected at Carache, Trujillo, October 19, 1936, at 1,200 m. altitude.

119155. No. 306.

119156. No. 307.

119157. No. 308.

Nos. 119158 to 119161. From La Barinena, Zamora, October 24, 1936, at 400 m. altitude.

119158. No. 309.

119159. No. 310.

119160. No. 311. *Rabo de gallo.*

119161. No. 312. *Oreja de mula.*

Nos. 119162 to 119164. From the State of Zamora, October 24, 1936, at 400 m. altitude.

119162. No. 313. *Habano.*

119163. No. 314.

119164. No. 315.

Nos. 119165 to 119167. From Mesparro, Zamora, October 25, 1936, at 200 m. altitude.

119165. No. 316.

119166. No. 317.

119167. No. 318.

119168. No. 319. From San Rafael near Bocono, Trujillo, October 29, 1936, at 1,300 m. altitude.

119169. No. 320. From Bettjoque, Trujillo, October 21, 1936, at 540 m. altitude.

Nos. 119170 to 119172. From Isnotu, Trujillo, October 31, 1936, at 700 m. altitude.

119170. No. 321.

119171. No. 322.

119172. No. 323.

Nos. 119173 to 119180. Collected in the State of Merida, November 2 and 3, 1936.

119173. No. 324. *Habano.* From San Juan, at 1,500 m. altitude.

119174. No. 325. *Ambalema.* From Lagumillas, at 1,000 m. altitude.

119175. No. 326. *Ambalema.* From Lagumillas, at 1,000 m. altitude.

119176. No. 327. *Habano.* From Estanguetz, at 600 m. altitude.

119177. No. 328. *Cuba pimon.* From Tabacal.

119178. No. 329. *Habano negro.* From Zea, at 800 m. altitude.

119179. No. 330. *Bixentone.* From Tovar, at 950 m. altitude.

119180. No. 331. *Criollo.* From La Playa da Bailadores, at 900 m. altitude.

Nos. 119181 and 119182. From Seboruco, Tachira, November 3, 1936, at 800 m. altitude.

119181. No. 332. *Palmireno.*

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119182. No. 333. *Habano.*

Nos. 119183 to 119185. From La Grita, Tachira, November 3, 1936, at 1,100 m. altitude.

119183. No. 334. *Ambireno.*

119184. No. 335. *Tabaco negro.*

119185. No. 336. *Palmira.*

Nos. 119186 to 119188. From Tariba, Tachira, November 3, 1936, at 1,000 m. altitude.

119186. No. 337. *Habano negro.*

119187. No. 338.

119188. No. 339. *Habano negro.*

Nos. 119189 to 119192. From Palmira, Tachira, November 4, 1936, at 1,000 m. altitude.

119189. No. 340. *Cuba.*

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119191. No. 342. *Cuba negro.*

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119193. No. 344. From Bocono, Trujillo, October 29, 1936, at 1,200 m. altitude.

Nos. 119194 to 119196. From Rubio, Tachira, November 5, 1936, at 800 m. altitude.

119194. No. 345. *Cuba.*

119195. No. 346. *Puntillanza.*

119196. No. 347. *Palmira.*

119197. From Carache, Trujillo, October 29, 1936, at 1,400 m. altitude.

119198. *JACARANDA ACUTIFOLIA* Humb. and Bonpl. Bignoniaceae.

From Argentina. Seeds presented to President Franklin D. Roosevelt by Augustin P. Justo, President General of Argentina. Received December 30, 1936.

A smooth tree with bipinnate leaves made up of 5 to 8 pairs of sharp-pointed entire leaflets and terminal and axillary panicles of tubular violet flowers. It is native to Peru.

For previous introduction see 88238.

119199 to 119211.

From Buenos Aires, Argentina. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received December 30, 1936.

119199 to 119204. *ARACHIS HYPOGAEA* L. Fabaceae. Peanut.

Nos. 119199 to 119203 were purchased in seed stores, November 25, 1936.

119199. No. 4485.

119200. No. 4486.

119201. No. 4487.

119202. No. 4488.

119203. No. 4489.

119204. No. 4557. Presented November 27, 1936, by Dr. L. R. Parodi, Jardin Botánico de la Facultad de Agronomía, Buenos Aires.

119205 to 119211. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

Nos. 119205 to 119210. Presented by Agiros Villanueva, Jefe de Sección. Ex-

119199 to 119211—Continued.

119205 to 119211—Continued.

perimental Tobacco, Ministerio de Agricultura, Buenos Aires, November 22, 1936.

119205. No. 4547. *Habano colorado*. Strain S. R.

119206. No. 4548. *Chileno Correntino*. Strain M. S. F.

119207. No. 4549. *Lampazo*. Strain E. E. Ch.

119208. No. 4550. *Hoja parada*. Strain E. E. Ch.

119209. No. 4551. *Chileno grande colorado*. Strain S. F.

119210. No. 4552. *Cubano de las sieras*. Strain E. R.

119211. No. 4567. Presented November 27, 1936, by Dr. L. R. Parodi, Jardín Botánico de la Facultad de Agronomía, Buenos Aires.

119212. ACACIA RETINODES Schlecht. Mimosaceae.

From Mexico. Seeds collected by C. C. Cole, of Coconut Grove, Fla. Received December 28, 1936.

A tall, vigorous, evergreen shrub or small tree, native to southeastern Australia, with long, narrow phyllodes, when mature, and dense yellow flower heads. It is said to flower in France almost throughout the year. The young seedlings, in common with many acacias, have feathery foliage.

For previous introduction see 92330.

119213 to 119215.

From Venezuela. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received December 29, 1936.

119213. CAPSICUM ANNUM L. Solanaceae. Common redpepper.

Mongo. A hot pepper from Niguitao, Trujillo, October 28, 1936.

119214 and 119215. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

From Barinitas, Zamora, October 24, 1936.

119214. A small tomato.

119215. A medium-sized tomato.

119216. MALUS SYLVESTRIS Mill. Malaceae. Apple.

From the Union of Soviet Socialist Republics. Scions presented by the Institute of Plant Industry, Leningrad. Received June 2, 1932. Numbered in December 1936.

Pippin Chinese. No. 137721. Cat. No. 24.

119217 and 119218.

From Japan. Scions collected by P. H. Dorsett and W. J. Morse, Bureau of Plant Industry. Received in 1929 and 1930. Numbered in December 1936.

119217. PYRUS SEROTINA Rehder. Malaceae. Late pear.

No. 4345. *Okusankichi*. Presented by the Horticultural Institution, Department of Agriculture, Kyoto Imperial University, Kyoto, February 24, 1930.

119217 and 119218—Continued.

119218. MALUS FLORIBUNDA Sieb. Malaceae. Japanese flowering crab.

No. 1376. From along the seacoast near Shirai, Hokkaido, September 29, 1929. A small tree with small red fruits.

119219 to 119235.

From India. Seeds, bulbs, and roots collected by Walter Koelz, Bureau of Plant Industry. Received December 11, 1936.

119219 and 119220. ARISAEMA AMBIGUUM Engl. Araceae.

An arisaema with a large pedate leaf of 13 to 15 segments. Native to China.

119219. Received as bulbs.

119220. No. 1504-A. From Kulu, Kulu, Punjab.

119221. BERBERIS sp. Berberidaceae.

No. 1467. From Gundla, Lahul.

119222. BERBERIS sp. Berberidaceae.

No. 1468. From Tsokang Nulla, Lahul.

119223 to 119226. COTONEASTER spp. Malaceae.

119223. COTONEASTER sp.

No. 1469. From Kyelang, Lahul.

119224. COTONEASTER sp.

No. 1471. From Rotang Pass, Kulu, Punjab.

119225. COTONEASTER sp.

No. 1477. From Kalung, Lahul.

119226. COTONEASTER MULTIFLORA Bunge. Malaceae.

No. 1478. From Rahla, Kulu, Punjab. A deciduous shrub about 6 feet high, with slender arching branches; native to western China. The broadly ovate leaves are 1 to 2 inches long, and the dense clusters of small white flowers are followed by subglobose to ovoid red fruits one-third of an inch in diameter.

For previous introduction see 102477.

119227. CYDONIA OBLONGA Mill. Malaceae.

No. 1509. From Skardo, Baltistan.

119228. JUNIPERUS PSEUDOSABINA Fisch. and Mey. Pinaceae.

No. 1454. From Tsokang, Nulla, Lahul. A low shrubby juniper. Native to dry mountain slopes in Turkistan.

For previous introduction see 111057.

119229. MALUS BACCATA (L.) Moench. Malaceae. Siberian crab.

No. 1450. From Kyelang, Lahul.

119230. MALUS sp. Malaceae.

No. 1464. From Gozang, Lahul. An ornamental species.

119231. MELIA sp. Meliaceae.

No. 1505. From Raison, Kulu, Punjab.

119232. PRUNUS CORNUTA (Wall.) Steud. Amygdalaceae. Himalayan bird cherry.

No. 1452. From the Upper Bhaga Valley, Lahul. A deciduous tree 50 to 60 feet

119219 to 119235—Continued.

119232—Continued.

high, native to the Himalayan region up to 10,000 feet altitude. The cylindrical racemes of small white flowers are followed by round red fruits, one-third of an inch in diameter, which become dark brown purple. Closely allied to *Prunus padus*.

119233. *PYRUS* sp. Malaceae.

No. 1506. From Kulu, Kulu, Punjab.

119234. *SORBUS* sp. Malaceae.

No. 1451. From Lahul.

119235. (Undetermined.)

No. 1470. Rhizomes from Nagger, Kulu, Punjab.

119236 to 119251.

From Brazil and Uruguay. Seeds, bulbs, and roots collected by W. A. Archer, Bureau of Plant Industry. Received December 23, 1936.

119236. *ABUTILON MOLLISSIMUM* (Cav.) Sweet. Malvaceae.

No. 4448. From Santa Anna, Rio Grande do Sul, Brazil, November 14, 1936. A compact shrub 3 feet in diameter, but reported to grow 10 feet high in Peru, where the plant is native. The stem and very large heart-shaped leaves are quite hairy, and the solitary axillary flowers, about an inch long, are sulfur yellow.

For previous introduction see 56908.

119237 to 119240. *ARACHIS HYPOGAEA* L. Fabaceae.

119237. No. 4447. From Santa Anna, Rio Grande do Sul, Brazil, November 13, 1936. A mixture of at least four types.

Nos. 119238 to 119240 were collected at Ribera, Uruguay, November 16, 1936.

119238. No. 4458. A variety said to yield 37 percent of oil.

119239. No. 4459. Cultivated peanut.

119240. No. 4460. Cultivated peanut.

119241. *HIPPEASTRUM* sp. Amaryllidaceae.

No. 4435. Along the road 12 km. north of Santa Anna, Rio Grande do Sul, Brazil, November 13, 1936. Bulbs of a plant common in this region, found in swampy places. The flower stalk is 2 to 3 feet long and bears 5 or 6 flowers; the petals are orange red with green markings at the base.

119242. *SPREKELIA FORMOSISSIMA* (L.) Herb. Amaryllidaceae. St. Jameslily.

No. 4456. From Ribera, Uruguay, November 14, 1936. Bulbs of a perennial, native to Mexico, with 3 to 6 linear leaves 1 to 2 feet long and a reddish scape 1 foot high, with 1 large gaping, bright crimson flower 3 to 4 inches long.

For previous introduction see 93155.

119243. *HIPPEASTRUM* sp. Amaryllidaceae.

No. 4457. From Ribera, Uruguay, November 14, 1936. Bulbs of a cultivated plant, said to be native here. The leaves are strap-shaped, and the scape bears 5 or 6 flowers marked with red and white with narrow petals.

119236 to 119251—Continued.

119244. *PHALOCALLIS HERBERTII* (Herbert) Kuntze. Iridaceae.

No. 4436. Roots collected on a sandy hillside, along a road 12 km. north of Santa Anna, Rio Grande do Sul, Brazil, November 13, 1936.

For previous introduction and description see 119150.

119245. *LAGENARIA LEUCANTHA* (Duchesne) Rusby. Cucurbitaceae. Calabash gourd.

No. 4461. *Yerua*. From Ribera, Uruguay, November 16, 1936. The fruit is cultivated for its bottle-shaped fruits, which are about 8 inches long and are used as containers for maté.

119246. *LUPINUS* sp. Fabaceae.

No. 4303. From Viera, near Rio Grande, Rio Grande do Sul, Brazil, November 1, 1936. Plants growing in clumps a foot high and 4 feet in diameter on sand dunes near the sea.

119247. *RAPHANUS SATIVUS* L. Brassicaceae. Radish.

No. 4424. From Rio Pardo, Rio Grande do Sul, Brazil, November 8, 1936. Plants occurring as weeds in vegetable gardens.

Nos. 119248 and 119249 were collected near Ribera, Uruguay, November 16, 1936.

119248. *VERBENA PERUVIANA* (L.) Britton. Verbenaceae.

No. 4454. A scarlet-flowered trailing verbena with stems sometimes 2 feet or more long. Native to southern and western South America.

119249. *VERBENA RIGIDA* Spreng. Verbenaceae.

No. 4452. A perennial verbena, native to Brazil, with oblong-lanceolate, deeply dentate leaves and terminal cymes of whitish flowers.

119250. *VICIA TETRASPERMA* (L.) Moench. Fabaceae. Vetch.

No. 4430. From Posto Zoo-tecnico, at Tupacretan, Rio Grande do Sul, Brazil, November 11, 1936. A plant native to Brazil, with white flowers tinged with lavender. It is cultivated as forage.

119251. *ZEPHYRANTHES* sp. Amaryllidaceae.

No. 4432. From Posto Zoo-tecnico, at Tupacretan, Rio Grande do Sul, Brazil, November 11, 1936. Bulbs of a plant with pink flowers.

119252 to 119266.

From India. Seeds, roots, and bulbs collected by Walter Koelz, Bureau of Plant Industry. Received December 29, 1936.

119252. *AESCULUS INDICA* (Royle) Hook. Aesculaceae. Horsechestnut.

No. 1651. From above Bandrole, Kulu, Punjab, November 14, 1936, at 8,000 feet altitude. A tree that becomes 100 feet high in northern India, with a trunk 4 feet in diameter, flowering the latter part of June when other horsechestnuts have finished. The foliage is shining green, and the dainty white flowers, which are borne in fairly dense racemes, have the 2 upper petals heavily blotched with yellow, changing to orange-red, and the lower petals are tinged with pink.

For previous introduction see 52625.

119252 to 119266—Continued.

119253 to 119258. *ALLIUM* spp. Liliaceae.119253. *ALLIUM CEPA* L. Onion.

No. 1370-A. Bulbs from Kampuk, Baltistan, at 9,000 feet altitude, September 9, 1936. An onion which will stand freezing.

119254 to 119256. *ALLIUM SATIVUM* L. Liliaceae. Garlic.119254. No. 1511. *Gokpa*. From Kailung, Lahul, at 12,000 feet altitude, October 12, 1936. Bulbs of a pungent sort.119255. No. 1510. *Gokpa*. From Kampuk, Shyok Valley, Baltistan, September 9, 1936, at 12,000 feet altitude. Bulbs of a highly scented variety.119256. No. 1741. *Lassan*. Bulbs from Kulu, Kulu, Punjab, at 4,500 feet altitude, November 13, 1936.119257. *ALLIUM* sp.No. 1475. *Rigok*. From Kyelang, Lahul, at 10,000 feet altitude, October 21, 1936. Bulbs of a very attractive species, with cylindrical leaves and heads of clear-purple flowers $1\frac{1}{2}$ inches in diameter. Grows on dry slopes and blooms in the damp earth of spring.119258. *ALLIUM* sp.No. 1720. *Pram*. Presented by the Director of Agriculture, Kashmir. Bulbs said to be used for flavoring.119259. *CITRUS LIMONIA* Osbeck. Rutaceae. Lemon.

No. 1743-A. From Bandrole, Kulu, Punjab.

119260. *IRIS KASHMIRIANA* Baker. Iridaceae.

No. 1664. Roots of a wild species presented by the Director of Agriculture, Kashmir, November 14, 1936.

119252 to 119266—Continued.

119261. *LILIUM POLYPHYLLUM* D. Don. Liliaceae.

No. 1740. Bulbs presented by the Director of Agriculture, Kashmir.

For previous introduction see 112748.

119262. *LIGUSTRUM COMPACTUM* Hook. f. and Thoms. Rhamnaceae. Privet.

No. 1742. From Bandrole, Kulu, Punjab, at 5,000 feet altitude, November 14, 1936. A well-formed evergreen tree with large trusses of creamy flowers, followed by blue-black fruits.

For previous introduction see 114763.

119263. *SARCOCOCCA SALIGNA* (D. Don) Muell. Arg. Buxaceae.

No. 1654. From Bandrole, Kulu, Punjab, at 6,000 feet altitude, November 14, 1936. An evergreen shrub from 2 to 3 feet high, which covers the ground in well-watered shady places. Interesting chiefly from its very fragrant green flowers in short axillary racemes and the purple ovoid fruits nearly an inch long. Game birds find both food and shelter among the clumps.

For previous introduction see 92760.

119264. *TAXUS* sp. Taxaceae.No. 1661. *Rak Kahr*. From above Bandrole, Kulu, Punjab, at 8,000 feet altitude, November 14, 1936. A handsome evergreen tree that becomes 4 feet in diameter, but occurs sparingly in the spruce-balsam forest.119265. *TULIPA* sp. Liliaceae.

No. 1665. Bulbs presented by the Director of Agriculture, Kashmir.

119266. (Undetermined.)

No. 1472. *Kukum*. From Lahul, Punjab, at 9,000 feet altitude, October 22, 1936. Bulbs of a plant with crocuslike yellow flowers which bloom early in the spring; said to be poisonous to horses until after blooming.

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UNITED STATES DEPARTMENT OF AGRICULTURE



INVENTORY No. 130



Washington, D. C.

Issued May 1942

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, JANUARY 1 TO MARCH 31, 1937 (Nos. 119267 to 123341)

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INTRODUCTORY STATEMENT

This inventory, No. 130, is a record of the plant material (Nos. 119267 to 123341) received by the Division of Plant Exploration and Introduction during the period from January 1 to March 31, 1937.

More than 4,000 introductions are recorded in this inventory, which is nearly twice as many as have ever been received before during a like period. They represent the wide collections from two exploring parties, each of which was primarily concerned with the collection of vegetable varieties in the several areas. In making these collections, both parties were instructed to keep in mind the choice of varieties that showed health and vigor of growth, even if the food quality of the plant was poor. Any and all types of vegetables were collected except those very recently introduced into the area. All were to be considered as potential breeding materials for the Southeastern Vegetable Breeding Station, Charleston, S. C., and for various State experiment stations.

H. L. Westover, forage crop specialist, and F. L. Wellman, vegetable pathologist, traveled through Turkey for this purpose, and Walter Koelz, a former explorer of the Department, collected in northern India.

In addition to these projects, the results of two other collecting trips appear in this inventory; those of W. A. Archer and Raymond Stadelman, who collected peanuts and tobaccos for special breeding studies, traveling through various Latin-American countries and observing both small noncommercial cultures and plants in the wild.

Other materials besides those covered by their main projects included useful crop plants and some ornamentals from all these areas.

Initial identifications of the seeds and determination of the nomenclature have been made by Paul Russell, who has had general supervision of this inventory.

B. Y. MORRISON,
Principal Horticulturist, in Charge.

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D. C., May 22, 1941.

INVENTORY¹

NOTE.—This inventory is a historical record of plant material introduced for Department and other specialists. It is not to be considered as a list of plant material for distribution.

119267. APLOPAPPUS CUNEIFOLIUS Nutt. Asteraceae.

From Chile. Seeds collected by Clarence Elliott, of England, and presented by Ralph A. Fenton, of Oswego, Oreg. Received January 6, 1937.

A shrubby yellow-flowered composite with stiff alternate leaves; native to Chile.

119268. CARICA PENTAGONA Heilborn. Papayaceae.

From Ecuador. Cuttings presented by Luis A. Gattoni D., Quito. Received January 19, 1937.

Babaco. This is the most remarkable and valuable of the several interesting species of *Carica* cultivated in Ecuador, because of its large, very acid fruits, from which an excellent sauce is made, the relatively low temperatures which the plant can stand, and because of its habit of producing seedless fruits.

The plant is seen only under cultivation where it is a small tree about 3 m. high; the leaves are glabrous, like those of *Carica chrysopetala*, but with fewer and broader lobes. The fruits are about 30 cm. long and 7 to 12 cm. in diameter, truncate at the base and sharply acute at the apex. The flesh is about 1 cm. thick, white, distinctly fragrant, and very acid. It is eaten only after it is cooked. The large cavity in the center contains a quantity of white cottony substance and occasionally a few seeds.

For previous introduction see 62552.

119269 to 119271.

From Peru. Seeds presented by Cesar Vargas C., Universidad del Cuzco, Museo de Historia Natural, Sección Botánica, Cuzco. Received January 14, 1937.

119269. FRAGARIA sp. Rosaceae.

From Urubamba, 3,100 m. altitude, December 3, 1936.

119269 to 119271—Continued.

Nos. 119270 and 119271 were from Pihahuata, Paucartambo Valley, at 2,800 m. altitude, December 5, 1936.

119270. RUBUS sp. Rosaceae.

119271. RUBUS sp. Rosaceae.

119272. SACCHARUM. Poaceae.

Sugarcane.

From Barbados, West Indies. Seeds presented by the Department of Agriculture, Barbados, through E. W. Brandes, Bureau of Plant Industry. Received January 15, 1937.

119273. CITRUS LIMONIA Osbeck, Ruta- ceae. Lemon.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received January 4, 1937.

No. 1650. *Gulgul, gombru*. From Bandrole, Kulu, Punjab, at 5,000 feet altitude, November 14, 1936. A remarkable lemon; the tree withstands a temperature of 18° F. and is covered with snow a month or so in the winter. It is quick-growing; one 3-year-old tree (3 feet high when planted) is now bearing and is 8 feet high. The fruit is large, of good flavor, and will keep in ordinary storage for over a year. The tree is quite ornamental, principally on account of its large strongly scented flowers.

119274 to 119286. GLADIOLUS spp. Iri- daceae.

From the Union of South Africa. Seeds presented by A. Cheverton Buller. Dwaarsriviers Hoek, Stellenbosch District, Cape Province. Received January 13, 1937.

119274. GLADIOLUS ALATUS L.

A gladiolus with flowers of a delightful fragrance, not unlike that of the sweet brier. The three upper segments are bright

¹ It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Plant Exploration and 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 seed samples or 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 Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

119274 to 119286—Continued.

orange scarlet, and the three lower ones are banded with greenish yellow and tipped with orange scarlet. The bulbs are not larger than ordinary peas and cannot survive long out of the ground.

For previous introduction see 116983.

119275. *GLADIOLUS ANGUSTUS* L.

A plant with an ascending stem up to 2 feet in height and narrow upright leaves with prominent midribs. The white scentless flowers which grow in a lax one-sided spike are narrow, straight, and funnel-shaped. It is a native of the Cape of Good Hope.

For previous introduction see 44723.

119276. *GLADIOLUS BLANDUS* Ait.

A species with sword-shaped leaves somewhat shorter than the stem, which is from 6 inches to 2 feet high and which bears 3 to 10 white or reddish-tinted scentless flowers over an inch long.

For previous introduction see 116984.

119277. *GLADIOLUS BREVIFOLIUS* Jacq.

A South African gladiolus, with firm linear leaves $1\frac{1}{2}$ to 2 feet long and a very slender simple flower stem of equal length, with 4 to 12 pink or lilac flowers in a lax second spike. The lower segments are purplish at the throat.

119278. *GLADIOLUS DEBILIS* Ker.

A South African gladiolus with a very slender stem 1 to $1\frac{1}{2}$ feet high, about 3 linear leaves and 1 to 3 whitish flowers in a lax spike. The obtuse segments are about three-fourths of an inch long and the inner ones are marked with a carmine, 3-lobed spot at the base of each.

119279. *GLADIOLUS GRANDIS* Thunb.

Closely related to *Gladiolus tristis*, this has 3 strongly terete leaves 12 to 18 inches long and a slender stem up to 2 feet high. The purplish, brown-tinted flowers are 2 to 3 inches long in a lax second spike. Like *Gladiolus tristis*, the flowers give off a pleasant scent during the night. Native to the Cape of Good Hope.

For previous introduction see 113571.

119280. *GLADIOLUS ALATUS NAMAQUENSIS* (Ker) Baker.

A variety differing from the type by the more robust habit, with sword-shaped leaves sometimes to 2 inches broad and more numerous flowers in the spike.

119281. *GLADIOLUS ORCHIDIFLORUS* Andr.

The 3 or 4 leaves of this gladiolus are linear, firm, crowded, and 6 to 12 inches long, and the 4 to 6 greenish, very fragrant flowers are in a very lax spike on a stem the same height as the leaves. Native to South Africa.

For previous introduction see 105293.

119282. *GLADIOLUS PSITTACINUS* Hook.
Parrot gladiolus.

A gladiolus with a stout stem 3 feet or more in length and usually 4 rigid sword-like leaves up to 2 feet long. The many-flowered spike reaches a foot or more in length. The flowers are a rich yellow, grained and overlain with red, particularly about the margins of the segments.

For previous introduction see 116985.

119274 to 119286—Continued.

119283. *GLADIOLUS RECURVUS* L.

A slender-stemmed species, up to 2 feet high, native to boggy sandy places in South Africa. The 2 to 6 mildly fragrant flowers which appear in August are borne in a very lax spike and vary in color from blue to flus'ed pink with minute blackish-lilac spots.

For previous introduction see 105295.

119284. *GLADIOLUS SCAPHOCHLAMYS* Baker.

A South African gladiolus related to *G. blandus*. It has 3 or 4 ensiform, rigid leaves about 1 foot long and a rigid stem $1\frac{1}{2}$ to 2 feet high, with 6 to 8 straw-yellow flowers in a lax curved spike.

119285. *GLADIOLUS VITTATUS* Hornem.

A gladiolus about 1 foot high with several narrow linear leaves 6 to 9 inches long and numerous pink or whitish flowers in a stout curved spike. The nearly erect flowers are about 1 inch long, the limbs slightly longer, and the three lower segments with a purple central blotch. Native to South Africa.

119286. *GLADIOLUS WATERMEYERI* L. Bolus.

A species with 3 or 4 leaves about 10 inches long, conspicuously two-nerved, and very fragrant flowers $1\frac{1}{2}$ inches long. The upper segments are usually greenish, flushed with pinkish buff, with conspicuous purple veins.

For previous introduction see 105298.

119287. *COLOCASIA ESCULENTA* (L.) Schott. Araceae. Dasheen.

From China. Tubers collected by F. A. McClure, Lingnan University, Canton. Received January 25, 1926. Numbered in January 1937.

No. 271. *Taai Fa Oo, Fa T'au Oo*. Canton, November 26, 1925. A dasheen resembling in general the Trinidad dasheen, but differing from it in certain respects. The corms tend to be tough when cooked, but the tubers are of good quality and fairly uniform in size and shape.

119288. *PAPAVER* sp. Papaveraceae.

Poppy.

Plants grown at the Plant Introduction Garden, Glenn Dale, Md. Numbered in January 1937.

Grown from seed collected in Turkistan, 1934-35, by H. L. Westover and C. R. Enlow, Bureau of Plant Industry; exact locality unknown.

119289 to 119294.

From the Union of South Africa. Seeds presented by the McGregor Museum, Kimberley. Received January 14, 1937.

119289. *COMBRETUM BRYTHOPHYLLUM* (Burch.) Sond. Combretaceae.

A tree up to 40 feet high, with unarmed, spreading branches and ovate-acute leaves which turn crimson in autumn. Native to tropical Africa.

For previous introduction see 112639.

119290. *DIMORPHOTHECA VISCOSA* (Andr.) Druce. Asteraceae.

A shrubby, much-branched perennial with variable leaves and deep-yellow flower heads. Native to South Africa.

119291. *OLEA VERRUCOSA* (Roem. and Schult.) Link. Oleaceae. Olive.

119289 to 119294—Continued.

119292. RHUS LANCEA L. f. Anacardiaceae.
Sumac.

Karree-boom. A small bushy tree with gray bark and long-stemmed leaves, with linear-lanceolate leaflets 4 to 6 inches long. It is a valuable hardwood tree for regions of limited rainfall. Native to the Cape of Good Hope.

For previous introduction see 115811.

119293. RHUS VIMINALIS Ait. Anacardiaceae.
Sumac.

Karree-boom. An evergreen tree up to 30 feet high, native to South Africa in semiarid regions at over 4,000 feet altitude. Sheep and goats browse on the foliage.

For previous introduction see 114495.

119294. V E N D I U M FASTUOSUM (Jacq.) Stapf. Asteraceae.

A showy annual a foot or more high, with lanceolate or obovate, irregularly lobed leaves 1 to 2 inches long and terminal solitary bright-orange flower heads up to 4 inches across. Native to South Africa.

For previous introduction see 106099.

119295. LEBECKIA SERICEA (Ait.) Thunb. Fabaceae.

From the Union of South Africa. Seeds presented by M. Henrici, Officer in Charge, Veld Reserve, Fauresmith, Orange Free State. Received January 21, 1937.

A densely branched shrub about 3 feet high, with trifoliolate leaves, linear-oblong leaflets up to 1½ inches long, and numerous small, deep-yellow flowers. Native to South Africa.

119296 to 119298. ZEA MAYS L. Poaceae.
Corn.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 14, 1937.

119296. No. 3276-A. From Edime.

119297. No. 2429-A. From 30 km. northwest of Susheri.

119298. No. 2929-A. From Biga.

119299. TRITICUM AESTIVUM L. Poaceae.
Common wheat.

From the Netherlands. Seeds presented by the Instituut voor Phytopathologie, Wageningen. Received January 8, 1937.

Robusta wheat.

119300 to 119407. TRITICUM AESTIVUM L. Poaceae.
Common wheat.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 5, 1937.

119300. No. 560. From the Isparta bazar, June 6, 1936.

119301. No. 760. From a mill near Tavas, May 30, 1936.

Nos. 119302 to 119304. From fields near Denizli, May 31, 1936.

119302. No. 763.

119303. No. 764.

119304. No. 774.

119300 to 119407—Continued.

119305. No. 811. From a field near Antalya, June 4, 1936.

119306. No. 1070. From a field 40 km. northwest of Izmir, June 10, 1936.

119307. No. 1071. From a field 10 km. west of Soma, June 10, 1936.

119308. No. 1110. From the Kirkagach bazar, June 11, 1936.

119309. No. 1170. From a field 90 km. west of Balikesir, June 16, 1936.

119310. No. 1232. From the Bursa bazar, June 18, 1936.

119311. No. 1281. From a field 10 km. east of Bandirma, June 18, 1936.

119312. No. 1292. From a field 6 km. east of Bursa, June 19, 1936.

Nos. 119313 and 119314. From fields near Ankara, June 25, 1936.

119313. No. 1358.

119314. No. 1360.

119315. No. 1376. From the Marash bazar, July 2, 1936.

Nos. 119316 to 119318. From the Marash bazar, July 2, 1936.

119316. No. 1387. *Romania* wheat.

119317. No. 1388. *Albistan Yazlık*.

119318. No. 1396. *Yoksul*.

119319. No. 1465. From a field 45 km. north of Gaziantep, July 3, 1936.

119320. No. 1465-A. White wheat from the village of Hodja Bay, about 15 km. southeast of Urfa, July 6, 1936.

Nos. 119321 and 119322. From fields east of Birejik, July 5, 1936.

119321. No. 1514. Field 5 km. east.

119322. No. 1516. Field 25 km. east.

Nos. 119323 and 119324. From the village of Hodja Bay, 15 km. south of Urfa, July 6, 1936.

119323. No. 1523. Red wheat.

119324. No. 1524. *Kaudakare*, best for bread.

119325. No. 1552. From the Urfa bazar, July 6, 1936.

119326. No. 1573. From a field 40 km. northeast of Urfa, July 7, 1936.

Nos. 119327 to 119331. From the Diyarbekir bazar, July 8, 1936.

119327. No. 1613. 119330. No. 1618.

119328. No. 1616. 119331. No. 1619.

119329. No. 1617.

119332. No. 1677. From a field 52 km. east of Diyarbekir, July 10, 1936.

Nos. 119333 and 119334. From the Elaziz bazar, July 13, 1936.

119333. No. 1696.

119334. No. 1704.

119335. No. 1768. From a field 20 km. southeast of Elaziz, July 13, 1936.

Nos. 119336 to 119340. From the Malatya bazar, July 16, 1936.

119336. No. 1823. White wheat for macaroni.

119300 to 119407—Continued.

119337. No. 1835.
 119338. No. 1838. Soft white wheat.
 119339. No. 1841. Strong red wheat.
 119340. No. 1842. White wheat for macaroni.
 Nos. 119341 to 119343. From fields north of Malatya, July 17, 1936.
 119341. No. 1881. Field 50 km. north.
 119342. No. 1893. Field 30 km. north.
 119343. No. 1894. Field 42 km. north.
 119344. No. 1910. From a field 28 km. southeast of Elaziz, July 13, 1936.
 Nos. 119345 and 119346. From fields 25 km. north of Nigde, July 26, 1936.
 119345. No. 2006.
 119346. No. 2008.
 119347. No. 2100. From a field on the slopes of Alma Dag, 25 km. southeast of Ankara, August 1, 1936.
 119348. No. 2103. From a field 15 km. southeast of Ankara, August 1, 1936.
 Nos. 119349 and 119350. From 106 km. east of Sivas, August 5, 1936.
 119349. No. 2118.
 119350. No. 2123.
 Nos. 119351 to 119353. From the Sivas bazar, August 5, 1936.
 119351. No. 2155.
 119352. No. 2156.
 119353. No. 2157.
 Nos. 119354 to 119356. From fields southeast of Susheri, August 7, 1936.
 119354. No. 2178. Field 46 km. southeast.
 119355. No. 2179. Field 80 km. southeast.
 119356. No. 2181. Field 46 km. southeast.
 Nos. 119357 and 119358. From the Erzinjan bazar, August 8, 1936.
 119357. No. 2250. Medium wheat.
 119358. No. 2253.
 Nos. 119359 and 119360. From fields east of Erzinjan, August 9, 1936.
 119359. No. 2262. Field 114 km. east.
 119360. No. 2271. Field 94 km. east.
 119361. No. 2495. From a field 8 km. southwest of Shebinkarahisar, August 18, 1936.
 119362. No. 2573. From a field 7 km. west of Terme, August 22, 1936.
 119363. No. 2610. From a field 8 km. west of Samsun, August 23, 1936.
 119364. No. 2661. From a field near Merzifon, August 25, 1936.
 Nos. 119365 to 119370. Wheat from Konya, obtained at the Izmir Fair, August 22, 1936.
 119365. No. 2932. White Rumanian wheat.
 119366. No. 2933. Bearded white wheat.
 119367. No. 2934. Hard wheat.
 119368. No. 2935. *Camel tooth*. White wheat.
 119369. No. 2936. Beardless white wheat.

119300 to 119407—Continued.

119370. No. 2937. White wheat.
 Nos. 119371 and 119372. Wheat screenings from Turgutlu, obtained at the Izmir Fair, August 22, 1936.
 119371. No. 2942.
 119372. No. 2943.
 Nos. 119373 to 119377. From the Kutahya bazar August 28, 1936.
 119373. No. 2989. Medium wheat.
 119374. No. 2991. A soft wheat of good quality.
 119375. No. 2997. A soft wheat.
 119376. No. 2999. A soft wheat; shriveled from too much rain.
 119377. No. 3005. A hard wheat.
 119378. No. 3022. A variety developed by Numan Bay at Eskishehir and being distributed to farmers. August 29, 1936.
 Nos. 119379 to 119383. From the Amasya bazar October 6, 1936.
 119379. No. 3058.
 119380. No. 3059.
 119381. No. 3062. *Bogozköy*.
 119382. No. 3065.
 119383. No. 3066.
 Nos. 119384 to 119388. From the Yozgat bazar October 9, 1936.
 119384. No. 3092. Soft wheat.
 119385. No. 3093. A mixed sample of hard and soft wheat.
 119386. No. 3096. Hard wheat.
 119387. No. 3097. Hard wheat.
 119388. No. 3098. Hard wheat.
 119389. No. 3107. From a field 58 km. north of Kalejik, October 12, 1936.
 Nos. 119390 to 119394. From the Chankiri bazar, October 12, 1936.
 119390. No. 3109.
 119391. No. 3110.
 119392. No. 3111.
 119393. No. 3112.
 119394. No. 3113. Wheat No. 2.
 Nos. 119395 and 119396. From the Inebolu bazar, October 12, 1936.
 119395. No. 3114.
 119396. No. 3115.
 Nos. 119397 to 119399. From the Kastamonu bazar, October 14, 1936.
 119397. No. 3186. Originally from the village of Arach.
 119398. No. 3187. Originally from the village of Arach.
 119399. No. 3188. *Devrekani*.
 Nos. 119400 and 119401. From the Adapazari bazar, October 20, 1936.
 119400. No. 3228.
 119401. No. 3231.
 119402. No. 3274. *Bintane* variety from the Adapazari Experiment Station, October 20, 1936.
 Nos. 119403 and 119404. From the Edirne bazar, October 22, 1936.

119300 to 119407—Continued.

119403. No. 3280.

119404. No. 3281.

119405. No. 3329. The type commonly grown in the vicinity of Aydin. May 26, 1936.

119406. No. 3368. From a field 40 km. east of Bursa, June 19, 1936.

119407. No. 3373. From a field near Bursa, June 19, 1936.

119408 to 119416. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

From Colombia. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received January 5, 1937.

Samples of Colombian tobacco presented by Hernando Garcia B., Herbario Nacional, Bogota.

119408. *Bucaramanga*.119409. *Castilla negro*.119410. *Castilla negro*.119411. *Chococ*.119412. *Cuba Espinaluno*.119413. *Giron*.119414. *La Fuente*.119415. *Habano*.119416. *Los Santos*.

119417 to 119445. HORDEUM spp. Poaceae.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 5, 1937.

This material was all collected in the summer and autumn of 1936.

119417. HORDEUM BULBOSUM L.

No. 1935. From Birejik, July 22.

119418 to 119443. HORDEUM VULGARE L. Barley.

119418. No. 550. From the Isparta bazar, June 2.

119419. No. 730. From a field near Mugla, May 28.

119420. No. 805. From a field near Bujak, June 3.

119421. No. 1121. From the Kirkagach bazar, June 11.

119422. No. 1259. From the Bursa bazar, June 18.

119423. No. 1277. From a field 60 km. southwest of Bursa, June 18.

119424. No. 1285. From a field 45 km. northeast of Bandirma, June 18.

119425. No. 1359. From near Ankara, June 25; abundant in places on dry hills.

119426. No. 1467. From a field 40 km. north of Gaziantep, July 3.

119427. No. 1551. From the Urfa bazar, July 6.

Nos. 119428 and 119429. From the Diyarbekir bazar, July 8.

119428. No. 1621. 119429. No. 1625.

Nos. 119430 and 119431. From the Elaziz bazar, July 13.

119417 to 119445—Continued.

119430. No. 1695. 119431. No. 1713.

Nos. 119432 and 119433. From the Malatya bazar, July 16.

119432. No. 1831. White barley.

119433. No. 1840.

119434. No. 2180. From a field 80 km. southeast of Susheri, August 7.

119435. No. 2592. From a field 20 km. west of Samsun, August 23.

Nos. 119436 and 119437. Hull-less barley from Konya, obtained at the Izmir Fair, September 22.

119436. No. 2939. 119437. No. 2940.

119438. No. 2987. From the Kutahya bazar, September 28.

Nos. 119439 and 119440. From the Amasya bazar, October 6.

119439. No. 3061. 119440. No. 3063.

119441. No. 3099. From the Yozgat bazar, October 9.

119442. No. 3148. From the Kastamonu bazar, October 14; originally from the village of Arach.

119443. No. 3335. From a field near Burdur, June 3.

119444. HORDEUM sp.

No. 630. From Ephesus, May 24.

119445. HORDEUM sp.

No. 2769. From 35 km. south of Bursa on Ulu Dag at 6,500 feet altitude, September 8.

119446 to 119473.

From Venezuela. Seeds collected by Raymond Stadelman, Bureau of Plant Industry. Received January 6, 1937.

119446. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

From El Gamera, Sarare River, Apure.

119447 to 119473. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

119447 to 119449. From Posetas (Rio Doradas), Tachira.

119447. No. 348. *Giron*.119448. No. 349. *Ambalema*.119449. No. 350. *Grande*.119450. No. 351. *Habano*. From Las Caobas (Rio Uribante), Apure.119451. No. 352. *Habano*. From Guaca (Rio Uribante), Zamora.119452. No. 353. *Caribe*. From Totumito (Rio Apure), Apure.119453. No. 354. *Orega de mula*. From Arturago (Rio Apure), Zamora.

119454. No. 355. From La Tigra (Rio Apure), Zamora.

Nos. 119455 to 119457 were collected along the Rio Apure in the State of Apure.

119455. No. 356. From Palmarito.

119456. No. 357. From Palmarito.

119457. No. 358. From San Vicente.

Nos. 119458 and 119459 were collected along the Rio Apure in the State of Zamora.

119446 to 119473—Continued.

119458. No. 359. From Nutrias.
 119459. No. 360. From Santo Domingo.
 Nos. 119460 and 119461 were collected along the Rio Apure in the State of Apure.
 119460. No. 361. From Apurito.
 119461. No. 362. From Banco Largo.
 119462. No. 363. *Rabo de gallo*. From Boquerones, Rio Apure, Zamora.
 Nos. 119463 to 119471 were collected along the Rio Apure in the State of Apure.
 119463. No. 364. *Pailon*. From La Matanza.
 119464. No. 365. From Los Pajaros.
 119465. No. 366. From El Cochino.
 119466. No. 367. From Panclita.
 119467. No. 368. *Oreja de tigre*. From Los Indios.
 119468. No. 369. From Picacho de Manati.
 119469. No. 370. From Maria Luisa.
 119470. No. 371. From Boca Apure.
 119471. No. 372. From La Cascabel.
 Nos. 119472 and 119473 were collected at Caicara del Orinoco, State of Bolivar.
 119472. No. 373.
 119473. No. 374.

119474 to 119586.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 6, 1937.

This material was all collected in the summer and autumn of 1936.

- 119474 to 119478. *AVENA SATIVA* L. Poaceae.
 119474. No. 1172. From a field 80 km. west of Balikesir, June 16.
 119475. No. 1284. From a field 8 km. east of Bandirma, June 18.
 119476. No. 2018. From a field 15 km. north of Nigde, July 26.
 119477. No. 2101. From a field 25 km. southeast of Ankara on the slopes of Alma Dag, August 1.
 119478. No. 3282. From the Edirne bazar, October 22.
 119479 to 119535. *MEDICAGO* spp. Fabaceae.
 119479 to 119490. *MEDICAGO FALCATA* L. Yellow-flowered alfalfa.
 119479. No. 1847. From 11 km. west of Malatya, July 16.
 119480. No. 1859. From the city park, Malatya, July 16.
 119481. No. 1886. From 65 km. north of Malatya, July 17.
 119482. No. 2106. From near Zara, June 5.
 Nos. 119483 and 119484. Collected east of Sivas, August 5.
 119483. No. 2108. From 84 km. east.

119474 to 119586—Continued.

119484. No. 2122. From 106 km. east.
 119485. No. 2203. From 80 km. south-east of Susheri, August 7.
 119486. No. 2496. From 8 km. south-west of Shebinkarahisar, August 18.
 119487. No. 2586. From 8 to 20 km. west of Samsun, August 23.
 119488. No. 2614. From Samsun, August 21.
 Nos. 119489 and 119490. Collected southwest of Samsun, August 24.
 119489. No. 2618. From 54 km. southwest.
 119490. No. 2619. From 35 km. southwest.
 119491 and 119492. *MEDICAGO SATIVA* L. Alfalfa.
 119491. No. 558. From the Isparta bazar, June 2.
 119492. No. 616. From the Izmir bazar, June 23.
 119493. *MEDICAGO ORBICULARIS* (L.) All. Medick.
 No. 673. From near Milas, June 26.
 For previous introduction see 107559.
 119494 to 119499. *MEDICAGO SATIVA* L. Alfalfa.
 119494. No. 1157. From the Balikesir bazar, June 17.
 119495. No. 1241. From the Bursa bazar, June 18.
 119496. No. 1305. From the Bursa bazar, June 20.
 119497. No. 1688. From the Elaziz bazar, July 13.
 119498. No. 1726. Wild alfalfa from 20 km. southeast of Elaziz, July 13.
 119499. No. 1795. From 35 km. south-west of Elaziz, July 14.
 119500. *MELILOTUS OFFICINALIS* (L.) Lam.
 No. 1828. From the Malatya bazar, July 16.
 119501 to 119535. *MEDICAGO SATIVA* L. Alfalfa.
 119501. No. 1871. From 50 km. north of Malatya, July 17.
 119502. No. 1975. From Birejik, July 24. Wild alfalfa.
 119503. No. 1936. From Birejik, July 22.
 119504. No. 2013. Wild alfalfa from 20 km. north of Nigde, July 26.
 119505. No. 2130. From the Sivas bazar, August 5.
 119506. No. 2206. From 80 km. south-east of Susheri, August 2.
 119507. No. 2249. From the Erzinjan bazar, August 8.
 119508. No. 2261. Wild alfalfa, found abundantly between Terjan and Erzerum, August 8.
 119509. No. 2272. From 20 to 40 km. east of Erzinjan, August 9.

119474 to 119586—Continued.

119510. No. 2317. Wild alfalfa from 10 km. north of Gemushane, August 10.
119511. No. 2351. From the Trabzon bazar, August 11.
119512. No. 2453. From Alma Dag, 25 km. southeast of Ankara, August 1.
119513. No. 2502. From 8 km. west of Mesudiye, August 8.
- Nos. 119514 and 119515. Collected southeast of Amasya, August 25.
119514. No. 2634. From 20 km. southeast.
119515. No. 2636. From 50 km. southeast.
119516. No. 2665. From 35 km. south of Tokat, August 26.
119517. No. 2698. From the Amasya bazar, August 25.
119518. No. 2722. From Urgup, August 28.
119519. No. 2753. Wild alfalfa from Ulu Dag. 15 km. south of Bursa, September 8.
119520. No. 2978. Wild alfalfa from Ephesus, September 25.
119521. No. 2996. From the Kutahya bazar, September 28.
119522. No. 3018. From a field at Kutahya, September 28.
119523. No. 3069. From the Amasya bazar, October 6.
119524. No. 3185. From the Kastamonu bazar, October 14.
- Nos. 119525 to 119528. Collected at Erzinjan, October 16.
119525. No. 3215. 119527. No. 3217.
119526. No. 3216. 119528. No. 3218.
119529. No. 3219. From Denizli, October 16.
119530. No. 3220. From Konya, October 16.
119531. No. 3221. From Kayseri, October 16.
119532. No. 3222. From Erzerum, October 16.
119533. No. 3223. From Yeshilkoy, October 16.
119534. No. 3224. From Mush (Mus), October 16.
119535. No. 3290. From the Edirne bazar, October 22.

119536 to 119540. *MEDICAGO*. Fabaceae.
Medick.

- A collection of hybrid alfalfas.
119536. No. 1979. From Birejik, July 24.
119537. No. 2110. From 106 km. east of Sivas, August 5.
119538. No. 2621. From 85 km. southwest of Samsun, August 24.
- Nos. 119539 and 119540. Collected south of Tokat, August 26.
119539. No. 2681. From 15 km. south.
119540. No. 2689. From 21 km. south.

119474 to 119586—Continued.

- 119541 to 119548. *SECALE CEREALE* L. Poaceae.
Rye.
119541. No. 822. From a field; en route from Aydin to Milas, May 26.
119542. No. 1072. From a field 10 km. west of Soma, June 10.
119543. No. 1167. From a field 8 km. west of Balikesir, June 16.
- Nos. 119544 and 119545. Collected in a field 20 km. southeast of Elaziz, July 13.
119544. No. 1765.
119545. No. 1766.
119546. No. 1817. From the Malatya bazar, July 16.
119547. No. 2016. From a field 45 km. north of Nigde, July 26.
119548. No. 2102. From a field on the slopes of Alma Dag, 25 km. southeast of Ankara, August 1.
- 119549 to 119586. *ZEA MAYS* L. Poaceae.
Corn.
119549. No. 1245. From the Bursa bazar, June 18.
119550. No. 1389. From the Marash bazar, July 2.
119551. No. 1556. From the Urfa bazar, July 6.
119552. No. 1712. From the Elaziz bazar, July 13.
119553. No. 1843. From the Malatya bazar, July 16.
119554. No. 1907. From Diyarbekir, July 8. This type is eaten roasted.
- Nos. 119555 and 119556. From the Nigde bazar, July 27.
119555. No. 2036. 119556. No. 2044.
119557. No. 2131. From the Sivas bazar, August 5.
119558. No. 2239. From the Erzinjan bazar, August 8.
119559. No. 2365. From the Trabzon bazar, August 11.
119560. No. 2386. From Surmeneh, August 12.
119561. No. 2416. From the Rize bazar, August 13.
119562. No. 2429. From a field 30 km. northwest of Susheri, August 18.
119563. No. 2512. From a field near Trabzon, August 14.
119564. No. 2549. From the Samsun bazar, August 21.
119565. No. 2571. From 10 km. west of Charshamba, August 22.
- Nos. 119566 and 119567. Collected in fields west of Samsun, August 23 and 24.
119566. No. 2596. From 5 km. west.
119567. No. 2620. From 20 km. south.
119568. No. 2633. From a field 30 km. southeast of Amasya, August 25.
119569. No. 2662. From a field between Tokat and Sivas, August 26.
119570. No. 2695. From a field south of Tokat, August 26.

119474 to 119586—Continued.

119571. No. 2751. From the slopes of Ulu Dag, 20 km. south of Bursa, September 7.
119572. No. 2938. From Urfa, obtained at the Izmir Fair, September 22.
119573. No. 2924. From Yalova, September 6.
119574. No. 2927. Popcorn from the Yalova bazar, September 12.
119575. No. 2929. From Biga, September 19.
119576. No. 3019. From Eskishehir, September 29.
119577. No. 3067. From the Amasya bazar, October 6.
119578. No. 3101. From the Yozgat bazar, October 9.
119579. No. 3116. From the Inebolu bazar, October 13.
119580. No. 3142. Popcorn from the Inebolu bazar, October 13.
119581. No. 3201. From the Chankiri bazar, October 13.
119582. No. 3230. From the Adapazari bazar, October 20.
119583. No. 3275. From the Adapazari Experiment Station, October 20.
- Nos. 119584 and 119585. From the Edirne bazar, October 22.
119584. No. 3276. Popcorn.
119585. No. 3278.
119586. No. 3374. From the Balikesir bazar, June 6.

119587 to 119592. *TRITICUM AESTIVUM* L. Poaceae. Common wheat.

- From Argentina. Seeds presented by the Ministerio de Agricultura de la Nación, Buenos Aires. Received January 11, 1937.
119587. LF. 23063. *Kanred* × *Florence*
F₇. Cheg: 27-7 × 5-1-24/34.
119588. LF. 23065. *Kanred* × *Florence*
F₇. Cheg: 27-7 × 11-1-10/34.
119589. LF. 23061. *Kanred* × *Florence*
F₇. Cheg: 27-7 × 5-1-5/34.
119590. LF. 23062. *Kanred* × *Florence*
F₇. Cheg: 27-7 × 5-1-13/34.
119591. LF. 23064. *Kanred* × *Florence*
F₇. Cheg: 27-7 × 8-1-3/34.
119592. LF. 23066. *Kanred* × *Florence*
F₇. Cheg: 27-7 × 11-1-23/34.

119593 to 119705.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 11, 1937.

This material was all collected in the summer and autumn of 1936.

- 119593 to 119598. *AEGILOPS* spp. Poaceae.
119593. *AEGILOPS SPELTOIDES AUCHERI* (Boiss.) Meyer.
- No. 1595. From between Urfa and Diyarbekir, July 7. Found growing plentifully on basalt formation.
119594. *AEGILOPS BICORNIS* (Forsk.) Jaub. and Spach.

119593 to 119705—Continued.

- No. 1077. From 50 km. northwest of Izmir, June 10.
119595. *AEGILOPS MUTICA* Boiss.
- No. 1901. From dry plains 25 km. north of Malatya, July 17. An annual grass with erect stems about 12 inches high, native to Asia Minor.
119596. *AEGILOPS MUTICA* Boiss.
- No. 2182. From 20 km. east of Susheri, August 7.
119597. *AEGILOPS SPELTOIDES* Tausch.
- No. 1402. From 30 km. southeast of Gaziantep, July 2.
- For previous introduction see 116293.
119598. *AEGILOPS SPELTOIDES* Tausch.
- No. 1610. Found growing abundantly on dry basalt plains between Urfa and Diyarbekir, July 7.
- 119599 to 119608. *AGROPYRON* spp. Poaceae. Grass.
- 119599 to 119601. *AGROPYRON CRISTATUM* (L.) Gaertn. Crested wheatgrass.
119599. No. 2015. From 25 km. north of Nigde, July 26.
119600. No. 2280. From 94 km. east of Erzinjan, August 9.
119601. No. 3409. From near Ankara, June 26. An early maturing dwarf variety found growing on dry plains.
119602. *AGROPYRON DIVARICATUM* Boiss. and Bal.
- No. 1888. A perennial grass found 55 km. north of Malatya, July 17.
119603. *AGROPYRON INTERMEDIUM* (Host) Beauv.
- No. 2902. From the ruins in Troy, September 18.
119604. *AGROPYRON JUNCEUM* (L.) Beauv.
- No. 2875. Beach grass from 1 km. west of Yalova, September 12.
- For previous introduction see 115323.
119605. *AGROPYRON ORIENTALE LASIANTHUM* Boiss.
- No. 1905. From 25 km. north of Malatya, July 17. An annual grass found on dry plains.
- For previous introduction see 108846.
119606. *AGROPYRON PANORMITANUM* Parl.
- No. 1937. From Birejik, July 22. A fibrous-rooted perennial grass with erect stems. Native to the Mediterranean region.
119607. *AGROPYRON* sp.
- No. 1892. From 60 km. north of Malatya, July 17.
119608. *AGROPYRON* sp.
- No. 2971. From 20 km. northeast of Izmir, August 24.
- 119609 to 119615. *AGROSTIS* spp. Poaceae. Bentgrass.
- 119609 and 119610. *AGROSTIS SPICA-VENTI* L.
- An annual grass, usually about 20 inches high, with feathery panicles 4 to 8 inches long. Native to Europe.

119593 to 119705—Continued.

- For previous introduction see 109222.
119609. No. 1644. From 70 km. south of Diyarbekir, July 9.
119610. No. 2012. From 30 km. north of Nigde, July 26.
119611. *AGROSTIS VERTICILLATA* Vill.
No. 1848. From 11 km. west of Malatya, July 16.
119612. *AGROSTIS* sp.
No. 1176. From 40 km. west of Balikesir, June 16.
119613. *AGROSTIS* sp.
No. 2281. From 128 km. east of Erzinjan, August 9.
119614. *AGROSTIS* sp.
No. 2813. From Yalova Kaplijalari, September 11.
119615. *AGROSTIS* sp.
No. 2817. From Yalova Kaplijalari, September 11.
119616. *ALOPECURUS PRATENSIS* L. Poaceae.
Meadow foxtail.
No. 617. From Ephesus, May 24.
119617. *ANDROPOGON ISCHAEMUM* L. Poaceae.
Grass.
No. 2561. From 41 km. east of Samsun, August 22.
119618. *ANTHOXANTHUM ODORATUM* L. Poaceae.
Sweet vernal grass.
No. 671. From south of Chine, June 26.
- 119619 to 119622. *ARRHENANTHERUM ELATIUS* (L.) Beauv. Poaceae. Tall oatgrass.
119619. No. 1169. From 10 km. west of Balikesir, June 16.
119620. No. 1288. From 31 km. northeast of Bandirma, June 18.
119621. No. 2080. From Alma Dag, 36 km. southeast of Ankara, August 1.
119622. No. 2192. From 100 km. southeast of Susheri, August 7.
- 119623 to 119625. *BRACHYPODIUM PINNATUM* (L.) Beauv. Poaceae. Grass.
119623. No. 2112. From 100 km. east of Sivas as 6,000 feet altitude on rocky soil, August 5.
119624. No. 2183. From 100 km. southeast of Susheri, August 7.
119625. No. 2680. From 41 km. south of Tokat, August 26.
119626. *BRIZA MAXIMA* L. Poaceae.
Big quaking grass.
No. 1190. From 5 km. west of Balikesir, June 16. An annual grass with erect or decumbent culms up to 2 feet high and large showy spikelets. Native to southern Europe.
- For previous introduction see 111268.
- 119627 and 119628. *BRIZA HUMILIS* Bieb. Poaceae.
Quaking grass.
An annual grass with ascending stems about 1 foot high. Native to the Near East.
119627. No. 3405. From 3 km. west of Ankara, June 25.

119593 to 119705—Continued.

119628. No. 3306. From 10 km. west of Gaziantep, May 1.
- 119629 to 119633. *BROMUS* spp. Poaceae.
Brome-grass.
119629. *BROMUS SECALINUS* L. Chess.
No. 2228. From the Erzinjan bazar, August 8.
119630. *BROMUS TECTORUM* L.
No. 2188. From 100 km. southeast of Susheri, August 7.
119631. *BROMUS TECTORUM* L.
No. 2052. From Alma Dag, 25 km. southeast of Ankara, August 1.
119632. *BROMUS* sp.
No. 1287. From 40 km. northeast of Bandirma, June 18.
119633. *BROMUS STERILIS* L.
No. 2807. From Yalova Kaplijalari, September 11.
119634. *CALAMAGROSTIS* sp. Poaceae.
Grass.
No. 2425. From 77 km. south of Giresun, August 17.
119635. *CYNODON DACTYLON* (L.) Pers. Poaceae.
Bermuda grass.
No. 1900. A coarse type from dry plains 25 km. northeast of Malatya, July 17.
- 119636 to 119639. *DACTYLIS GLOMERATA* L. Poaceae.
Orchard grass.
119636. No. 1196. From 80 km. west of Balikesir, June 16.
119637. No. 1645. From 70 km. south of Diyarbekir, July 9.
119638. No. 1869. From 60 km. north of Malatya in the mountains, July 17.
119639. No. 2208. From 60 km. southeast of Susheri, August 7.
119640. *DESCHAMPSIA CAESPITOSA* (L.) Beauv. Poaceae. Tufted hairgrass.
No. 2745. From Alma Dag, 35 km. south of Bursa, August 7.
119641. *ERIANTHUS HOSTII* Griseb. Poaceae.
Grass.
No. 2852. From Yalova Kaplijalari, September 12. A perennial tufted reedlike grass about 6 feet high, with densely woolly panicles. Native to southern Europe and Asia Minor.
- For previous introduction see 109495.
- 119642 to 119652. *FESTUCA* spp. Poaceae.
Fescue.
- 119642 to 119648. *FESTUCA OVINA* L. Sheep fescue.
119642. No. 1884. From 45 km. north of Malatya, July 17.
- Nos. 119643 and 119644. From Birejik, July 21.
119643. No. 1928. 119644. No. 1929.
119645. No. 2079. From Alma Dag, 25 km. southeast of Ankara, August 1.
119646. No. 2676. From 39 km. south of Tokat, August 26.

119593 to 119705—Continued.

119647. No. 2748. From Ulu Dag, 35 km. south of Bursa, August 7. A form with stiff grayish-green leaves; seldom eaten.
119648. No. 3424. From 3 km. north-east of Ankara, June 26.
119649. *FESTUCA* sp.
No. 724. From a lake bottom, 50 km. southeast of Mugla, May 28.
119650. *FESTUCA* sp.
No. 2746. From Ulu Dag, 35 km. south of Bursa, September 7.
119651. *FESTUCA* sp.
No. 2788. From Ulu Dag, 35 km. south of Bursa, September 9.
119652. *FESTUCA* sp.
No. 2832. From Yalova Kaplijalari, September 11.
119653. *GAUDINIA FRAGILIS* (L.) Beauv. Poaceae.
No. 1173. From 10 km. west of Balikesir, June 16. An annual ascending grass, up to 2 feet high, with thick, rough-hairy leaves. It is confined almost entirely to the Mediterranean countries.
For previous introduction see 74167.
119654. *KOELERIA PHLEOIDES* (Vill.) Pers. Poaceae.
No. 632. A low-growing type found near Selchuk, May 24.
- 119655 to 119657. *LOLIUM* spp. Poaceae.
119655. *LOLIUM PERENNE* L.
Perennial ryegrass.
No. 1131. From lowlands south of Kirkagach, June 11.
- 119656 and 119657. *LOLIUM TEMULENTUM* L.
Darnell.
119656. No. 765. From 2 km. north of Denizli, May 31.
119657. No. 2578. From 7 km. west of Terme, August 22.
119658. *MELICA CILIATA* L. Poaceae.
No. 1168. From 10 km. west of Balikesir, June 16.
For previous introduction see 111686.
119659. *MELICA MINUTA* L. Poaceae.
No. 624. From Ephesus, May 22.
For previous introduction see 117376.
- 119660 to 119665. *ORYZOPSIS* spp. Poaceae.
119660 and 119661. *ORYZOPSIS COERULESCENS* (Desf.) Hack.
For previous introduction see 117384.
119660. No. 656. From 25 km. south-east of Izmir, June 25.
119661. No. 1930. From Birejik, July 21.
- 119662 and 119663. *ORYZOPSIS HOLCIFORMIS* (Bieb.) Hack.
A perennial grass with a thick short rhizome and stems 3 feet or more high. The panicles are a foot or more long. It is native to southern and southeastern Europe.
For previous introduction see 78797.

119593 to 119705—Continued.

119662. No. 777. From 35 km. west of Isparta, June 2.
119663. No. 2186. From 100 km. southwest of Susheri, August 7.
- 119664 and 119665. *ORYZOPSIS MILIACEA* (L.) Benth. and Hook.
For previous introduction see 109536.
119664. No. 2560. From 4 km. east of Samsun, August 22.
119665. No. 2948. From Kemal Pasha, September 23.
- 119666 to 119670. *PHALARIS* spp. Poaceae. Grass.
119666. *PHALARIS BRACHYSTACHYS* Link.
No. 1647. An annual grass from 20 km. south of Diyarbekir, July 9.
119667. *PHALARIS PARADOXA* L.
No. 620. From Ephesus, June 24.
- 119668 to 119670. *PHALARIS TUBEROSA* L.
For previous introduction see 117386.
119668. No. 1565. From 30 km. north-east of Urfa, July 7.
119669. No. 1649. Found growing in large clumps 20 km. south of Diyarbekir, July 9.
119670. No. 2907. From 2 km. south of Biga, September 19.
- 119671 to 119676. *PHLEUM* spp. Poaceae. Timothy.
119671 and 119672. *PHLEUM ARENARIUM* L.
For previous introduction see 109345.
119671. No. 1641. From 30 km. south of Diyarbekir, July 9.
119672. No. 2284. From 25 km. east of Erzinjan, August 9.
119673. *PHLEUM PRATENSE* L.
No. 2583. From 31 km. west of Samsun, August 23.
- 119674 to 119676. *PHLEUM SUBULATUM* (Savi) Aschers. and Graebn.
For previous introduction see 109547.
119674. No. 1094. From south of Akhisar, June 11.
119675. No. 1187. From 50 km. west of Balikesir, June 16.
119676. No. 2603. From 3 km. west of Samsun, August 23.
- 119677 to 119688. *POA* spp. Poaceae. Grass.
119677 to 119682. *POA BULBOSA* L.
119677. No. 633. From the Izmir district, June 25.
119678. No. 1577. From 30 km. northeast of Urfa, July 7.
119679. No. 1887. From 42 km. north of Malatya, July 17.
119680. No. 2020. From 45 km. north of Nigde, July 26.
119681. No. 2771. From 6,500 feet altitude on Ulu Dag, 35 km. south of Bursa, September 8.
119682. No. 3308. From 10 km. west of Gaziantep, May 1.

119593 to 119705—Continued.

119683. *POA* sp.
No. 1115. From 2 km. south of Kiiikagach, June 11.
119684. *POA* sp.
No. 1199. From 65 km. west of Balikesir, June 16.
119685. *POA* sp.
No. 2066. From Alma Dag, 25 km. southeast of Ankara, August 1.
119686. *POA* sp.
No. 2071. From Alma Dag, 25 km. southeast of Ankara, August 1.
119687. *POA* sp.
No. 2337. From 55 km. south of Trabzon, August 10.
119688. *POA* sp.
No. 2682. From 41 km. south of Tokat, August 26.
119689. *POLYPOGON MONSPELIENSIS* (L.) Desf. Poaceae. Grass.
No. 1443. From 60 km. north of Gaziantep, July 2. An annual grass with soft bristly green or yellowish spikes up to 6 inches long. A common weed on our Pacific coast.
For previous introduction see 109143.
- 119690 to 119696. *RHAPHIS GRYLLOS* (L.) Desv. Poaceae. Grass.
119690. No. 723. From dry limestone hills 45 km. southeast of Mugla, May 28.
119691. No. 1076. From 60 km. north-west of Izmir, June 10.
119692. No. 1171. From 65 km. west of Balikesir, June 16.
119693. No. 1175. From 40 km. west of Balikesir, June 16. Very common on the dry plains and hills of this region.
119694. No. 1399. From 15 km. southeast of Marash, where it forms bright green patches on dry rocky slopes, July 2.
119695. No. 1522. From 25 km. east of Birejik, July 5.
119696. No. 2834. From Yalova Kapli-jalari, September 11.
119697. *SECALE ANATOLICUM* Boiss. Poaceae. Grass.
No. 2060. From Alma Dag, 25 km. southeast of Ankara, August 1. A perennial grass with stems 2 to 3 feet high. Native to Asia Minor.
- 119698 to 119705. *STIPA* spp. Poaceae. Feathergrass.
119698. *STIPA BROMOIDES* (L.) Beck.
No. 2911. From 50 km. east of Chanak Kale, September 19.
- 119699 and 119700. *STIPA PENNATA* L.
119699. No. 2062. From Alma Dag, 25 km. southeast of Ankara, August 1.
119700. No. 3384. From 3 km. west of Ankara, June 26.
119701. *STIPA SZOVITZIANA* Trin.

119593 to 119705—Continued.

- No. 806. From 20 km. south of Burdur, June 3.
119702. *STIPA* sp.
No. 775. From 35 km. west of Isparta, June 2.
119703. *STIPA* sp.
No. 1068. From the Bergama ruins, June 10.
119704. *STIPA* sp.
No. 1762. From 40 km. southeast of Elaziz, July 13.
119705. *STIPA* sp.
No. 2009. From 20 km. north of Nigde, July 26.
119706. *BRASSICA OLERACEA CAPITATA* L. Brassicaceae. Cabbage.
From New Zealand. Seeds presented by Richard Norman, Otago, through Mrs. John Waldron, National Geographic Society, Washington, D. C. Received January 13, 1937.
Maori cabbage. A variety native to New Zealand, which grows rapidly and is a fine culinary plant; the seeds look like rape.
- 119707 and 119708.
From Kenya Colony, Africa. Seeds and bulbs purchased from the Mount Elgon Nurseries, Kama Koia, Mount Elgon, Kitale. Received January 11, 1937.
119707. *CLEODENDRUM MYRICOIDES* R. Br. Verbenaceae.
A tender erect evergreen shrub 3 to 5 feet high, with 2- to 4-lobed oblong leaves 2 to 6 inches long and small bicolored blue and white flowers in short terminal panicles. Native to tropical Africa.
119708. *AMMOCHARIS HETEROSTYLA* (Bullock) Mil.-Redh. and Schw. Amaryllidaceae.
Bulbs of an amaryllid with glaucous green, strap-shaped, spreading leaves about 10 inches long and up to 18 erect, mildly fragrant flowers in an umbel; the narrow segments are 2 to 3 inches long. The fresh flowers are creamy white with a pinkish tube; as they age, usually in 2 or 3 days, they become dull rose over all. Native to South Africa.
- 119709 to 119804.
From Buenos Aires, Argentina. Seeds and bulbs collected by W. A. Archer, Bureau of Plant Industry. Received January 4, 1937.
Collected in markets and seed stores in Buenos Aires, November 25 to 27, 1936, and, unless otherwise stated, received as seeds.
- 119709 to 119720. *ALLIUM CEPA* L. Liliaceae. Onion.
119709. No. 4538. *Colorado de Madeira*.
119710. No. 4539. *Ognon Jaune de Danvers*.
119711. No. 4540. *Blanca Chata de la Costa*.
119712. No. 4541. *Amarilla de Trebans*.
119713. No. 4542. *Amarilla Valenciana*.
119714. No. 4543. *Blanca Chata de Nápole*.

119709 to 119804—Continued.

119715. No. 4544. *Colorada de la Costa*.
 119716. No. 4545. *Colorada Viva de Agosto*.
 119717. No. 4546. *Amarilla Chata de Vertus*.
 119718. No. 4499. *Amarilla Aglobada de la Costa*.
 119719. No. 4500. *Colorada Chata de la Costa*.
 119720. No. 4501. *Amarilla Chata In-versiza*.
 119721 and 119722. BRASSICA OLERACEA CAPITATA L. Brassicaceae. **Cabbage**.
 119721. No. 4507. *Repollo Crespo Grueso San Juan Temprano*.
 119722. No. 4505. *Col Negro Romano*. Native seed.
 119723. TARA SPINOSA (Molina) Britton and Rose (*Caesalpinia pectinata* Cav.). Caesalpiniaaceae.
 No. 4559. *Tara*. A tall upright spiny shrub or small tree, often used as a hedge in Peru. The foliage is deep green with the leaflets smooth and polished on the upper surface. The greenish-yellow flowers, in cylindrical open spikes, are not very conspicuous, but the pods are produced in large clusters and the exposed surfaces show bright scarlet for a long time before maturing. The pods contain a high percentage of tannin.
 For previous introduction see 64915.
 119724. CICER ARIETINUM L. Fabaceae. **Chickpea**.
 No. 4479. *Garbanzo*.
 119725. CICHORIUM INTYBUS L. Cichoriaceae. **Chicory**.
 No. 4508. *Radichota Fina do Cortar*. Native seed.
 119726 to 119735. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon**.
 119726. No. 4494. *Florida Favorita*.
 119727. No. 4495. *Colorada de la Costa*.
 119728. No. 4509. *Colorada Delicia*.
 119729. No. 4510. *Colorada de la Costa*. Native seed.
 119730. No. 4523. *Colosal*.
 119731. No. 4524. A mixed sample of native varieties.
 119732. No. 4531. *De Cremona*.
 119733. No. 4532. *Larga de Valencia*.
 119734. No. 4533. *Colorada Redonda*.
 119735. No. 4564.
 119736 to 119753. CUCUMIS MELO L. Cucurbitaceae. **Muskmelon**.
 119736. No. 4491. *Cantaloup de Argel*.
 119737. No. 4492. *Campeón del Mercado*.
 119738. No. 4493. *Azucarado de Tours*.
 119739. No. 4514. A mixed sample.
 119740. No. 4515. *Cantaloup Nantais*.
 119741. No. 4516. *Cantaloup Azucarado*.
 119742. No. 4517. *Valenciano Largo, Carne Amarillo*.

119709 to 119804—Continued.

119743. No. 4518. *Malta de Invierno, Carne Colorado*.
 119744. No. 4519. *Mediano Redondo*. Native seed.
 119745. No. 4520. *Brodi Bola de Oro, Carne Verde*.
 119746. No. 4521. *Redondo Escrito*.
 119747. No. 4522. *Vaucluse é Cavallon*.
 119748. No. 4534. *Cantaloup de Argel*.
 119749. No. 4535. *Campeón del Mercado*.
 119750. No. 4536. *Azucarado de Tours*.
 119751. No. 4537. *Amarillo de Valencia*.
 119752. No. 4562. A cultivated melon.
 119753. No. 4563. A cultivated melon.
 119754 and 119755. CUCUMIS SATIVA L. Cucurbitaceae. **Cucumber**.
 119754. No. 4496-A. *Largo Verde*.
 119755. No. 4497. *Chico de Rusia*.
 119756 to 119768. CUCURBITA spp. Cucurbitaceae.
 119756 to 119761. CUCURBITA MAXIMA Duchesne. **Squash**.
 119756. No. 4496. *Zapallito Redondo de Tronco*. A variety common in the market; it is filled with meats, etc., for roasting.
 119757. No. 4502. *Redondo Criollo*. Native seed.
 119758. No. 4503. *Español Chato*.
 119759. No. 4504. *Zapallito Redondo de Tronco*. The same as No. 4496 (P. I. 119756).
 119760. No. 4527. *Courge Sucrière de Brésil*.
 119761. No. 4529. *Zapallo Criollo Grueso*.
 119762 to 119764. CUCURBITA MOSCHATA Duchesne. **Cushaw**.
 119762. No. 4566. From the Province of Salta.
 119763. No. 4565. A form with curved fruits.
 119764. No. 4483. A cultivated pumpkin.
 119765 to 119768. CUCURBITA PEPO L. **Pumpkin**.
 119765. No. 4526. *Courge a la Moelle*.
 119766. No. 4528. *Zapallito Largo del Tronco Temprano Genoves*.
 119767. No. 4530. *Zapallo Angola*.
 119768. No. 4556. *Boliviana*. Cultivated by the Indians of the Province of Salta. The fruits keep a long time.
 119769. DOLICHOS LABLAB L. Fabaceae. **Hyacinth-bean**.
 No. 4465. An ornamental vine; seeds sometimes eaten.
 119770. FRAGARIA VESCA L. Rosaceae. **Strawberry**.
 No. 4462. A cultivated strawberry with small fruits of good flavor.
 119771. HELIANTHUS ANNUUS L. Asteraceae. **Common sunflower**.

119709 to 119804—Continued.

- No. 4481. A cultivated sunflower.
119772. HIPPEASTRUM sp. Amaryllidaceae.
No. 4555. Bulbs; native in Corrientes, Argentina.
119773. LACTUCA SATIVA L. Cichoriaceae.
Garden lettuce.
No. 4464. Cultivated lettuce; native seed.
119774. LATHYRUS SATIVUS L. Fabaceae.
Bittervetch.
No. 4474. A cultivated pea.
119775. LUPINUS sp. Fabaceae.
No. 4558.
- 119776 to 119778. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.
119776. No. 4511. *Liso Colorado Argentino*. Native seed.
119777. No. 4512. *Grueso Liso Chemin*.
119778. No. 4513. *Colorado Grueso*.
- 119779 to 119782. MEDICAGO spp. Fabaceae.
119779. MEDICAGO LUPULINA L.
Black medick.
No. 4570. A prostrate variety with yellow flowers.
- 119780 to 119782. MEDICAGO SATIVA L.
Alfalfa.
119780. No. 4484.
119781. No. 4463. Native seed.
119782. No. 4525. *Alfalfa de la Pampa*. Native seed.
119783. OCMUM BASILICUM L. Mentha-
ceae. Common basil.
No. 4506. *Albahaca a Hoja Ancha*. Native seed.
For previous introduction see 118393.
119784. ORYZA SATIVA L. Poaceae. Rice.
No. 4561. A cultivated rice.
- 119785 to 119792. PHASEOLUS spp. Fab-
aceae. Bean.
119785 and 119786. PHASEOLUS COCCINEUS
L. Scarlet runner bean.
119785. No. 4468. 119786. No. 4471.
119787. PHASEOLUS LUNATUS L.
Lima bean.
No. 4472. A cultivated butter bean.
- 119788 to 119792. PHASEOLUS VULGARIS
L. Common bean.
119788. No. 4466. *Chauca*. Used as
food, also as stock feed.
119789. No. 4467. 119791. No. 4470.
119790. No. 4469. 119792. No. 4480.
- 119793 to 119796. PISUM SATIVUM L. Fab-
aceae. Pea.
119793. No. 4475. 119795. No. 4477.
119794. No. 4476. 119796. No. 4478.
119797. PRUNUS ARMENIACA L. Amygdala-
ceae. Apricot.
No. 4599. *Damasco*. Fruit small, about
1 inch in diameter.

119709 to 119804—Continued.

119798. VIGNA SINENSIS (Torner) Savi.
Fabaceae. Cowpea.
No. 4473. A cultivated black-eyed pea.
- 119799 to 119802. ZEA MAYS L. Poaceae.
Corn.
119799. No. 4561—A. *Maiz Arco Iris*.
119800. No. 4482. Cultivated popcorn.
119801. No. 4498. *Maiz Dulce Para Choclo*. Native seed.
119802. No. 4560. *Maiz Vestido*.
119803. ZEPHYRANTHES sp. Amaryllida-
ceae.
No. 4553. Bulbs from Iguazu, Argen-
tina.
119804. ZEPHYRANTHES sp.
No. 4554. Bulbs, native to Puerto Ber-
toni, Argentina. A variety with yellow
flowers.
- 119805 to 119809. XANTHOSOMA spp.
Araceae. Malanga.
From Puerto Rico. Tubers presented by
Atherton Lee, Puerto Rico Federal Exper-
iment Station, Mayaguez. Received Janu-
ary 27, 1937.
119805. XANTHOSOMA ATROVIRENS Koch and
Bouché.
119806. XANTHOSOMA CARACU Koch and
Bouché. Yautia.
A yautia remarkable for the large and
uniform size of its tubers.
For previous introduction see 98519.
119807. XANTHOSOMA SAGITTAEFOLIUM (L.)
Schott. Yautia.
A white-fleshed yautia of very good
quality.
For previous introduction see 51388.
119808. XANTHOSOMA sp.
119809. XANTHOSOMA sp.
- 119810 to 119823.
From Argentina and Brazil. Collected by
W. A. Archer, Bureau of Plant Industry.
Received January 13, 1937.
Unless otherwise mentioned, the material
was received as seeds.
- 119810 to 119815. ARACHIS HYPOGAEA L.
Fabaceae. Peanut.
Nos. 119810 to 119813 were from Pos-
adas, Argentina, December 5, 1936. Cult-
ivated peanuts.
119810. No. 4600. 119812. No. 4602.
119811. No. 4601. 119813. No. 4603.
Nos. 119814 and 119815 were from
Santa Anna, Argentina, December 10,
1936.
119814. No. 4622. *Negro*.
119815. No. 4623. *Rojo*.
- 119816 and 119817. CUCUMIS MELO L. Cu-
curbitaceae. Muskmelon.
Cultivated melons from Posadas, Argen-
tina, December 5, 1936.
119816. No. 4605. 119817. No. 4606.

119810 to 119823—Continued.

119818. *PHALOCALLIS HERBERTII* (Herbert) Kuntze. Iridaceae.

No. 4435-A. From Santa Anna, Brazil, November 13, 1936. A plant commonly found in this region growing in muck or in moist sand. Flower stalk 2 to 3 feet long, with bulbous base, bearing 5 or 6 flowers. Petals orange-red with green markings at base.

119819. *LUFFA CYLINDRICA* (L.) Roemer. Cucurbitaceae. Suakwa towelgourd.

No. 4604. *Esonja enredadera*. From a shop in Posadas, Argentina, December 5, 1936.

119820. *MOMORDICA CHARANTIA* L. Cucurbitaceae. Balsam-pear.

No. 4607. *Calabasita*. From a shop in Posadas, Argentina, December 5, 1936. A cultivated vine with edible fruits.

119821 and 119822. *NICOIYANA TABACUM* L. Solanaceae. Common tobacco.

From Bonpland, Argentina, December 8, 1936.

119821. No. 4616. *Chileno guazú*. Native to Misiones.

119822. No. 4617. *Amarellinha*. Seed imported from Rio Grande do Sul, Brazil.

119823. *PASSIFLORA CAERULEA* L. Passifloraceae. Bluecrown passionflower.

No. 4614. On the road between Posadas and Bonpland, Misiones, Argentina, December 8, 1936. A slender, strong-growing vine, native to Brazil, with leaves divided into 5 to 7 lanceolate segments and fragrant greenish-white flowers 4 inches across. The rays of the crown are blue at the tip, white in the middle, and purple at the base, while the styles are light purple. The orange-colored fruits are 2 inches long and 1½ inches in diameter. The edible pulp is red.

For previous introduction see 79178.

119824 to 119834.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received January 15, 1937.

119824 and 119825. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. Watermelon.

From Lahore, Punjab, November 26 and 28, 1936, but said to have come from Quetta.

119824. No. 1797. *Tarbuza*. Fruit globose, 1 foot long, pale to dark green; if pale, finely reticulated with dark green; rind rough; flesh thin, very sweet and very seedy; an excellent keeper.

119825. No. 1802. *Tarbuza*. A globose melon which weighs 15 pounds; medium green, blotched with darker green; flesh very sweet.

119826. *COCCINIA* sp. Cucurbitaceae.

No. 1830. From Saharanpur, United Provinces, December 2, 1936. The *Coccinias* are perennial tropical vines, usually with tuberous roots. This form has insipid scarlet fruits 2 inches long.

119827. *CUCUMIS MELO* L. Cucurbitaceae. Muskmelon.

No. 1792. *Sarda*. Purchased at Pathankot, Punjab, November 23, 1936; said

119824 to 119834—Continued.

to have come from Baluchistan. Fruit oval, 1 foot long, golden yellow, well netted, no cavity, seeds embedded in flesh. Flesh salmon, thick, fragrant.

119828. *DIOSPYROS MONTANA* Roxb. Diospyraceae. Mountain persimmon.

No. 1817. Presented by the Government Gardens, Saharanpur, United Provinces, December 1, 1936. An evergreen tree 1 foot in diameter, laden with globular orange fruits, 1 to 1½ inches in diameter.

For previous introduction see 52287.

119829. *EUONYMUS* sp. Celastraceae.

No. 1825. From Saharanpur, United Provinces.

119830. *IXORA COCCINEA* L. Rubiaceae. Scarlet ixora.

No. 1827. From the Government Gardens, Saharanpur, United Provinces, December 1, 1936. An attractive evergreen shrub 4 feet high, with heads of lovely scarlet flowers, followed by crimson berries.

119831. *KIGELIA PINNATA* (Jacq.) DC. Bignoniaceae.

No. 1831. The "sausage tree" of eastern tropical Africa; becomes 30 to 50 feet high, with rough ternate leaves made up of 7 to 9 elliptic-oblong leaflets and large claret-colored flowers in long spikes, followed by sausagelike fruits 12 to 18 inches long.

For previous introduction see 106507.

119832. *MALUS* sp. Malaceae.

No. 1832. *Sarak*. From Lahore, Punjab, November 29, 1936. Fruits 1½ to 2 inches in diameter, red and yellow; flesh sweet, nonstringent, of agreeable flavor.

119833. *SARACA INDICA* L. Caesalpiniaceae. Common saraca.

From Saharanpur, United Provinces. A medium-sized Indian tree with pinnately compound leaves of 6 to 12 oblong leathery leaflets 6 to 12 inches long and fragrant orange-red flowers in compact panicles.

For previous introduction see 98093.

119834. *TABERNAEMONTANA CORONARIA* R. Br. Apocynaceae.

No. 1823. From the Government Gardens, Saharanpur, United Provinces, December 1, 1936. An evergreen shrub up to 8 feet tall, with white flowers and fruits which split and show the crimson seeds.

119835 to 119866.

From the Union of Soviet Socialist Republics. Plants presented by Dr. N. I. Sharapov, Institute of Plant Industry, Leningrad. Received January 25, 1937.

Originally from Turkistan, unless otherwise stated.

119835 to 119846. *AMYGDALUS* spp. Amygdalaceae.

119835. *AMYGDALUS DAVIDIANA* (Carr.) Zabel. Chinese wild peach.

No. 1674.

119836 to 119840. *AMYGDALUS PERSICA* L. Peach.

119836. No. 224. *Khidistavsky*.

119835 to 119866—Continued.

119837. No. 349—T. *Sarji Oilar*.
 119838. No. 0647. *Shaptaly*.
 119839. No. 1281—T. *Shirim-Danak*.
 119840. No. 0195. Turnip-shaped.
 119841 to 119843. *AMYGDALUS PERSICA* L.
 Peach.
 Variety *Ferganensis*.
 119841. No. 849. A white-fleshed form.
 119842. No. 0439. An early yellow form.
 119843. No. 02288. A yellow form.
 119844. *AMYGDALUS PERSICA* NECTARINA Ait.
 Nectarine.
 No. 0932. A flat red nectarine.
 119845 and 119846. *AMYGDALUS PERSICA* PLATYCARPA (Decaisne) Ricker.
 Flat peach.
 119845. No. 240. An early peach.
 119846. No. 1383—T.
 119847 to 119866. *PRUNUS* spp. Amygdalaceae.
 119847 to 119857. *PRUNUS ARMENIACA* L.
 Apricot.
 119847. No. 210—T.
 119848. No. 1070. *Shirpaivan*.
 119849. No. ———. *Krurmai*.
 119850. No. 1820—T. *Spitak*. Originally from Transcaucasia.
 119851. No. 1770. *Uimautsky*.
 119852. No. 0416. *Tadji-Eai*.
 119853. No. 321. *Badam-Tsfarak*.
 119854. No. 1163. *Shirassky*. From Transcaucasia.
 119855. No. 0466. *Golden Dust*.
 119856. No. 0234. *Kandsk*.
 119857. No. 1189. *Mirsandjhal*.
 119858. *PRUNUS MANDSHURICA* (Maxim.) Koehne.
 No. 1720. A small Manchurian tree up to 15 feet high, with spreading branches, ovate acuminate leaves, solitary pinkish flowers an inch or more across, and yellow subglobose fruits an inch in diameter.
 For previous introduction see 76743.
 119859 to 119863. *PRUNUS ARMENIACA* L.
 Apricot.
 119859. No. 1431—T. *Arsami*.
 119860. No. 0247. *Mulla Gadai*.
 119861. No. 0487. *Daravshak*.
 119862. No. 665—T. *Bonhara*.
 119863. No. 429. *Salgirshy*. Originally from the Crimea.
 119864 to 119866. × *PRUNUS DASYCARPA* Ehrh.
 Plum-apricot.
 For previous introduction see 117678.
 119864. No. 01276. A natural hybrid.
 119865. No. 03484. *Flor-Tsiran*. Originally from Armenia.
 119866. No. 0347.

119867. *SOLANUM* sp. Solanaceae.

From Paraguay. Tubers collected by W. A. Archer, Bureau of Plant Industry. Received January 27, 1937.

No. 4662. *Papa silvestre*. From San Miguel Curuzú, 3 km. north of Villa Encarnación, December 14, 1936.

119868 to 119874. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

From Peru. Seeds presented by Luis Aspilaga A., Hacienda Cayalti, Eten, through Raymond Stadelman, Bureau of Plant Industry. Received January 25, 1937.

119868. *Adcock*.
 119869. *Cold leaf Orinoco*.
 119870. *Connecticut Habana*.
 119871. *Judi Pride Buriel*.
 119872. *Madole tabaco*.
 119873. *Maryland broadleaf*.
 119874. *Rustico Peruano*, originally from the Hacienda Chumbenique.

119875 to 119889.

From Paraguay. Seeds and plants collected by W. A. Archer, Bureau of Plant Industry. Received January 27, 1937.

119875. *ANANAS COMOSUS* (L.) Merr. Bromeliaceae. Pineapple.

No. 4771. *Abacachi del pais*. Plants from San Lorenzo, December 24, 1936. Said to have originated in Brazil, but cultivated in Paraguay for over a century. Fruit small, about 6 inches in diameter, and 8 to 9 inches long; flesh white, very sweet and juicy; core very small, eyes do not extend into meat. The fruit here is eaten with a spoon, by merely cutting off one end.

119876 to 119881. *ARACHIS* spp. Fabaceae. Peanut.

119876 and 119877. *ARACHIS HYPOGAEA* L.

From the Villa Encarnación, December 14, 1936.

119876. No. 4638. *Colorado*. A cultivated peanut.

119877. No. 4639. *Abá*. A cultivated peanut.

119878. *ARACHIS MARGINATA* Gardn.

No. 4655. From San Miguel Curuzú, 3 km. north of Villa Encarnación, December 14, 1936. A perennial species, native to Brazil.

119879 to 119881. *ARACHIS HYPOGAEA* L.

Mixed varieties of cultivated peanuts; integuments, white, red, and black. Purchased in the market at Villa Rica, December 17, 1936.

119879. No. 4705.

119880. No. 4706.

119881. No. 4707.

119882 to 119889. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

119882. No. 4649. *Tobaco parrá; pet'há*. A large leaf, black when cured. From the Villa Encarnación, December 14, 1936.

119875 to 119889—Continued.

Nos. 119883 and 119884. From Játád, 8 km. north of Villa Rica, December 16, 1936.

119883. No. 4685. *Canela*.

119884. No. 4686. *Via Pagar Mi Cuenta*. A heavy producer, leaves taper-pointed.

Nos. 119885 to 119889. From San Lorenzo, December 25, 1936. Cultivated tobacco.

119885. No. 4762. *Pety canela-i*.

119886. No. 4763. *Pety-chai*, meaning wrinkled leaf.

119887. No. 4764. *Para pagar su cuenta*.

119888. No. 4765. Mixed varieties; probably includes one that has anise odor.

119889. No. 4766. *Romero*.

119890 to 119910.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received January 8, 1937.

119890. *ACACIA NILOTICA* (L.) Willd. *Mimosaceae*.

No. 1805. *Kikas*. From Lahore, Punjab, November 28, 1936. A handsome tree, found in both dry and wet situations, which provides a dense shade.

119891. *ALLIUM CEPA* L. *Liliaceae*. *Onion*.

No. 1804. *Piyaz*. From Lahore, Punjab. A rather flattened red onion from Karachi; keeps well.

119892. *BETA VULGARIS* L. *Chenopodiaceae*. *Common beet*.

No. 1808. *Palag*. From Lahore, Punjab, November 28, 1936. A potheb.

119893. *BRASSICA OLERACEA BOTRYTIS* L. *Brassicaceae*. *Cauliflower*.

No. 1822. *Phulgob*. Purchased in Saharanpur, United Provinces, December 1, 1936. Said to be *Walcheren*, a German variety that thrives here, producing large white heads.

119894 and 119895. *CAPSICUM ANNUM* L. *Solanaceae*. *Common redpepper*.

Mirch. From Saharanpur, United Provinces, December 1, 1936.

119894. No. 1818. Very pungent orange fruit $2\frac{1}{2}$ inches wide and $1\frac{1}{2}$ inches long. Said to have come from Patrala.

119895. No. 1819. Moderately pungent, red, top-shaped fruit, $1\frac{1}{2}$ inches high. Said to have come from the Punjab.

119896. *CITRULLUS VULGARIS* Schrad. *Cucurbitaceae*. *Watermelon*.

No. 1800. *Tarbutz*. From Lahore, Punjab, November 28, 1936, said to have come from Quetta. Fruit elongate, 1 foot long, very pale green with blotched strip of darker green. The light part is apt to have pale-green tubercles. Rind hard; flesh very sweet and of good quality. Apparently a good keeper.

119897. *ERIANTHUS RAVENNAE* (L.) Beauv. *Poaceae*. *Ravenna grass*.

No. 1798. *Sarkanda, kamma*. From Pathankot, Punjab, November 25, 1936. An ornamental grass 15 feet high, found growing in clumps; used here for thatching.

For previous introduction see 109496.

119890 to 119910—Continued.

119898. *MALUS* sp. *Malaceae*.

No. 1803. *Sarak*. From Lahore, Punjab, November 28, 1936. A sweet yellow crab, with a red cheek, $1\frac{1}{2}$ inches in diameter.

119899. *MEDICAGO SATIVA* L. *Fabaceae*. *Alfalfa*.

No. 1806. *Senje; Clara*. From Lahore, Punjab, November 28, 1936. Said to be a variety that grows from 8 to 10 years.

119900 to 119905. *ORYZA SATIVA* L. *Poaceae*. *Rice*.

Nos. 119900 to 119902 were from Lahore, Punjab, November 28 and 29, 1936.

119900. No. 1807. *Bansmati*. One of the best of the local rices.

119901. No. 1810. *Seon*. Said to be a short season rice (90 days), a heavy yielder, 2,800 pounds per acre, and a poor quality table rice.

119902. No. 1811. *Begami*. A second-class table rice which yields 1,600 to 2,000 pounds per acre. Said to mature in 110 to 120 days.

Nos. 119903 to 119905 were from Kala Shah Kaku, Punjab, November 29, 1936.

119903. No. 1812. *Basmati*. This form originated in Gujranwala District in 1927. Superior to local *basmati*. Matures in 110 to 112 days; yields 2,000 to 2,240 pounds per acre. Considered the best table rice in Punjab; remarkably white and fragrant.

119904. No. 1813. *Mushkan 41*. A strain, developed by the Government rice specialists, that matures in 100 to 107 days, and yields 2,000 to 2,200 pounds per acre. Grain fine, white, fragrant. Used as an adulterant for *basmati*, a superior rice.

119905. No. 1814. *Palman sufed 246*. A strain, developed by the Government rice specialists, that matures in 90 to 95 days, yielding 2,240 to 2,560 pounds per acre. Used to adulterate *basmati*, a superior rice.

119906. *PUNICA GRANATUM* L. *Punicaceae*. *Pomegranate*.

No. 1796. *Anan*. From Lahore, Punjab, November 26, 1936, but said to have come from Afghanistan. A deep-crimson fruit the size of a large orange with an abundance of very agreeable crimson juice.

119907. *SALIX* sp. *Salicaceae*.

No. 1826. From Saharanpur, United Provinces, December 1, 1936. An attractive sturdy tree with shiny elliptical leaves $3\frac{1}{2}$ to 4 inches long; found growing along canal banks; blooms in the fall.

119908 and 119909. *SPINACIA OLERACEA* L. *Chenopodiaceae*. *Common spinach*.

119908. No. 1811—A. *Palag*. From Lahore, Punjab, November 28, 1936.

119909. No. 1828. Purchased at Saharanpur, United Provinces, December 1, 1936. Said to be from seed imported from France and to be a large round-leaved type with prickly leaves.

119910. *TECTONA GRANDIS* L. f. *Verbenaceae*. *Teak*.

No. 1820. From the Government Gardens at Saharanpur, United Provinces, De-

119890 to 119910—Continued.

ember 1, 1936. A large tree 3 feet in diameter, with large nearly evergreen leaves; attractive as a roadside tree.

119911 to 119917.

From Argentina. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received January 15, 1937.

119911. *ARACHIS HYPOGAEA* L. Fabaceae.
Peanut.

No. 4634. From Posadas, Misiones, December 12, 1936. A cultivated peanut.

119912. *AXONOPUS COMPRESSUS* (Swartz) Beauv. Poaceae. Carpet grass.

No. 4618. *Periquita, Grama Paraguaya*. From near Bonpland, Misiones, December 9, 1936. A good pasture grass, used as erosion control by farmers in this region; resists freezing.

119913. *CUCUMIS MELO* L. Cucurbitaceae.
Muskmelon.

No. 4635. A cultivated melon from Posadas, Misiones, December 12, 1936.

119914. *CUCUMIS* sp. Cucurbitaceae.

No. 4621. *Pepino*. From near Bonpland, Misiones, December 9, 1936. Flowers yellow; fruit faintly striped. Fruit is eaten raw or as pickles and has the odor of cucumbers.

119915. *NICOTIANA TABACUM* L. Solanaceae.
Common tobacco.

No. 4608. From the streets of Posadas, Misiones, December 7, 1936. Plants 2 to 3 feet high, producing a basal rosette of leaves in young stage; flowers pale greenish outside, white within or sometimes lavender tinged.

119916. *VERBENA LACINIATA* (L.) Briq. Verbenaceae.

No. 4609. From Posadas, Misiones, December 7, 1936. A prostrate herb with purple flowers.

119917. *VERBENA PLATENSIS* Spreng. Verbenaceae.

No. 4625. Along the road between Posadas and Candelaria, Misiones, December 10, 1936. A shrubby verbena with lax spikes of fragrant crimson flowers.

119918 and 119919. *HORDEUM VULGARE* L. Poaceae. Barley.

From India. Seeds presented by the Imperial Institute of Agricultural Research, Botanical Sub-Station, Pusa. Received January 22, 1937.

119920 to 119931.

From Paraguay. Seeds and tubers collected by W. A. Archer, Bureau of Plant Industry. Received January 29, 1937.

Nos. 119920 to 119927 were from Asunción, purchased in the market and in shops.

119920 to 119924. *ARACHIS HYPOGAEA* L. Fabaceae. Peanut.

119920. No. 4793. 119923. No. 4796.

119921. No. 4794. 119924. No. 4797.

119922. No. 4795.

119925. *HORDEUM VULGARE* L. Poaceae. Barley.

No. 4790. *Cebada Paraguaya*. Seed used for beverages.

119920 to 119931—Continued.

119926 and 119927. *SOLANUM TUBEROSUM* L. Solanaceae. Potato.

119926. No. 4791. Tubers.

119927. No. 4792. Tubers.

119928. *SORGHUM VULGARE* Pers. Poaceae. Sorghum.

No. 4772. *Sorgo azucarado*. Seed secured from Carandaity, Chaco, and presented by the Jardin Botánico, Santissima, Trinidad, near Asunción, December 24, 1936.

119929 and 119930. *ZEA MAYS* L. Poaceae. Corn.

Purchased in the market at Villa Rica, December 17, 1936.

119929. No. 4708.

119930. No. 4709.

119931. *ZEPHYRANTHES* sp. Amaryllidaceae.

No. 4756. Bulbs of a native Paraguayan plant with white flowers.

119932 to 119935.

From Colombia. Seeds presented by Eduardo Hernandez Pijas, Caldas. Received January 29, 1937.

119932 to 119934. *BOMAREA CALDASII* (H. B. K.) Herbert. Amaryllidaceae.

Twining, ornamental plants, native to the Andes as far south as Peru. The thin spreading leaves are 3 to 6 inches long, and the orange-red to red flowers, about an inch long, are borne in many-flowered, pendulous clusters.

For previous introduction see 101216.

119935. *CROTALARIA* sp. Fabaceae.

119936 to 119938.

From Cuba. Seeds presented by F. G. Walsingham, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received February 1, 1937.

119936. *ARISTOLOCHIA GIGANTEA* Mart. and Zucc. Aristolochiaceae.

From the Botanic Garden, Rio de Janeiro, Brazil. A tropical climber with very large flowers, purple blotched and veined. The tube of the flower is bent so that it resembles a bird's neck, while the limb is much like the head drawn back against the neck as a swan or pelican rests.

119937. *BAUHINIA MACRANTHA* Oliver. Caesalpiniaceae.

From the Horticultural Section, Ministry of Agriculture, Cairo, Egypt. A pubescent shrub 4 to 5 feet high, with thin leathery compound leaves and very large flowers, 2 or 3 together, on short terminal peduncles; the obovate petals are over 2 inches long, pinnately veined from a prominent deliquescent midrib. Native to tropical Africa.

For previous introduction see 48236.

119938. *COCHLOSPERMUM ORINOCENSE* (H. B. K.) Steud. Cochlospermaceae.

From the Botanic Garden, Rio de Janeiro, Brazil. A tree about 50 feet high, with digitate leaves and large showy yellow flowers. Native to Brazil.

119939 to 120029.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 9, 1937.

This material was all collected in the spring and summer of 1936.

119939. *LATHYRUS GORGONI* Parl. Fabaceae.

No. 1341. From Adana, June 10.

119940 to 119947. *VICIA* spp. Fabaceae. Vetch.

119940. *VICIA LATHYROIDES* L.

No. 698. From east of Milas in open pine forest. May 27. An annual vetch, native to Europe.

119941. *VICIA MONANTHOS* (L.) Desf.

No. 699. From open pine woods east of Milas, May 27.

119942. *VICIA LATHYROIDES* L.

No. 701. From 30 km. east of Milas, May 27.

119943. *VICIA SATIVA* L. Common vetch.

No. 705. From 35 km. east of Milas, May 27.

119944. *VICIA DASycARPA* Ten.

No. 736. From 45 km. southeast of Mugla, May 28.

119945. *VICIA SERRATIFOLIA INTEGRIFOLIA* Beck.

No. 781. From 40 km. west of Isparta, June 2.

119946. *VICIA DASycARPA* Ten.

No. 802. From Bujak, June 3.

119947. *VICIA PEREGRINA* L.

No. 824. From along the road between Isparta and Antalya, June 3.

119948. *LATHYRUS* sp. Fabaceae.

No. 826. From Ephesus, May 24.

119949. *VICIA PEREGRINA* L. Fabaceae. Vetch.

No. 1062. From 20 km. west of Soma, June 10.

119950. *VICIA DASycARPA* Ten. Fabaceae. Vetch.

No. 1085. From 15 km. east of Bergama, June 10.

119951. *LATHYRUS* sp. Fabaceae.

No. 1086. From a wheat field 40 km. northwest of Izmir, June 10.

119952. *LATHYRUS ANNUUS* Hoejer. Fabaceae. Pea.

No. 1099. From 2 km. south of Kirkagach, June 11.

119953 to 119955. *VICIA* spp. Fabaceae. Vetch.

119953. *VICIA SERRATIFOLIA INTEGRIFOLIA* Beck.

No. 1125. From 2 km. south of Kirkagach, June 11.

119954. *VICIA MONANTHOS* (L.) Desf.

No. 1197. From 30 km. west of Balikesir, June 16.

119939 to 120029—Continued.

119955. *VICIA LATHYROIDES* L.

No. 1307-A. From 20 km. east of Bursa.

119956. *LATHYRUS ANNUUS* Hoejer. Fabaceae. Pea.

No. 1331. From Adana, June 10. A form with yellow flowers.

119957. *VICIA HYBRIDA* L. Fabaceae. Vetch.

No. 1332. From Adana, June 10. A form with attractive white and yellow flowers.

199958. *LATHYRUS* sp. Fabaceae. Pea.

No. 1351. From Adana, June 10.

119959. *LATHYRUS* sp. Fabaceae. Pea.

No. 1427. From 37 km. north of Gaziantep, July 2.

119960. *VICIA SERIOCARPA MICROPHYLLA* Boiss. Fabaceae. Vetch.

No. 1440. From 37 km. north of Gaziantep, July 2.

119961. *VICIA PEREGRINA* L. Fabaceae. Vetch.

No. 1442. From 20 km. north of Gaziantep, July 2.

119962. *LATHYRUS* sp. Fabaceae. Pea.

No. 1446. From 37 km. north of Gaziantep, July 2.

119963. *VICIA HYBRIDA* L. Fabaceae. Vetch.

No. 1463. From 30 km. southeast of Marash, July 2.

119964. *LATHYRUS ERECTUS* Lag. Fabaceae. Pea.

No. 1473. From 37 km. north of Gaziantep, July 3.

119965. *LATHYRUS* sp. Fabaceae. Pea.

No. 1474. From 37 km. north of Gaziantep, July 3.

119966. *VICIA SERIOCARPA MICROPHYLLA* Boiss. Fabaceae. Vetch.

No. 1476. From 37 km. north of Gaziantep, July 3.

119967 to 119969. *LATHYRUS* spp. Fabaceae. Pea.

119967. *LATHYRUS* sp.

No. 1593. From 35 km. west of Diyarbekir, July 7.

119968. *LATHYRUS* sp.

No. 1594. From 50 km. west of Diyarbekir, July 7.

119969. *LATHYRUS ERECTUS* Lag.

No. 1790. From 35 km. southwest of Elaziz, July 14.

119970. *VICIA LATHYROIDES* L. Fabaceae. Vetch.

No. 1952. From Birejik, July 22.

119971. *VICIA PEREGRINA* L. Fabaceae. Vetch.

No. 1976. From Birejik, July 24.

119972 to 119974. *LATHYRUS* spp. Fabaceae. Pea.

119939 to 120029—Continued.

119972. *LATHYRUS GORGONI* Parl.
No. 1978. From Birejik, July 24.
119973. *LATHYRUS* sp.
No. 2068. From Alma Dag, 25 km. southeast of Ankara, August 1.
119974. *LATHYRUS ERECTUS* Lag.
No. 2081. From Alma Dag, 25 km. southeast of Ankara, August 1.
119975. *VICIA SATIVA* L. Fabaceae.
Common vetch.
No. 2858. From Yalova Kaplijalari, September 12.
119976. *LATHYRUS* sp. Fabaceae. Pea.
No. 3342. From the Bergama ruins, June 10.
119977. *VICIA PEREGRINA* L. Fabaceae.
Vetch.
No. 3393. From 3 km. west of Ankara, June 25.
119978. *LENS ESCULENTA* Moench. Fabaceae.
Lentil.
No. 1497. From 10 km. southeast of Gaziantep, July 4.
119979. *VICIA LATHYROIDES* L. Fabaceae.
No. 1307. From 20 km. east of Bursa, June 19.
119980. *ONONIS* sp. Fabaceae.
No. 1129. From Bergama, June 10.
- 119981 to 120026. *VICIA* spp. Fabaceae.
Vetch.
119981. *VICIA DASYCARPA* Ten.
No. 655. From 5 km. southwest of Selchuk, May 25.
119982. *VICIA VILLOSA* Roth.
Hairy vetch.
No. 654. From 2 km. west of Aydin, May 25.
119983. *VICIA LUTEA HIRTA* (Balb.) Loisel.
No. 715. From an old lake bottom, 50 km. southeast of Mugla, May 28.
119984. *VICIA LUTEA HIRTA* (Balb.) Loisel.
No. 747. From 2 km. north of Denizli, May 30.
119985. *VICIA VILLOSA* Roth.
No. 785. From the vicinity of Isparta, June 2.
119986. *VICIA* sp.
No. 799. From 25 km. south of Burdur, June 3.
119987. *VICIA* sp.
No. 821. From near Mugla, June 27.
119988. *VICIA SATIVA* L. Common vetch.
No. 1087. From 40 km. northwest of Izmir, June 10.
119989. *VICIA DASYCARPA* Ten.
No. 1118. From 2 km. south of Kirkagach, June 11.
119990. *VICIA* sp.
No. 1134. From ruins around Ephesus, June 12.

119939 to 120029—Continued.

119991. *VICIA TETRASPHERMA* (L.) Moench.
No. 1198. From 70 km. west of Balikesir, June 16.
119992. *VICIA SERRATIFOLIA INTEGRIFOLIA* Beck.
No. 1204. From 30 km. west of Balikesir, June 16.
119993. *VICIA HIRSUTA* (L.) S. F. Gray.
No. 1308. From 40 km. east of Bursa, June 19.
119994. *VICIA SATIVA* L. Common vetch.
No. 1325. From Adana, June 10. A variety with crimson flowers.
119995. *VICIA SERRATIFOLIA INTEGRIFOLIA* Beck.
No. 1340. From Adana, June 10.
119996. *VICIA SATIVA* L. Common vetch.
No. 1346. From Adana, June 10.
119997. *VICIA* sp.
No. 1404. From Gaziantep, July 2.
119998. *VICIA* sp.
No. 1422. From 37 km. north of Gaziantep, July 2.
119999. *VICIA* sp.
No. 1457. From 30 km. southeast of Marash, July 2.
120000. *VICIA* sp.
No. 1570. From 35 km. west of Diyarbekir, July 7.
120001. *VICIA* sp.
No. 1578. From 35 km. west of Diyarbekir, July 7.
120002. *VICIA FABA* L. Broadbean.
No. 1685. From the Elaziz bazar, July 13.
120003. *VICIA SERRATIFOLIA INTEGRIFOLIA* Beck.
No. 1938. From Birejik, July 22.
120004. *VICIA SATIVA* L. Common vetch.
No. 1977. From Birejik, July 24.
120005. *VICIA SATIVA* L. Common vetch.
No. 1982. From Birejik, July 24.
120006. *VICIA* sp.
No. 1997. From Ulukishla, July 25.
120007. *VICIA* sp.
No. 2014. From 20 km. north of Nigde, July 26.
120008. *VICIA* sp.
No. 2070. From Alma Dag, 25 km. southeast of Ankara, August 1.
120009. *VICIA* sp.
No. 2107. From 84 km. east of Sivas, August 5.
120010. *VICIA* sp.
No. 2109. From 84 km. east of Sivas, August 5.
120011. *VICIA* sp.
No. 2169. From 100 km. northeast of Sivas, August 1.

119939 to 120029—Continued.

120012. *VICIA SERRATIFOLIA INTEGRIFOLIA* Beck.
No. 2171. From 100 km. northeast of Sivas, August 6.
120013. *VICIA FABA* L. **Broadbean.**
No. 2241. From the Erzinjan bazar, August 8.
120014. *VICIA* sp.
No. 2268. From 136 km. east of Erzinjan, August 9.
120015. *VICIA* sp.
No. 2283. From 114 km. east of Erzinjan, August 9.
120016. *VICIA FABA* L. **Broadbean.**
No. 2342. From the Trabzon bazar, August 11.
120017. *VICIA* sp.
No. 2383. From 35 km. north of Gemushane on wooded mountain slopes, August 10.
120018. *VICIA* sp.
No. 2388. From 16 km. east of Trabzon, August 12.
120019. *VICIA* sp.
No. 2432. From 10 km. east of Ordu, August 19.
120020. *VICIA* sp.
No. 2493. From 8 km. southwest of Shebinkarahisar, August 18.
120021. *VICIA ANGUSTIFOLIA* Grufberg.
No. 2572. From 7 km. west of Terme, August 22.
120022. *VICIA* sp.
No. 2585. From 20 km. west of Samsun, August 23.
120023. *VICIA SERRATIFOLIA INTEGRIFOLIA* Beck.
No. 2585-A. From 20 km. west of Samsun, August 23.
120024. *VICIA VILLOSA* Roth. **Hairy vetch.**
No. 2611. From a barley field 20 km. west of Samsun, August 23.
120025. *VICIA SERRATIFOLIA INTEGRIFOLIA* Beck.
No. 2675. From 10 km. south of Tokat, August 26.
120026. *VICIA* sp.
No. 3345. From Ephesus, June 12.
120027. *LENS ESCULENTA* Moench. **Faba-
ceae. Lentil.**
No. 3421. From dry rocky soil 3 km. northeast of Ankara, June 26.
120028. *VICIA* sp. **Fabaceae.**
No. 3426. From Alma Dag, 25 km. southeast of Ankara, June 28.
120029. *VICIA SATIVA* L. **Fabaceae.
Common vetch.**
No. 3482. From the Sivas bazar, August 5.

120030. *MYRICA* sp. **Myricaceae.**

From Paraguay. Plant collected by W. A. Archer, Bureau of Plant Industry, Received February 13, 1937.

No. 4920. From the Jardín Botánico, Santísima, Trinidad, January 6, 1937. Received under the specific name "candida," for which a place of publication has not been found.

120031 and 120032.

From the Canal Zone. Seeds presented by W. R. Lindsay, Canal Zone Experiment Gardens, Summit. Received February 8, 1937.

120031. *LECYTHIS ELLIPTICA* Kunth. **Lecy-
thidaceae.**

A spreading shrub or tree up to 40 feet high, with thick elliptic leaves about 6 inches long and racemes of large reddish flowers. Native to Colombia.

120032. *PHYLLANTHUS EMBLICA* L. **Eu-
phorbiaceae. Nelli.**

A dense spreading tree with linear leaves about half an inch long; the globose fruits, when green, are rich in tannin; when ripe they are cooked to make an acid sauce. Native to tropical Asia.

For previous introduction see 116531.

120033 to 120250.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 7, 1937.

This material was all collected in the spring and autumn of 1936.

120033. *ARTEZIA SQUAMATA* L. **Apiaceae.**

No. 1347. From Adana, June 10.

120034 to 120045. *MEDICAGO* spp. **Faba-
ceae. Medick.**120034. *MEDICAGO HISPIDA* Gaertn.

No. 1133. From the mountains between Manisa and Izmir, June 11.

120035. *MEDICAGO TUBERCULATA* (Retz.) Willd.

No. 1326. From Adana, June 10.

120036 to 120042. *MEDICAGO HISPIDA* Gaertn.

120036. No. 1333. From Adana, June 10.

120037. No. 1339. From Adana, June 10.

120038. No. 1601. From 2 km. east of Siverek, July 7.

120039. No. 1669. From 16 km. east of Diyarbekir, July 10.

120040. No. 1794. From 35 km. southwest of Elaziz, July 14.

120041. No. 1904. From 44 km. north of Malatya, July 17.

120042. No. 1916. From 16 km. east of Diyarbekir, July 10.

120043 and 120044. *MEDICAGO SCUTEL-
LATA* (L.) Mill. **Snail medick.**

120043. No. 761. From Denizli, June 31.

120044. No. 1323. From Adana, June 10.

120045. *MEDICAGO* sp.

No. 1355. From Adana, June 10.

120033 to 120250—Continued.

- 120046 to 120062. *MELILOTUS* spp. Fabaceae. Sweetclover.
- 120046 to 120048. *MELILOTUS ALBA* Desr. White sweetclover.
120046. No. 2266. From 73 km. east of Erzinjan, August 9.
120047. No. 2584. From 28 km. west of Samsun, August 23.
120048. No. 2860. From Yalova Kap-lıjalari, September 12.
- 120049 to 120055. *MELILOTUS INDICA* (L.) All.
120049. No. 740. From 10 km. south of Denizli, May 30.
120050. No. 773. From 2 km. north of Denizli, May 31.
120051. No. 683. From near Aydin, May 26.
120052. No. 1337. From Adana, June 10.
120053. No. 3392. From Ankara, June 25. A form with pale-blue flowers.
120054. No. 1114. From Kirkagach, June 11.
120055. No. 1088. From 40 km. northwest of Izmir, June 10.
- 120056 to 120059. *MELILOTUS OFFICINALIS* (L.) Lam.
120056. No. 2094. From Alma Dag, 25 km. southeast of Ankara, August 1.
120057. No. 2515. From Samsun, August 21.
120058. No. 3396. From near Ankara, June 25.
120059. No. 1853. From 23 km. west of Malatya, July 16.
120060. *MELILOTUS* sp.
- No. 767. From 2 km. north of Denizli, May 31.
120061. *MELILOTUS* sp.
- No. 1164. From 30 km. west of Balikesir, June 16.
120062. *MELILOTUS* sp.
- No. 1165. From 30 km. west of Balikesir, June 16.
- 120063 to 120250. *TRIFOLIUM* spp. Fabaceae. Clover.
- 120063 to 120074. *TRIFOLIUM AGRARIUM* L.
- For previous introduction see 109173.
120063. No. 1189. From 30 km. west of Balikesir, June 16. A clover with large purplish flowers.
120064. No. 1212. From 30 km. west of Balikesir, June 16. A small clover.
120065. No. 1328. From Adana, June 10.
120066. No. 1423. From 40 km. north of Gaziantep, July 2.
120067. No. 680. From near Chine, May 26.
120068. No. 2423. From 75 km. south of Giresun, August 17.

120033 to 120250—Continued.

120069. No. 1934. From Birejik, July 22.
120070. No. 2912. From 50 km. east of Chanak Kale, September 19.
120071. No. 1517. From 25 km. northwest of Urfa, July 5.
120072. No. 1494. From 10 km. southeast of Gaziantep, July 4.
120073. No. 700. From 30 km. east of Milas, May 27; a yellow-flowered clover.
120074. No. 1127. From 40 km. west of Izmir, June 10.
- 120075 to 120079. *TRIFOLIUM ARVENSE* L.
120075. No. 1180. "Rabbit foot" No. 2, from 30 km. west of Balikesir, June 16.
120076. No. 1193. "Rabbit foot" No. 1, from 30 km. west of Balikesir, June 16. This clover grows abundantly on dry plains and hills of western Turkey.
120077. No. 1597. From 2 km. east of Siverek, July 7.
120078. No. 1109. From Izmir, June 11. This clover is very abundant over dry plains in southwest Turkey.
120079. No. 2829. From Yalova Kap-lıjalari, September 11.
- 120080 and 120081. *TRIFOLIUM HYBRIDUM* L. Alsike clover.
120080. No. 2679. From 46 km. south of Tokat, August 26.
120081. No. 2770. A pink-flowered clover from Ulu Dag, 6,500 feet altitude, 35 km. south of Bursa, September 8.
- 120082 to 120099. *TRIFOLIUM PRATENSE* L. Red clover.
120082. No. 1356. From near Ankara, June 24.
120083. No. 1651. From 70 km. south of Diyarbekir, July 9.
120084. No. 1760. From 30 km. southeast of Elaziz, July 13.
120085. No. 1845. From 27 km. west of Malatya, July 16.
120086. No. 1854. From 11 km. west of Malatya, July 16.
120087. No. 1946. From Birejik, July 22.
120088. No. 2120. From 84 km. east of Sivas, August 5.
120089. No. 2205. From 100 km. southeast of Susheri, August 7.
120090. No. 2282. From 94 km. east of Erzinjan, August 9.
120091. No. 2324. From 35 km. north of Gemushane, August 10.
120092. No. 2332. A white-flowered form common in the mountains between Gemushane and Trabzon, August 10.
120093. No. 2381. A form with white flowers from 35 km. north of Gemushane, August 10.
120094. No. 2489. From 66 km. south of Giresun, August 17.

120033 to 120250—Continued.

120095. No. 2556. From 51 km. east of Samsun, August 22.
120096. No. 2598. From 31 km. west of Samsun, August 23.
120097. No. 2837. From Yalova Kap-ljalari, September 11.
120098. No. 2859. From Yalova Kap-ljalari, September 12.
120099. No. 2426. From 75 km. south of Giresun.
- 120100 to 120119. *TRIFOLIUM REPENS* L.
White clover.
120100. No. 727. From near Denizli, May 31.
120101. No. 1357. A form with pink flowers, from Ankara, June 24.
120102. No. 1411. From 50 km. north of Gaziantep, July 2.
120103. No. 1576. A variety with small white flowers from between Siverek and Diyarbekir, July 7.
120104. No. 1640. From 70 km. south of Diyarbekir, July 9.
120105. No. 1757. From 30 km. south-east of Elaziz, July 13.
120106. No. 1856. From 23 km. west of Malatya, July 16.
120107. No. 1862. From 11 km. west of Malatya, July 16.
120108. No. 2092. A pink-flowered strain from Alma Dag, 25 km. southeast of Ankara, August 1.
120109. No. 2121. From 100 km. east of Sivas at 6,000 feet altitude, August 5.
120110. No. 2321. From 35 km. north of Gemusbane, August 10.
120111. No. 2340. From meadows 70 km. south of Trabzon, August 10.
120112. No. 2341. A very large type found 60 km. south of Trabzon, August 10.
120113. No. 2428. From 86 km. south of Giresun, August 17.
120114. No. 2593. From 31 km. west of Samsun, August 23.
120115. No. 2772. A strain with large white flowers, from Ulu Dag at 6,500 feet altitude, 35 km. south of Bursa, August 8.
120116. No. 2810. From Yalova Kap-ljalari, August 11.
120117. No. 3391. A strain with very small pink flowers from Ankara, June 25.
120118. No. 3428. From Alma Dag, 25 km. southeast of Ankara, June 28.
120119. No. 798. From Dinar, 25 km. north of Antalya, June 3. A small-flowered type, very abundant in the wet meadows in this region.
120120. *TRIFOLIUM* sp.
No. 816. From 25 km. east of Antalya, June 4. A small-flowered white clover, found in wet places. The main stems are coarse and 3 feet long.

120033 to 120250—Continued.

120121. *TRIFOLIUM* sp.
No. 626. From Ephesus, May 24.
120122. *TRIFOLIUM* sp.
No. 629. From Ephesus, May 24.
120123. *TRIFOLIUM LAPPACEUM* L.
No. 636. From 23 km. southwest of Izmir, May 25.
- 120124 to 120126. *TRIFOLIUM HIRTUM* All.
120124. No. 672. From south of Chine, May 26.
120125. No. 692. From 30 km. east of Milas, May 27.
120126. No. 693. From 3 km. north of Mugla, May 27.
Nos. 120127 to 120134. Collected between 30 and 40 km. east of Milas, May 27.
120127. *TRIFOLIUM* sp.
No. 694.
120128. *TRIFOLIUM* sp.
No. 697. A very small strain.
120129. *TRIFOLIUM LAPPACEUM* L.
No. 702. From between Kulluk and Milas.
120130. *TRIFOLIUM HIRTUM* All.
No. 704.
120131. *TRIFOLIUM* sp.
No. 712.
120132. *TRIFOLIUM* sp.
No. 713. From open pine wood.
120133. *TRIFOLIUM* sp.
No. 707. A strain with small flowers.
120134. *TRIFOLIUM* sp.
No. 710.
120135. *TRIFOLIUM* sp.
No. 731. From the mountains 30 km. southeast of Mugla, May 28.
- 120136 to 120138. *TRIFOLIUM HIRTUM* All.
120136. No. 746. From 10 km. south of Denizli, May 30.
120137. No. 794. From 25 km. north of Antalya, June 3.
120138. No. 807. From 46 km. north of Antalya, June 3.
120139. *TRIFOLIUM* sp.
No. 818. Found on dry gravelly soil, 20 km. east of Antalya, June 4.
120140. *TRIFOLIUM LAPPACEUM* L.
No. 1063. From 40 km. northwest of Izmir, June 10.
Nos. 120141 and 120142 were from Ephesus, June 12.
120141. *TRIFOLIUM* sp.
No. 1136.
120142. *TRIFOLIUM* sp.
No. 1139.
Nos. 120143 to 120147. Collected between 30 and 65 km. west of Balikesir, June 16.

120033 to 120250—Continued.

120143. TRIFOLIUM sp.
No. 1174.
120144. TRIFOLIUM HIRTUM All.
No. 1177. A wild red clover.
120145. TRIFOLIUM sp.
No. 1178.
120146. TRIFOLIUM HIRTUM All.
No. 1192.
120147. TRIFOLIUM sp.
No. 1211. A form with white flowers.
120148. TRIFOLIUM sp.
No. 1299. From 50 km. west of Bursa, June 18.
120149. TRIFOLIUM sp.
No. 1303. From 20 km. east of Bursa, June 19. A form with bright-pink flowers.
120150. TRIFOLIUM PRATENSE L.
Red clover.
No. 1304. From 20 km. west of Megol, June 19. A form with large white flowers.
120151. TRIFOLIUM PURPUREUM Lois.
No. 1306. Found abundantly between Izmir, Bergama, and Soma, June 10.
Nos. 120152 to 120155 were from Adana, June 10.
120152. TRIFOLIUM sp.
No. 1322. A white clover.
120153. TRIFOLIUM sp.
No. 1338.
120154. TRIFOLIUM sp.
No. 1343.
120155. TRIFOLIUM sp.
No. 1349.
Nos. 120156 to 120173. Collected between 30 and 40 km. north of Gaziantep, July 2.
120156. TRIFOLIUM HIRTUM All.
No. 1409.
120157. TRIFOLIUM sp.
No. 1410.
120158. TRIFOLIUM PURPUREUM Lois.
No. 1412.
120159. TRIFOLIUM sp.
No. 1416. A Persian clover found in a valley.
120160. TRIFOLIUM sp.
No. 1417. Persian clover.
120161. TRIFOLIUM sp.
No. 1419.
120162. TRIFOLIUM sp.
No. 1421.
120163. TRIFOLIUM sp.
No. 1424.

120033 to 120250—Continued.

120164. TRIFOLIUM sp.
No. 1428.
120165. TRIFOLIUM sp.
No. 1429.
120166. TRIFOLIUM sp.
No. 1432.
120167. TRIFOLIUM sp.
No. 1433.
120168. TRIFOLIUM sp.
No. 1436.
120169. TRIFOLIUM sp.
No. 1435.
120170. TRIFOLIUM sp.
No. 1437.
120171. TRIFOLIUM sp.
No. 1438.
120172. TRIFOLIUM sp.
No. 1448. A form with purplish flowers.
120173. TRIFOLIUM sp.
No. 1449.
Nos. 120174 to 120177. Collected 30 km. southeast of Marash, July 2.
120174. TRIFOLIUM sp.
No. 1455.
120175. TRIFOLIUM sp.
No. 1458.
120176. TRIFOLIUM sp.
No. 1459.
120177. TRIFOLIUM PURPUREUM Loisel.
No. 1462.
Nos. 120178 to 120180. Collected 37 km. north of Gaziantep, July 3.
120178. TRIFOLIUM sp.
No. 1477.
120179. TRIFOLIUM PURPUREUM Loisel.
No. 1481.
120180. TRIFOLIUM sp.
No. 1483.
120181. TRIFOLIUM sp.
No. 1515. From 5 km. east of Birejik, July 5.
120182. TRIFOLIUM sp.
No. 1598. From 5 km. east of Hilvan, July 7.
120183. TRIFOLIUM sp.
No. 1602. From 30 km. west of Diyarbekir, July 7.
120184. TRIFOLIUM sp.
No. 1607. From 3 km. northeast of Siverek, July 7.
120185. TRIFOLIUM sp.
No. 1608. From 18 km. northeast of Siverek, July 7. Found growing abundantly on basalt formation.
Nos. 120186 to 120190. Collected around Diyarbekir, from July 7 to 9.

120033 to 120250—Continued.

120186. TRIFOLIUM PURPUREUM Loisel.
No. 1611. From 30 km. west of the town.
120187. TRIFOLIUM PURPUREUM Loisel.
No. 1642. From 26 km. south of the town.
120188. TRIFOLIUM sp.
No. 1643. From 25 km. south of the town.
120189. TRIFOLIUM LAPPACEUM L.
No. 1650. From 25 km. south of the town.
120190. TRIFOLIUM sp.
No. 1672. From 52 km. east of the town.
120191. TRIFOLIUM sp.
No. 1719. From 25 km. southeast of Elaziz Mountains, July 13.
120192. TRIFOLIUM HIRTUM All.
No. 1754. From 40 km. southeast of Elaziz, July 13.
Nos. 120193 and 120194. Collected 44 km. north of Malatya, July 17.
120193. TRIFOLIUM sp.
No. 1878.
120194. TRIFOLIUM sp.
No. 1899. An annual clover, found on dry rocky soil.
120195. TRIFOLIUM PRATENSE L.
Red clover.
No. 1923. From Birejik, July 21.
120196. TRIFOLIUM sp.
No. 1984. From Birejik, July 24.
Nos. 120197 to 120204. Collected 25 km. southeast of Ankara, August 1.
120197. TRIFOLIUM sp.
No. 2054.
120198. TRIFOLIUM HIRTUM All.
No. 2056.
120199. TRIFOLIUM sp.
No. 2063.
120200. TRIFOLIUM sp.
No. 2069.
120201. TRIFOLIUM sp.
No. 2082.
120202. TRIFOLIUM sp.
No. 2084.
120203. TRIFOLIUM sp.
No. 2090.
120204. TRIFOLIUM sp.
No. 2091.
Nos. 120205 and 120206. Collected 84 km. east of Sivas, August 5.
120205. TRIFOLIUM sp.
No. 2105.
120206. TRIFOLIUM sp.
No. 2119.

120033 to 120250—Continued.

- Nos. 120207 and 120208. Collected between 50 and 95 km. east of Erzinjan, August 9.
120207. TRIFOLIUM sp.
No. 2264.
120208. TRIFOLIUM sp.
No. 2269.
Nos. 120209 to 120212. Collected 35 to 40 km. north of Gemushane, August 10.
120209. TRIFOLIUM sp.
No. 2295.
120210. TRIFOLIUM sp.
No. 2297.
120211. TRIFOLIUM REPENS L.
No. 2305.
120212. TRIFOLIUM sp.
No. 2315.
120213. TRIFOLIUM ANGUSTIFOLIUM L.
No. 2420. From the hills near Trabzon, August 14.
Nos. 120214 and 120215. Collected between 86 and 106 km. south of Giresun, August 17.
120214. TRIFOLIUM LAPPACEUM L.
No. 2421.
120215. TRIFOLIUM sp.
No. 2424.
Nos. 120216 and 120217. Collected between 20 and 40 km. east of Samsun, August 22.
120216. TRIFOLIUM sp.
No. 2562.
120217. TRIFOLIUM PRATENSE L.
No. 2564.
120218. TRIFOLIUM sp.
No. 2577. From 7 km. west of Terme, August 22.
120219. TRIFOLIUM sp.
No. 2600. From 31 km. west of Samsun, August 23.
Nos. 120220 and 120221. Collected between 10 and 40 km. south of Tokat, August 26.
120220. TRIFOLIUM sp.
No. 2672.
120221. TRIFOLIUM sp.
No. 2674.
Nos. 120222 and 120223. From Yalova Kaplijalari, September 9 and 11.
120222. TRIFOLIUM sp.
No. 2732.
120223. TRIFOLIUM sp.
No. 2808.
120224. TRIFOLIUM sp.
No. 2259. From Erzinjan, August 9.
120225. TRIFOLIUM sp.
No. 2260. From Erzerum, August 9.

120033 to 120250—Continued.

120226. TRIFOLIUM LAPPACEUM L.
No. 2599. From 5 km. west of Samsun, August 23.
120227. TRIFOLIUM PRATENSE L.
No. 2638. From 50 km. southeast of Amasya, August 25.
120228. TRIFOLIUM sp.
No. 2688. From 46 km. south of Tokat, August 26.
120229. TRIFOLIUM sp.
No. 2750. From Ulu Dag, September 7.
- Nos. 120230 to 120238. From Yalova Kaplijalari, September 11 and 12.
120230. TRIFOLIUM sp.
No. 2814.
120231. TRIFOLIUM HIRTUM ALL.
No. 2818.
120232. TRIFOLIUM HIRTUM ALL.
No. 2824.
120233. TRIFOLIUM sp.
No. 2828.
120234. TRIFOLIUM PURPUREUM Loisel.
No. 2836.
120235. TRIFOLIUM LAPPACEUM L.
No. 2839.
120236. TRIFOLIUM sp.
No. 2853.
120237. TRIFOLIUM sp.
No. 2816.
120238. TRIFOLIUM LAPPACEUM L.
No. 2856.
120239. TRIFOLIUM PURPUREUM Loisel.
No. 2901. From the ruins of the old city of Troy, August 18.
120240. TRIFOLIUM PURPUREUM Loisel.
No. 3303. From 25 km. south of Gaziantep, June 1.
120241. TRIFOLIUM ANGUSTIFOLIUM L.
No. 3328. From the Agricultural Institute, Ankara, June 20.
120242. TRIFOLIUM sp.
No. 3332. From 10 km. south of Denizli, May 30.
120243. TRIFOLIUM sp.
No. 3347. From near Izmir, June 14.
120244. TRIFOLIUM sp.
No. 3349. From 30 km. west of Balikesir, June 16.
120245. TRIFOLIUM sp.
No. 3361. A strain with dark-red flowers; from the slopes of Mount Olympus, Ulu Dag, 10 km. south of Bursa, June 19.
- Nos. 120246 to 120248. Collected on the dry rocky slopes of Alma Dag. from 3 to 25 km. southeast of Ankara, June 26 to 28.

120033 to 120250—Continued.

120246. TRIFOLIUM sp.
No. 3427.
120247. TRIFOLIUM HIRTUM ALL.
No. 3410.
120248. TRIFOLIUM sp.
No. 3429.
120249. TRIFOLIUM sp.
No. 1600. From 35 km. west of Diyarbakir, July 7.
120250. TRIFOLIUM sp.
No. 2334. From mountain meadows 70 km. south of Trabzon, August 10.
120251. BETA VULGARIS L. Chenopodiaceae.
From Italy. Seeds presented by the R. Stazione Sperimentale di Bieticoltura, Rovigo. Received February 1, 1937.
Cesena, a sugar beet.
120252. ALLIUM AMPELOPRASUM L. Liliaceae.
From Algeria. Bulbs presented by Dr. René Maire, Directeur Service Botanique, Université d'Alger, Algiers. Received February 11, 1937.
A wild onion, about 2 feet high, with purple flowers. Native to southern Europe. Received under the varietal name "combazianum," for which a place of publication has not been found.
- 120253 to 120278. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.
From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 14, 1937.
This material was collected in the spring and summer of 1936.
120253. No. 526. From the Mugla bazar, May 28.
120254. No. 588. From the Izmir bazar, May 23.
120255. No. 1234. From the Bursa bazar, June 16.
120256. No. 1543. From the Urfa bazar, July 6.
120257. No. 1689. From the Elaziz bazar, July 13.
120258. No. 1836. From the Malatya bazar, July 16.
120259. No. 2027. From the Nigde bazar, July 27.
120260. No. 2133. From the Sivas bazar, August 5.
120261. No. 2221. From the Erzinjan bazar, August 8.
120262. No. 2255. From the Erzinjan bazar, August 8.
120263. No. 2374. From the Trabzon bazar, August 11.
120264. No. 2532. From the Samsun bazar, August 21.
120265. No. 2595. From 36 km. west of Samsun, August 23.
A very small wild tomato.

120253 to 120278—Continued.

120266. No. 2718. From the Amasya bazar, August 25.
120267. No. 2740. From 6 km. west of Yalova Kaplijalari, September 6.
120268. No. 2743. From 1 km. south of Gemlik, September 6.
- Small fruits found growing in an uncultivated olive orchard.
120269. No. 2888. From the Chanak Kale bazar, September 18.
120270. No. 2906. From 75 km. southwest of Chanak Kale, September 18. A red-plum type, sweet with tough skin, from the ruins of the old city of Troy.
120271. No. 3003. From the Kutahya bazar, September 26.
120272. No. 3053. From the Amasya bazar, October 6.
120273. No. 3083. From the Yozgat bazar, October 9.
120274. No. 3133. From the Inebolu bazar, October 13.
120275. No. 3172. From the Kastamonu bazar, October 14.
120276. No. 3211. From the Chankiri bazar, October 15.
120277. No. 3254. From the Adapazari bazar, October 20.
120278. No. 3283. From the Edirne bazar, October 22.

120279 to 120281.

From British Honduras. Seeds purchased from William A. Schipp, botanical collector, Corozal. Received February 8, 1937.

120279. *ACANTHORIZA ACULEATA* (Liebm.) Wendl. Phoenicaceae. Rootspine palm.
120280. *CHAMAEDOREA* sp. Phoenicaceae. Palm.
120281. *THRINAX* sp. Phoenicaceae. Palm.

A magnificent fan-leaved palm, found only in the northern part of the colony, in calcareous soils.

120282 to 120490.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 13, 1937.

This material was all collected in 1936.

120282. *BETA VULGARIS* L. Chenopodiaceae. Common beet.
- No. 2220. From the Erzinjan bazar, August 8.
120283. *CAPSICUM ANNUUM* L. Solanaceae. Common redpepper.
- No. 3153. From the Kastamonu bazar, October 14.
- 120284 to 120332. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. Watermelon.
120284. No. 556. From the Isparta bazar, June 2.
120285. No. 579. From the Antalya bazar, June 4.
- Nos. 120286 and 120287. From the Izmir bazar, May 23.

120282 to 120490—Continued.

120286. No. 607. A sweet melon of good quality.
120287. No. 611. A melon with large black seeds.
120288. No. 1153. From the Balikesir bazar, June 16.
120289. No. 1160. From the Balikesir bazar, June 17.
120290. No. 1250. From the Bursa bazar, June 16.
120291. No. 1370. From the Marash bazar, July 2.
- Nos. 120292 to 120294. From the Urfa bazar, July 6.
120292. No. 1541. 120294. No. 1554.
120293. No. 1550.
- Nos. 120295 to 120297. From the Diyarbekir bazar, July 8 and 10.
120295. No. 1612. Fruit small, round; skin dark green with green markings; flesh red, of fair quality; early ripening; from Tarsus.
120296. No. 1654. Fruit small, round, early; flesh red; seeds black; said to be grown in the Mersin district.
120297. No. 1668. A famous variety; in 1935, one fruit is reported to have weighed about 160 pounds.
120298. No. 1822. From the Malatya bazar, July 16.
120299. No. 1903. From the Malatya bazar, July 17, but grown on dry hills along the Euphrates River. Fruit round, a foot in diameter, early; flesh red and of good quality; skin tough, grass green with darker markings.
120300. No. 2033. From the Nigde bazar, July 27.
120301. No. 2128. From the Sivas bazar, August 5.
- Nos. 120302 and 120303. From the Erzinjan bazar, August 8.
120302. No. 2226.
120303. No. 2257. Fruit 6 inches in diameter; skin very thin, dark green; flesh light salmon color, fair to medium sweet.
120304. No. 2370. From the Trabzon bazar, August 11.
120305. No. 2404. From 55 km. east of Trabzon, August 13. Fruit medium small; skin dark green; rind thin; flesh pink with salmon streaks, of good quality.
120306. No. 2435. From Adana, July 21.
120307. No. 2520. From the Samsun bazar, August 21.
120308. No. 2787. Originally from Bursa. September 8. Flesh creamy white, of fair quality; seeds few, large and white.
120309. No. 2504. From Ordu, August 18. Fruit long and slender, like a cucumber; skin green, netted; flesh red, of fair quality.
120310. No. 2786. Originally from Bursa, September 8. Fruit with pink flesh and small light-colored seeds.

120282 to 120490—Continued.

120311. No. 2878. From the Yalova bazar, September 12. Fruit small, 4 inches in diameter; flesh red, of good quality.
Nos. 120312 to 120318. From the Turgutlu bazar, September 23.
120312. No. 2958. Fruit small, round, of fair quality, with cloudy yellowish splotches on a green background.
120313. No. 2959. Fruit small, round, dark green; rind tough; quality fair.
120314. No. 2960. Fruit elliptical with reticulated green markings; quality poor.
120315. No. 2961. Fruit elliptical with green reticulations, medium sized; quality fair; rind very tough.
120316. No. 2962. Fruit long; flesh of poor quality; skin dark green, tough, marked with lighter green reticulations.
120317. No. 2963. Fruit dark green, elongated; flesh yellow, of poor quality.
120318. No. 2964. Fruit elongated, mottled green; quality, very poor.
120319. No. 3015. From the Kutahya bazar, September 28.
120320. No. 3057. From the Amasya bazar, October 6.
120321. No. 3087. From the Yozgat bazar, October 9.
Nos. 120322 and 120323. From the Inebolu bazar, October 13.
120322. No. 3137. Istanbul variety.
120323. No. 3138.
Nos. 120324 and 120325. From the Kastamonu bazar, October 14.
120324. No. 3156. 120325. No. 3171.
120326. No. 3159. From the Chankiri bazar, October 15.
120327. No. 3382. From the Istanbul bazar, June 22. A very small and early fruit with slightly pink flesh.
Nos. 120328 to 120332. From the Balikesir bazar, June 16.
120328. No. 1152. 120331. No. 1152-C.
120329. No. 1152-A. 120332. No. 1152-D.
120330. No. 1152-B.
- 120333 to 120396. CUCUMIS MELO L. Cucurbitaceae. Muskmelon.
120333. No. 2256. From Erzinjan, August 8. Fruit small, about 5 inches in diameter; skin smooth, yellow with slight markings; flesh creamy to white, of good quality and very fragrant.
120334. No. 2631. From a village between Samsun and Merzifon, August 23. Fruit long; skin cream colored with slight netting; flesh solid, medium sweet, of good flavor.
120335. No. 2632. From a village between Samsun and Merzifon, August 24. Fruit oval; skin yellow; flesh sweet and of good quality.
Nos. 120336 and 120337. From the Amasya bazar, August 25.

120282 to 120490—Continued.

120336. No. 2716. A fruit with wrinkled green skin.
120337. No. 2717. Fruit round; skin yellow, netted; quality good.
120338. No. 2721. From the Kasperli bazar, August 28. Skin wrinkled, green with yellow mottling; flesh greenish with salmon color near the seeds, sweet, excellent flavor.
120339. No. 2877. *Kish Kahoon*. From the Yalova bazar, September 12. A winter melon, hung from ceiling until after other fresh vegetables are gone. Skin yellow, with green dashes and dots. At this season the flavor is insipid.
120340. No. 2879. From Istanbul, September 15. Casaba type. Skin dark green; flesh orange yellow, thick and of good quality.
Nos. 120341 to 120343. From the Chanak Kale bazar, September 19.
120341. No. 2913. Fruit Casaba type, elliptical; skin wrinkled and spotted, quality fair.
120342. No. 2914. Casaba type.
120343. No. 2915. Fruit large; skin smooth with distinct sections; flesh not very sweet but keeps well.
Nos. 120344 and 120345. From the Balikesir bazar, September 20.
120344. No. 2916. Fruit Casaba type; skin white, wrinkled; flesh deep, sweet, of good texture, very good quality; rind thick enough for shipment.
120345. No. 2917. Casaba type, but evidently a cross of some sort. Skin smooth, brown with stippled markings; flesh not sweet.
Nos. 120346 and 120347. From Soke, September 21. Casaba type.
120346. No. 2918. Fruit medium size; skin green, wrinkled; quality good.
120347. No. 2919. Fruit large; skin green, wrinkled, quality good.
Nos. 120348 to 120355. From the Turgutlu (Kasaba) bazar, September 23.
120348. No. 2950. Casaba type. Fruit medium size; skin wrinkled, green.
120349. No. 2951. Casaba type. Fruit medium size; skin wrinkled, green; quality good.
120350. No. 2952. Casaba type. Fruit large; skin smooth with prominent sectors, green and speckled; quality fair.
120351. No. 2953. Casaba type. Fruit large; skin yellow, warty with green blotches; quality good.
120352. No. 2954. Casaba type. Fruit large; skin green, semi-smooth; quality medium.
120353. No. 2955. Casaba type. Fruit large; skin green, semi-smooth; quality good.
120354. No. 2956. Casaba type. Fruit medium size; skin smooth, light green with handsome dark green mottling; quality good.

120282 to 120490—Continued.

120355. No. 2957. Casaba type. Fruit large, skin yellow, wrinkled; quality poor.
120356. No. 2965. Casaba type. From the Izmir (Smyrna) bazar, September 23. Fruit large; skin green, wrinkled; quality good.
120357. No. 2976 Casaba type. From Marusa, September 24. Skin green, wrinkled; quality good.
120358. No. 2983. Casab type. From Kirkagach, September 26. Fruit large; skin yellow, wrinkled, with handsome green spotting; flesh of very good quality, flavor, and texture.
- Nos. 120359 and 120360. From the Eskishehir bazar, September 29.
120359. No. 3023. Grown in the Sakarya Valley. Fruit elliptical, 9 by 5 inches; skin smooth, shiny, yellow-brown, tough; flesh greenish, not sweet.
120360. No. 3024. Fruit pumpkin-shaped; skin smooth, yellow with a few green stripes, medium tough; flesh green, slightly sweet, of poor quality.
120361. No. 3076. From the Turhal bazar, October 7. Fruit elongated, netted; flesh green, quality fair.
- Nos. 120362 to 120364. From the Ankara market, September 2.
120362. No. 3459. Casaba type. A round melon.
120363. No. 3460. Casaba type. An elongated melon of excellent quality.
120364. No. 3461. Casaba type. A large round melon of excellent quality.
120365. No. 548. From the Isparta bazar, June 2.
- Nos. 120366 and 120367. From the Antalya bazar, June 3.
120366. No. 574. 120367. No. 575.
120368. No. 604. From the Izmir bazar, May 23.
120369. No. 1146. From the Balikesir bazar, June 16. A Casaba type of melon which had been kept all winter.
120370. No. 1152—E. From Balikesir.
- Nos. 120371 and 120372. From the Bursa bazar, June 18.
120371. No. 1216. 120372. No. 1220.
120373. No. 1395. From the Marash bazar, July 2.
120374. No. 1535. From the Urfa bazar, July 6.
- Nos. 120375 and 120376. From the Elaziz bazar, July 18.
120375. No. 1693. *Diyarbekir* melon.
120376. No. 1703. A very sweet melon.
120377. No. 1824. From the Malatya bazar, July 16.
120378. No. 2057. From the Nigde bazar, July 27.
120379. No. 2138. From the Sivas bazar, August 5.
- Nos. 120380 to 120382. From the Erzinjan bazar, August 8.

120282 to 120490—Continued.

120380. No. 2213. 120382. No. 2217.
120381. No. 2216.
120383. No. 2377. From the Trabzon bazar, August 11.
120384. No. 2403. From 45 km. east of Trabzon, August 12. Fruit long, oval; skin yellow, slightly netted; flesh deep greenish, pink near the seeds; quality fairly good, becoming mealy with age.
- Nos. 120385 to 120387. From the Samsun bazar, August 21.
120385. No. 2523.
120386. No. 2551. Fruit about 4 inches in diameter; skin smooth, tan with brown stripes. A very attractive and fragrant fruit.
120387. No. 2552.
120388. No. 3004. From the Kutahya bazar, September 28.
120389. No. 3054. From the Amasya bazar, October 6.
120390. No. 3085. From the Yozgat bazar, October 9.
120391. No. 3048. From the Amasya bazar, October 6.
120392. No. 3136. From the Inebolu bazar, October 13.
120393. No. 3159. From the Kastamonu bazar, October 14.
120394. No. 3191. From the Chankiri bazar, October 15.
- Nos. 120395 and 120396. From the Adapazari bazar, October 20.
120395. No. 3272. Fruit pumpkin-shaped; skin canary yellow.
120396. No. 3273. Fruit pumpkin-shaped; skin orange yellow with green spots.
- 120397 to 120435. *CUCUMIS SATIVUS* L. Cucurbitaceae. Cucumber.
120397. No. 535. From the Mugla bazar, May 28.
120398. No. 557. From the Isparta bazar, June 2.
- Nos. 120399 and 120400. From the Antalya bazar, June 4.
120399. No. 586. 120400. No. 593.
120401. No. 615. From the Izmir bazar, May 23.
120402. No. 1394. From the Marash bazar, July 2. A small cucumber.
120403. No. 537. From the Mugla bazar, May 28.
120404. No. 562. From Isparta, June 2.
- Nos. 120405 to 120407. From the Izmir bazar, May 23.
120405. No. 575. 120407. No. 621.
120406. No. 603.
120408. No. 1248. From the Bursa bazar, June 18.
- Nos. 120409 and 120410. From the Marash bazar, July 2.
120409. No. 1371.

120282 to 120490—Continued.

120410. No. 1385. A striped, ridged cucumber.
- Nos. 120411 and 120412. From the Urfa bazar, July 6.
120411. No. 1544.
120412. No. 1548. Fruit long, slender, striped.
- Nos. 120413 to 120415. From the Diyarbekir bazar, July 10.
120413. No. 1653.
120414. No. 1658. Fruit long, whitish.
120415. No. 1661.
120416. No. 1699. From the Elaziz bazar, July 12.
120417. No. 1821. From the Malatya bazar, July 16.
- Nos. 120418 and 120419. From the Nigde bazar, July 27.
120418. No. 2040. 120419. No. 2048.
120420. No. 2235. From the Erzinjan bazar, August 8.
120421. No. 2137. From the Sivas bazar, August 5.
120422. No. 2240. From the Erzinjan bazar, August 8.
120423. No. 2541. From the Samsun bazar, August 21.
- Nos. 120424 and 120425. From the Trabzon bazar, August 11.
120424. No. 2346. A climbing type.
120425. No. 2372.
120426. No. 2890. From the Chanak Kale bazar, September 18.
120427. No. 2998. From the Kutahya bazar, September 26.
120428. No. 3043. From the Amasya bazar, October 6.
120429. No. 3086. From the Yozgat bazar, October 9.
120430. No. 3131. From the Inebolu bazar, October 13.
- Nos. 120431 and 120432. From the Kastamonu bazar, October 14.
120431. No. 3169. 120432. No. 3182.
120433. No. 3204. From the Chankiri bazar, October 15.
- Nos. 120434 and 120435. From the Adapazari bazar, October 20.
120434. No. 3234. A large cucumber.
120435. No. 3256. A small cucumber.
- 120436 to 120445. *CUCURBITA MAXIMA* Duchesne. Cucurbitaceae. Squash.
120436. No. 1230. From the Bursa bazar, June 18.
120437. No. 1542. From the Urfa bazar, July 6. A large squash.
120438. No. 2345. Chestnut squash. From the Trabzon bazar, August 11.
120439. No. 3205. From the Chankiri bazar, October 15.
120440. No. 3249. From the Adapazari bazar, October 20.

120282 to 120490—Continued.

120441. No. 3298. From the Edirne bazar, October 22.
120442. No. 570. From the Izmir bazar, May 23.
120443. No. 580. From the Antalya bazar, June 4.
120444. No. 2705. From the Burasga bazar, August 25.
120445. No. 3180. From the Kastamonu bazar, October 14.
- 120446 to 120453. *CUCURBITA MOSCHATA* Duchesne. Cucurbitaceae. Cushaw.
- Nos. 120446 and 120447. From the Mugla bazar, May 28.
120446. No. 533. 120447. No. 542.
120448. No. 610. From the Izmir bazar, May 23.
120449. No. 1214. From the Bursa bazar, June 18.
120450. No. 2251. From the Erzinjan bazar, August 8.
120451. No. 2348. A large squash from the Trabzon bazar, August 11.
120452. No. 3143. From the Inebolu bazar, October 13. A very small fruit whose flesh smells like pumpkins.
120453. No. 3250. From the Adapazari bazar, October 20.
- 120454 to 120485. *CUCURBITA PEPO* L. Cucurbitaceae. Pumpkin.
120454. No. 539. From the Mugla bazar, May 28.
120455. No. 567. From the Isparta bazar, June 2. A small pumpkin.
- Nos. 120456 and 120457. From the Antalya bazar, June 4.
120456. No. 581. 120457. No. 584.
120458. No. 1151. From the Balikesir bazar, June 16. A small winter pumpkin.
- Nos. 120459 and 120460. From the Bursa bazar, June 18.
120459. No. 1215. 120460. No. 1218.
- Nos. 120461 and 120462. From the Marash bazar, July 2.
120461. No. 1377. 120462. No. 1380.
- Nos. 120463 and 120464. From the Urfa bazar, July 6.
120463. No. 1533. 120464. No. 1537.
- Nos. 120465 and 120466. From the Diyarbekir bazar, July 10.
120465. No. 1655. 120466. No. 1663.
120467. No. 1700. From the Elaziz bazar, July 14.
120468. No. 1827. From the Malatya bazar, July 16. A small pumpkin.
120469. No. 2046. From the Nigde bazar, July 27.
120470. No. 2145. From the Sivas bazar, August 5.
- Nos. 120471 and 120472. From the Erzinjan bazar, August 8.
120471. No. 2227. 120472. No. 2237.
120473. No. 2361. From the Trabzon bazar, August 11.

120282 to 120490—Continued.

120474. No. 2900. From the Chanak Kale bazar, August 18.

Nos. 120475 and 120476. From the Kutahya bazar, August 28.

120475. No. 2995. A white pumpkin.

120476. No. 3007. A black pumpkin.

120477. No. 3052. From the Amasya bazar, October 6.

120478. No. 3129. From the Inebolu bazar, October 12.

Nos. 120479 to 120481. From the Kastamonu bazar, October 14.

120479. No. 3181. 120481. No. 3177.

120480. No. 3154.

120482. No. 3196. From the Chankiri bazar, October 15.

120483. No. 3262. From the Adapazari bazar, October 20. A pumpkin used for stuffing.

120484. No. 3292. From the Edirne bazar, October 22.

120485. No. 1709. From the Elaziz bazar, July 13.

120486. CUCURBITA sp. Cucurbitaceae.

No. 1365. From the Marash bazar, July 2.

120487 and 120488. LAGENARIA LEUCANTHA (Duchesne) Rusby. Cucurbitaceae. Calabash gourd.

120487. No. 2052. From the Nigde bazar, July 27.

120488. No. 3263. From the Adapazari bazar, October 20.

120489 and 120490. LUFFA ACUTANGULA (L.) Roxb. Cucurbitaceae. Singkwa towelgourd.

120489. No. 1238. From the Bursa bazar, June 18.

120490. No. 1367. From the Marash bazar, July 2. Dishrag gourd.

120491 to 120495. VITIS spp. Vitaceae. Grape.

From France. Vines purchased from the Rielter Nurseries, Montpellier. Received February 12, 1937.

120491. Cabernet Franc on Riparia × Rupestris No. 3309.

120492. Chasselas Musque on Riparia × Rupestris No. 3309.

120493. Muscat Blanc de Frontignan on Riparia × Rupestris No. 3309.

120494. Pinot Blanc Chardonnay on Riparia × Rupestris No. 3309.

120495. Pinot Noir on Riparia × Rupestris No. 3309.

120496 to 120521.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 12, 1937.

120496 to 120499. CANNABIS SATIVA L. Moraceae. Hemp.

120496. No. 3241. From the Adapazari bazar, October 20.

120497. No. 3179. From the Kastamonu bazar, October 14.

120496 to 120521—Continued.

120498. No. 1391. From the Marash bazar, July 2.

120499. No. 2136. From the Sivas bazar, August 4.

120500 and 120501. LINUM USITATISSIMUM L. Linaceae. Flax.

120500. No. 564. From the Isparta bazar, June 2.

120501. No. 606. From the Izmir bazar, May 23.

120502. URTICA sp. Urticaceae.

No. 622. From the Izmir bazar, May 23.

120503 to 120511. LINUM USITATISSIMUM L. Linaceae. Flax.

120503. No. 711. From a field between Milas and Kulluk, May 27.

120504. No. 1243. From the Bursa bazar, June 18.

120505. No. 1279. From a field near Karacabey, June 18.

120506. No. 2410. From 32 km. west of Rize, August 13.

120507. No. 2581. From 20 km. west of Samsun, August 23.

120508. No. 3008. From Kutahya bazar, August 28.

120509. No. 3060. From the Amasya bazar, October 6.

120510. No. 3225. From the Adapazari bazar, October 10.

120511. No. 3279. From the Edirne bazar, October 22.

120512 to 120521. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

120512. No. 1217. From the Bursa bazar, June 18.

120513. No. 2464. From a field near Trabzon, August 15.

120514. No. 2553. From 4 km. east of Samsun, August 22.

120515. No. 2613. From a field near Basra, August 23.

120516. No. 2663. From Tokat, August 26.

120517. No. 2734. From 5 km. west of Yalova, September 6.

Nos. 120518 and 120519. From Biga, September 19.

120518. No. 2908. A tall tobacco.

120519. No. 2909. A short type of tobacco.

120520. No. 2926. From near Chesme, Smyrna region, September 12.

120521. No. 2981. From Ephesus, September 25.

120522 to 120524. CITRUS spp. Rutaceae.

From Egypt. Seeds presented by Thomas W. Brown, Horticultural Section of the Ministry of Agriculture, Giza. Received February 11, 1937.

120522. CITRUS AURANTIFOLIA (Christm.) Swingle. Lime.

Beledy, a Persian lime.

120522 to 120524—Continued.

120523. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Mandarin orange.

Beledy mandarine.

120524. CITRUS SINENSIS (L.) Osbeck. Orange.

Sokkary, a sugar orange.

120525. KETELEERIA DAVIDIANA (Bertrand) Beissner. Pinaceae.

From France. Seeds presented by A. Gerard, La Fosse, par Montroire-sur-Loir, Loir-et-Cher. Received February 11, 1937.

A coniferous tree, native to western China, closely allied to the firs. It sometimes becomes 100 feet tall, is of pyramidal habit, and has handsome glossy-green firlike foliage.

For previous introduction see 111742.

120526. CAMPOMANESIA FENZLIANA (Berg.) Glaziou. Myrtaceae.

Guabiroba.

From Brazil. Seeds presented by Graham Bell Fairchild, Anapolis, Goyaz. Received February 5, 1937.

A low bush 1 to 2 feet high. The fruit is very good, juicy, and very sweet. The skin is tough, leathery, and bitter, but this is no drawback, as the seeds and pulp pop out when squeezed. It grows in the open scrubby plains of central Brazil and is called *guivira* in Matto Grosso.

For previous introduction see 44784.

120527 to 120529. GLADIOLUS spp. Iridaceae.

From the Union of South Africa. Seeds presented by A. Cheverton Buller, Dwarsriviers Hoek, District of Stellenbosch, Cape Province. Received February 9, 1937.

120527. GLADIOLUS CALLISTUS Bolus f.

A tall plant, 30 to 40 inches high, with 4 to 7 narrow, sword-shaped leaves 1 to 2 feet long, and 2 stem leaves. The flowers, white suffused with lavender pink and 9 to 12 in number, are produced in 1 to 3 branches. Native to South Africa.

120528. GLADIOLUS GRACILIS Jacq.

A plant with about 3 rigid, subterete leaves a foot long and very slender stems up to 2 feet high, bearing 2 to 6 pale-lilac scentless flowers in a lax secund spike. Native to South Africa.

For previous introduction see 113570.

120529. GLADIOLUS VILLOSUS Ker.

The simple stems of this gladiolus are up to 2 feet long, and the sheaths are very hairy, the lowest without any leaf blade. The upper sheaths enclose linear, thick, rigid leaves up to 12 inches long. The bright-red or lilac flowers are in a lax secund spike. Native to South Africa.

For previous introduction see 105297.

120530 to 120640.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received February 9, 1937.

120530 and 120531. DOLICHOS LABLAB L. Fabaceae. Hyacinth-bean.

120530. No. 3031. From the Amasya bazar. October 9.

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120530 to 120640—Continued.

120531. No. 598. From the Izmir bazar, May 23.

120532 to 120537. LENS ESCULENTA Moench. Fabaceae. Lentil.

120532. No. 566. From the Isparta bazar, June 2.

120533. No. 1615. From the Diyarbekir bazar, July 8.

120534. No. 1717. From the Elaziz bazar, July 13.

120535. No. 1839. From the Malatya bazar, July 16.

120536. No. 2678. From 10 km. south of Tokat, August 26.

120537. No. 2881. From the Chanak Kale bazar, September 18.

120538 to 120616. PHASEOLUS spp. Fabaceae. Bean.

120538 to 120542. PHASEOLUS COCCINEUS L. Fabaceae. Scarlet-runner bean.

120538. No. 3151. From the Kastamonu bazar, October 14.

120539. No. 1158. From the Balikesir bazar, June 17.

120540. No. 1242. From the Bursa bazar, June 18.

120541. No. 1536. From the Urfa bazar, July 6.

120542. No. 2214. From the Erzinjan bazar, August 9.

120543 to 120613. PHASEOLUS VULGARIS L. Common bean.

120543. No. 547. From the Mugla bazar, May 28.

Nos. 120544 to 120548. From the Isparta bazar, June 2.

120544. No. 551. 120547. No. 559.

120545. No. 552. 120548. No. 563.

120546. No. 554.

120549. No. 600. From the Antalya bazar, June 4.

Nos. 120550 to 120554. From the Izmir bazar, May 23.

120550. No. 605. 120553. No. 620.

120551. No. 608. 120554. No. 624.

120552. No. 618.

Nos. 120555 and 120556. From the Balikesir bazar, June 17.

120555. No. 1155. 120556. No. 1156.

Nos. 120557 to 120563. From the Bursa bazar, June 18.

120557. No. 1223. 120561. No. 1236.

120558. No. 1225. 120562. No. 1237.

120559. No. 1226. 120563. No. 1240.

120560. No. 1229.

120564. No. 1553. From the Urfa bazar, July 6.

Nos. 120565 to 120567. From the Marash bazar, July 7.

120565. No. 1363. 120567. No. 1382.

120566. No. 1366.

120530 to 120640—Continued.

120568. No. 1540. From the Urfa bazar, July 6.

Nos. 120569 and 120570. From the Diyarbekir bazar, July 9 and 10.

120569. No. 1614. 120570. No. 1662.

Nos. 120571 to 120574. From the Elaziz bazar, July 13.

120571. No. 1692.

120572. No. 1701. A long bean.

120573. No. 1707. A yellow bean.

120574. No. 1711.

Nos. 120575 to 120577. From the Malatya bazar, July 16.

120575. No. 1813. A late bean.

120576. No. 1809.

120577. No. 1837.

Nos. 120578 to 120580. From the Nigde bazar, July 27.

120578. No. 2024. 120580. No. 2053.

120579. No. 2028.

120581. No. 2135. From the Sivas bazar, August 5.

120582. No. 2056. From the Nigde bazar, July 27.

Nos. 120583 and 120584. From the Sivas bazar, August 5.

120583. No. 2141. 120584. No. 2148.

Nos. 120585 to 120587. From the Erzinjan bazar, August 8.

120585. No. 2224. 120587. No. 2236.

120586. No. 2234.

Nos. 120588 to 120591. From the Trabzon bazar, August 11.

120588. No. 2352. A pole bean.

120589. No. 2355.

120590. No. 2364.

120591. No. 2371.

Nos. 120592 to 120594. From the Samsun bazar, August 21.

120592. No. 2524. 120594. No. 2540.

120593. No. 2535.

120595. No. 2622. From a small patch growing among corn, 63 km. southwest of Samsun, August 24.

120596. No. 2547. From the Samsun bazar, August 21.

120597. No. 2624. Found growing among brush 54 km. southwest of Samsun, August 24.

120598. No. 2701. From the Amasya bazar, August 26.

120599. No. 2883. From the Chanak Kale bazar, August 18.

Nos. 120600 and 120601. From the Amasya bazar, October 6.

120600. No. 3070. 120601. No. 3072.

Nos. 120602 to 120604. From the Inebolu bazar, October 13.

120602. No. 3118. 120603. No. 3119.

120604. No. 3120. A stringless bean.

120530 to 120640—Continued.

120605. No. 3232. *Dag so gani*. From the Adapazari bazar, October 20.

Nos. 120606 and 120607. From the Chankiri bazar, October 15.

120606. No. 3198. 120607. No. 3200.

Nos. 120608 to 120613. From the Edirne bazar, October 22.

120608. No. 3289. 120611. No. 3300.

120609. No. 3296. 120612. No. 3301.

120610. No. 3299. 120613. No. 3302.

Nos. 120614 to 120616. From the Inebolu bazar, October 12. A collection of late varieties.

120614. *PHASEOLUS* sp.

No. 3121.

120615. *PHASEOLUS* sp.

No. 3121-A.

120616. *PHASEOLUS* sp.

No. 3121-B.

120617 to 120632. *PISUM* spp. *Fabaceae*.
Pea.

120617 to 120622. *PISUM ELATIUS* Bieb.

For previous introduction see 117261.

120617. No. 738. From 19 km. south of Denizli, on a plateau, May 30.

120618. No. 823. From between Isparta and Antalya, June 3.

120619. No. 3346. From Ephesus, June 12. A wild edible pea with 6 to 8 peas in a pod.

120620. No. 1962. From Birejik, July 22. A variety with 4 to 9 peas in a pod; found growing on very poor soil.

120621. No. 825. From Ephesus, May 24. A wild pea.

120622. No. 3344. From 2 km. south of Kirkagach, June 11.

120623 to 120628. *PISUM SATIVUM* L.

120623. No. 545. From Mugla bazar, June 28.

120624. No. 1258. From the Bursa bazar, June 18.

Nos. 120625 and 120626. From the Amasya bazar.

120625. No. 2708. Collected August 25.

120626. No. 3071. Collected October 6.

120627. No. 3123. From the Inebolu bazar, October 13.

120628. No. 3229. From the Adapazari bazar, October 20.

120629. *PISUM ELATIUS* Bieb.

No. 1317. From the hills near Mudanya, June 21.

120630. *PISUM SATIVUM* L.

No. 3257. From the Adapazari bazar, October 20.

120631. *PISUM* sp.

No. 1468. From 45 km. north of Gaziantep, July 3.

120530 to 120640—Continued.

120632. *PISUM* sp.

No. 1162. From 2 km. west of Bali-kesir, June 16.

120633. *SOLANUM MELONGENA* L. Solana-
ceae. Eggplant.

No. 576. From the Antalya bazar, June 4.

120634 to 120638. *VIGNA* spp. Fabaceae.

120634 and 120635. *VIGNA SINENSIS* (Torner) Savi. Cowpea.

120634. No. 555. From the Isparta bazar, June 2.

120635. No. 1383. From the Marash bazar, July 2. A black-eyed bean.

120636 and 120637. *VIGNA CYLINDRICA* (Stickm.) Skeels. Catjang.

120636. No. 1684. From the Elaziz bazar, July 13.

120637. No. 553. From the Isparta bazar, June 2. Black-eyed peas.

120638. *VIGNA SINENSIS* (Torner) Savi. Cowpea.

No. 546. From the Mugla bazar, May 28.

120639. *PISUM* sp. Fabaceae.

No. 1968. From Birejik, July 22. A species with small pods.

120640. *PISUM* sp. Fabaceae.

No. 667. An edible wild pea from the hills near Milas, June 26.

120641 to 120645.

From Algeria, Africa. Seeds presented by Dr. René Maire, University of Algiers, Algiers. Received February 11, 1937.

120641. *ACACIA RADDIANA* Savi. Mimosa-
ceae.

A tropical African tree, somewhat spiny, with bipinnate leaves and linear-oblong leaflets which are obtuse and one-fourth of an inch long.

For previous introduction see 106613.

120642. *ARISTIDA PUNGENS* Desf. Poaceae.

A tall vigorous grass.

For previous introduction see 84278.

120643. *CALLIGONUM AZEL* Maire. Poly-
gonaceae.

A small desert tree related to *Calligonum comosum*. Native to northern Africa.

120644. *CALLIGONUM COMOSUM* L'Her. Polygonaceae.

A densely branched shrub 10 to 15 feet high, with minute subulate leaves and small ovate, densely spiny, nutlike fruits. Native to the eastern Mediterranean region.

For previous introduction see 112046.

120645. *GENISTA RAETEM* Forsk. Fabaceae.
Retem.

A bushy shrub, up to 10 feet high, with simple leaves about 5 mm. long. The sessile white flowers, in small clusters, are about 1 cm. long; the pods are inflated and abruptly beaked. It is native to northern Africa, where it grows on sand dunes.

120646 to 120658.

From China. Seeds purchased from R. C. Ching, Keeper of the Garden, Lu-Shan Arboretum, Kiukiang. Received February 17, 1937.

120646. *CASTANEA HENRYI* (Skan) Rehd. and Wils. Fagaceae. Chestnut.

For previous introduction see 116862.

120647. *CASTANEA SEGUINII* Dode. Faga-
ceae. Chestnut.

120648. *CASTANOPSIS CAUDATA* Franch. Fagaceae.

A large evergreen shrub or small tree with shining entire ovate leaves. Native to central China.

120649. *CASTANOPSIS SCLEROPHYLLA* (Lindl.) Schottky. Fagaceae.

For previous introduction see 116123.

120650. *LITHOCARPUS GLABRA* (Thunb.) Rehd. Fagaceae.

An evergreen tree with oblong entire leaves 3 to 6 inches long and small nuts in spikes. Native to Japan.

For previous introduction see 116140.

120651. *LITHOCARPUS HENRYI* (Seemen) Rehd. and Wils. Fagaceae.

An evergreen tree, sometimes 60 feet high, with oblong-lanceolate leaves 3 to 7 inches long. Native to central China.

120652. *QUERCUS ACUTISSIMA* Carruthers. Fagaceae. Brittletooth oak.

A narrow-leaved oak with attractive bright-green leaves.

120653. *QUERCUS CHENII* Nakai. Fagaceae.
Oak.

An oak which becomes 90 feet high, with lanceolate leaves about 5 inches long. It is allied to *Quercus glandulifera*. Native to Chekiang Province, China.

120654. *QUERCUS FABRI* Hance. Fagaceae.
Oak.

A small evergreen oak of the *Prinus* section, up to 45 feet high, with obovate to oblong leaves about 6 inches long, sinuate and shallow lobed. Native to China.

For previous introduction see 116148.

120655. *QUERCUS GLAUCA* Thunb. Faga-
ceae. Blue Japanese oak.

120656. *QUERCUS MYRSINAEFOLIA* Blume. Fagaceae.

From Chia-hua-shan, Anhwei Province.

120657. *QUERCUS GLANDULIFERA* Blume (*Q. serrata* Thunb.). Fagaceae. Oak.

A white oak up to 70 feet high, native to Japan, Chosen, and China. The oblong-ovate leaves are lustrous bright green and hold their color until late in the autumn. It is usually shrubby under cultivation.

For previous introduction see 103774.

120658. *QUERCUS VARIABILIS* Blume. Faga-
ceae. Oriental oak.

A large oak up to 80 feet high, forming pure stands between 2,000 and 5,000 feet altitude in central and eastern China. The bark is pale yellowish gray and deeply furrowed; the dark-green, crenately serrate leaves with bristlike teeth are oblong to oblong-lanceolate; the roundish acorns are almost sessile.

For previous introduction see 89606.

120659. RUBUS sp. Rosaceae.

From England. Plants purchased from Laxton Bros. Nurseries, Bedford. Received February 19, 1937.

Bedford Giant blackberry.

120660 to 120820.

From Turkey. Seeds and bulbs collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 9, 1937.

This material was all collected in 1936 and, unless otherwise stated, was received as seeds.

120660 and 120661. ABELMOSCHUS ESCULENTUS (L.) Moench. Malvaceae. Okra.

120660. No. 536. From the Mugla bazar, May 28.

120661. No. 1708. From the Elaziz bazar, July 13.

120662 to 120681. ALLIUM CEPA L. Liliaceae. Onion.

120662. No. 565. From the Isparta bazar, June 2.

120663. No. 623. From the Izmir bazar, May 23.

Nos. 120664 and 120665. From the Balikesir bazar, June 17.

120664. No. 1145. 120665. No. 1159.

120666. No. 1213. From the Bursa bazar, June 18.

120667. No. 1376. From the Marash bazar, July 2.

120668. No. 1538. From the Urfa bazar, July 6.

120669. No. 1826. From the Malatya bazar, July 16.

120670. No. 2025. From the Nigde bazar, July 27.

120671. No. 2140. From the Sivas bazar, August 5.

120672. No. 2211. From the Erzinjan bazar, August 8.

120673. No. 2546. From the Samsun bazar, August 21.

120674. No. 2724. From the Mission garden at Talas, August 29. A cultivated multiplier type.

120675. No. 3089. From the Yozgat bazar, October 9.

120676. No. 2993. From the Kutahya bazar, October 28.

120677. No. 3126. From the Inebolu bazar, October 13.

120678. No. 3162. From the Kastamonu bazar, October 14.

120679. No. 3212. From the Chankiri bazar, October 15.

120680. No. 3259. From the Adapazari bazar, October 20.

120681. No. 3457. From Elaziz, August 30.

120682 to 120685. ALLIUM SATIVUM L. Liliaceae. Garlic.

120682. No. 1534. Bulblets from the Urfa bazar, July 6.

120683. No. 3078. Bulblets from the Yozgat bazar, October 9.

120660 to 120820—Continued.

120684. No. 3433. Bulblets from Alma Dag, June 28.

120685. No. 3474. From the Inebolu bazar, October 15.

120686. ANETHUM GRAVEOLENS L. Apiaceae. Dill.

No. 1624. From the Diyarbekir bazar, July 9.

120687. APIUM GRAVEOLENS L. Apiaceae. Celery.

No. 534. From the Mugla bazar, May 28.

120688 to 120707. BETA VULGARIS L. Chenopodiaceae. Common beet.

120688. No. 578. From the Antalya bazar, June 4.

Nos. 120689 and 120690. From the Bursa bazar, June 18.

120689. No. 1219. 120690. No. 1239.

120691. No. 1379. From the Marash bazar, July 2.

120692. No. 1539. From the Urfa bazar, July 6.

120693. No. 1656. From the Diyarbekir bazar, July 10.

120694. No. 1714. From the Elaziz bazar, July 13.

120695. No. 1814. From the Malatya bazar, July 16.

120696. No. 2124. From the Sivas bazar, August 5.

120697. No. 2358. From the Trabzon bazar, August 11.

120698. No. 2529. A yellow beet from the Samsun bazar, August 21.

120699. No. 2709. From the Amasya bazar, August 25.

120700. No. 2899. From the Chanak Kale bazar, September 18.

120701. No. 2992. From the Kutahya bazar, September 28.

120702. No. 3021. From gardens in Eskishehir, September 29. The sugar-beet type.

120703. No. 3094. From the Yozgat bazar, October 9.

120704. No. 3170. From the Kastamonu bazar, October 10.

120705. No. 3208. From the Chankiri bazar, October 15.

Nos. 120706 and 120707. From the Adapazari bazar, October 20.

120706. No. 3238. 120707. No. 3264.

120708 to 120714. BETA VULGARIS CICLA L. Chenopodiaceae. Chard.

120708. No. 614. From the Izmir bazar, May 23.

120709. No. 2378. From the Trabzon bazar, August 11.

120710. No. 2531. From the Samsun bazar, August 21.

Nos. 120711 and 120712. From the Adapazari bazar, October 20.

120711. No. 3243. 120712. No. 3270.

120713. No. 1393. From the Marash bazar, July 2.

120660 to 120820—Continued.

120714. No. 3124. From the Inebolu bazar, October 13.
- 120715 to 120752. *CAPSICUM ANNUUM* L. Solanaceae. Common redpepper.
120715. No. 530. From the Mugla bazar, May 28.
- Nos. 120716 to 120718. From the Izmir bazar, May 23.
120716. No. 572. A bell-shaped pepper.
120717. No. 589. A small slender pepper.
120718. No. 594. A hot pepper.
120719. No. 1253. From the Bursa bazar, June 18.
120720. No. 1372. A mild pepper from the Marash bazar, July 2.
- Nos. 120721 to 120723. From the Urfa bazar, July 6.
120721. No. 1558. An elongated pepper.
120722. No. 1560.
120723. No. 1559. A cylindrical pepper.
120724. No. 1666. From the Diyarbekir bazar, July 10.
- Nos. 120725 and 120726. From the Elaziz bazar, July 13.
120725. No. 1690. 120726. No. 1691.
- Nos. 120727 and 120728. From the Nigde bazar, July 27.
120727. No. 2047. 120728. No. 2049.
120729. No. 1815. From the Malatya bazar, July 16.
120730. No. 2163. From the Sivas bazar, August 5.
- Nos. 120731 to 120733. From the Erzinjan bazar, May 8.
120731. No. 2229. A cylindrical pepper.
120732. No. 2230. An elongated pepper.
120733. No. 2242. An elongated pepper.
- Nos. 120734 and 120735. From the Trabzon bazar, August 11.
120734. No. 2359. A bell-shaped pepper.
120735. No. 2366.
120736. No. 2417. From Rize, August 13. A sweet pepper; fruits round, about the size of a cherry, brilliant tomato-red; brought in from nearby Russian gardens; eaten both raw and cooked.
- Nos. 120737 and 120738. From the Samsun bazar, August 21.
120737. No. 2525. An elongated pepper.
120738. No. 2539. A large pepper.
120739. No. 2893. From the Chanak Kale bazar, September 18.
120740. No. 2985. From the Kutahya bazar, September 28.
- Nos. 120741 and 120742. From the Amasya bazar, October 6.
120741. No. 3044.
120742. No. 3051. An elongated pepper.
- Nos. 120743 and 120744. From the Chankiri bazar, October 15.

120660 to 120820—Continued.

120743. No. 3194. 120744. No. 3209. Nos. 120745 to 120747. From the Adapazari bazar, October 20.
120745. No. 3261. A small red pepper.
120746. No. 3265. A large pepper.
120747. No. 3267. A large hot pepper.
- Nos. 120748 and 120749. From the Edirne bazar, October 22.
120748. No. 3285. A hot pepper.
120749. No. 3287. A bell-shaped pepper.
- Nos. 120750 and 120751. From the Balikesir bazar, June 17.
120750. No. 3351. A small pepper.
120751. No. 3352. A medium-sized pepper.
120752. No. 3360. From the Bursa bazar, June 18.
120753. *CICER ARIETINUM* L. Fabaceae. Chickpea. No. 1227. *Garbanzos*. From the Bursa bazar, June 18.
- 120754 to 120774. *DAUCUS CAROTA* L. Apiaceae. Carrot.
120754. No. 573. From the Isparta bazar, June 2.
120755. No. 592. From the Izmir bazar, June 23.
120756. No. 1244. From the Bursa bazar, June 18.
120757. No. 1384. From the Marash bazar, July 2.
120758. No. 1561. From the Urfa bazar, July 6.
120759. No. 1705. From the Elaziz bazar, July 13.
120760. No. 1832. From the Malatya bazar, July 16.
- Nos. 120761 and 120762. From the Nigde bazar, July 27.
120761. No. 2041. 120762. No. 2055.
120763. No. 2134. From the Sivas bazar, August 5.
120764. No. 2231. From the Erzinjan bazar, August 8.
120765. No. 2542. From the Samsun bazar, August 21.
120766. No. 2714. From the Amasya bazar, August 25.
120767. No. 2898. From the Chanak Kale bazar, September 18.
120768. No. 3002. From the Kutahya bazar, September 28.
120769. No. 3020. From the Eskishehir bazar, September 29.
120770. No. 3081. From the Yozgat bazar, October 9.
- Nos. 120771 and 120772. From the Inebolu bazar, October 13.
120771. No. 3125. 120772. No. 3135.
120773. No. 3178. From the Kastamonu bazar, October 14.
120774. No. 3258. From the Adapazari bazar, October 20.

120660 to 120820—Continued.

- 120775 to 120799. *SOLANUM MELONGENA* L.
Solanaceae. Eggplant.
120775. No. 607. *Mattias*. From the Antalya bazar, June 4.
120776. No. 544. From the Mugla bazar, May 28.
120777. No. 591. From the Antalya bazar, June 3.
120778. No. 591-A. From the Izmir bazar, May 23.
120779. No. 1255. From the Bursa bazar, June 18.
120780. No. 1378. From the Marash bazar, July 2.
- Nos. 120781 and 120782. From the Urfa bazar, July 6.
120781. No. 1532. A white eggplant.
120782. No. 1549.
120783. No. 1667. From the Diyarbekir bazar, July 10.
120784. No. 1681. From the Elaziz bazar, July 13.
120785. No. 1820. From the Malatya bazar, July 16.
120786. No. 2034. From the Nigde bazar, July 27.
120787. No. 2223. From the Erzinjan bazar, August 8.
120788. No. 2526. From the Samsun bazar, August 21.
120789. No. 2700. From the Amasya bazar, August 25.
120790. No. 2892. From the Chanak Kale bazar, September 18.
120791. No. 3013. From the Kutahya bazar, September 28.
- Nos. 120792 and 120793. From the Amasya bazar, October 6.
120792. No. 3035. 120793. No. 3042.
120794. No. 3088. From the Yozgat bazar, October 9.
120795. No. 3155. From the Kastamonu bazar, October 14.
120796. No. 3210. From the Chankir bazar, October 15.
120797. No. 3236. From the Adapazari bazar, October 20.
- Nos. 120798 and 120799. From the Edirne bazar, October 22.
120798. No. 3291. 120799. No. 3293.
- 120800 to 120820. *SPINACIA OLERACEA* L.
Chenopodiaceae. Common spinach.
120800. No. 528. From the Mugla bazar, May 28.
- Nos. 120801 and 120802. From the Izmir bazar, May 23.
120801. No. 612. 120802. No. 617.
120803. No. 1368. From the Marash bazar, July 2.
- Nos. 120804 and 120805. From the Elaziz bazar, July 13.
120804. No. 1683. 120805. No. 1687.
120806. No. 1829. From the Malatya bazar, July 16.

120660 to 120820—Continued.

- Nos. 120807 and 120808. From the Nigde bazar, July 27.
120807. No. 2037. 120808. No. 2043.
- Nos. 120809 and 120810. From the Erzinjan bazar, August 8.
120809. No. 2232. 120810. No. 2244.
120811. No. 2368. From the Trabzon bazar, August 11.
- Nos. 120812 and 120813. From the Samsun bazar, August 21.
120812. No. 2534. 120813. No. 2537.
120814. No. 2884. From the Chanak Kale bazar, September 18.
120815. No. 2988. From the Kutahya bazar, September 28.
120816. No. 3128. From the Inebolu bazar, October 13.
- Nos. 120817 and 120818. From the Kastamonu bazar, October 14.
120817. No. 3150. 120818. No. 3152.
120819. No. 3202. From the Chankir bazar, October 15.
120820. No. 3235. From the Adapazari bazar, October 20.
- 120821 to 120823.**
- From Ecuador. Seeds collected by Mrs. Ynes Mexia, Bureau of Plant Industry. Received January 28, 1937.
120821. *TEPHROSIA TOXICARIA* (Swartz)
Pers. Fabaceae.
- No. 8486-A. December 23, 1936. *Barbasco*. From Playa Rica, Provincia Esmeraldas, Parroquia Concepción, at 350 feet altitude, where it rains throughout the year, with the temperature ranging from 70° to 90° F.
- For previous introduction see 116245.
120822. *OCHROMA GRANDIFLORA* Rowlee.
Bombacaceae.
- No. 8487-A. *Balsa*. From Guayaquil, December, 1936. Found growing in a back yard. A tree with soft, very light wood used for rafts and grown for export.
120823. (Undetermined.)
- No. 8460. December 16, 1936. From Playa Rica, Provincia Esmeraldas, Parroquia Concepción, at 350 feet altitude. An ornamental vine, with cream-white flowers, which climbs to the tops of forest trees. The climate is rainy throughout the year and the temperature ranges from 70° to 90° F.
- 120824. CITRUS LIMONIA** Osbeck. **Ruta-**
ceae. Lemon.
- From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received February 5, 1937.
- No. 1650. *Gulgul, gombrou*. From Bandrole, Kulu, Punjab, November 14, 1936, at 5,000 feet altitude. A citrus tree which stands 18° F. with little apparent injury; in some sections snow covers it for a month. The tree is a moderately rapid grower, bears fairly early, and the fruit is of good flavor and has excellent keeping quality.

120825 to 121052.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 18, 1937.

This material was all collected in the summer and autumn of 1936.

- 120825 to 120841. *ABELMOCHUS ESCULENTA* (L.) Moench. Malvaceae. Okra.
120825. No. 1231. From the Bursa bazar, June 18.
120826. No. 1381. From the Marash bazar, July 2.
120827. No. 1555. From the Urfa bazar, July 6.
120828. No. 1659. From the Diyarbekir bazar, July 10.
120829. No. 1816. From the Malatya bazar, July 16.
120830. No. 2038. From the Nigde bazar, July 27.
120831. No. 2126. From the Sivas bazar, August 5.
120832. No. 2247. From the Erzinjan bazar, August 8.
120833. No. 2375. From the Trabzon bazar, August 11.
120834. No. 2543. From the Samsun bazar, August 21.
120835. No. 2710. From the Amasya bazar, June 25.
120836. No. 2880. From the Chanak Kale bazar, August 18.
120837. No. 3016. From the Kutahya bazar, September 28.
120838. No. 3049. From the Amasya bazar, October 9.
120839. No. 3082. From the Yozgat bazar, October 9.
120840. No. 3206. From the Chankiri bazar, October 15.
120841. No. 3253. From the Adapazari bazar, October 20.
120842. *NIGELLA SATIVA* L. Liliaceae. Black cummin.
- No. 549. From the Isparta bazar, June 2.
- 120843 to 120854. *ALLIUM PORRUM* L. Liliaceae. Leek.
120843. No. 1702. From the Elaziz bazar, July 13.
120844. No. 1811. From the Malatya bazar, July 16.
120845. No. 2050. From the Nigde bazar, July 27.
120846. No. 2530. From the Samsun bazar, August 21.
120847. No. 2706. From the Amasya bazar, August 25.
- Nos. 120848 and 120849. From the Amasya bazar, October 6.
120848. No. 3038. 120849. No. 3056.
120850. No. 3084. From the Yozgat bazar, October 9.
120851. No. 3158. From the Kastamonu bazar, October 14.
120852. No. 3207. From the Chankiri bazar, October 15.

120825 to 121052—Continued.

120853. No. 3251. From the Adapazari bazar, October 20.
120854. No. 3294. From the Edirne bazar, October 22.
120855. *ALLIUM* sp. Liliaceae.
- No. 2895. From the Chanak Kale bazar, August 18.
- 120856 to 120870. *ANETHUM GRAVEOLENS* L. Apiaceae. Dill.
120856. No. 578. From the Izmir bazar, May 23.
120857. No. 599. From the Antalya bazar, June 4.
120858. No. 1235. From the Bursa bazar, June 18.
120859. No. 1715. From the Elaziz bazar, July 13.
120860. No. 1833. From the Malatya bazar, July 16.
120861. No. 2054. From the Nigde bazar, July 27.
120862. No. 2243. From the Erzinjan bazar, August 8.
120863. No. 2360. From the Trabzon bazar, August 11.
120864. No. 2538. From the Samsun bazar, August 21.
- Nos. 120865 and 120866. From the Amasya bazar.
120865. No. 2699. August 25.
120866. No. 3045. October 6.
- Nos. 120867 and 120868. From the Kastamonu bazar, October 14.
120867. No. 3157. 120868. No. 3161.
120869. No. 3242. From the Adapazari bazar, October 20.
120870. No. 1147. From the Balikesir bazar, June 16.
- 120871 to 120881. *APIUM GRAVEOLENS* L. Apiaceae. Celery.
- Nos. 120871 and 120872. From the Izmir bazar, May 23.
120871. No. 576. 120872. No. 585.
120873. No. 594. From the Antalya bazar, June 3.
120874. No. 2362. From the Trabzon bazar, August 11.
120875. No. 2521. From the Samsun bazar, August 21.
120876. No. 2885. From the Chanak Kale bazar, September 18.
120877. No. 2986. From the Kutahya bazar, September 28.
120878. No. 3037. From the Amasya bazar, October 6.
120879. No. 3139. From the Inebolu bazar, October 13.
120880. No. 3184. From the Kastamonu bazar, October 14.
120881. No. 3245. From the Adapazari bazar, October 20.
- 120882 to 120884. *BRASSICA OLERACEA* BO-TRYTIS L. Brassicaceae. Cauliflower.
120882. No. 2891. From the Chanak Kale bazar, September 18.

120825 to 121052—Continued.

120883. No. 3130. From the Inebolu bazar, October 13.
120884. No. 582. From the Izmir bazar, May 23.
- 120885 to 120926. BRASSICA spp. Brassicaceae.
- 120885 to 120905. BRASSICA OLERACEA CAPITATA L. Cabbage.
120885. No. 573. From the Izmir bazar, May 23.
120886. No. 1660. From the Diyarbekir bazar, July 10. A form with glaucous leaves. It is not grown for the heads, but is used to wrap meats.
120887. No. 1819. From the Malatya bazar, July 16.
120888. No. 2030. From the Nigde bazar, July 27.
120889. No. 2158. From the Sivas bazar, August 5.
120890. No. 2238. From the Erzincan bazar, August 8.
- Nos. 120891 and 120892. From the Trabzon bazar, August 1.
120891. No. 2356. Leaf type.
120892. No. 2363. Head type.
- Nos. 120893 and 120894. From the Samsun bazar, August 21.
120893. No. 2518. 120894. No. 2519.
120895. No. 2704. From the Amasya bazar, August 25.
120896. No. 3011. From the Kutahya bazar, September 28.
- Nos. 120897 and 120898. From the Amasya bazar, October 6.
120897. No. 3039. 120898. No. 3064.
- Nos. 120899 and 120900. From the Kastamonu bazar, October 14.
120899. No. 3174. 120900. No. 3176.
120901. No. 3197. From the Chankiri bazar, October 15.
- Nos. 120902 and 120903. From the Adapazari bazar, October 20.
120902. No. 3247. 120903. No. 3260.
120904. No. 3295. From the Edirne bazar, October 22.
120905. No. 3458. From Elaziz, August 30.
- 120906 to 120919. BRASSICA RAPA L. Turnip.
120906. No. 1154. From the Balikesir bazar, June 17.
120907. No. 1221. From the Bursa bazar, June 18.
120908. No. 1361. From the Marash bazar, July 2.
- Nos. 120909 and 120910. From the Elaziz bazar, July 13.
120909. No. 1694. 120910. No. 1697.
120911. No. 1825. From the Malatya bazar, July 16.
120912. No. 2035. From the Nigde bazar, July 27.

120825 to 121052—Continued.

120913. No. 2159. From the Sivas bazar, August 5.
120914. No. 2218. From the Erzincan bazar, August 8.
120915. No. 2354. From the Trabzon bazar, August 11.
120916. No. 2517. From the Samsun bazar, August 21.
120917. No. 3034. From the Amasya bazar, October 6.
120918. No. 3164. From the Kastamonu bazar, October 14.
120919. No. 3255. From the Adapazari bazar, October 20.
120920. BRASSICA sp.
No. 529. Mustard from the Mugla bazar, June 28.
120921. BRASSICA CAMPESTRIS L. Rutabaga.
No. 569. From the Isparta bazar, June 2.
120922. BRASSICA sp.
No. 583. Mustard from the Antalya bazar, June 4.
120923. BRASSICA sp.
No. 590. Mustard from the Izmir bazar, May 23.
120924. BRASSICA sp.
No. 1140. Mustard from Ephesus, June 12.
120925. BRASSICA sp.
No. 2286. Mustard from 110 km. east of Erzincan, August 9.
120926. BRASSICA sp.
No. 2376. Mustard from the Trabzon bazar, August 18.
120927. ERUCA SATIVA Mill.
No. 584. Salad mustard from the Izmir bazar, May 23.
120928. BRASSICA sp.
No. 3269. From the Adapazari bazar, October 20.
120929. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.
No. 3136-A. From the Inebolu bazar, October 13.
120930. CUCURBITA MAXIMA Duchesne. Cucurbitaceae. Squash.
No. 1380-A. From the Marash bazar, July 2.
120931. CUCURBITA PEPO L. Cucurbitaceae. Pumpkin.
No. 3144. From the Inebolu bazar, October 13.
- 120932 to 120966. LACTUCA SATIVA L. Cichoriaceae. Garden lettuce.
120932. No. 531. From the Mugla bazar, May 28.
120933. No. 571. From the Isparta bazar, June 2.
120934. No. 586. From the Izmir bazar, May 23.
120935. No. 590. From the Antalya bazar, June 3.

120825 to 121052—Continued.

120936. No. 593. From the Izmir bazar, May 23.
120937. No. 1251. From the Bursa bazar, June 18.
120938. No. 1626. From the Diyarbekir bazar, July 9.
120939. No. 1706. From the Elaziz bazar, July 13.
120940. No. 1810. From the Malatya bazar, July 16.
120941. No. 2039. Head lettuce from the Nigde bazar, July 27.
Nos. 120942 and 120943. From the Sivas bazar, August 5.
120942. No. 2139. 120943. No. 2150.
120944. No. 2246. A mixed sample from the Erzinjan bazar, August 8.
Nos. 120945 and 120946. From the Trabzon bazar, August 11.
120945. No. 2343. 120946. No. 2369.
Nos. 120947 and 120948. From the Samsun bazar, June 21.
120947. No. 2527.
120948. No. 2533. Head type.
120949. No. 2703. From the Amasya bazar, August 25.
Nos. 120950 and 120951. From Yalova Kaplijalari, September 12.
120950. No. 2854. Wild lettuce.
120951. No. 2857. Wild lettuce.
- 120952 and 120953. From the Chanak Kale bazar, September 18.
120952. No. 2886. Head lettuce.
120953. No. 2889. Leaf lettuce.
120954. No. 2990. From the Kutahya bazar, September 28.
120955. No. 3036. From the Amasya bazar, October 6.
120956. No. 3090. From the Yozgat bazar, October 9.
- 120957 and 120958. From the Inebolu bazar, October 13.
120957. No. 3127. Leaf lettuce.
120958. No. 3134. Head lettuce.
Nos. 120959 and 120961. From the Kastamonu bazar, October 14.
120959. No. 3163. Leaf lettuce.
120960. No. 3166. Head lettuce.
120961. No. 3167.
Nos. 120962 and 120963. From the Chankiri bazar, October 15.
120962. No. 3192. 120963. No. 3195.
120964. No. 3244. From the Adapazari bazar, October 20.
120965. No. 3284. From the Edirne bazar, October 22.
120966. No. 577. Romaine lettuce from the Izmir bazar, May 23.
- 120967 to 120969. LAGENARIA LEUCANTHA (Duchesne) Rusby. Cucurbitaceae. Calabash gourd.
120967. No. 1390. From the Marash bazar, July 2.

120825 to 121052—Continued.

120968. No. 1818. From the Malatya bazar, July 18. A gourd with a neck.
120969. No. 1224. From the Bursa bazar, June 18.
- 120970 to 120980. LEPIDIUM SATIVUM L. Brassicaceae. Garden cress.
120970. No. 1256. From the Bursa bazar, June 18.
120971. No. 1686. From the Elaziz bazar, July 17.
120972. No. 2045. From the Nigde bazar, July 27.
120973. No. 2245. From the Erzinjan bazar, August 8.
120974. No. 2357. From the Trabzon bazar, August 11.
120975. No. 2516. From the Samsun bazar, August 21.
120976. No. 2712. From the Amasya bazar, August 25.
120977. No. 3001. From the Kutahya bazar, September 28.
120978. No. 3040. From the Amasya bazar, October 6.
120979. From 3079. From the Yozgat bazar, October 9.
120980. No. 3239. From the Adapazari bazar, October 20.
120981. LEPIDIUM sp. Brassicaceae.
No. 801. From Burdur, June 3. A perennial with a musky odor.
- 120982 to 121006. PETROSELINUM CRISPUM (Mill.) Nym. Apiaceae. Parsley.
120982. No. 571. From the Izmir bazar, June 23.
120983. No. 572. From the Isparta bazar, June 2.
120984. No. 1149. From the Balikesir bazar, June 16.
120985. No. 1252. From the Bursa bazar, June 18.
Nos. 120986 and 120987. From the Marash bazar, July 2.
120986. No. 1373. 120987. No. 1392.
120988. No. 1546. From the Urfa bazar, July 6.
Nos. 120989 and 120990. From the Diyarbekir bazar.
120989. No. 1620. July 9.
120990. No. 1657. July 10.
120991. No. 1710. From the Elaziz bazar, July 13.
120992. No. 1965. From Birejik, July 22. Plants growing near an abandoned house.
120993. No. 2029. From the Nigde bazar, July 27.
120994. No. 2212. From the Erzinjan bazar, August 8.
120995. No. 2144. From the Sivas bazar, August 5.
120996. No. 2350. From the Trabzon bazar, August 17.
120997. No. 2536. From the Samsun bazar, August 21.

120825 to 121052—Continued.

120998. No. 2711. From the Amasya bazar, August 25.
120999. No. 2894. From the Chanak Kale bazar, August 18.
121000. No. 2994. From the Kutahya bazar, September 28.
121001. No. 3041. From the Amasya bazar, October 6.
121002. No. 3077. From the Yozgat bazar, October 9.
121003. No. 3160. From the Kastamonu bazar, October 14.
121004. No. 3190. From the Chankiri bazar, October 15.
121005. No. 3252. From the Adapazari bazar, October 20.
121006. No. 3297. From the Edirne bazar, October 22.
- 121007 to 121051. *RAPHANUS* spp. Brassicaceae. Radish.
- 121007 to 121047. *RAPHANUS SATIVUS* L.
121007. No. 543. From the Mugla bazar, May 28.
121008. No. 568. From the Isparta bazar, June 2. A large radish.
121009. No. 574. From the Izmir bazar, May 23. A black radish.
121010. No. 582. A white radish from the Antalya bazar, June 4.
- Nos. 121011 and 121012. From the Izmir bazar, May 23.
121011. No. 583. A long radish.
121012. No. 587. A small round radish.
121013. No. 592. From the Antalya bazar, June 2.
121014. No. 1254. From the Bursa bazar, June 18.
- Nos. 121015 and 121016. From the Marash bazar, July 2.
121015. No. 1362. A small radish.
121016. No. 1374. A large radish.
121017. No. 1545. From the Urfa bazar, July 6.
121018. No. 1664. From the Diyarbekir bazar, July 10. A large radish.
- Nos. 121019 and 121020. From the Malatya bazar, July 16.
121019. No. 1812. A small red radish.
121020. No. 1830. A large radish.
- Nos. 121021 to 121023. From the Nigde bazar, July 27.
121021. No. 2032. A long red radish.
121022. No. 2042. A white radish.
121023. No. 2051. A long white radish.
121024. No. 2129. From the Sivas bazar, August 5. A large round radish.
- Nos. 121025 and 121026. From the Erzinjan bazar, August 8.
121025. No. 2219.

120825 to 121052—Continued.

121026. No. 2248. A small red radish.
- Nos. 121027 and 121028. From the Trabzon bazar, August 11.
121027. No. 2344.
121028. No. 2347. A small red radish.
- Nos. 121029 and 121030. From the Samsun bazar, August 21.
121029. No. 2528.
121030. No. 2545. A white radish.
- Nos. 121031 and 121032. From the Amasya bazar, August 25.
121031. No. 2802. A long red radish.
121032. No. 2713. A small radish.
121033. No. 2755. From 11 km. south of Bursa, September 9.
121034. No. 2887. From Chanak Kale bazar, September 18.
121035. No. 2825. From Yalova Kapiljalari, September 11. A wild radish.
- Nos. 121036 and 121037. From the Kutahya bazar, September 28.
121036. No. 3010. A white radish.
121037. No. 3014. A red radish.
121038. No. 3047. From the Amasya bazar, October 6. A red radish.
121039. No. 3091. From the Yozgat bazar, October 9.
- Nos. 121040 and 121041. From the Kastamonu bazar, October 14.
121040. No. 3183. A red radish.
121041. No. 3175.
121042. No. 3141. From the Inebolu bazar, October 13.
121043. No. 3203. From the Chankiri bazar, October 15.
- Nos. 121044 to 121046. From the Adapazari bazar, October 20.
121044. No. 3237. A red radish.
121045. No. 3246. A white radish.
121046. No. 3248. A black radish.
121047. No. 3288. From the Edirne bazar, October 22. A large radish.
121048. *RAPHANUS* sp.
- No. 2514. From Samsun, August 21.
121049. *RAPHANUS* sp.
- No. 2325. From 75 km. north of Gemushane, August 10.
121050. *RAPHANUS* sp.
- No. 3375. From Yenisehir, June 19.
121051. *RAPHANUS* sp.
- No. 2400. From the sea coast between Trabzon and Rize, August 12.
121052. *SOLANUM* sp. Solanaceae.
- No. 2805. From the Bursa bazar, September 10. A fruit used as a vegetable, quartered and boiled with meat; ripens in the fall, which is unusual.

121053 to 121077.

From Paraguay and Argentina. Collected by W. A. Archer, Bureau of Plant Industry. Received February 16, 1937.

Unless otherwise stated the material was received as seeds.

121053. *ANANAS COMOSUS* (L.) Mer. Bromeliaceae. Pineapple.

No. 4906. Var. *Tipica*. From the Jardín Botánico, Santísima, Trinidad, Paraguay, January 6, 1937. Suckers of a semi-wild, very sweet pineapple.

121054 to 121071. *ARACHIS HYPOGAEA* L. Fabaceae. Peanut.

Nos. 121054 to 121070 are pure-strain selections of cultivated peanuts, presented by Sr. Clos of the Ministerio de Agricultura, Buenos Aires, Argentina, January 22, 1937.

121054. No. 4985. *Negro*. Strain A. H. 198-2. From the Facultad de Agronomía y Veterinaria de Buenos Aires.

121055. No. 4986. *Colorado*. Strain A. H. 901-1. From Tucumán.

121056. No. 4987. *Rastrero*. Strain A. H. 833-2. From China.

121057. No. 4988. Strain A. H. 1,000-1. From the market, Jujuy.

121058. No. 4989. *Negro*. Strain A. H. 1002-1. From Loreto, Misiones.

121059. No. 4990. *Colorado*. Strain A. H. 1039-1. From Córdoba.

121060. No. 4991. *Rastrero*. Strain A. H. 1042-1. From Mancopas, Tucumán.

121061. No. 4992. *Negro*. Strain A. H. 1048-A. From Corrientes.

121062. No. 4993. Strain A. H. 1051-1. From Santa Fé, Reconquista.

121063. No. 4994. Strain A. H. 1053-B. From Santa Fé, Monte Caseros.

121064. No. 4995. *Colorado*. Strain A. H. 1066-1. From Córdoba.

121065. No. 4996. Strain A. H. 1068-1. From Colonia Yeraú, Entre Ríos.

121066. No. 4997. *Bianco*. Strain A. H. 1070-1. From Córdoba.

121067. No. 4998. *Indio*. Strain A. H. 1119-A. From Misiones.

121068. No. 4999. *Imperial*. Strain A. H. 1120-A. From the Tucumán Experiment Station.

121069. No. 5000. Strain A. H. 1122-1. From Corcordia, Entre Ríos.

121070. No. 5001. Strain A. H. 1131-1. From Chajarí, Entre Ríos.

121071. No. 4951. *Tucuru*. A cultivated peanut from Bonpland, Misiones, Argentina, December 1936.

121072 to 121074. *NICOTIANA TABACUM* L. Solanaceae. Common tobacco.

121072. No. 4879. A mixed sample from Cabaña, Paraguay.

Nos. 121073 and 121074. Cultivated tobacco from Bonpland, Misiones, Argentina, December 1936.

121073. No. 4950. *Chileno grande colorado*.

121053 to 121077—Continued.

121074. No. 4949. *Chileno grande amarillo*.

121075. *ZEA MAYS* L. Poaceae. Corn.

No. 4922. From the Jardín Botánico, Santísima, Trinidad, Paraguay, January 6, 1937. A soft corn, cultivated and grown especially for a certain type of bread; also for roasting ears.

121076. *ZEPHYRANTHES* sp. Amaryllidaceae.

No. 4944. From the Jardín Botánico, Santísima, Trinidad, Paraguay, January 9, 1937. Bulbs of a cultivated species thought to be native.

121077. *NOTHOSCORDUM* sp. Liliaceae.

No. 4945. From the Jardín Botánico, Santísima, Trinidad, Paraguay, January 9, 1937. Bulbs of a native species.

121078 to 121085.

From New Zealand. Seeds presented by the Plant Research Bureau, Grasslands Division, Department of Scientific and Industrial Research, Palmerston North. Received February 11, 1937.

121078. *AGROSTIS TENUIS* Sibth. Poaceae.

Brown top. No. Bt. 657.

For previous introduction see 111986.

121079. *DACTYLIS GLOMERATA* L. Poaceae. Orchard grass.

Cocksfoot No. Bc. 286.

121080. *LOLIUM MULTIFLORUM* Lam. Poaceae. Italian ryegrass.

No. Bb. 229.

121081 and 121082. *LOLIUM PERENNE* L. Poaceae. Perennial ryegrass.

121081. No. Ba. 6310.

121082. No. Ba. 6256.

121083. *TRIFOLIUM PRATENSE* L. Fabaceae. Red clover.

Montgomery Extra Late Flowering. No. Aa. 415.

121084 and 121085. *TRIFOLIUM REPENS* L. Fabaceae. White clover.

121084. No. Ac. 2377.

121085. No. Ac. 2297.

121086 to 121290.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 9, 1937.

This material was collected in the summer and autumn of 1936.

121086. *ANTHYLLIS VULNERARIA* L. Fabaceae. Kidneyvetch.

No. 2455. From Alma Dag, 25 km. southeast of Ankara, August 1.

For previous introduction see 93068.

121087. *ANTHYLLIS* sp. Fabaceae.

No. 1763. From 32 km. southeast of Elaziz, July 13.

121088. *ANTHYLLIS VULNERARIA* L. Fabaceae. Kidneyvetch.

No. 709. From 30 km. east of Milas, June 27.

121086 to 121290—Continued.

121089. ARGYROBIUM sp. Fabaceae.
No. 2666. From 46 km. south of Tokat, August 26.
- 121090 to 121106. ASTRAGALUS spp. Fabaceae. Milkvetch.
121090. ASTRAGALUS sp.
No. 739. From 10 km. north of Tavas, May 30.
121091. ASTRAGALUS sp.
No. 808. From 35 km. north of Antalya, June 3.
121092. ASTRAGALUS sp.
No. 1083. From the ruins at Bergama, June 10. A shrub with large yellow flowers.
121093. ASTRAGALUS sp.
No. 1749. From 30 km. southeast of Elaziz, July 13.
121094. ASTRAGALUS sp.
No. 1873. From 50 km. north of Malatya, July 17.
121095. ASTRAGALUS sp.
No. 2117. From 84 km. east of Sivas, August 5.
121096. ASTRAGALUS sp.
No. 2408. From 29 km. west of Rize, August 13.
121097. ASTRAGALUS sp.
No. 2456. From Alma Dag, 25 km. southeast of Ankara, August 1.
121098. ASTRAGALUS sp.
No. 3398. From dry plains around Ankara, June 25.
121099. ASTRAGALUS sp.
No. 3418. From a dry rocky slope 3 km. northeast of Ankara, June 26.
121100. ASTRAGALUS sp.
No. 3452. From 10 km. southeast of Ankara, June 28.
121101. ASTRAGALUS sp.
No. 1447. From 20 km. north of Gaziantep, July 2.
121102. ASTRAGALUS sp.
No. 2768. From Ulu Dag, 35 km. north of Bursa, September 8.
121103. ASTRAGALUS sp.
No. 1883. From 50 km. north of Malatya, July 17.
121104. ASTRAGALUS sp.
No. 3394. From 3 km. southwest of Ankara, June 25.
121105. ASTRAGALUS sp.
No. 3311. From Gaziantep, June 3.
121106. ASTRAGALUS sp.
No. 1633. From 20 km. south of Diyarbekir, July 9.
- 121107 to 121112. CICER spp. Fabaceae.
121107. CICER sp.
No. 1914. From 20 km. west of Diyarbekir, July 9.

121086 to 121290—Continued.

121108. CICER sp.
No. 1596. From 30 km. west of Diyarbekir, July 7.
121109. CICER sp.
No. 1791. From 10 km. southwest of Elaziz, July 14.
- 121110 to 121112. CICER ARIETINUM L. Chickpea.
121110. No. 1752. From 39 km. southeast of Elaziz, July 13.
121111. No. 1623. Garbanzo. From the Diyarbekir bazar, July 8.
121112. No. 3193. Garbanzo. From the Chankiri bazar, October 15.
121113. COLUTEA sp. Fabaceae.
No. 3416. From 3 km. northeast of Ankara, June 26. A shrub with large yellow flowers and papery pods.
- 121114 to 121119. CORONILLA spp. Fabaceae.
121114. CORONILLA VARIA L. Crownvetch.
No. 1802. From 42 km. southwest of Elaziz, July 14. A legume with leaves like the common vetch.
121115. CORONILLA sp.
No. 1944. From Birejik, July 22.
121116. CORONILLA sp.
No. 2491. From 66 km. south of Giresun, August 17.
121117. CORONILLA sp.
No. 2719. From Alma Dag, August 27.
121118. CORONILLA sp.
No. 772. From 2 km. north of Denizli, June 31.
121119. CORONILLA sp.
No. 797. From 25 km. north of Antalya, June 3.
121120. CYTISUS sp. Fabaceae.
No. 2766. From Ulu Dag, 35 km. south of Bursa, September 8.
121121. CYTISUS sp. Fabaceae.
No. 2812. A shrub from Yalova Kaplijalari, September 11.
- 121122 to 121128. GENISTA spp. Fabaceae.
121122. GENISTA sp.
No. 2389. From 50 km. east of Trabzon, August 12.
121123. GENISTA sp.
No. 2430. From 12 km. east of Ordu, August 19.
121124. GENISTA sp.
No. 2555. From 9 km. east of Samsun, August 22.
121125. GENISTA sp.
No. 2696. A shrub with yellow flowers from 106 km. south of Samsun, August 25.
121126. GENISTA sp.
No. 2819. A spiny leafless shrub from Yalova Kaplijalari, September 11.

121086 to 121290—Continued.

121127. *GENISTA* sp.
No. 2744. A shrub from near Gemlik, September 6.
121128. *GENISTA* sp.
No. 2821. A leafless shrub from Yalova Kaplijalari, September 11.
- 121129 to 121131. *HEDYSARUM* spp. Fabaceae.
121129. *HEDYSARUM* sp.
No. 2001. From Ulukishla, July 25.
121130. *HEDYSARUM* sp.
No. 2162. From 59 km. east of Sivas, August 6.
121131. *HEDYSARUM* sp.
No. 3451. From 10 km. southeast of Ankara, June 28.
121132. *INDIGOFERA* sp. Fabaceae.
No. 1130. From 75 km. northwest of Izmir, June 10.
- 121133 to 121135. *LATHYRUS* spp. Fabaceae. Pea.
121133. *LATHYRUS* *APHACA* L.
No. 618. From Ephesus, May 24.
121134. *LATHYRUS* *ERECTUS* Lag.
No. 804. From Bujak, June 3.
121135. *LATHYRUS* sp.
No. 1106. From the mountains between Manisa and Izmir, June 11.
121136. *VICIA* *LATHYROIDES* L. Fabaceae. Vetch.
No. 1108. From the mountains between Manisa and Izmir, June 11.
- 121137 to 121143. *LATHYRUS* spp. Fabaceae.
121137. *LATHYRUS* *ERECTUS* Lag.
No. 1113. From 2 km. south of Kirkagach, June 11.
121138. *LATHYRUS* *ERECTUS* Lag.
No. 1181. From 30 km. west of Balikesir, June 16.
121139. *LATHYRUS* sp.
No. 1195. From 30 km. west of Balikesir, June 16.
121140. *LATHYRUS* *APHACA* L.
No. 1342. From Adana, June 10.
121141. *LATHYRUS* *SATIVUS* L. Bittervetch.
No. 1354. From Adana, June 10.
121142. *LATHYRUS* sp.
No. 1461. From 30 km. southeast of Marash, July 2.
121143. *LATHYRUS* sp.
No. 1603. From 20 km. east of Siverek, July 7.
121144. *VICIA* *ERVILIA* (L.) Willd. Fabaceae. Vetch.
No. 1793. From 35 km. southwest of Elaziz, July 14.
121145. *LATHYRUS* *ERECTUS* Lag. Fabaceae.
No. 1880. From 44 km. north of Malatya, July 17.

121086 to 121290—Continued.

- 121146 to 121148. *VICIA* spp. Fabaceae. Vetch.
121146. *VICIA* *PEREGRINA* L.
No. 1940. From Birejik, July 22.
121147. *VICIA* *SERICOCARPA* *MICROPHYLLA* Boiss.
No. 1949. From Birejik, July 22.
121148. *VICIA* *LATHYROIDES* L.
No. 2058. From Alma Dag, 25 km. southeast of Ankara, August 1.
121149. *LATHYRUS* *APHACA* L. Fabaceae.
No. 2494. From 8 km. southwest of Sbebinkarahisar, August 18.
121150. *LATHYRUS* sp. Fabaceae.
No. 2574. From 7 km. west of Terme, August 22.
121151. *VICIA* *HYBRIDA* L. Fabaceae. Vetch.
No. 2587. From 8 km. west of Samsun, August 23.
- 121152 to 121154. *LATHYRUS* *GORGONI* Parl. Fabaceae.
121152. No. 3304. From 25 km. south of Gaziantep, June 1.
121153. No. 3305. From 10 km. west of Gaziantep, June 1.
121154. No. 3403. From 3 km. west of Ankara, June 25.
121155. *VICIA* *LATHYROIDES* L. Fabaceae. Vetch.
No. 3423. From a dry rocky slope 3 km. northeast of Ankara, June 26.
121156. *PISUM* *ELATIUS* Bieb. Fabaceae. Pea.
No. 644. From near Aydin, June 25. A wild pea.
- 121157 to 121160. *LATHYRUS* spp. Fabaceae. Pea.
121157. *LATHYRUS* *APHACA* L.
[No number.] From 86 km. southeast of Susheri, August 7.
121158. *LATHYRUS* sp.
No. 649. From near Söke, June 25.
121159. *LATHYRUS* *APHACA* L.
No. 727. From a lake bottom 50 km. southeast of Mugla, May 28.
121160. *LATHYRUS* *GORGONI* Parl.
No. 749. From 10 km. north of Tavas, May 30.
121161. *VICIA* *SATIVA* L. Fabaceae. Common vetch.
No. 753. From 8 km. north of Tavas, May 30.
- 121162 to 121181. *LATHYRUS* spp. Fabaceae. Pea.
121162. *LATHYRUS* *SETIFOLIUS* L.
No. 754. From 10 km. south of Denizli, May 30.
121163. *LATHYRUS* *GORGONI* Parl.
No. 800. From 25 km. south of Burdur, June 3.

121086 to 121290—Continued.

121164. *LATHYRUS APHACA* L.
No. 1074. From 40 km. northwest of Izmir. June 10. A small pea found in a wheat field.
121165. *LATHYRUS ANNUUS* Hoejer.
No. 1095. From 2 km. south of Kir-kagach, June 11.
121166. *LATHYRUS GORGONI* Parl.
No. 1097. From 2 km. south of Kir-kagach, June 11.
121167. *LATHYRUS CASSIUS* Boiss.
No. 1439. From 37 km. north of Gaziantep, July 2.
121168. *LATHYRUS* sp.
No. 1472. From 37 km. north of Gaziantep, July 3.
121169. *LATHYRUS CASSIUS* Boiss.
No. 1478. From 30 km. southeast of Marash, July 3.
121170. *LATHYRUS ANNUUS* Hoejer.
No. 1480. From 30 km. southeast of Marash, July 3.
121171. *LATHYRUS APHACA* L.
No. 1609. From 30 km. west of Di-yarbakir, July 7.
121172. *LATHYRUS GORGONI* Parl.
No. 1648. From 20 km. south of Di-yarbakir, July 9.
121173. *LATHYRUS ODORATUS* L.
Sweet pea.
No. 1741. From 25 km. southeast of Elaziz, September 13. A form with large yellow flowers.
121174. *LATHYRUS ERECTUS* Lag.
No. 1750. From 40 km. southeast of Elaziz, July 13.
121175. *LATHYRUS ERECTUS* Lag.
No. 1769. From 30 km. southeast of Elaziz, July 13.
121176. *LATHYRUS APHACA* L.
No. 1792. From 35 km. southwest of Elaziz, July 14.
121177. *LATHYRUS ERECTUS* Lag.
No. 2061. From Alma Dag, 25 km. southeast of Ankara, August 1.
121178. *LATHYRUS HIRSUTUS* L.
No. 2113. From 106 km. east of Sivas, August 5.
121179. *LATHYRUS ERECTUS* Lag.
No. 2114. From 84 km. east of Sivas, August 5.
121180. *LATHYRUS* sp.
No. 2170. From 84 km. northeast of Sivas, August 6.
121181. *LATHYRUS HIRSUTUS* L.
No. 2391. From 60 km. east of Trabzon, August 17.
121182. *VICIA SATIVA* L. Fabaceae.
Common vetch.
No. 2427. From 50 km. south of Giresun, August 17.

121086 to 121290—Continued.

121183. *LATHYRUS* sp.
No. 2510. From 30 km. east of Ordu, August 18.
121184. *LATHYRUS GORGONI* Parl.
No. 3454. From 30 km. southeast of Ankara on Alma Dag, June 28.
121185. *LATHYRUS* sp.
No. 2073. From Alma Dag, 25 km. southeast of Ankara, August 1.
- 121186 to 121199. *LOTUS* spp. Fabaceae.
121186. *LOTUS* sp.
No. 792. En route from Isparta to Antalya, June 3.
121187. *LOTUS* sp.
No. 1022. From the Bergama ruins, June 10.
121188. *LOTUS* sp.
No. 1319. From the hills near Mudanya, June 21.
121189. *LOTUS* sp.
No. 1353. From Adana, June 10.
121190. *LOTUS* sp.
No. 2089. An ornamental rock plant from Alma Dag, 25 km. southeast of Ankara, August 1.
121191. *LOTUS* sp.
No. 2390. From 50 km. east of Trabzon, August 12.
121192. *LOTUS* sp.
No. 2822. From Yalova Kaplijalari, August 11.
121193. *LOTUS* sp.
No. 3338. From 3 km. west of Ankara, June 25.
121194. *LOTUS* sp.
No. 1209. From 50 km. west of Balikesir, June 16.
121195. *LOTUS* sp.
No. 1882. From 18 km. north of Malatya, July 17.
121196. *LOTUS* sp.
No. 2104. From 106 km. east of Sivas, October 5.
121197. *LOTUS* sp.
No. 2454. From Alma Dag, 25 km. southeast of Ankara, August 1.
121198. *LOTUS* sp.
No. 2677. From 46 km. south of Tokat, August 26.
121199. *LOTUS* sp.
No. 3390. From 3 km. west of Ankara, June 25.
121200. *LUPINUS* sp. Fabaceae.
No. 2809. From Yalova Kaplijalari, September 11.
121201. *LUPINUS* sp.
No. 1069. From 60 km. northwest of Izmir, June 10.
- 121202 to 121205. *MEDICAGO* spp. Fabaceae.
Medick.

121086 to 121290—Continued.

121202. *MEDICAGO RADIATA* L.
No. 1759. From 40 km. southeast of Elaziz, July 13.
121203. *MEDICAGO* sp.
No. 2306. From 40 km. north of Gemushane, August 10.
121204. *MEDICAGO SATIVA* L. Alfalfa.
No. 2634-A. From 15 km. from Amasya.
121205. *MEDICAGO* sp.
No. 1606. From 20 km. west of Diyarbekir, July 7.
121206. *MELILOTUS* sp. Fabaceae.
No. 1126. From the mountains between Manisa and Izmir, June 11.
121207. *MELILOTUS* sp. Fabaceae.
No. 3309. From 10 km. west of Gaziantep, June 1.
- 121208 to 121217. *ONOBRYCHIS* spp. Fabaceae.
121208. *ONOBRYCHIS ORNATA* (Willd.) Desv.
No. 1662. From 20 km. east of Diyarbekir, July 10. An erect perennial over 6 inches high, native to Asia Minor.
121209. *ONOBRYCHIS AURANTIACA* Boiss.
No. 1663. From 20 km. east of Diyarbekir, July 10. A perennial with thick ascending stems about 18 inches long, native to Asia Minor.
121210. *ONOBRYCHIS ORNATA* (Willd.) Desv.
No. 3453. From 10 km. southeast of Ankara, June 28.
For previous introduction and description see 121208.
121211. *ONOBRYCHIS CAPUT-GALLI* (L.) Lam.
No. 625. From Ephesus, June 24.
121212. *ONOBRYCHIS AERUQUIDENTATA* (Sibth. and Smith) D'Urv.
No. 751. From 16 km. south of Denizli, June 30. An annual with ascending or erect stems about a foot high, native to southern Europe.
121213. *ONOBRYCHIS* sp.
No. 1460. From 30 km. southeast of Marash, July 2.
121214. *ONOBRYCHIS* sp.
No. 1470. From 45 km. north of Gaziantep, July 3.
121215. *ONOBRYCHIS TOURNEFORTII* (Willd.) Desv.
No. 1906. From 45 km. north of Gaziantep, July 3. A hardy herbaceous perennial, native to Asia Minor.
For previous introduction see 72811.
121216. *ONOBRYCHIS* sp.
No. 1970. From Birejik, July 23.
121217. *ONOBRYCHIS TOURNEFORTII* (Willd.) Desv.
No. 1991. From Ulukishla, July 25.
For previous introduction and description see 121215.

121086 to 121290—Continued.

121218. *ONONIS* sp. Fabaceae.
No. 1296. From 40 km. east of Bursa, June 19.
121219. *ONOBRYCHIS CAPUT-GALLI* (L.) Lam. Fabaceae.
No. 1313. From 25 km. north of Bursa, June 20.
121220. *ONONIS* sp. Fabaceae.
No. 1315. From 25 km. north of Bursa, June 20.
121221. *ONONIS* sp. Fabaceae.
No. 1320. From the hills near Mudanya, June 21.
121222. *ONONIS* sp. Fabaceae.
No. 1933. From Birejik, July 22.
121223. *ORNITHOPUS COMPRESSUS* L. Fabaceae.
No. 695. From open pine forest east of Milas, May 27. A slender spreading annual with pinnate leaves and very small yellow flowers.
For previous introduction see 65028.
121224. *PSORALEA BITUMINOSA* L. Fabaceae. Scurf-pea.
No. 1075. From 50 km. northwest of Izmir, June 10.
For previous introduction see 88594.
- 121225 to 121229. *SECURIGERA SECURIDACA* (L.) Deg. and Doerfl. Fabaceae.
121225. No. 664. From 5 km. west of Tireh, June 25.
121226. No. 682. From 30 km. southwest of Izmir, June 25.
121227. No. 1112. From 2 km. south of Kirkagach, June 11.
121228. No. 1345. From Adana, June 10.
121229. No. 1456. From 30 km. southeast of Marash, July 2.
121230. *SOPHORA* sp. Fabaceae.
No. 817. From 25 km. southeast of Izmir, May 25.
121231. *THERMOPSIS* sp. Fabaceae.
No. 1061. From 3 km. east of Antalya, June 4.
- 121232 to 121250. *TRIFOLIUM* spp. Fabaceae. Clover.
121232. *TRIFOLIUM* sp.
No. 1073. From 50 km. northwest of Izmir, June 10.
121233. *TRIFOLIUM* sp.
No. 1324. From Adana, June 19.
121234. *TRIFOLIUM* sp.
No. 1352. From Adana, June 19.
121235. *TRIFOLIUM PURPUREUM* Loisel.
No. 1475. From 37 km. north of Gaziantep, July 3.
121236. *TRIFOLIUM* sp.
No. 1479. From 25 km. northwest of Gaziantep, July 3.

121086 to 121290—Continued.

121237. TRIFOLIUM sp.
No. 1520. From 25 km. northwest of Urfa, July 5.
121238. TRIFOLIUM sp.
No. 1604. From 3 km. east of Sive-
rek, July 7.
121239. TRIFOLIUM sp.
No. 1605. From 3 km. northeast of
Siverek, July 7.
121240. TRIFOLIUM sp.
No. 1748. From 35 km. southeast of
Elaziz, July 13.
121241. TRIFOLIUM sp.
No. 1803. From 35 km. southwest of
Elaziz, July 14.
121242. TRIFOLIUM sp.
No. 1857. From 15 km. west of Mala-
tya, July 16.
121243. TRIFOLIUM sp.
No. 1922. From Birejik, July 21.
121244. TRIFOLIUM sp.
No. 1943. From Birejik, July 22.
121245. TRIFOLIUM sp.
No. 1988. From Ulukishla, July 25.
121246. TRIFOLIUM sp.
No. 2021. From 45 km. north of
Nigde, July 26.
121247. TRIFOLIUM sp.
No. 2116. From 84 km. east of Sivas,
August 5.
121248. TRIFOLIUM sp.
No. 2210. From 60 km. southeast of
Susheri, August 7.
121249. TRIFOLIUM sp.
No. 2615. From 20 km. southwest of
Samsun, August 24.
121250. TRIFOLIUM sp.
No. 3400. From dry plains around
Ankara, June 25.
- 121251 to 121262. TRIGONELLA spp. Faba-
ceae.
- 121251 to 121253. TRIGONELLA FOENUM-
GRAECUM L. Fenugreek.
121251. No. 768. From about 4 km.
north of Denizli, May 31.
121252. No. 1334. From Adana, June
19.
121253. No. 2125. From the Sivas
bazar, August 5.
121254. TRIGONELLA sp.
No. 1518. From 25 km. northwest of
Urfa, July 5.
121255. TRIGONELLA sp.
No. 1767. From 35 km. southeast of
Elaziz, July 13.
121256. TRIGONELLA sp.
No. 1789. From 10 km. southeast of
Elaziz, July 14.
121257. TRIGONELLA sp.
No. 1927. From 40 km. southwest of
Elaziz, July 13.

121086 to 121290—Continued.

121258. TRIGONELLA sp.
No. 2565. From 51 km. east of Sam-
sun, August 22.
121259. TRIGONELLA sp.
No. 2733. From Yalova Kaplijalari,
September 6.
121260. TRIGONELLA sp.
No. 2876. From 1 km. west of Yalova
Kaplijalari, September 12.
121261. TRIGONELLA sp.
No. 3411. A mixed sample, from dry
gravelly soil 3 km. northeast of Ankara,
June 26.
121262. TRIGONELLA sp.
No. 3417. From 3 km. northeast of
Ankara, June 26.
- 121263 to 121276. VICIA spp. Fabaceae.
Vetch.
121263. VICIA FABA L. Broadbean.
No. 3068. From the Amasya bazar,
October 6.
121264. VICIA ERVILIA (L.) Willd.
No. 3490-F. From Eskishehir, No-
vember 2.
For previous introduction see 107594.
121265. VICIA ANGUSTIFOLIA Grufberg.
No. 665. From near Söke, May 25.
121266. VICIA sp.
No. 1120. From the mountains be-
tween Manisa and Izmir, June 11.
121267. VICIA SATIVA L. Common vetch.
No. 1124. From the mountains be-
tween Manisa and Izmir, June 11.
121268. VICIA HIRSUFA (L.) S. F. Gray.
No. 1166. From 30 km. west of Bali-
kesir, June 16.
121269. VICIA SATIVA L. Common vetch.
No. 1188. From 30 km. west of Bali-
kesir, June 16.
121270. VICIA sp.
No. 1207. From 30 km. west of Bali-
kesir, June 16.
Nos. 121271 to 121275. From Adana,
June 19.
121271. VICIA ANGUSTIFOLIA Grufberg.
No. 1327.
121272. VICIA sp.
No. 1330.
121273. VICIA sp.
No. 1335. *Dream flowers*.
121274. VICIA LUTEA HIRTA (Balb.)
Loisel.
No. 1336.
121275. VICIA ANGUSTIFOLIA Grufberg.
No. 1344.
121276. VICIA sp.
No. 1876. From 44 km. north of
Malatya, July 17.

121086 to 121290—Continued.

121277. *LATHYRUS APHACA* L. Fabaceae.
Pea.
No. 1889. From 44 km. north of Malatya, July 17.
121278. *VICIA* sp. Fabaceae.
No. 1915. From 25 km. west of Diyarbakir, July 9.
121279. *VICIA SERRATIFOLIA INTEGRIFOLIA* Beck. Fabaceae.
No. 2204. From a wheat field, 86 km. southeast of Susheri, August 7.
121280. *LATHYRUS APHACA* L. Fabaceae.
Pea.
No. 2204-A. From 86 km. southeast of Sivas, August 7.
- 121281 to 121283. *VICIA* spp. Fabaceae.
Vetch.
121281. *VICIA TETRASPERMA* (L.) Moench.
No. 2576. From 7 km. west of Terme, August 22.
121282. *VICIA* sp.
No. 2942-A. From the Izmir bazar, September 22.
121283. *VICIA* sp.
No. 2727. From Yalova Kaplijalari, September 6.
121284. *LATHYRUS GORGONI* Parl. Fabaceae.
No. 2339. From 50 km. south of Trabzon, August 10.
121285. *VICIA ERVILIA* (L.) Willd. Fabaceae.
Vetch.
No. 3422. A small vetch from a dry rocky slope 3 km. northeast of Ankara, June 26.
121286. *VICIA SERRATIFOLIA INTEGRIFOLIA* Beck. Fabaceae.
Vetch.
No. 3490-E. From Eskishehir, November 2.
121287. *VICIA FABA* L. Fabaceae.
Broadbean.
No. 3122. From the Inebolu bazar, October 13.
121288. *LATHYRUS OCHRUS* (L.) DC. Fabaceae.
Pea.
No. 609. From the Izmir bazar, May 23.
121289. *VICIA* sp. Fabaceae.
No. 1247. From the Bursa bazar, June 18.
121290. *VICIA* sp. Fabaceae.
No. 2629. From 54 km. southwest of Samsun, August 24.

121291 to 121366.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received February 1, 1937.

Unless otherwise mentioned, this material was all collected in the United Provinces in the autumn of 1936.

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121291 to 121366—Continued.

121291. *ABELMOSCHUS ESCULENTUS* (L.) Moench. Malvaceae.
Okra.
No. 1850. *Bhindi*. From Lucknow, December 10. A long green native okra of good quality.
- 121292 to 121295. *ALLIUM CEPA* L. Liliaceae.
Onion.
121292. No. 1838. *Peyaz*. From Lucknow, December 8. A native red onion.
121293. No. 1856. *Peyaz*. From Lucknow, December 11. A native flat red onion.
121294. No. 1880. *Peyaz*. From Benares, December 15. A native yellow onion.
121295. No. 1881. *Peyaz*. From Benares, December 15. A native white onion.
121296. *BETA VULGARIS* L. Chenopodiaceae.
Common beet.
No. 1835. *Palag*. From Lucknow, December 8.
121297. *BETA VULGARIS* L. Chenopodiaceae.
Common beet.
No. 1905. *Palag*. From Benares, December 16.
- 121298 to 121304. *BRASSICA* spp. Brassicaceae.
- 121298 to 121303. *BRASSICA OLERACEA BOTRYTIS* L.
Cauliflower.
Phulgobi. From Lucknow, December 10 to 13.
121298. No. 1844. An early variety.
121299. No. 1845. A very early Patna variety.
121300. No. 1860. A short-stemmed, small-leaved, variety of uniform shape and size. Sown in August.
121301. No. 1864. A large late sort with a very large white head. Sown in September.
121302. No. 1873. The earliest native cauliflower; of good quality.
121303. No. 1875. A very early cauliflower, of good quality; planted here in June and July, and will, therefore, tolerate heat and rain.
121304. *BRASSICA OLERACEA CAPITATA* L.
Cabbage.
No. 1859. *Gobi*. From Lucknow, December 11. A short-stemmed winter cabbage with round heads of 6 to 8 pounds weight.
121305. *CANAVALIA GLADIATA* (Jacq.) DC. Fabaceae.
Swordbean.
No. 1904. From Benares, December 16. A vigorous vine giving an abundance of broad pods, 18 inches long, very good to eat when tender.
- 121306 and 121307. *CAPSICUM ANNUUM* L. Solanaceae.
Common redpepper.
121306. No. 1866. *Mirch*. From Lucknow, December 12. A long mild redpepper.
121307. No. 1882. *Mirch*. From Benares, December 15. A large mild redpepper, used for pickles.

121291 to 121366—Continued.

121308. CASUARINA EUISETIFOLIA Stickm.
Casuarinaceae. Horsetail-tree.

No. 1824. From the Saharanpur Government Gardens, December 1.

For previous introduction see 67683.

121309 to 121314. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.

121309. No. 1858. *Delfsand* or *Tinda*. From Lucknow, December 11.

121310. No. 1799. *Tarbuз*. From Lahore, Punjab, November 27, but said to have come from Quetta. Fruit globose, pale to dark green, marked with darker green; flesh stringy like a pumpkin, but sweet and not tough.

121311. No. 1839. *Tarbuз*. From Lucknow, December 8. Originally from Shahjehanpur.

121312. No. 1840. From Lucknow, December 8. Originally from Farukhabad.

121313. No. 1877. *Tarbuзa*. From Benares, December 15. An extra fine native melon.

121314. No. 1883. *Tarbuзc*. From Benares, December 15. An extra good native melon.

121315. CLIANTHUS DAMPIERI A. Cunn. Fabaceae.

No. 1878. From Benares, December 15. A half-trailing shrub with branches 2 to 4 feet long, white hairy throughout, with pinnate leaves and large crimson flowers in a drooping raceme. Native to Australia.

121316 to 121331. CUCUMIS spp. Cucurbitaceae.

121316 to 121320. CUCUMIS MELO L. Muskmelon.

121316. No. 1837. *Poot*. From Lucknow, December 8. A rainy season melon said to be 18 inches in diameter, splitting when ripe. Flavor not strong, but ripens after the hot season varieties are finished.

121317. No. 1843. *Kharbuзa*. From Lucknow, December 8. A variety for which Lucknow is famous. A smooth yellow oval melon that ripens in the hottest season. The flavor is sweet, but unlike that of any American melon.

121318. No. 1854. *Kharbuзa*. From Lucknow, December 11. A good local variety.

121319. No. 1855. *Kharbuзa*. From Lucknow, December 11. A very sweet local variety.

121320. No. 1876. *Kharbuзa*. From Benares, December 15. A Jampuri variety.

121321 to 121331. CUCUMIS SATIVUS L. Cucumber.

Nos. 121321 to 121329. *Kakri*. From Lucknow, December 10 to 13.

121321. No. 1846. A winter form, 1 foot long.

121322. No. 1847. A special Lucknow sort, very tender and sweet.

121323. No. 1848. *Bareilly Kakri*. A very large cucumber grown at Bareilly.

121291 to 121366—Continued.

121324. No. 1849. *Balam Khiri*. Said to be 1 foot long and to endure the greatest heat.

121325. No. 1861. A long green cucumber, grown in the hot season.

121326. No. 1863. *Khiri*. A rainy season form.

121327. No. 1867. A round cucumber of good quality, grown in the rainy season.

121328. No. 1868. *Khiri*. An early winter variety.

121329. No. 1871. *Khari*. An early local variety of good quality.

121330. No. 1893. *Kakri*. From Benares, December 16. A native variety.

121331. No. 1894. *Kakri*. From Benares, December 16. A long green cucumber from Lucknow.

121332 to 121334. CUCURBITA MOSCHATA Duchesne. Cushaw.

Nos. 121332 and 121333. *Kaddu*. From Lucknow, December 8 and 13.

121332. No. 1836. Fruit oval, 18 inches long, deeply ribbed, green, spotted and blotched with buff.

121333. No. 1872. A round melon grown in the rainy hot season.

121334. No. 1898. *Kumsa*. From Benares, December 16. Grown in the hot season.

121335 to 121337. DAUCUS CAROTA L. Apiaceae. Carrot.

Nos. 121335 and 121336. *Gajas*, Lucknow, December 8.

121335. No. 1833. A native orange carrot.

121336. No. 1834. A native purple carrot, short, stubby, with thick, purple red rind, not sweet, fairly tender.

121337. No. 1887. *Gajas*. From Benares, December 15. The native purple-red sort; stubby, tender, hardy, but not sweet.

121338 to 121340. DOLICHOS LABLAB L. Fabaceae. Hyacinth-bean.

Sem. From Benares, December 15. It occurs in many varieties and most are sold as green "string beans." They are tender but stringy, and have a stronger flavor than our green beans. They have the advantage of being heavy and long-season producers.

121338. No. 1888.

121339. No. 1889.

121340. No. 1890. A form with round pods.

121341 and 121342. LAGENARIA LEUCANTHA (Duchesne) Rusby. Cucurbitaceae. Calabash gourd.

From Benares, December 16.

121341. No. 1900. *Kaddu*. A round form.

121342. No. 1901. *Lanki*. A long form of particularly good quality.

121291 to 121366—Continued.

121343. *LUFFA ACUTANGULA* (L.) Roxb. Cucurbitaceae. Singkwa towelgourd.

No. 1841. *Satfuta*. From Lucknow, December 8. A small variety that bears its fruits in clusters.

121344. *LUFFA CYLINDRICA* (L.) Roemer. Cucurbitaceae. Suakwa towelgourd.

No. 1895. *Nenua*. From Benares, December 16. A hot season vegetable.

121345. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

No. 1865. *Termater*. From Lucknow, December 12. A native variety.

121346. *MOMORDICA CHARANTIA* L. Cucurbitaceae. Baisam-pear.

No. 1902. *Karela*. From Benares, December 16. A particularly good kind.

121347. *NELUMBO NUCIFERA* Gaertn. Nymphaeaceae. Hindu lotus.

No. 1892. *Kamal*. From Benares, December 16. A mixture of native varieties.

121348. *OROXYLON INDICUM* (L.) Vent. Bignoniaceae. East Indian trumpetflower.

No. 1816. *Tsampaka*. From the Government Gardens, Saharanpur, November 30. A small tree with long flat pods; grows at 3,000 feet altitude in the Kangra Valley.

121349. *ORYZA SATIVA* L. Poaceae. Rice.

No. 1809. *Bansmat*. From Lahore, Punjab, November 29. The best rice grown here. Planted the last of summer and requires about 120 days to mature; yields from 1,600 to 2,000 pounds per acre.

121350. *ORYZA SATIVA* L. Poaceae. Rice.

No. 1815. *Sathra 278*. From Kala Shah Kaku, Punjab, November 29. A strain from the Government Rice Farm, maturing in 60 to 70 days and yielding about 2,400 pounds per acre. The grain is coarse and not valued as a table rice, but it will grow in nearly any kind of soil.

121351. *PHASEOLUS VULGARIS* L. Fabaceae. Common bean.

No. 1851. *Sem*. From Lucknow, December 10.

121352. *PISUM SATIVUM* L. Fabaceae. Pea.

No. 1891. From Benares, December 15.

121353 to 121362. *SOLANUM MELONGENA* L. Solanaceae. Eggplant.

Nos. 121353 to 121356. *Bengan*; collected at Lucknow, from December 8 to 13.

121353. No. 1842. A mixture of local varieties.

121354. No. 1862. A long green round fruit which weighs 4 to 5 pounds.

121355. No. 1870. An early purple fruit, 1 foot long.

121356. No. 1874. A round purple fruit, weighing 2 pounds.

Nos. 121357 to 121362. *Bengan*; from Benares, December 15 and 16.

121357. No. 1879. A purple variety, 1 foot long, with tender skin; quality good.

121291 to 121366—Continued.

121358. No. 1884. Fruit large, round, green, up to 5 pounds in weight; skin thin, seeds few, flavor excellent; bush 3½ feet high, and bears well.

121359. No. 1885. A large green fruit of fine quality. Said to be the same as No. 1884 (P. I. 121358).

121360. No. 1886. A round, deep-purple fruit, weight about 1 pound, quality good.

121361. No. 1896. A round white native variety.

• 121362. No. 1897. A long green native variety.

121363. *SPINACIA OLERACEA* L. Chenopodiaceae. Common spinach.

No. 1899. *Palag*. From Benares, December 16. A vigorous growing spinach which makes plants 2 feet across.

121364. *TAGETES* sp. Asteraceae. Marigold.

No. 1903. From Benares, December 16. An interesting quilled yellow form is seen here in the gardens, and this may be the form here represented.

121365. *VICIA FABA* L. Fabaceae. Broadbean.

No. 1852. *Bagla*. From Lucknow, December 10.

121366. *STIZOLOBIUM* sp. Fabaceae.

No. 1853. From Lucknow, December 10. A native bean.

121367 to 121369. *VITIS VINIFERA* L. Vitaceae. European grape.

From Austria. Plants presented by Prof. Andre Teleki, Vienna. Received February 23, 1937.

121367. *Ezerjo*.

121368. *Kiknyeli*

121369. *Leányka*

121370 to 121400.

From Turkey. Seeds and bulbs collected by H. L. Westover and F. L. Wellman. Received January 18, 1937.

Unless otherwise stated, this material was all collected in 1936 and was received as seeds.

121370. *NIGELLA SATIVA* L. Liliaceae. Black cumin.

No. 2897. *Chörükotu*. From the Chanak Kale bazar, September 18.

121371 to 121395. *ALLIUM* spp. Liliaceae.

121371. *ALLIUM* sp.

No. 3271. From the Adapazari bazar, October 20.

121372. *ALLIUM* sp.

No. 2031. From the Nigde bazar, July 27.

121373. *ALLIUM* sp.

No. 1557. From the Urfa bazar, July 6. Used for flavoring bread.

121374. *ALLIUM* sp.

No. 2544. *Cherogote*. From the Samsun bazar, August 2.

121370 to 121400—Continued.

121375. ALLIUM sp.

No. 3009. From the Kutahya bazar, September 28. Used for flavoring bread.

121376. ALLIUM sp.

No. 3132. *Cherogote*. From the Inebolu bazar, October 13. Used for flavoring bread.

121377. ALLIUM sp.

No. 538. From the Mugla bazar, May 28.

121378. ALLIUM sp.

No. 1431. Bulbs of a white-flowered allium from 31 km. north of Gaziantep, July 2.

121379. ALLIUM sp.

No. 1525. Bulbs from the mountains near Urfa, July 6.

121380. ALLIUM sp.

No. 1566. From 5 km. east of Siverek, July 7.

121381. ALLIUM sp.

No. 1571. Bulbs from 41 km. southeast of Diyarbekir, July 7.

121382. ALLIUM sp.

No. 1589. Bulbs from 54 km. north of Urfa, July 7.

121383. ALLIUM sp.

No. 1851. From 26 km. west of Malatya, July 16.

121384. ALLIUM sp.

No. 1927. From Birejik, July 21.

121385. ALLIUM sp.

No. 2691. From 46 km. south of Tokat, August 26.

121386. ALLIUM sp.

No. 2725. From Talas, August 29.

Nos. 121387 and 121388. From Yalova Kaplijalari, September 11.

121387. ALLIUM sp.

No. 2827. Bulbs.

121388. ALLIUM sp.

No. 2827-A.

121389. ALLIUM sp.

No. 2872. From the sea beach 1 km. west of Yalova, September 12.

121390. ALLIUM sp.

No. 3406. Bulbs from the dry plain 4 km. southwest of Ankara, June 25.

Nos. 121391 to 121393. From a rocky cliff, 3 km. northeast of Ankara, June 26.

121391. ALLIUM sp.

No. 3408.

121392. ALLIUM sp.

No. 3408-A. Bulbs.

121393. ALLIUM sp.

No. 3413.

121394. ALLIUM sp.

No. 3473. Bulbs from 39 km. north of Kastamonu, October 13.

121370 to 121400—Continued.

121395. ALLIUM sp.

No. 3413-A. From 3 km. northeast of Ankara, June 26.

121396 to 121398. BETA spp. Chenopodiaceae.

121396. BETA VULGARIS CICLA L. Chard.

No. 541. From the Mugla bazar, May 28.

121397. BETA VULGARIS L. Common beet.

No. 561. From the Isparta bazar, June 2.

121398. BETA VULGARIS L. Common beet.

No. 577. From the Antalya bazar, June 4.

121399. LEPIDIUM sp. Brassicaceae.

No. 3490-A. From Eskishehir, November 2.

121400. PHASEOLUS VULGARIS L. Fabaceae. Common bean.

No. 2146. From the Sivas bazar, August 5.

121401 to 121435.

From Paraguay. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received January 27, 1937.

This material was all collected in 1936.

121401. CAMPOMANESIA OBYERSA (Miquel) Berg. Myrtaceae.

No. 4703. *Guabirami*. From Villa Rica, December 17. A shrub about 8 feet high; fruits round, about 2 cm. in diameter; skin green with minute pale-brown specks; pulp sweet, grapelike, with 5 seeds.

For previous introduction see 37064.

121402 to 121405. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.

Nos. 121402 and 121403. From Villa Encarnación, December 14.

121402. No. 4650. *Sandia amarilla*. Fruit with yellow flesh.

121403. No. 4651. A cultivated melon.

Nos. 121404 and 121405. From San Miguel Curuzú, 3 km. north of Villa Encarnación, December 14. Cultivated melons.

121404. No. 4659. 121405. No. 4660.

121406. CITRUS sp. Rutaceae.

No. 4704. *Apebo*. From the market at Villa Rica, December 17. Fruits 5 to 7 cm. in diameter, slightly flattened at the poles; skin fragile, puffy inside, bright orange. The pulp has the flavor of grapefruit, but looks like that of an orange. From the leaves of this plant is obtained the commercial "petit grain." Fruits are used locally for a bottled soft drink and for wine. The tree is large and occurs in a wild state in Paraguay.

121407 and 121408. CUCUMIS MELO L. Cucurbitaceae. Muskmelon.

121407. No. 4652. From the Villa Encarnación, December 14. A cultivated melon.

121408. No. 4698. From the Villa Rica, December 17. A cultivated melon.

121401 to 121435—Continued.

121409. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. Cushman.

No. 4653. *Zapallo duro*. From the Villa Encarnación, December 14. Fruit flattened at the poles, about 6 inches in diameter. It keeps well if a portion of the stem is left on.

121410 and 121411. CUCURBITA PEPO L. Cucurbitaceae. Pumpkin.

121410. No. 4654. *Zapallo guachio*. From the Villa Encarnación, December 14. A cultivated pumpkin.

121411. No. 4701. *Zapallo duro*. From the market at Villa Rica, December 17. Fruit 7 to 10 by 4 to 5 cm. in size; rind whitish green, very hard; keeps from one year to the next.

121412. EUGENIA sp. Myrtaceae.

No. 4699. *Ucavijá*. From the market at Villa Rica, December 17. A large shrub or small tree about 15 feet high. Fruits roundish, slightly flattened at the poles, calyx persistent, skin dark reddish purple. Flesh has the consistency of grape, slightly sweet; seeds green, 1 to 3 in a fruit. In general, the fruits look like large blueberries and are used to make a refreshing drink.

121413. HIPPEASTRUM sp. Amaryllidaceae.

No. 4661. From San Miguel Curuzú, 3 km. north of Villa Encarnación, December 14. Flowers said to be white.

121414. LAGENARIA LEUCANTHA (Duchesne) Rusby. Cucurbitaceae. Calabash gourd.

No. 4684. From Jatatú, 8 km. north of Villa Rica, December 16. Fruit spindle-shaped, used for maté containers.

121415. PASPALUM NOTATUM Fluegge. Poaceae. Bahía grass.

No. 4721. *Kaspiipe* (means: horse grass). From Jardín Botánico, Santísima Trinidad, December 21. A perennial tropical American grass, good for forage and for erosion control.

For previous introduction see 118464.

121416 to 121421. PHASEOLUS VULGARIS L. Fabaceae. Common bean.

Nos. 121416 to 121419 were from Villa Encarnación, December 14.

121416. No. 4640. *Avilla de 6 meses*.

121417. No. 4643. *Avilla há*.

121418. No. 4645. *Soperín*. Produces the year round.

121419. No. 4647. *Poroto blanco arroz*.

121420. No. 4694. *Avilla*. From Villa Rica.

121421. No. 4697. *Poroto de manteca*. From the market at Villa Rica, December 17.

121422. PISUM SATIVUM L. Fabaceae. Pea.

No. 4648. *Arveja*. From Villa Encarnación, December 14.

121423. RHEEDIA BRASILIENSIS (Mart.) Planch. and Triana. Clusiaceae.

No. 4702. *Pacuri*. From the market at Villa Rica, December 17. A large tree with bright-yellow, round fruits 3 to 4 cm. in diameter, which contain 2 or 3 large seeds that nearly fill the cavity. The

121401 to 121435—Continued.

lemon-flavored pulp, which surrounds the seeds, is used to make a refreshing beverage.

For previous introduction see 41150.

121424. RHYNCOSIA HAGENBECKII Harms. Fabaceae.

No. 4712. From the Jardín Botánico, Santísima Trinidad, December 21. A shrubby perennial with long racemes of many small yellow flowers. Native to Brazil.

121425. SALACIA ELLIPTICA (Mart.) G. Don. Hippocrateaceae.

No. 4714. From the Jardín Botánico, Santísima Trinidad, December 21. A semi-climbing evergreen shrub or small tree, with laurel-like leaves and axillary clusters of small yellowish-green flowers, followed by edible fruits. Native to Brazil.

121426. SORGHUM VULGARE Pers. Poaceae. Sorghum.

No. 4767. *Sorgo perenne*. From San Lorenzo, December 24. A perennial lasting 10 years. Seed obtained in the Chaco and said to have come originally from Matto Grosso, Brazil.

121427. STEVIA REBAUDIANA Bertoni. Asteraceae.

No. 4773. *Kaá-hee*. From Asunción, December 24. The leaves contain a sweet glucoside used locally, on a small scale, as a sugar substitute for diabetics.

121428. GALACTIA JUSSIEAANA Kunth. Fabaceae.

No. 4713. From the Jardín Botánico, Santísima Trinidad, December 21. A woody climber with ternate leaves; the leaflets elliptic rounded, sticky on the upper surface and hairy beneath, and small pink flowers. Native to Venezuela.

For previous introduction see 108259.

121429. VICIA FABA L. Fabaceae. Broadbean.

No. 4642. *Haba*. From Villa Encarnación, December 14. The young fruit and dry seeds are eaten.

121430 to 121433. VIGNA SINENSIS (Torner) Savi. Fabaceae. Cowpea.

Nos. 121430 to 121432. From Villa Encarnación, December 14.

121430. No. 4641. *Poroto todo el año*. A vine with curved pods 8 to 9 cm. long which are eaten green.

121431. No. 4644. *Cumandá*.

121432. No. 4646. *Poroto cuarenta*. Bears in 40 days after planting.

121433. No. 4696. A cultivated bean from the market at Villa Rica, December 17.

121434. VITIS sp. Vitaceae.

No. 4636. From Villa Encarnación, December 14. Cultivated for shade and ornament in many places. Fruits small, purple with dusty bloom, sweet but insipid, about 1 cm. in diameter with 1 to 3 seeds in each. The vine is a heavy bearer.

121435. ZEA MAYS L. Poaceae. Corn.

No. 4693. *Mafa dura*. From the market at Villa Rica, December 17. A cultivated corn.

- 121436 to 121438. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.
From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received February 15, 1937.
121436. No. 2115. From Calcutta, January 4, 1937. A red fruit, 3 inches across; possibly disease resistant.
121437. No. 1918. From Darjeeling, Bengal, December 22, 1936, at 7,000 feet altitude. Fruit red, globose, 2 inches in diameter.
121438. No. 1148. From Skardo, Baltistan Province, Kashmir, August 14, 1936, at 6,500 feet altitude. Fruit red, globose, 1½ to 2 inches in diameter.
- 121439 to 121491.
From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 16, 1937.
The material was all collected in 1936.
121439. *AMYGDALUS* sp. Amygdalaceae.
No. 2258. From 50 km. east of Erzincan, August 9. Seed from a wild tree.
- 121440 to 121444. *CORYLUS AVELLANA* L. Betulaceae. Filbert.
121440. No. 2511. From between Ordu and Giresun, August 19.
121441. No. 2384. Along the road between Trabzon and Rize, August 12.
121442. No. 2419. From a pile of drying filberts at Trabzon, August 14.
121443. No. 2923. From Giresun, August 20.
121444. No. 2550. From the Samsun bazar, August 21.
121445. *CEPHALARIA* sp. Dipsacaceae.
No. 2154. *Kangir*. From the Sivas bazar, August 5. Fruits eaten green or stewed.
- 121446 to 121450. *FRAGARIA* spp. Rosaceae. Strawberry.
121446. *FRAGARIA* sp.
No. 827. From the market at Izmir, June 8.
121447. *FRAGARIA VESCA* L.
No. 2307. A wild strawberry from 62 km. north of Gemushane, August 10.
121448. *FRAGARIA* sp.
No. 2476. From 49 km. south of Giresun, August 17.
121449. *FRAGARIA* sp.
No. 3314. From the Istanbul bazar, June 16. A common variety of excellent flavor.
121450. *FRAGARIA* sp.
No. 3327. From the Ankara bazar, June 20. A variety with white flesh.
121451. *MALUS SYLVESTRIS* Mill. Apple.
No. 3050. From the Amasya bazar, October 6.
121452. *MORUS ALBA* L. Moraceae. White mulberry.
No. 3046. From the Amasya bazar, October 6.
- 121439 to 121491—Continued.
121453. *MORUS NIGRA* L. Moraceae. Black mulberry.
No. 2503. From 30 km. northwest of Susheri, August 18. A delicious mulberry, very sour when green, but sweet and juicy when mature.
- 121454 to 121486. *PRUNUS* spp. Amygdalaceae.
- 121454 to 121469. *PRUNUS ARMENIACA* L. Apricot.
Nos. 121454 to 121457 were from the Elaziz bazar, July 11 to 13.
121454. No. 1680. Large, yellow-fleshed fruit.
121455. No. 1718. Medium-sized fruit of good quality with reddish skin.
121456. No. 1732. Medium-sized fruit of poor quality.
121457. No. 1808. Unusually large fruit but very poor quality.
121458. No. 1865. From the Malatya bazar, July 16. The famous "Malatya apricot" which has the highest sugar content and is the best for drying.
121459. No. 2452. From Develu Karahissan, July 27.
121460. No. 3331. From the Mugla bazar, June 30. Small fruits with yellow flesh.
121461. No. 3334. From the Antalya bazar, June 3. A yellow-fleshed apricot.
121462. No. 3336. From the Antalya bazar, June 3. A yellow-fleshed apricot.
121463. No. 3338. *Sugar money*. From a Mediterranean boat, June 4.
121464. No. 3339. From the Izmir bazar, June 8. A large sweet apricot.
- Nos. 121465 to 121469 were received at Gaziantep, June 16, from M. N. Isely.
121465. No. 3362. A large pulpy, not juicy, freestone variety.
121466. No. 3363. A small sweet freestone variety.
121467. No. 3364. A large freestone variety.
121468. No. 3366. *Sweet*.
121469. No. 3367. *Sugar money*.
121470. *PRUNUS* sp.
No. 1806. From the Elaziz bazar July 14. A small red freestone plum of good quality.
121471. *PRUNUS* sp.
No. 1911. From the Malatya bazar, July 16. A large round yellow plum with crisp sweet flesh and tough skin.
121472. *PRUNUS* sp.
No. 2184. A wild plum from 50 km. southeast of Susheri, August 7.
121473. *PRUNUS* sp.
No. 2380. From the Trabzon bazar, August 11. A blue plum of medium size, and a freestone; somewhat tart when not completely ripe.

121439 to 121491—Continued.

121474. *PRUNUS* sp.

No. 2470. A wild plum from 99 km. south of Giresun, August 17.

121475. *PRUNUS* sp.

No. 2554. From 16 km. east of Sam-sun, August 22. A yellow wild plum of medium size and fairly good quality.

121476. *PRUNUS* sp.

No. 2609. From 38 km. west of Sam-sun, August 23. A small wild blue plum with good sharp flavor.

121477. *PRUNUS* sp.

No. 3100. From the Yozgat bazar, October 9. A late-fruiting, oblong plum with pinkish tan skin.

121478. *PRUNUS* sp.

No. 3104. From the Ankara bazar, October 10. A purplish medium-sized, late plum with solid flesh of fair quality.

121479. *PRUNUS* sp.

No. 3340. A red plum from the Izmir bazar, June 8.

121480. *PRUNUS* sp.

No. 3341. From the Izmir bazar, June 8. A light-red plum with watery flesh, picked and eaten green in Turkey.

121481. *PRUNUS* sp.

No. 3378. A dark-red plum from the Bursa bazar, June 20.

121482. *PRUNUS* sp.

No. 3414. A wild plum from a dry rocky slope 3 km. northeast of Ankara, June 26.

121483. *PRUNUS* sp.

No. 3480. A round purple late plum from the Kastamonu bazar, October 14.

121484. *PRUNUS* sp.

No. 2469. From Giresun, August 16. A small-fruited evergreen tree with broad shining dark-green leaves; fruit eaten both fresh and dried.

121485. *PRUNUS* sp.

No. 2468. From Giresun, August 16. A large-fruited evergreen tree with broad, shining, dark-green leaves; fruit eaten both fresh and dried.

121486. *PRUNUS* sp.

No. 733. From the Mugla bazar, May 28. Fruit eaten green.

121487. *PIMPINELLA ANISUM* L. Apiaceae.
Anise.

No. 1246. From the Bursa bazar, June 18.

121488. *RUMEX* sp. Polygonaceae.

No. 1758. From 25 km. southeast of Elaziz, July 13. So-called "spinak" used as a salad and cooked as greens.

121489. *PYRUS* sp. Malaceae.

No. 3472. A wild pear from near Inebolu, October 13.

121490 and 121491. *SORBUS DOMESTICA* L. Malaceae.
Servicetree.

For previous introduction see 62586.

121439 to 121491—Continued.

121490. No. 3481. *Oves*. From the Kastamonu bazar, October 14.

121491. No. 3075. From the Amasya bazar, October 7.

121492 to 121507.

From Paraguay. Collected by W. A. Archer, Bureau of Plant Industry. Received February 10, 1937.

Unless otherwise mentioned, the material was collected as seeds.

121492. *PSEUDANANAS MACRODONTES* (E. Morr.) Harms (*Ananas macrodentes* E. Morr.) Bromeliaceae.

No. 4907. *Abacachy Tupi*. From the Jardín Botánica, Santissima Trinidad, January 5, 1937. A semiwild form which produces the year round. The fruits are used for making wine and vinegar.

121493. *ARACHIS HYPOGAEA* L. Fabaceae.
Peanut.

No. 4881. A cultivated peanut from Tobatý, January 2, 1937.

121494. *ARACHIS MARGINATA* Gardn. Fabaceae.

No. 4758. From San Lorenzo, December 24, 1936.

For previous introduction and description see 119878.

121495. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae.
Watermelon.

No. 4878. From Caacupé, January 1, 1937. Fruit with yellow flesh.

121496. *CUCUMIS MELO* L. Cucurbitaceae.
Muskmelon.

No. 4884. From Tobatý, January 2, 1937. Fruit oval, brown and yellow striped, about 2 inches long, very aromatic but insipid flavor.

121497. *HIPPEASTRUM* sp. Amaryllidaceae.

No. 4914. From near Tobatý, January 2, 1937. Said to be a native species. The long-tubed, fragrant flowers are white with two pink stripes on each segment; there are 4 to 6 flowers in each umbel.

121498. *MIMOSA* sp. Mimosaceae.

No. 4820. From the Arroyo Tobatý, near Tobatý, January 1, 1937. A shrub about 10 feet high, with rose-colored flowers.

121499 to 121502. *NICOTIANA TABACUM* L. Solanaceae.
Common tobacco.

121499. No. 4880. *Carapé guazú*. From near Tobatý, January 2, 1937.

Nos. 121500 to 121502. Purchased from Banco Agrícola, Asunción, January 4, 1937, and are varieties distributed to farmers.

121500. No. 4915. *Chileno guazú*.

121501. No. 4916. *Carapé*.

121502. No. 4917. *Santa Elena*.

121503. *PHASEOLUS LUNATUS* L. Fabaceae.
Lima bean.

No. 4874. From Caacupé, January 1, 1937.

121492 to 121507—Continued.

121504. SOLANUM CHACOENSE Bitter. Solanaceae. Nightshade.

No. 4909. Tubers from the Jardín Botánico, Santísima Trinidad, January 5, 1937.

For previous introduction see 47972.

121505. VERBENA BONARIENSIS L. Verbenaceae.

No. 4821. From the Arroyo Tobatý, near Tobatý, January 1, 1937. A stiff, erect shrub 1 to 3 feet high, with purple-blue flowers.

For previous introduction see 97712.

121506 and 121507. ZEA MAYS L. Poaceae. Corn.

121506. No. 4876. From Caacupé, January 1, 1937. Cultivated corn.

121507. No. 4882. *Mais blanco*. From Tobatý, January 3. Cultivated especially for flour.

121508 to 121517.

From India. Bulbs and tubers collected by Walter Koelz, Bureau of Plant Industry. Received February 25, 1937.

121508 to 121512. ALLIUM SATIVUM L. Liliaceae. Garlic.

Nos. 121508 and 121509. *Lassan*. Bulbs from Benares, United Provinces, December 16, 1936.

121508. No. 1911.

121509. No. 1912. This is the first time I have seen this single bulb garlic here.

121510. No. 1923. Bulbs from Darjeeling, Bengal, December 23, 1936.

Nos. 121511 and 121512. Bulbs from Calcutta, January 4, 1937.

121511. No. 2117. Said to have come from Singapore.

121512. No. 2119. A local variety.

121513 and 121514. IPOMOEA BATATAS (L.) Lam. Convolvulaceae. Sweetpotato.

Shaker Kandi. Tubers from Calcutta, January 7, 1937. The sugar content is much less than in our species, and by some is preferred on that account.

121513. No. 2142. 121514. No. 2143.

121515 to 121517. SOLANUM TUBEROSUM L. Solanaceae. Potato.

Nos. 121515 and 121516. Tubers of *Alu*, from Benares, United Provinces, December 16, 1936. White potatoes which may be stored all through the summer heat. Best seed comes from the mountains.

121515. No. 1909. 121516. No. 1910.

121517. No. 2141. Tubers of *Alu* from Calcutta, January 7, 1937. Grown nearby at Behar.

121518 to 121541.

From Uruguay and Argentina. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received February 25, 1937.

121518 to 121521. ARACHIS HYPOGAEA L. Fabaceae. Peanut.

121518. No. 4952. From Real de San Carlos, 7 km. north of Puerto Colonia, Uruguay, January 17, 1937.

121518 to 121541—Continued.

121519 to 121521. Presented by the Ministerio de Agricultura, Buenos Aires, Argentina, January 22, 1937. All three strains are fairly pure selections.

121519. No. 5002. *Colorado*. From Río Cuarto, Cordoba.

121520. No. 5003. *Colorado*. From Santo Tomé, Santa Fé.

121521. No. 5004. *Aecitoso* or *Mani blanco*. From Santo Tomé, Santa Fé. A white-skinned type, considered the most important for oil extraction.

121522 to 121541. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

121522. No. 4971. From along the steep eroded river banks at Puerto Colonia, Uruguay, January 19, 1937.

Nos. 121523 to 121541 were presented by the Ministerio de Agricultura, Buenos Aires, Argentina, January 22, 1937.

121523 and 121524. *Criollo Salteño*.

121523. No. 5006. 121524. No. 5007.

121525 and 121526. *Chileno Colorado Hoja*.

121525. No. 5008. 121526. No. 5009.

121527 and 121528. *Chileno colorado gigante Santa Cruz*.

121527. No. 5010. 121528. No. 5011.

121529. No. 5012. *Lampazo*.

121530 and 121531. *Hoja Parada*.

121530. No. 5013. 121531. No. 5014.

121532 to 121535. *Criollo Colorado*.

121532. No. 5015. 121534. No. 5017.

121533. No. 5016. 121535. No. 5018.

121536 and 121537. *Chileno Grande Colorado*.

121536. No. 5019. 121537. No. 5020.

121538 and 121539. *Chileno Grande amarillo*.

121538. No. 5021. 121539. No. 5022.

121540 and 121541. *Chileno correntino*.

121540. No. 5023. 121541. No. 5024.

121542 to 121555. ORYZA SATIVA L. Poaceae. Rice.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received February 25, 1937.

A collection of rice from the Dacca Agricultural Farm, Dacca, Bengal, January 13, 1937.

121542. No. 2146. *Jhingasail*. A fine rice which, when transplanted in July, ripens in December. Said to have short awns and weak straw, hence liable to lodge; of superior quality and a good yielder.

121543. No. 2147. *Hatisail*. A fine, late, medium-yielding, scented, white rice; transplanted in July and August and ripening in December.

121544. No. 2148. An early rice of superior quality and a good yielder.

121545. No. 2149. *Latisail*. A small, coarse, heavy-yielding, medium-early rice with short straw; adapted to several types of soil.

121542 to 121555—Continued.

121546. No. 2150. *Chinsura*. A fine late medium-yielding scented white transplanted rice.

121547. No. 2151. *Dandkhani*. Described as a fine scented, late, medium-yielding, white, transplanted rice.

121548. No. 2152. *Bhasmank*. A transplanted rice of medium quality and high yield.

121549. No. 2153. *Dudshar*. A transplanted rice of medium quality and high yield, ripening in about 170 days.

121550. No. 2154. *Black Kachari*. A coarse, heavy-yielding transplanted rice.

121551. No. 2155. *India sail* (Aman type). A medium-late, good yielding, transplanted rice.

121552. No. 2156. *Kalai Aman*. A transplanted rice of which there are many forms that grow in the lowlands where the floods raise the water to a depth of 8 feet or more.

Nos. 121553 to 121555 are Aus types, sown on upland and watered well. The life period of this group ranged from about 90 to 125 days.

121553. No. 2157. An early scented rice, suited to rich light soils.

121554. No. 2160. *Dhairal*. A coarse, very heavy-yielding, highland, red rice.

121555. No. 2162. *Kumari*. A medium fine rice of good quality, and a heavy yielder; a broadcast, highland type.

121556. *AGONANDRA BRASILIENSIS* Benth. and Hook. f. Opiliaceae.

From Brazil. Seeds collected by Mr. Barlow at Maranhão, and presented through G. S. Jamieson, Bureau of Chemistry and Engineering. Received February 26, 1937.

A small tree with pendulous branches, thin elliptical leaves, and racemes of inconspicuous flowers. The drupaceous fruits, over an inch long, enclose seeds rich in oil. This oil, however, does not yet have any known use. Native to tropical Brazil.

121557 to 121577.

From Morocco. Plants presented by H. Brayard, Directeur, Service de l'Agriculture, Station Experimentale de Marrakech. Received February 27, 1937.

121557 to 121559. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.

121557. *Delice d'Avril*.

121558. *Dubusson*.

121559. *Reinette Descadre*.

121560 to 121577. *PRUNUS* spp. Amygdalaceae.

121560 to 121568. *PRUNUS ARMENIACA* L. Apricot.

121560. *Amor Leuch*.

121561. *Bedri*.

121562. *Blanc*.

121563. *Jacques*.

121564. *Nouveau de Versailles*.

121565. *Pourret*.

121566. *Saint Ambroise*.

121567. *Souvenir de Roberteau*.

121557 to 121577—Continued.

121568. *Triomphe de Brüssières*.

121569 and 121570. *PRUNUS AVIUM* L. Sweet cherry.

121569. *Bigarreau Abel*.

121570. *Marmotte*.

121571 to 121574. *PRUNUS DOMESTICA* L. Common plum.

121571. *Bleu de Belgique*.

121572. *Early Laxton*.

121573. *Georges Lafèvre*.

121574. *Madeleine Nomblot*.

121575. *PRUNUS INSITITIA* L.

Mirabelle precoce.

121576 and 121577. *PRUNUS DOMESTICA* L. Common plum.

121576. *Royale*.

131577. *Saint Jean*.

121578 to 121649.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received February 15, 1937.

This material was collected in the summer and autumn of 1936, unless otherwise mentioned.

121578 and 121579. *ALLIUM CEPA* L. Liliaceae. Onion.

Pujaz. From Calcutta, January 3 and 4.

121578. No. 2106. A native red onion.

121579. No. 2111. Originally from Bombay.

121580 to 121582. *BRASSICA* spp. Brassicaceae.

121580 and 121581. *BRASSICA CAMPESTRIS* L. Rutabaga.

121580. No. 1913. *Phulgabi*. From Benares, United Provinces, December 16. An early native variety which will tolerate great heat.

121581. No. 1940. *Raisag*. From Darjeeling, Bengal, December 24, at 7,000 feet altitude. Grown in India as a potherb. The leaves, about 2 feet long, are tender and resemble chard in appearance.

121582. *BRASSICA* sp.

No. 2109. *Raisag*. From Calcutta, January 3. May be the same as that from Darjeeling under the same name.

121583 to 121588. *CAPSICUM ANNUUM* L. Solanaceae. Common redpepper.

121583. No. 1955. From Sukua, Bengal, December 28. Plants 4 to 5 feet high, found in rain forest; fruits red, very pungent.

121584. No. 1907. *Mirch*. From Benares, United Provinces, December 16. Fruit elongated, three-fourths of an inch by 3 inches and hot, turning almost black then red.

121585. No. 1927. From Darjeeling, Bengal, December 23, at 7,000 feet altitude. Fruit red, pointed, 3 inches long, 1 inch across at base; some types sweet except for strong seeds, others with pungent flesh.

121578 to 121649—Continued.

121586. No. 2077. *Mirch*. From Calcutta, January 1. Fruit 3 to 4 inches long by $1\frac{1}{2}$ to 2 inches wide, moderately hot.
121587. No. 2078. *Mirch*. From Calcutta, January 1. Fruit red, $2\frac{1}{2}$ inches to 3 inches long by three-fourths to 1 inch wide; pungent.
121588. No. 2110. *Mirch*. From Calcutta, January 4. A large red wild pepper.
- 121589 to 121592. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. Watermelon.
- Nos. 121589 and 121590. *Matira*. From Calcutta, January 1.
121589. No. 2082. 121590. No. 2083.
121591. No. 2084. *Tarbuз Gulenda*. From Calcutta, January 1. From the market.
121592. No. 2113. *Tarbuз Amta*. From Calcutta, January 4.
121593. *CORYLUS FEROX* Wall. Betulaceae. Hazelnut.
- No. 1966. From Darjeeling, December 25; said to have come from Yatung (Sikkim), at 13,000 feet altitude.
- For previous introduction see 93190.
- 121594 to 121601. *CUCUMIS SATIVUS* L. Cucurbitaceae. Cucumber.
121594. No. 2072. *Kakri*. From Siliguri, Bengal, December 28.
- Nos. 121595 to 121597. From Calcutta, January 2.
121595. No. 2095. *Khira*. A small black fruit.
121596. No. 2096. *Khira*. A large cucumber.
121597. No. 2097. *Kakri*. Possibly the long snaky form that is eaten when very small and is then a fine salad vegetable.
121598. No. 2112. *Patna Kakri*. From Calcutta, January 4.
121599. No. 1939. *Kankra*. From Darjeeling, Bengal, December 24, at 7,000 feet altitude. Fruit 2 feet long and weighing 6 to 7 pounds, tender, few-seeded, and of fine flavor. Appears to grow only in the mountains and is said to be of Sikkimese origin.
121600. No. 2116. *Khira*. From Calcutta, January 4.
121601. No. 2098. From Calcutta, January 2.
- 121602 to 121604. *CUCURBITA MAXIMA* Duchesne. Cucurbitaceae. Squash.
- From Darjeeling, Bengal, December 22 to 24, at 7,000 feet altitude.
121602. No. 1916. Fruit elongate, 2 feet long with widely spaced ribs; gray-green blotched with orange.
121603. No. 1917. Fruit pale green blotched with paler green, 20 inches long and ribbed.
121604. No. 1932. From the bazar.
- 121605 to 121612. *CUCURBITA MOSCHATA* Duchesne. Cucurbitaceae. Cushaw.
- Nos. 121605 to 121607. From Darjeeling, Bengal, December 2, at 7,000 feet altitude.

121578 to 121649—Continued.

121605. No. 1934. From the market; fruit said to be huge.
121606. No. 1914. Fruit 18 inches in diameter, ribs conspicuous, buff with a bloom, half flattened.
121607. No. 1915. Fruit buff with bloom, oval, 18 inches long and irregularly ribbed.
121608. No. 2073. *Kadu*. From Sevak, Bengal, December 29.
- Nos. 121609 to 121611. From Calcutta, January 3.
121609. No. 2104. *Kadu*. Fruit brown, oval.
121610. No. 2105. *Kadu*. Fruit round, flattened, brown.
121611. No. 2114. *Lalkadu*. A red pumpkin.
121612. No. 1933. From Darjeeling, Bengal, December 24. From the bazar; fruit said to be large.
121613. *DOLICHOS LABLAB* L. Fabaceae. Hyacinth-bean.
- No. 2079. *Sem*. From Calcutta, January 1. Used as green pods, mostly.
121614. *LACTUCA DUBYAEA* C. B. Clarke. Cichoriaceae.
- No. 2002. From Darjeeling, December 25, but said to have come from Sikkim at 3,000 feet altitude.
- 121615 to 121617. *LUFFA* spp. Cucurbitaceae.
121615. *LUFFA ACUTANGULA* (L.) Roxb. Singkwa towelgourd.
- No. 2102. *Tori*. From Calcutta, January 3. Used as a vegetable when young.
- 121616 and 121617. *LUFFA CYLINDRICA* (L.) Roemer. Suakwa towelgourd.
121616. No. 1947. From Darjeeling, Bengal, at 2,000 feet altitude, December 24. A wild annual with spongy fruits 6 by 3 inches.
121617. No. 2103. *Tori*. From Calcutta, January 3. Esteemed as a vegetable when young.
121618. *MELOTHRIA* sp. Cucurbitaceae.
- No. 1938. From the Rangit River, Darjeeling District, Bengal, at 2,000 feet altitude. An annual with small globose brown-red fruits.
121619. *MELOTHRIA* sp. Cucurbitaceae.
- No. 1943. From the Rangit River, Darjeeling District, Bengal, at 2,000 feet altitude. An annual with small globose, madder-red fruits.
121620. *MELOTHRIA* sp. Cucurbitaceae.
- No. 2075. From Siliguri, Bengal, December 30. An annual with pealike globose red fruits.
- 121621 to 121624. *PHASEOLUS VULGARIS* L. Fabaceae. Common bean.
- Nos. 121621 to 121623. From Darjeeling, Bengal, at 7,000 feet altitude, December 23 and 24.
121621. No. 1924.
121622. No. 1935. Bought in the market.
121623. No. 1944. Used as green and also as dried beans.

121578 to 121649—Continued.

121624. No. 2099. From Calcutta, January 3. Used chiefly as green beans.

121625. *PYRUS* sp. Malaceae.

No. 1789. *Shegal*. From Kangra, Kangra, Punjab, November 22, at 2,500 feet altitude. A vigorous tree attaining a diameter of 12 to 18 inches. The flowers are usually white, but sometimes pink. An ornamental tree, but used chiefly as a stock for pears in warm regions.

121626. *RHEUM ACUMINATUM* Hook. f. and Thoms. Polygonaceae. Rhubarb.

No. 2012. Obtained at Darjeeling, December 25; said to have come from 14,000 feet altitude in Tibet.

For previous introduction see 114652.

121627. *RHEUM NOBILE* Hook. f. and Thoms. Polygonaceae. Rhubarb.

No. 2011. Obtained at Darjeeling, December 25; said to have come from a high altitude in Tibet. A handsome herbaceous plant with a stem 3 to 4 feet high and as thick as the wrist at the base. It is found in the inner ranges of the Sikkim Himalayas at altitudes between 13,000 and 15,000 feet. The root resembles that of the common rhubarb, but is spongy and inert. The acid stems are eaten both boiled and raw, and the dried leaves afford a substitute for tobacco.

For previous introduction see 115985.

121628. *RIBES GRIFFITHII* Hook. f. and Thoms. Grossulariaceae.

No. 2000. From Darjeeling, Bengal, December 25; said to have come from a nearby locality at 9,000 feet altitude.

121629 to 121635. *RUBUS* spp. Rosaceae.

121629. *RUBUS ALPESTRIS* Blume.

No. 2029. Obtained at Darjeeling, Bengal, December 25; said to have come from a nearby locality at 9,000 feet altitude.

121630. *RUBUS ELLIPTICUS* J. E. Smith. Yellow Himalayan raspberry.

No. 2027. Obtained at Darjeeling, December 25; grows at 7,000 feet altitude; fruit edible.

121631. *RUBUS LINEATUS* Reinw.

No. 1925. From Darjeeling, Bengal, December 23, at 8,500 feet altitude. A stout shrub 10 feet high, with palmate leaves and small red fruits.

For previous introduction see 115006.

121632. *RUBUS NIVEUS* Thunb.

No. 2028. Obtained at Darjeeling, Bengal, December 25; said to have come from 12,000 feet altitude in Sikkim.

For previous introduction see 115012.

121633. *RUBUS* sp.

No. 1989. From Darjeeling, Bengal, December 25, at 7,000 feet altitude. A stout climbing shrub with long cordate leaves.

121634. *RUBUS* sp.

No. 1942. From Tiger Hill, Darjeeling District, Bengal, December 23, at 9,000 feet altitude. A climbing shrub 12 feet high with trifoliate leaves and small red fruits.

121578 to 121649—Continued.

121635. *RUBUS* sp.

No. 1945. From Tiger Hill, Darjeeling District, Bengal, at 8,000 feet altitude, December 23. An attractive shrub 6 feet high, with large maplelike leaves and red fruits.

121636. *SOJA MAX* (L.) Piper. Fabaceae. Soybean.

No. 1936. From Darjeeling, Bengal, at 7,000 feet altitude, December 23.

121637 to 121646. *SOLANUM MELONGENA* L. Solanaceae. Eggplant.

From Calcutta, January 1 to 3.

121637. No. 2081. Fruit long, purple.

121638. No. 2087. *Aushey*. A late variety.

121639. No. 2088. *Singa*. A variety with long fruits.

121640. No. 2089. *Bengan Makra*.

121641. No. 2090. *Bengan Kuli*. A prolific variety.

121642. No. 2091. *Bengan Sufed*. A large white variety.

121643. No. 2092. *Bengan Mukakeshi*. A large sweet variety.

121644. No. 2093. *Bengan Baramusi*. An everbearing variety.

121645. No. 2094. *Bengan*. A mixed sample.

121646. No. 2101. *Bengan*. A round purple variety.

121647. *STIZOLOBIUM* sp. Fabaceae.

No. 2107. From Calcutta, January 5. Used as green beans.

121648. *TITHONIA DIVERSIFOLIA* (Hemsl.) A. Gray. Asteraceae.

121649. *VIGNA CYLINDRICA* (Stickm.) Skeels. Fabaceae. Catjang.

No. 2080. From Calcutta, January 1. Used as green beans.

121650 to 121659. *PRUNUS* spp. Amygdalaceae.

From the United States Plant Introduction Garden, Chico, Calif. Seedlings grown at the garden; numbered in March 1937.

121650 to 121657. *PRUNUS ARMENIACA* L. Apricot.

Nos. 121650 to 121653 were grown from P. I. No. 82672.

121650. Row 74, tree no. 40.

121651. Row 74, tree no. 42.

121652. Row 74, tree no. 44.

121653. Row 74, tree no. 46.

Nos. 121654 to 121657 were grown from P. I. No. 82677.

121654. Row 74, tree no. 27.

121655. Row 74, tree no. 28.

121656. Row 74, tree no. 33.

121657. Row 74, tree no. 36.

121658 and 121659. *PRUNUS CERASUS* L. Sour cherry.

Grown from P. I. No. 82678.

121650 to 121659—Continued.

121658. Row 70, tree no. 34.

121659. Row 74, tree no. 35.

121660 and 121661.

From the Union of Soviet Socialist Republics. Seeds presented by the Director, Botanical Institute, Tiflis, Georgia. Received February 20, 1937.

121660. *CYCLAMEN* sp. Primulaceae.

Received under the name "abchasicum," for which a place of publication has not been found.

121661. *HEDERA COLCHICA* Koch. Araliaceae. Colchis ivy.

A high-climbing vine with the young growth covered by golden-yellow scales, broadly cordate, almost entire, very large, bright-green leaves of firm texture, and small umbels of greenish-yellow flowers in paniculate clusters, followed by black fruits. Native to the Caucasus region.

For previous introduction see 115641.

121662 to 121667. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

From Canada. Seeds presented by T. F. Ritchie, Chief-Assistant, Dominion Horticulturist, Central Experimental Farm, Ottawa. Received March 2, 1937.

121662. *Abel.* 121665. *Globonnie.*121663. *Alacrity.* 121666. *Herald.*121664. *Bestal.* 121667. *Pink.*121668 to 121775. *PRUNUS ARMENIACA* L. Amygdalaceae. Apricot.

From Kashmir, India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received March 2, 1937.

Nos. 121668 to 121745. Collected in Skardo, Baltistan Province, August 16 and 17, 1936, at 6,000 feet altitude.

121668. No. 1166. *Hangol.* Fruit golden yellow, 1¾ inches in diameter, sweet and firm; one of the best grown there.121669. No. 1167. *Blochuli.* Fruit yellow, 1¼ inches in diameter; ripens in the fall, of fair quality.121670. No. 1168. *Kapyuka.* Fruit almond-shaped, 1½ inches high, yellow with traces of a red cheek; quality fair.121671. No. 1169. *Badam Ohuli.* Fruit sweet, yellow, 1½ inches in diameter.121672. No. 1170. *Shaganda.* Fruit round; flesh salmon colored, firm, fairly sweet.121673. No. 1171. *Kustarpa.* Fruit golden yellow, sweet, almond-shaped; flesh firm.121674. No. 1173. *Karpo Shagunda.* Fruit yellow with pale-red cheek; flesh white, sweet; for eating fresh.121675. No. 1174. *Margholand.* Fruit 2½ inches in diameter, somewhat flattened, yellow with pale-red cheek. Flesh yellow; said to be excellent when eaten fresh.121676. No. 1175. *Bagdus.* Fruit 2 inches in diameter; flesh firm, sweet, yellow.121677. No. 1176. *Kakas.* Fruit somewhat flattened, yellow with red cheek, sweet; seed usually split.

121668 to 121775—Continued.

121678. No. 1177. *Badam Chuli.* Fruit yellow with red cheek, fairly sweet; seed often split in fruit.121679. No. 1178. *Wapuli.* Fruit golden yellow, red cheeked; flesh very sweet, firm; one of the best for drying.121680. No. 1178-A. *Wapuli.* Fruit golden yellow with red cheek; flesh very sweet, firm.121681. No. 1179. *Odomas.* Fruit yellow with purple red cheek, very sweet, one of the best.121682. No. 1180. *Ribu Chuli.* Fruit round, golden yellow with red cheek; flesh firm and good.121683. No. 1181. *Marposhagunda.* Fruit round, 2 inches in diameter, golden yellow with red cheek; sweet, firm.121684. No. 1182. *Karpoblo.* Fruit pale yellow with white flesh; seed sweet.121685. No. 1183. *Blo.* Fruit yellow with red cheek, 1½ inches in diameter.121686. No. 1184. *Oston.* Fruit almond-shaped, green with pale cheek; flesh white; a late variety.121687. No. 1185. *Ribu Chuli.* Fruit round, yellow firm.121688. No. 1186. *Starin.* Fruit round, golden yellow, firm, sweet, midseason.121689. No. 1187. *Shogun.* Fruit said to be early.121690. No. 1188. *Gurdalu Chuli.* An early variety.121691. No. 1189. *Sobkur.* An early variety.121692. No. 1190. *Azguak.* Fruit very large, seed bitter; said to be good.121693. No. 1191. *Kachha Chuli.* An early variety.121694. No. 1192. *Yakkar Chuli.* An early variety.121695. No. 1193. *Khustar.* An early variety.121696. No. 1194. *Ribu Chuli.* Fruit round, golden yellow with red cheek; flesh firm and good, like No. 1180 (P. I. 121682).121697. No. 1195. *Kardaksha.* An early variety.121698. No. 1196. *Apu.* An early sweet variety.121699. No. 1197. *Wapuli.* An early variety.121700. No. 1198. *Jimbata.* An early variety.121701. No. 1199. *Arghonfa.* An early variety.121702. No. 1200. *Halman.* A variety of No. 1272 (P. I. 121758). One of the types used for drying.121703. No. 1201. *Margholam.* Fruit pale yellow, 2 inches in diameter; not used for drying, eaten fresh.121704. No. 1202. *Khohalman.* Like the well-known *Halman*, but with bitter seeds.121705. No. 1203. *Muldung.* An early variety.

121668 to 121775—Continued.

121706. No. 1204. *Khablo*. An early variety, said to have bitter seeds.
121707. No. 1205. *Shara Karpo*. An early variety.
121708. No. 1206. *Margholam*. One of the best varieties.
121709. No. 1207. *Lumur*. Fruits very poor; cultivated for the kernels.
121710. No. 1208. (No name.) An early variety with sweet seeds.
121711. No. 1210. *Yakkar*. An early variety.
121712. No. 1211. *Makpura*. An early variety.
121713. No. 1213. *Dosopa*. No two trees of this variety have exactly the same sort of fruit.
121714. No. 1214. *Khoban*. An early variety.
121715. No. 1215. *Sharakopo*. Said to be very good.
121716. No. 1216. *Ribu Khustar*. An early variety.
121717. No. 1217. *Khustar*. An early variety.
121718. No. 1218. *Yakkar*. Said to be like No. 1210 (P. I. 121711), but with bitter seeds.
121719. No. 1219. *Khustarchakhanda*. An early variety.
121720. No. 1220. *Rambyun Margholam*. An early variety.
121721. No. 1221. *Stalarumi*. An early variety.
121722. No. 1222. *Omachikpa*. An early variety.
121723. No. 1223. *Karu Margholam*. An early variety with bitter seeds.
121724. No. 1224. *Ribu Wapah*. An early variety.
121725. No. 1225. *Badam Chuli*. An earlier sort of *Badam Chuli* than No. 1177 (P. I. 121678).
121726. No. 1226. *Karpo Chuli*. A good variety to be eaten fresh.
121727. No. 1227. *Khohalman*. A bitter-seeded form of the standard variety *Halman*.
121728. No. 1228. *Yakkir*. An early variety.
121729. No. 1229. *Dosopa*. An early variety.
121730. No. 1230. (No name.)
121731. No. 1231. *Blomargholam*. Fruit yellow with pink cheek. A late variety.
121732. No. 1232. *Blo*. Fruit round, deep yellow, 1½ inches in diameter, and sweet.
121733. No. 1233. Said to be a good early variety.
121734. No. 1245. *Galbat*. Fruit golden yellow, 2 inches in diameter, slightly compressed; used fresh.
121735. No. 1246. *Kakas*. An early variety.
121736. No. 1247. *Biru*. Said to be one of the best.

121668 to 121775—Continued.

121737. No. 1248. *Chull Karpo*. Fruit oval, 2 inches in diameter, yellow with a faint cheek, sweet and one of the best to be eaten fresh.
121738. No. 1249. *Arghon*.
121739. No. 1250. *Karing Karpo*. Fruit not seen, but name indicates white flesh.
121740. No. 1251. *Miting*. An early variety.
121741. No. 1254. *Hagulapa*. An early variety.
121742. No. 1255. *Stonkhoban*. Fruit quince-shaped, 2 inches in diameter, yellow, firm, good.
121743. No. 1256. *Shakanda*. Fruit 1½ inches in diameter, golden yellow with a red cheek, sweet; used as dried fruit.
121744. No. 1257. *Kapyuk*. Fruit 1½ inches in diameter, golden yellow with trace of cheek color; flesh firm and good.
121745. No. 1258. *Karpo Shaganda*. Fruit pale yellow, compressed and 2 inches high; slightly bitter, not sweet.
- Nos. 121746 to 121760 were collected at Shigar, Baltistan Province, from August 18 to 20, 1936, at 6,500 feet altitude.
121746. No. 1259. *Marshronpa*. Fruit 1½ inches in diameter, golden yellow with red cheek; flesh firm and sweet.
121747. No. 1261. *Astakhal*. Fruit 2 inches in diameter, yellow with faint pink cheek; flesh watery, not dried, but good for eating fresh.
121748. No. 1262. *Ba*. Fruit golden yellow with red cheek; flesh firm and sweet.
121749. No. 1263. *Siabas*. Fruit 1½ inches in diameter, golden yellow with red base; flesh sweet and not too dry.
121750. No. 1264. *Hangor*. Fruit orange color, 2 inches in diameter; flesh firm and sweet.
121751. No. 1265. *Jan*. Fruit 1½ inches in diameter, golden yellow, used fresh.
121752. No. 1266. *Ghulabi Chuli*. Fruit 1½ inches in diameter, orange with red cheek, sweet, used fresh only.
121753. No. 1267. *Bek*. Fruit 2 inches in diameter, compressed; flesh yellow, watery, bitter, and never used dried.
121754. No. 1268. *Khaban*. Fruit 1½ inches in diameter, orange, with firm sweet flesh.
121755. No. 1269. *Gurdalu*. Fruit kidney-shaped, 2 inches in diameter, bright yellow with pink cheek; used fresh.
121756. No. 1270. *Pacha Kalwa*. Fruit flattened, 1½ inches wide, golden yellow; used fresh.
121757. No. 1271. *Karpo Shaganda*. Fruit pale yellow with red cheek; flesh of fine texture with delicate flavor.
121758. No. 1272. *Halman*. Fruit 2 inches in diameter, orange with red cheek; flesh sweet and firm; one of the best.
121759. No. 1273. *Sonkaban*. Fruit 2 inches in diameter, quince-shaped, golden yellow with red base.
121760. No. 1274. Fruit 2 inches in diameter, white with red cheek; flesh sweet, not firm.

121668 to 121775—Continued.

121761. No. 1373. From Kampuk, Baltistan Province, at 9,000 feet altitude, September 8, 1936. Said to have edible seed. From a colder climate than the seeds collected in Shardo and Shigar (P. I. 121668 to 121760).

Nos. 121762 to 121769. Collected at Shigar, Baltistan Province, August 20, 1936, at 6,500 feet altitude.

121762. No. 1275. *Ghon*. Fruit 2 inches in diameter, golden yellow, eaten fresh.

121763. No. 1276. *Altik*. Fruit elliptical, 1½ inches high, golden yellow with red cheek; flesh sweet, used fresh.

121764. No. 1277. *Dul*. Fruit ripens in the fall; flowers said to be pink.

121765. No. 1278. *Biru*. Fruit 1 inch in diameter, orange with red cheek; flesh firm and sweet.

121766. No. 1279. *Min n*. Fruit top-shaped, 2 inches high, orange colored flesh good to eat fresh.

121767. No. 1288. Fruit 2 inches in diameter, orange colored with sweet firm flesh.

121768. No. 1294. *Andiar*. An early variety.

121769. No. 1295.

Nos. 121770 to 121772 were collected in the region around Kapalu, Baltistan Province, between 6,000 and 7,000 feet altitude, August 26, 1936.

121770. No. 1315. Fruit 1½ inches in diameter, quince-shaped, yellow with trace of red cheek; flesh sweet and firm.

121771. No. 1315-A. Fruit 1½ inches in diameter, globose, yellow with trace of pink cheek; flesh sweet and firm. No Baltistan apricots have the woody veins that characterize many of the imported varieties grown in the Himalayas.

121772. No. 1317. *Chuli*. Fruit 2 inches in diameter, globose, golden yellow with red cheek; flesh firm, but not very sweet.

Nos. 121773 and 121774 were collected at Kampuk, Baltistan Province, at 9,000 feet altitude, September 9, 1936.

121773. No. 1371. *Chuli*. Said to have sweet seeds.

121774. No. 1372. *Chuli*. Said to have sweet seeds.

121775. No. 1172. *Biru*. From Skardo, Baltistan Province, August 26, 1936. Fruit 1½ inches in diameter, yellow and very sweet.

121776. *PISTACIA VERA* L. *Anacardiaceae*. *Pistachio*.

From the United States Plant Introduction Garden, Chico, Calif. Seedlings grown at the garden; numbered in March 1937.

Row 11, Tree no. 20, Orchard "O." A seedling of P. I. 86372.

121777 to 121783. *ARACHIS* spp. *Fabaceae*. *Peanut*.

From South America. Material collected by W. A. Archer, Bureau of Plant Industry. Numbered in March 1937.

121777 to 121783—Continued.

121777. *ARACHIS GLABRATA* Benth. *Fabaceae*.

No. 3990-A. Plants from Campo Grande, Matto Grosso, Brazil, September 9, 1936. Found in rich black earth in the streets of the town. A dwarf perennial with a glabrous ascending stem, oblong-elliptic leaflets about one-half inch long, and small yellow flowers. Native to Brazil.

For previous introduction of seeds, see 118457.

121778. *ARACHIS* sp. *Fabaceae*.

No. 3965. Roots from Campo Grande, eastern Matto Grosso, September 2, 1936. From the streets of the town.

121779. *ARACHIS MARGINATA* Gardn.

No. 4429. Plants from the Posto Zootecnico, Tupacretan, Rio Grande do Sul, Brazil, November 11, 1936.

121780. *ARACHIS MARGINATA* Gardn.

No. 4439. Plants from along the road 12 km. north of Santa Anna, Rio Grande do Sul, Brazil, November 13, 1936. Common in sandy soil.

121781. *ARACHIS* sp.

No. 4624. Plants from along the road between Posados and Candelaria, Misiones, Argentina, December 10, 1936. Found in hard red earth, often in stony soil; in cultivated ground the plants are larger. They produce numerous underground rhizomes.

121782. *ARACHIS* sp.

No. 4664. *Mandubi*. From the streets of Villa Rica, Paraguay, December 16, 1936.

121783. *ARACHIS* sp.

No. 4851. Along the road between Caacupé and Tobaty, Paraguay, January 2, 1937. Found in white sandy soil.

121784 to 121798.

From the Union of Soviet Socialist Republics. Seeds presented by B. A. Vakar, Cytological Laboratory, Siberian Agricultural Institute, Omsk. Received March 3, 1937.

121784 to 121793. *AGROPYRON* spp. *Poaceae*.

121784. *AGROPYRON TRICHOPIHORUM* (Link) Richt.

No. 149.

For previous introduction see 116253.

121785. *AGROPYRON* sp.

No. 2. Received as "altaicum," for which a place of publication has not been found.

121786 and 121787. *AGROPYRON CRISTATUM* (L.) Gaertn. Crested wheatgrass.

121786. No. 245.

121787. No. 3.

121788. *AGROPYRON ELONGATUM* (Host) Beauv.

No. 564.

121789 and 121790. *AGROPYRON INTERMEDIUM* (Host) Beauv.

121789.

121790. No. 7.

121791. *AGROPYRON* sp.

No. 16.

121784 to 121798—Continued.

121792. *AGROPYRON* sp.

No. 513.

121793. *AGROPYRON* sp.

No. 8.

121794 to 121798. *TRITICUM* spp. Poaceae.
Wheat.

121794. *TRITICUM SPELTA* × *AGROPYRON*
GLAUCUM.

121795. *TRITICUM DICOCCUM FARRUM* ×
AGROPYRON GLAUCUM.

121796. *TRITICUM HORDEIFORME* × *AGRO-*
PYRON GLAUCUM.

121797. *TRITICUM DURUM* × *AGROPYRON*
GLAUCUM.

121798. *TRITICUM AESTIVUM FERRUGINEUM*
× *AGROPYRON GLAUCUM*.

121799. *FRAGARIA CHILOENSIS* (L.) Du-
chesne. Rosaceae.

Chiloe strawberry.

From Chile. Seeds presented through the
American consul at Valparaiso. Received
March 8, 1937.

Wild strawberries from the island of Juan
Fernandez.

For previous introduction see 62679.

121800 to 121819.

From India. Material collected by Walter
Koelz, Bureau of Plant Industry. Received
February 27, 1937.

This material was collected in 1936 and,
unless otherwise stated, was received as
seeds.

121800. *IRIS* sp. Iridaceae.

No. 1794. Root from Shalimar, Bagh,
Kashmir, November 25, 1936. Said to be
a tall wild species.

121801 to 121812. *ORYZA SATIVA* L. Poa-
ceae. Rice.

Nos. 121801 to 121805 were from the
Kulu District, Punjab Province.

121801. No. 1548. *Jhatu*. From Jagat-
suk, October 22, at 6,000 feet altitude.
A coarse red rice.

121802. No. 1637. *Jhatu*. From Samsi,
November 2. A good red, irrigated
rice with low heat requirements.

121803. No. 1638. *Mangoi*. From Samsi,
November 2. A white irrigated rice
with low heat requirements.

121804. No. 1639. *Jatr*. From Samsi,
November 22. A white rice growing
on dry ground.

121805. No. 1672. *Bansmatti*. From
Buntar, November 14. A fine-grained
white wet rice. Said to be a local
development of the first class *bans-*
matti from Dehra Dun.

Nos. 121806 to 121810 were obtained
from the Director of Agriculture, Kash-
tore, Kashmir Province.

121806. No. 1687. *Paddy Moshkabudji*.
(K. D. 15.)

121807. No. 1688. *Paddy Lolanzan*.
(K. W. 48.)

121808. No. 1689. *Paddy Badzag*. (K.
A. 78B.)

121800 to 121819—Continued.

121809. No. 1690. *Paddy Shirmal*. (K.
S. 17.)

121810. No. 1691. *Paddy Babar*. Se-
lection No. 19.

Nos. 121811 and 121812 were from
Lag. Kulu District, Punjab Province,
at 6,000 feet altitude.

121811. No. 1747. *Kala Mori*. Novem-
ber 8. A dry grown rice of low heat
requirement.

121812. No. 1748. *Mota Golgol*. No-
vember 15. A type of rice with low
heat requirement, broadcast on dry
soil.

121813 to 121818. *TRITICUM AESTIVUM* L.
Poaceae. Common wheat.

Nos. 121813 to 121815 were from Leh,
Ladak District, Kashmir Province, Septem-
ber 15 and 17, at 10,500 feet altitude.

121813. No. 1407. *Dromar*. A bearded,
red, spring wheat.

121814. No. 1408. *Droral*. A spring
wheat.

121815. No. 1409. *Drochen*. A good
strain of spring wheat.

121816. No. 1442. *Drokar*. From Miru,
Ladak District, at 14,000 feet altitude,
September 25, 1936. A strain of white
spring wheat grown near the cultiva-
tion limit.

Nos. 121817 and 121818 were from
Kolung, Lahul District, at 12,000 feet
altitude, October 10, 1936.

121817. No. 1556. *Drokar*. A bearded
white spring wheat.

121818. No. 1557. *Dromar*. A bearded
red spring wheat.

121819. *ZEA MAYS* L. Poaceae. Corn.

No. 1750. *Chelli*. From Kulu, Kulu
District, Punjab Province, November 16,
1936, at 4,000 feet altitude. Native corn
of the Kulu Valley. A monsoon crop.

121820. *PYRUS COMMUNIS* L. Malaceae.
Common pear.

From Pennsylvania. Scions presented by the
Pennsylvania State College, State College.
Received March 5, 1937.

Scions of a blight-resistant pear.

121821. *MANGIFERA INDICA* L. Anacar-
diaceae. Mango.

From the United States Plant Introduction
Garden, Coconut Grove, Fla. Seedlings
of P. I. 11645. Numbered March 10, 1937.

Tree 4, Row 1, Avocado Circle. The par-
ent of 121821 is in turn a seedling of P. I.
11645, a mango introduced from Cochin China
under the name *Mangifera cambodiana*, later
re-identified as *Mangifera indica*.

121822. *ERICA FERVIDA* L. Bolus. Erica-
ceae. Heather.

From England. Seeds presented by Sir Lio-
nel de Rothschild, London. Received
March 15, 1937.

An erect heath up to 2 feet high, with small
linear acute leaves and small, intensely red
flowers about one fourth of an inch long.
Native to Cape of Good Hope Province, South
Africa.

121823. DACTYLIS GLOMERATA L. Poaceae. Orchard grass.

From Sweden. Seeds presented by the Swedish Seed Co., Svalöf, through Dr. Hernfrid Witte, Director, the Swedish State Seed Testing Station, Stockholm. Received March 9, 1937.

121824. BETULA CYLINDROSTACHYA Wall. Betulaceae. Birch.

From India. Seeds presented by the Range Officer, Takdah, Darjeeling District, North Bengal, at the request of Walter Koelz, Bureau of Plant Industry. Received March 10, 1937.

A Himalayan birch, 50 to 60 feet high, which grows at altitudes of 5,000 to 10,000 feet along the northeastern border of India. The young branches are bright reddish brown and the ovate, acuminate leaves, dull dark green above and bright green beneath, are 2½ to 5 inches long. The wood is red, hard, and heavy and seasons well.

For previous introduction see 60640.

121825 to 121998.

From India. Seed collected by Walter Koelz, Bureau of Plant Industry. Received February 18, 1937.

This material was all collected in 1936.

121825. ABELMOSCHUS ESCULENTUS (L.) Moench. Malvaceae. Okra.

No. 1695. *Hava Blindi*. Presented by the Director of Agriculture, Kashmir Province. A variety which grows 8 feet high, with pods 7 to 9 inches long.

121826 to 121837. ALLIUM spp. Liliaceae.

121826 to 121831. ALLIUM CEPA L. Onion.

121826. No. 1331. *Tsong*. From Kapalu, Baltistan, Kashmir, August 26. A white, thin-skinned globe onion.

121827. No. 1370. *Tsong*. From Kampuk, Baltistan, Kashmir, September 9, at 9,000 feet altitude. A white thin-skinned globe onion of mild flavor, which is not injured by freezing.

121828. No. 1430. *Tsong*. From Leh, Ladak, Kashmir, September 16, at 10,500 feet altitude. A red onion.

121829. No. 1668. *Piyaz*. From Kulu, Kulu, Punjab, November 14, at 4,000 feet altitude. A mild red globe onion that is very pleasant to eat until mid-June, when it becomes strong; poor keeper.

121830. No. 1353. From Biokdang, Baltistan, Kashmir, at 9,500 feet altitude, September 3. An onion with fine round leaves 1 foot high, growing in clumps on a dry slope.

121831. No. 1413. Purchased at Leh, Ladak, Kashmir, September 16; originally from Yarkand. A strong onion, used to flavor soups.

121832. ALLIUM sp.

No. 1438. Purchased near Leh, Ladak, Kashmir, September 17, from a Yarkandi. An edible onion near Yarkand.

121833. ALLIUM sp.

No. 1545. *Tsong*. From Kolung, Lahul, Punjab, August 16 at 11,500 feet altitude. An almost leafless species with

121825 to 121998—Continued.

an inflated flower stalk and small head of white flowers. Bulb small, foliage used for flavoring.

121834. ALLIUM sp.

No. 1612. *Kotze*. From Pukar, Lahul, Punjab, in August, at 12,000 feet altitude. An onion with fine, rounded leaves and rose-purple flowers of possible ornamental use.

121835. ALLIUM sp.

No. 1729. Presented by the Director of Agriculture of Kashmir.

121836. ALLIUM sp.

No. 1613. *Ritsong*. From Kolung, Lahul, Punjab, in August. An onion with flat leaves 5 mm. wide and large heads of rose-purple flowers. Used for flavoring, also as an ornamental.

121837. ALLIUM THOMSONI Baker.

No. 1356. From Sdongpa, Baltistan, Kashmir, at 15,000 feet altitude, September 4. A Himalayan allium up to 2 feet high, with 4 to 5 fleshy linear leaves sheathing the lower third of a stout scape which bears a head, about an inch in diameter, of rose-purple flowers. Found growing in clumps on a dry slope.

121838. BETA VULGARIS L. Brassicaceae. Common beet.

No. 2100. *Palog*. From Calcutta, January 3. A potherb.

121839 to 121854. BRASSICA spp. Brassicaceae.

121839 and 121840. BRASSICA CAMPESTRIS L. Rutabaga.

121839. No. 1535. *Samsou*. From Koti, Kulu, Punjab, October 27. A variety planted for its oil-bearing seeds. The tough pungent roots are dried and used as food.

121840. No. 1700. *Zanundoz*. Presented by the Director of Agriculture, Kashmir. A large form.

121841 and 121842. BRASSICA OLERACEA GONGYLODES L. Kohlrabi.

Presented by the Director of Agriculture, Kashmir.

121841. No. 1699. A native variety with a very large white root.

121842. No. 1704. *Gandgobi*. A good purple variety.

121843 to 121847. BRASSICA RAPA L. Turnip.

121843. No. 1237. *Mulu*. From Skardo, Baltistan, Kashmir, August 16.

121844. No. 1304. *Mulu*. From Kapalu, Baltistan, Kashmir, August 25, a white, top-shaped root with purple top.

121845. No. 1398. *Nyungma*. From Leh, Ladak, Kashmir, at 10,500 feet altitude, September 16. A white turnip from Baltistan.

121846. No. 1401. From Leh, Ladak, Kashmir, at 10,500 feet altitude. An early purple variety.

121847. No. 1707. *Japanese Shogin*. From the Director of Agriculture,

121825 to 121998—Continued.

Kashmir. A large white winter variety with tender edible tops.

Nos. 121848 to 121852 were from Leh, Ladak, Kashmir, at 10,500 feet altitude, September 16 and 17.

121848. BRASSICA sp.

No. 1414. *Tram*. A good potherb.

121849. BRASSICA CAPESTRIS L.
Rutabaga.

No. 1420. *Yarkandi Salat*. Originally from Yarkand. A bushy annual whose leaves are picked and used as a potherb.

121850. BRASSICA sp.

No. 1421. *Yarkandi Salat*. Like No. 1420 (P. I. 121849), but from plants matured at Leh.

121851. BRASSICA CAPESTRIS L.
Rutabaga.

No. 1436. *Salat*. An interesting potherb that grows after the fashion of Swiss chard.

121852. BRASSICA sp.

No. 1441. *Yarkandi Tram*. A good potherb.

121853. BRASSICA sp.

No. 1621. *Tramyung*. From Kolung, Lahul, Punjab, at 12,000 feet altitude, in October. A large top-shaped, orange-yellow root.

121854. BRASSICA sp.

No. 1696. *Karm Sag*. Presented by the Director of Agriculture, Kashmir. An excellent potherb which grows like brussels sprouts, without the sprouts. The leaves are picked and new ones formed as the plant continues to grow taller.

121855 to 121859. CAPSICUM ANNUM L.
Solanaceae. Common red pepper.

121855. No. 1336. *Nirma*. From Surno, Baltistan, Kashmir, at 6,000 feet altitude, August 28. A very pungent fruit, 1 inch across at base and 2 inches long.

121856. No. 1697. *Mirch*. Presented by the Director of Agriculture, Kashmir. A native variety, long and very hot.

121857. No. 1706. *Cayenne Red*. Presented by the Director of Agriculture, Kashmir. A variety which produces well and is a good color.

121858. No. 1773. *Mirch*. From Kulu, Kulu, Punjab, at 4,500 feet altitude, November 12. A red pungent variety with fruits 2 to 3 inches long.

121859. No. 1787. *Pipli*. From Mandi, Mandi, Punjab, November 21. Fruit red, 1½ inches long, and considered one of the most pungent varieties when grown in Mandi; planted in Kulu, it is said to lose much of this quality.

Nos. 121860 to 121911 were collected in Baltistan Province, Kashmir, from August 16 to 26.

121860 to 121876. CITRULLUS VULGARIS
Schrad. Cucurbitaceae. Watermelon.

Nos. 121860 to 121863. *Bwar*. From Skardo, at 6,500 feet altitude, August 16.

121825 to 121998—Continued.

121860. No. 1142. Fruit globose, up to 10 inches in diameter, medium green, finely veined with darker green; rind very hard; flesh with no large air spaces, but with fine air spaces that give a crisp, firm, very agreeable character; flesh yellow and sweet, but very seedy.

121861. No. 1152. Fruit 11 inches long, pale green, finely netted with darker green; flesh pink, creamy with a delicate flavor; seeds large, otherwise a good novelty.

121862. No. 1162. Fruit globose, 1 foot in diameter, pale green with heavy blotched stripes of darker green; flesh red.

121863. No. 1163. Fruit globose, 11 inches in diameter, medium green mottled and faintly ribbed with darker green; rind thick; flesh coarse, red and sweet.

121864. No. 1164. *Bwar*. From Keris, at 6,500 feet altitude. Fruit globose, 1 foot in diameter, pale green veined with darker green; flesh yellow, sweet and very seedy.

121865 and 121866. *Bwar*. From Dagoni at 6,000 feet altitude. Fruit glabrous, 6 inches in diameter, green with blotched stripes of darker green; flesh white and insipid.

121865. No. 1305.

121866. No. 1305-A.

Nos. 121867 to 121869. *Bwar*. From Kapalu, at 6,000 feet altitude, August 26.

121867. No. 1308. Fruit globose, 6 inches in diameter, light green with blotched stripes of darker green; flesh white, faintly sweet, firm and crisp.

121868. No. 1313. Fruit globose, 6 inches in diameter, pale green with traces of fine veining; flesh white, crisp, fair.

121869. No. 1314. Fruit globose, 6 inches in diameter, dark green, unmarked; flesh red, insipid.

121870. No. 1339. *Bwar*. From Surmo at 6,000 feet altitude. Fruit globose, 10 inches in diameter, dark green, faintly blotched with paler green. Flesh red and sweet.

121871. No. 1341. Like 1339 (P. I. 121870) in appearance and quality, but with black seeds.

Nos. 121872 and 121873 were from Kapalu at 6,000 feet altitude.

121872. No. 1343. *Bwar*. A variety with red flesh.

121873. No. 1332. *Usse Bwar*; "mulberry watermelon."

Nos. 121874 and 121875 were from Leh, Ladak, September 16 and 17, at 10,500 feet altitude.

121874. No. 1419. Fruit globose, 10 inches in diameter, pale green, netted and striped with darker green; flesh red, low in sugar content.

121875. No. 1424. Fruit not seen.

121876. No. 1439. *Bwar*. From Kapalu, August 27 at 6,000 feet altitude.

121825 to 121998—Continued.

121877 to 121909. *CUCUMIS* spp. Cucurbitaceae.

121877 to 121905. *CUCUMIS* MELO L.
Muskmelon.

121877. No. 1323. *Ghon*. From the Raja's garden in Kapalu at 6,000 feet altitude. Flesh white, coarse, and sweet; said to be from Yarkandi seed.

Nos. 121878 to 121888 were from Skardo at 6,500 feet altitude.

121878. No. 1137. *Ber Ghon*. Fruits oval, 16 to 18 inches long, smooth with orange stripes and broken markings of dark green; flesh orange, but sometimes pale yellow; ripens early.

121879. No. 1138. *Ghon*. Fruit globose, 8 to 10 inches in diameter, smooth, unribbed, orange, marked with broken stripes and blotches of green; flesh thick, orange, sweet and pleasant.

121880. No. 1139. *Bwar*. Fruit globose to 10 inches in diameter, smooth, orange with more or less raised blotches of green; flesh thick, firm, and fragrant; no air space in cavity.

121881. No. 1145. Fruit oval up to 1 foot long, smooth, unribbed, pale yellow with lines of green; flesh thick, pale yellow, very sweet and agreeable; said to keep well; a casaba type.

121882. No. 1149. *Ston Ghon*. Fruit oval, elongate, pale yellow, usually unmarked; flesh orange, a bit fibrous, but fragrant and well flavored.

121883. No. 1150. *Naktrak*. Fruit subglobose, dark green, 1 foot long, heavily netted; flesh thick, orange with very good flavor; Persian melon type.

121884. No. 1151. Fruit oval, 1 foot long, blotched dark-green and orange, with traces of heavy veining; flesh orange, very good.

121885. No. 1157. Fruit oval, 1 foot long, furrowed, yellow; flesh green; casaba type, said to keep well.

121886. No. 1159. *Sarda*. Fruit very large, 18 inches long, heavily ribbed, smooth, green, mottled with orange.

121887. No. 1160. *Ston Ghon*. Fruit oval, 1 foot long, smooth but slightly furrowed, yellow; flesh green, not highly scented but sweet.

121888. No. 1161. *Shesgunn*. Fruit elongate, 1 foot long, faintly netted, green mottled with orange; flesh half green, half orange, very good.

121889. No. 1240. *Ghon*. From Saranica. Fruit 6 inches in diameter, slightly flattened, netted green and orange; flesh salmon or green, sweet.

121890. No. 1292. *Ghon*. From Shigar. Fruit elongate, 1 foot long, smooth, yellow; flesh white and sweet.

121891. No. 1293. *Ghon*. From Shigar. Fruit 8 inches in diameter, glabrous, faintly veined, mottled

121825 to 121998—Continued.

orange and green; flesh orange, sweet, no cavity.

Nos. 121892 to 121898 were from Kapalu, August 26 and 27 at 6,000 feet altitude. *Ghon*.

121892. No. 1307. Fruit globose, 3 inches in diameter, yellow, smooth, solid; flesh yellow to orange, sweet, not musky like the melons of southern India.

121893. No. 1309. Fruit elongate, 1 foot long, smooth, netted, orange yellow, faintly ribbed; flesh white, sweet, not musky.

121894. No. 1321. Fruit round, 4 inches in diameter, mottled orange and green, faintly netted; flesh thin, yellow, sweet.

121895. No. 1322. Fruit elliptical, 10 inches long, netted and ribbed, orange; flesh orange, sweet, good.

121896. No. 1324. Flesh orange, sweet; entire fruit not seen.

121897. No. 1325. Fruit oval, 14 inches long, green blotched with orange, faintly netted; flesh green, thick, sweet, very poor.

121898. No. 1330. Fruit smooth, unribbed, oval, 1 foot long, green flecked with orange; flesh orange or green, sweet, very good.

121899. No. 1335. *Ghon*. From Surmo at 6,000 feet altitude. Fruit globular, 10 inches in diameter, smooth, netted, green and orange; flesh thin, sweet, green.

121900. No. 1340. *Ghon*. From Surmo at 6,000 feet altitude. Fruit elongate, 1 foot long, green blotched orange, with trace of netting; flesh thick, salmon color, sweet and very fragrant.

121901. No. 1344. *Ghon*. Purchased at Kapalu August 28 at 6,000 feet altitude.

121902. No. 1345. *Ghon*. Purchased at Kapalu August 28 at 6,000 feet altitude. Said to be good.

Nos. 121903 to 121905 were presented by the Director of Agriculture, Kashmir.

121903. No. 1682. *Punjabi Sarda*. A sweet native melon of medium size.

121904. No. 1705. *Shalabagh*. A melon of fine flavor which is a good keeper.

121905. No. 1719. A native Kashmir melon of good quality; weight from 4 to 6 pounds.

121906 to 121909. *CUCUMIS* SATIVUS L.
Cucumber.

121906. No. 1016. From Sofor at 5,000 feet altitude; found as a weed in fields; fruits green with blotch stripes of darker green.

121907. No. 1289. *Laru*. From Shigar. August 20. Fruit 10 by 3 inches.

121908. No. 1346. Bought at Kapalu, at 6,000 feet altitude.

121825 to 121998—Continued.

121909. No. 1692. *Tar*. Presented by the Director of Agriculture, Kashmir. Described as from 2 to 3 feet long, of good quality.
- 121910 to 121930. *CUCURBITA* spp. Cucurbitaceae.
- 121910 to 121916. *CUCURBITA* MAXIMA Duchesne. Squash.
121910. No. 1680. *Etampes pumpkin*. From the Director of Agriculture, Kashmir. Said to be popular and sometimes to weigh 100 pounds.
121911. No. 1328. From Kapalu, at 6,000 feet altitude. Fruit 10 inches high, 18 inches across, ribbed, orange colored; flesh yellow, very good.
121912. No. 1629. *Kadu*. From Manali, Kulu, Punjab, October 28. Fruit pale gray, of Hubbard squash form; flesh not sweet like our squash; weight 10 to 15 pounds.
121913. No. 1631. *Kadu*. From Kulu, Kulu, Punjab, October 29. Fruit weighs 40 pounds, Hubbard squash form, orange-red with pale deep ribs; flesh not sweet, but the best of the Kulu squashes to eat.
121914. No. 1630. *Kadu*. From Manali, Kulu, Punjab, October 27. Fruit red-orange like our Hubbard squash, but not sweet; up to 15 pounds in weight.
121915. No. 1633. From Kulu, Kulu, Punjab, October 29. Fruit white, smooth, elongate, pointed at both ends or more or less rounded. Flesh not sweet and 2 inches thick; weight up to 60 pounds.
121916. No. 1628. From Koti, Kulu, Punjab, October 27. A good vegetable.
- 121917 to 121920. *CUCURBITA* MOSCHATA Duchesne. Cushaw.
121917. No. 1788. *Kadu*. From Jagendernaga, Mandi, Punjab, at 4,000 feet altitude, November 22. Fruit oval, 18 inches long, ribbed, green, veined and spotted with creamy buff; flesh sweet.
- Nos. 121918 and 121919 were from Kulu, Kulu, Punjab, October 29 and November 10, between 4,000 and 4,500 feet altitude.
121918. No. 1634. *Kadu*. Fruit to 16 inches wide, flattened by nearly half, creamy buff with conspicuous ribs; flesh very sweet.
121919. No. 1775. *Kadu*. Seed purchased and said to represent a type so far not collected on this trip.
121920. No. 1636. *Kadu*. From Kairain, Kulu, Punjab, October 31. A large fruit that looks like an *Etampes* pumpkin, smooth orange-red, 2 feet wide and 18 inches high, weighs up to 60 pounds.
- 121921 to 121929. *CUCURBITA* PEPO L. Pumpkin.
- Nos. 121921 to 121926. From the Baltistan Province, Kashmir, between 6,000 and 6,500 feet altitude, from August 14 to 27.

121825 to 121998—Continued.

121921. No. 1147. From Skard o. Fruit elongate to compressed, pale yellow; flesh not sweet; no fiber.
121922. No. 1284. *Kadu*. From Shigar. Fruit flattened, 7 inches across and 5 inches high, green and yellow mottled; flesh not sweet.
- Nos. 121923 to 121926. From Kapalu.
121923. No. 1310. *Wan*. Fruit elongate, 16 inches long, pale yellow, unribbed, and said to keep all winter when ripe; flesh not sweet, but a good vegetable.
121924. No. 1311. *Wan*. Fruit elongate, 16 inches long, orange yellow, veined more or less with green. This is the *Gangeri* of the lower Himalayas and resembles our summer squash.
121925. No. 1312. *Wan*. Fruit elongate, 18 inches long, green black, finely mottled with paler green, much like Nos. 1310 and 1311 (P. I. 121923 and 121924.)
121926. No. 1327. *Wan*. Fruit elongate, 16 inches long, blue green, finely veined darker. A variant of *Gangeri*, like Nos. 1310 to 1312 (P. I. 121923-121925).
121927. No. 1534. *Gangeri*. From Koti, Kulu, Punjab, October 27. Fruit elongate, 18 inches long, green and gray green. Eaten stewed, but is not so sweet as our squash or pumpkins.
121928. No. 1536. *Gangeri*. From Kyelang, Lahul, Punjab, at 10,500 feet altitude, October 19. A pale-yellow variety like No. 1534 (P. I. 121927), but ripens earlier.
121929. No. 1632. *Kadu*. From Kulu, Kulu, Punjab, at 5,000 feet altitude, October 29. Fruit salmon pink, Hubbard squash form, weighs 4 pounds; flesh pink, 2 inches thick, not sweet.
121930. *CUCURBITA* sp.
- No. 1347. *Bwan*. A mixed sample bought at Kapalu, Baltistan, Kashmir, at 6,000 feet altitude, August 28.
- 121931 to 121933. *DAUCUS* CAROTA L. Apiaceae. Carrot.
121931. No. 1429. *Sarakturmang*. From Leh, Ladak, Kashmir, September 16, at 10,500 feet altitude. A white-rooted form.
121932. No. 1244. From Shigar, Baltistan, Kashmir, August 18. A plant 3 feet high, found growing wild.
121933. No. 1252. From Safaranga, Baltistan, Kashmir. A cultivated vegetable with a large coarse white root.
121934. *DOLICHOS* LABLAB L. Fabaceae. Hyacinth-bean.
- No. 1683. *Lalsem*. Presented by the Director of Agriculture, Kashmir. A climber, sometimes 10 feet high, with tender fleshy pods, some of which have a fine flavor.
- 121935 to 121947. *LACTUCA* spp. Cichoriaceae.
- 121935 to 121940. *LACTUCA* SATIVA L. Garden lettuce.

121825 to 121998—Continued.

121935. No. 1318. *Dums*. From Kapalu, Baltistan, Kashmir, August 26.
121936. No. 1397. *Dums*. From Kam-puk, Baltistan, Kashmir. A cultivated variety.
121937. No. 1415. *Dums*. From Leh, Ladak, Kashmir, at 10,500 feet altitude, September 16. A variety which grows 7 feet high.
121938. No. 1425. *Dums*. From Leh, Ladak, Kashmir, at 10,500 feet altitude, September 16. A variety which grows 8 feet high.
121939. No. 1440. *Dums*. From Petuk, Ladak, Kashmir, September 19, at 10,000 feet altitude. A cultivated variety which grows between 6 and 7 feet tall.
121940. No. 1717. *Cos French White*. Presented by the Director of Agriculture, Kashmir. An early French variety with upright leaves of good quality.
121941. *LACTUCA* sp.
No. 1299. From Morungkor, Baltistan, Kashmir, at 9,000 feet altitude, August 23. A plant 3 feet high, with purple flowers, used as a field border.
Nos. 121942 and 121943. From Bordes, Baltistan, Kashmir, at 8,000 feet altitude, August 24.
121942. *LACTUCA* sp.
No. 1301. A plant 4 feet high, with purple flowers. Found on a dry slope.
121943. *LACTUCA* sp.
No. 1302. A plant 3 feet high, with yellow flowers. Found on a dry slope.
121944. *LACTUCA* sp.
No. 1503. *Katakumur*. From Kolung, Lahul, Punjab, at 11,000 feet altitude, in October. An annual up to 6 feet high, used as a potherb when young.
121945. *LACTUCA* sp.
No. 1540. From Rahla, Kulu, Punjab, at 9,000 feet altitude, October 27. An annual 4 feet tall, found at the edge of a stream in the fir forest.
121946. *LACTUCA* sp.
No. 1529. From the Rotang Pass, Kulu, Punjab, at 13,000 feet altitude, October 29. Found growing in clumps 12 to 18 inches high, on wet cliffs. The flower heads are large and purplish blue.
121947. *LACTUCA* sp.
No. 1350. From Banu, Baltistan, Kashmir, at 3,000 feet altitude, September 1. A bushy plant 18 inches high, with small yellow flower heads. Found on dry slopes.
- 121948 to 121953. *LACENARIA LEUCANTHA* (Duchesne) Rusby. Cucurbitaceae. Calabash gourd.
121948. No. 1286. From Shigar, Baltistan, Kashmir, August 25, at 6,500 feet altitude. Cultivated sparingly in the Shyok Valley to at least 9,000 feet altitude.
121949. No. 1489. Purchased at Kapalu, Baltistan, Kashmir, August 28, at 6,000 feet altitude. Cultivated sparingly in the Shyok Valley.

121825 to 121998—Continued.

121950. No. 1669. *Ghia*. From Bajaura, Kulu, Punjab, November 14, at 3,500 feet altitude. A smooth green and white gourd, sometimes over 2 feet long, with the neck somewhat bent at the tip. Eaten while immature.
121951. No. 1681. *Lamba Ghia*. Presented by the Director of Agriculture, Kashmir. A gourd 3 to 4 feet long, which weighs 6 to 8 pounds. Used as food while immature.
121952. No. 1685. *Gol Ghia*. Presented by the Director of Agriculture, Kashmir. A globular variety which weighs between 4 and 6 pounds; of good flavor.
121953. No. 1774. *Tumba*. From Kulu, Kulu, Punjab, November 10, at 4,500 feet altitude. A long-necked variety used for dippers.
121954. *LENS ESCULENTA* Moench. Fabaceae. Lentil.
No. 1780. *Kolt*. From Kulu, Kulu, Punjab, November 10, at 4,500 feet altitude. The seeds are used as food.
- 121955 to 121957. *LUFFA* spp. Cucurbitaceae. Towelgourd.
Presented by the Director of Agriculture, Kashmir.
121955. *LUFFA ACUTANGULA* (L.) Roxb. Singkwa towelgourd.
No. 1702. A good strain adapted to cool climates, esteemed as a vegetable.
- 121956 and 121957. *LUFFA CYLINDRICA* (L.) Roemer. Suakwa towelgourd.
121956. No. 1708. A fine vegetable.
121957. No. 1698. A whitish vegetable of fine flavor.
- 121958 to 121972. *PHASEOLUS VULGARIS* L. Fabaceae. Common bean.
Cultivated beans.
121958. No. 1163-A. From Skardo, Baltistan, Kashmir, August 16. A collection of garden beans; all are sown together.
121959. No. 1578. *Rong*. From Tinu, Lahul, Kashmir, in September, at 11,500 feet altitude. Probably of Indian origin.
Nos. 121960 to 121974. *Rong*. From Kulu Province, Punjab, from November 1 to 10, between 4,500 and 9,000 feet altitude.
121960. No. 1640. From Koti.
121961. No. 1641. From Koti.
121962. No. 1642. From Katrain. One of the commonest types in India.
121963. No. 1643. From Katrain.
121964. No. 1768. From Kulu.
121965. No. 1769. From Kulu.
Nos. 121966 to 121972. Types grown by one man.
121966. No. 1770. A mixed sample.
121967. No. 1770-A.
121968. No. 1770-B.
121969. No. 1770-C.
121970. No. 1770-D.

121825 to 121998—Continued.

121971. No. 1770-E.
 121972. No. 1770-F.
 121973. *VIGNA SINENSIS* (Torner) Savi.
 Fabaceae. Cowpea.
 No. 1779. *Burt*. From Kulu, Kulu,
 Punjab, November 10, at 4,500 feet alti-
 tude. Roasted and eaten like peanuts.
 121974. *PHASEOLUS VULGARIS* L. Fabaceae.
 Common bean.
 No. 1772. *Rong*. From Kulu, Kulu,
 Punjab, November 10, at 4,500 feet alti-
 tude.
 121975. *PICEA SMITHIANA* (Wall.) Boiss.
 Pinaceae. Spruce.
 No. 1660. *Rai*. From above Bandrole,
 Kulu, Punjab, November 14, at 8,000 feet
 altitude. An adaptable spruce, commonly
 growing to a diameter of more than 6 feet.
 For previous introduction see 116605.
 121976 to 121979. *PISUM SATIVUM* L. Faba-
 ceae. Pea.
 121976. No. 1411. *Shandil*. From Leh,
 Ladak, Kashmir, September 17, at
 10,500 feet altitude. Seeds used both
 green or dried.
 121977. No. 1165. *Mata*. From Bena-
 res, United Provinces, December 16.
 A winter crop with purple-madder
 flowers.
 121978. No. 1566. *Shrakkar*. From
 Kolung, Lahul, Punjab, October 11, at
 12,000 feet altitude. Used as food
 both fresh and dried.
 121979. No. 1554. *Srangnak*. From
 Kolung, Lahul, Punjab, October 10, at
 12,000 feet altitude. Planted for the
 seeds which are eaten like lentils.
 121980 to 121985. *RAPHANUS SATIVUS* L.
 Brassicaceae. Radish.
 121980. No. 1423. *Marpo Labuk*. From
 Leh, Ladak, Kashmir, September 16.
 A red radish, originally from Yarkand.
 121981. No. 1432. *Labuk Karpo*. From
 Leh, Ladak, Kashmir, September 16,
 at 10,500 feet altitude. A native
 white radish.
 121982. No. 1620. *Labuk*. From Ko-
 lung, Lahul, Punjab, in October, at
 12,000 feet altitude. A long white
 radish.
 Nos. 121983 to 121985. Presented by
 the Director of Agriculture, Kashmir.
 121983. No. 1703. *Muzapparabad*. A
 long white radish with a small top.
 121984. No. 1711. A native black rad-
 ish, 9 inches long and 5 inches in cir-
 cumference, grown for winter use.
 121985. No. 1714. *Muli*. A native win-
 ter radish, round, white, and turnip-
 like.
 121986 to 121989. *RHEUM* spp. Polygona-
 ceae. Rhubarb.
 121986. *RHEUM AUSTRALE* Don.
 No. 1731. From the Director of Ag-
 riculture, Kashmir.
 121987. *RHEUM* sp.
 No. 1363. From Brokdang Nulla,
 Baltistan, Kashmir, September 5, at

121825 to 121998—Continued.

- 12,000 feet altitude. Plant dry, stalk
 3 feet high; found at the edge of a dry
 watercourse.
 121988. *RHEUM* sp.
 No. 1444. *Aytzo*. From below Tak-
 lung Pass, Ladak, Kashmir, September
 26, at 15,000 feet altitude. A low, cold-
 tolerant and drought-tolerant form with
 leaves not more than 1 foot long; will
 stand freezing every day all summer.
 121989. *RHEUM* sp.
 No. 1518. From Kolung, Lahul, Pun-
 jab, August 15, at 11,000 feet altitude.
 A vigorous plant with edible petioles
 that under good conditions grow as large
 as those of our common rhubarb.
 121990 to 121993. *SOLANUM MELONGENA* L.
 Solanaceae. Eggplant.
 Nos. 121990 to 121992 were presented by
 the Director of Agriculture, Kashmir.
 121990. No. 1709. *Bengan*. A round,
 black native eggplant, growing to 3
 pounds weight and maturing 8 weeks
 after planting. The flesh is crisp with
 few seeds.
 121991. No. 1712. *Bengan*. A native
 variety, purple, 9 inches long and of
 excellent flavor, which matures in 7½
 weeks.
 121992. No. 1744. *Bengan*. A good
 purple variety, 12 inches long, which
 matures in 11 weeks.
 121993. No. 1776. *Shigotri*. From Kulu,
 Kulu, Punjab, November 10, at 4,500
 feet altitude. A red-purple, elongate
 sort, to about 4 inches long; grown
 in the rainy season.
 121994. *SPINACIA OLERACEA* L. Chenopodi-
 aceae. Common spinach.
 No. 1710. Presented by the Director of
 Agriculture, Kashmir. An early variety;
 slow to go to seed.
 121995 to 121997. *VICIA FABA* L. Fabaceae.
 Broadbean.
 Varieties cultivated for the seed which
 is used as food.
 121995. No. 1285. *Makshrang*. From
 Shigar, Baltistan, Kashmir, August 20.
 121996. No. 1434. *Shrangnak*. From
 Marsalong, Ladak, Kashmir, Septem-
 ber 24, at 11,500 feet altitude.
 121997. No. 1771. *Bali*. From Kulu,
 Kulu, Punjab, November 10, at 4,500
 feet altitude.
 121998. *VIGNA SINENSIS* (Torner) Savi.
 Fabaceae. Cowpea.
 No. 1786. *Rong*. From Mandi, Mandi,
 Punjab, November 21. Pods eaten green
 and beans stewed.
 121999. *SEMECARPUS* sp. *Anacardia-*
ceae.
 From New Caledonia. Seeds presented by
 Charles Jacques, secretary, Chamber of
 Agriculture, Noumea, through E. W.
 Brandes, Bureau of Plant Industry. Re-
 ceived February 25, 1937.
 A genus of tropical trees, closely related
 to *Anacardium*.

122000. ACACIA CYANOPHYLLA Lindl.
Mimosaceae. Blueleaf acacia.

From South Australia. Seeds presented by J. Howard Johnson, St. Peters. Received February 26, 1937.

For previous introduction see 48040.

122001 to 122033.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received February 27, 1937.

This material was all collected in 1936.

122001 to 122003. ASTRAGALUS spp. Fabaceae.

122001. ASTRAGALUS sp.

No. 1584. From Tinu, Lahul, Punjab, October 15, at 11,000 feet altitude. A perennial up to 5 feet in height, with attractive rose-purple flowers.

122002. ASTRAGALUS sp.

No. 1602. *Rangzu Guram Kyelang*. From Pukar, Lahul, Punjab, in August, at 2,000 feet altitude. *Wanie*, or "horse sugarcane." This name is applied to several species of *Astragalus* which grow 3 feet tall. They are more or less attractive ornamentals, and are all relished by horses.

122003. ASTRAGALUS sp.

No. 1446. *Tartagaon*. From Zingzingbar, Lahul, Punjab, October 8, at 13,000 feet altitude. A perennial about 1 foot high, with woolly leaves and a large inflated pod.

122004 to 122009. FAGOPYRUM ESCULENTUM Moench. Polygonaceae. Buckwheat.

122004. No. 1542. *Gangri*. From Bikri, Kulu, Punjab, October 31, at 6,000 feet altitude. Superior to the common Lahul races and a good yielder.

122005. No. 1547. *Banbrau*. From Kasar, at 11,000 feet altitude. A form of buckwheat that is raised chiefly in this locality; as it shatters easily it must be harvested before it is fully ripe.

122006. No. 1560. *Mita bres*. From Jalma, Lahul, Punjab, October 10, at 9,000 feet altitude. This is considered the best of the four kinds of Lahul buckwheat, but it is the poorest yielder, perhaps because there are no honeybees.

122007. No. 1568. *Drau*. From Kolung, Lahul, Punjab, October 10, at 12,000 feet altitude. A bitter variety, but the best yielder of all the Lahul buckwheats.

122008. No. 1570. *Bostor*. From Jalma, Lahul, Punjab, October 17, at 9,000 feet altitude. The earliest of the buckwheats, maturing in 90 days, but of poor quality, with a heavy husk.

122009. No. 1627. *Kattu*. From Koti, Kulu, Punjab, October 27. A buckwheat 4 feet tall, much like the Lahul *drau* (P. I. 122007), but not quite so good.

122010 to 122021. HORDEUM VULGARE L. Poaceae. Barley.

122010. No. 1355. *Nemas*. From Sdongpa, Baltistan, Kashmir, September 5, at 15,000 feet altitude. An early barley, 3½ feet high, with large heads, growing near the limit of cultivation.

122001 to 122033—Continued

122011. No. 1379. *Afangma*. From Karzong, Baltistan, Kashmir, September 13, at 15,000 feet altitude. Barley grown at the limit of cultivation.

122012. No. 1391. *Yangama*. From Leh, Ladak, Kashmir, September 15, at 10,500 feet altitude. The earliest variety, maturing in about 90 days.

122013. No. 1405. *Shirok Kapo*. From Leh, Ladak, Kashmir, September 16, at 10,500 feet altitude. A barley sown in the spring and harvested in September.

122014. No. 1406. *Soshirok*. From Tiktse, Ladak, Kashmir, September 18, at 11,000 feet altitude. An early barley and the only husk barley grown in the vicinity.

122015. No. 1410. *Yangnak*. Probably the same as No. 1391 (P. I. 122012). An early-maturing variety.

122016. No. 1433. *Shirok*. From Upshi, Ladak, Kashmir, September 24, at 13,000 feet altitude. A strain of barley grown near the cultivation limit.

122017. No. 1443. *Shirok*. From Gya, Ladak, Kashmir, September 25, at 15,000 feet altitude. A strain of spring huskless barley grown at the world's cultivation limit.

122018. No. 1549. *Salzot*. From Kolung, Lahul, Punjab, October 16, at 12,000 feet altitude. A huskless barley, of good yield; considered the best in the valley.

122019. No. 1551. *Sermo Ringruo*. From Kolung, Lahul, Punjab, October 12, at 12,000 feet altitude. One of the best barleys for yield and quality. Sown in May, harvested in September.

122020. No. 1555. *Tangzot*. From Ja'ma, Lahul, Punjab, October 20, at 9,000 feet altitude. An early barley, but a poor yielder.

122021. No. 1559. *Sermo Tuqun*. From Kolung, Lahul, Punjab, October 11, at 12,000 feet altitude. One of the best yielding barleys; sown in May, harvested in September.

122022. LOTUS sp. Fabaceae.

No. 1623. *Tuljima*. From Kolung, Lahul, Punjab, August, at 12,000 feet altitude. A low plant with fragrant yellow flowers and leaves.

122023 to 122029. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

122023. No. 1283. *Buksup*. From Shigar, Baltistan, Kashmir, August 20; a cultivated variety.

122024. No. 1283-A. *Buksup*. From Shigar, Baltistan, Kashmir, August 16; a cultivated variety.

122025. No. 1303. *Buksup*. From Kapalu, Baltistan, Kashmir, August 25. A variety which grows between 4 and 5 feet high and gives two cuttings a season. The flowers are white, yellow, and purple.

122026. No. 1392. *Yarkandi Buksup*. From Leh, Ladak, Kashmir, September 17, at 10,500 feet altitude. A variety that grows 8 feet high, originally from Yarkand.

122001 to 122033—Continued

122027. No. 1393. *Buksup*. From Kam-puk, Ba'tistan, Kashmir, at 9,000 feet, September 9. A cultivated alfalfa.

122028. No. 1394. *Buksup*. From Kam-puk, Baltistan, Kashmir, September 9, at 9,000 feet altitude. A cultivated alfalfa.

122029. No. 1418. *Buksup*. From Leh, Ladak, Kashmir, September 16, at 10,500 feet altitude. An alfalfa that grows 8 feet high.

122030. MELILOTUS sp. Fabaceae.

No. 1561. From Kyelang, Lahul, Punjab, August 14, at 10,500 feet altitude.

122031. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

No. 1565. *Lahuli Buksup*. From Kye-lang, Lahul, Punjab, August 18, at 10,500 feet altitude. A yellow-flowered form about 3 feet high; excellent as hay.

122032. MELILOTUS OFFICINALIS (L.) Lam. Fabaceae. Sweet clover.

No. 1596. From Pukar, Lahul, Punjab, August, at 12,000 feet altitude.

122033. NICOTIANA TABACUM L. Solanaceae. Common tobacco.

No. 1287. *Kara tsotma*. From Shigar, Baltistan, Kashmir. Tobacco is grown to 1,000 feet altitude in Lahul.

122034 to 122047.

From Argentina and Paraguay. Seeds and bulbs collected by W. A. Archer, Bureau of Plant Industry. Received February 17, 1937.

Unless otherwise mentioned, the material was received as seeds.

122034. ADESMIA BICOLOR (Poir.) DC. Fabaceae.

No. 4568. From the Jardín Botánico de la Facultad de Agronomía, Buenos Aires, Argentina, November 27, 1936. An erect or prostrate legume with yellow flowers. Native to South America, where it is used as a forage plant.

122035. ARISTOLOCHIA ELEGANS Masters. Aristolochiaceae. Cauliflower.

No. 4946. From the Jardín Botánico, Santissima Trinidad, Paraguay, January 9, 1937.

For previous introduction see 114861.

122036. HORDEUM sp. Poaceae.

No. 4790. *Cebada Paraguaya*. From Asunción, Paraguay, December 27, 1936. Seed used in making beverages.

122037. CHODANTHUS SPLENDENS (Bur. and Schum.) Hassler. Bignoniaceae.

No. 4923. From the Jardín Botánico, Santissima Trinidad, Paraguay, January 6, 1937. An ornamental evergreen woody climber with decussate, leathery leaves and racemes of 6 to 8 erect campanulate, more or less 2-lipped, yellow flowers. Native to southern Brazil.

122038. Cocos sp. Phoenicaceae.

No. 4919. From the Jardín Botánico, Santissima Trinidad, Paraguay, January 6, 1937.

122039. CYPELLA CORIFOLIA Baker. Iridaceae.

No. 4921. *Ruiberbo*. From the Jardín Botánico, Santissima Trinidad, Paraguay,

122034 to 122047—Continued

January 6, 1937. Bulb of a herbaceous perennial up to 3 feet high, with fleshy linear leaves and fugitive yellow flowers. Native to Paraguay.

122040. DIOCLEA PARAGUARIENSIS Hassler. Fabaceae.

No. 4912. *Curuguay*. From the Jardín Botánico, Santissima Trinidad, Paraguay, January 5, 1937. A shrubby twiner up to 60 feet long, with trifoliolate leaves and dense umbels of beautiful violet flowers. Native to Paraguay where the natives burnish pottery by rubbing it with the seeds.

122041. HYMENAEA STIGONOCARPA Mart. Caesalpinaceae.

No. 4947. *Yataibá*. From the Jardín Botánico, Santissima Trinidad, Paraguay, January 7, 1937. A tall evergreen tree with paired oblong leaflets 3 to 6 inches long and dense terminal clusters of white flowers. Native to Brazil.

For previous introduction see 19178.

122042. MELOTHRIA sp. Cucurbitaceae.

No. 4896. Along the road between Caacupé and Tobatý, Paraguay, January 2, 1937. A slender herbaceous climber about 6 feet long, with ovate-cordate leaves 2 to 3 inches long and small yellow flowers, solitary in the leaf axis. Native to Brazil.

122043. PANICUM PANTRICHUM Hack. Poaceae.

No. 4886. From Sierra de Tobatý, Paraguay, January 2, 1937. A slender, branching, spreading, perennial grass. Native to shady places in northern South America; said to resist some freezing.

122044. PASSIFLORA CAERULEA L. Passifloraceae. Bluecrown passionflower.

No. 4942. From Campo Grande near Jardín Botánico, Santissima Trinidad, Paraguay, January 9, 1937.

For previous introduction and description see 119823.

122045. PASSIFLORA MISERA H. B. K. Passifloraceae.

No. 4850. Along the road between Caacupé and Tobatý, Paraguay, January 2, 1937. A woody climber with cordate trilobed leaves about 1 foot long and solitary violet flowers about 1 inch across. Native to Colombia.

122046. SCOPARIA DULCIS L. Scrophulariaceae.

No. 4924. *Typychá Carátá*. Purchased in the market at Asunción, Paraguay, January 8, 1937. A glabrous annual 1 to 3 feet high.

For previous introduction see 110194.

122047. ZEA MAYS L. Poaceae. Corn.

No. 4877. From Caacupé, Paraguay, January 1, 1937. Cultivated corn.

122048 to 122152.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received February 16, 1937.

This material was all obtained at Darjeeling, December 23 to 25, 1936, unless otherwise mentioned.

122048 to 122152—Continued

122048. *TSUGA DUMOSA* (D. Don) Eichler.
Pinaceae. Hemlock.

No. 2017. A fine ornamental forest tree sometimes 120 feet high with gracefully drooping branches, native to northwestern India between 8,000 and 10,000 feet altitude.

For previous introduction see 108303.

122049. *ABIES SPECTABILIS* Lambert (A. webbiana Lindl.). Pinaceae.
Himalayan fr.

No. 2018. A tree sometimes 150 feet high, native to the Himalayas at altitudes between 7,000 and 13,000 feet. The dark-green leaves are arranged in two opposite series so as to leave a V-shaped opening along the top; the individual leaves are 1 to 2 inches long. The cones, about 5 inches long, are violet purple at first, later becoming brown.

For previous introduction see 102816.

122050 to 122053. *ACER* spp. Aceraceae.
Maple.

122050. *ACER CAMPBELLII* Hook. f. and Thoms.

No. 2052. Said to have come from nearby at 8,000 feet altitude.

122051 to 122053. *ACER CAUDATUM* Wall.

A large tree with dark-gray bark and 5-lobed, red-stemmed leaves from 2 to 5 inches long. The shiny, compact, moderately hard wood is white with a faint pink tinge. This maple is found in the temperate Himalayas between 7,000 and 11,000 feet altitude.

For previous introduction see 99709.

122051. No. 1969.

122052. No. 2004.

122053. No. 2044.

122054 to 122057. *ACONITUM* spp. Ranunculaceae.
Monkshood.

122054. *ACONITUM FEROX* Wall.

No. 2055. A plant with an erect stem 3 to 6 feet high, rounded, palmately trifid leaves cut into irregularly indented lobes. The large pale-blue flowers are in a dense terminal raceme. The root of this plant is used medicinally.

For previous introduction see 51744.

122055. *ACONITUM LURIDUM* Hook. f. and Thoms.

No. 1961. A perennial herb with simple erect stems 2 to 3 feet high, native to the alpine slopes of the Himalayas in India. The palmately 5-lobed leaves, 2 to 3 inches across, have coarsely crenate margins, and the dull-red flowers, borne in a simple raceme, have a long straight beak and a broad domelike dorsal prominence.

For previous introduction see 99713.

122056. *ACONITUM SPICATUM* (Brühl) Stapf.

No. 2054. A herbaceous perennial up to 6 feet high, with terminal racemes of many large pale-blue flowers. Native to the Himalayan region.

122057. *ACONITUM* sp.

No. 2056. An ornamental perennial, said to have come from Sikkim at high altitudes.

122048 to 122152—Continued

122058. *ALLIUM VICTORIALIS* L. Liliaceae.
Onion.

No. 1964. Obtained at Darjeeling, but grown in adjacent highlands at 14,000 feet altitude. One of the most distinctive European alliums, with stems about 2 feet high, leaves resembling those of the lily-of-the-valley, and white to greenish-white flowers.

For previous introduction see 110648.

122059. *ALLIUM WALLICHIANUM* Steud.
Liliaceae. Onion.

No. 1987. Grown near Darjeeling at 12,000 feet altitude. A tall eastern onion, native to Asia, with narrow flat leaves about 3 feet long and purple flower heads.

For previous introduction see 99715.

122060 and 122061. *ANEMONE* spp. Ranunculaceae.

Obtained at Darjeeling, but grown in the nearby highlands from 12,000 to 14,000 feet altitude.

122060. *ANEMONE POLYANTHES* D. Don.

No. 1990. An alpine anemone with stems 2 feet high, reniform or cordate leaves 2 to 4 inches across, and numerous white umbellate flowers about 1 inch in diameter. Native to the Himalayas at altitudes of 10,000 to 12,000 feet.

122061. *ANEMONE RIVULARIS* Buch.-Ham.

No. 1980. A silky pubescent ornamental from 1 to 3 feet high, with 3-parted basal leaves up to 6 inches in diameter and white or bluish flowers, over 1 inch long, in compound cymes.

For previous introduction see 102310.

122062. *ARENARIA CILIATA* L. Silenaceae.

No. 2035. Grown in Tibet at 14,000 feet altitude.

122063. *AMORPHOPHALLUS BULBIFER* Blume
Araceae.

No. 1953. A long-flowered species which may prove useful as an ornamental. From the Rangit River District, Darjeeling District, December 24, 1936, at 2,000 feet altitude.

122064. *ARISAEMA* sp. Araceae.

No. 1954. Obtained at Darjeeling, but grown along the Rangit River at 2,000 feet altitude, in a thicket. A plant with large scarlet seeds, on a stalk 6 inches high.

122065 to 122067. *ASTER* spp. Asteraceae.

Ornamentals grown in the nearby highlands from 12,000 to 14,000 feet altitude.

122065. *ASTER DIPLOSTEPHOIDES* (DC.) Benth.

No. 2036. A perennial 2 to 3 feet high, native to the alpine slopes of the Indian Himalayas up to 16,000 feet altitude. The entire lanceolate leaves are 2 to 3 inches long, and the solitary blue to blue-purple flower heads are 1 to 3 inches across.

For previous introduction see 99719.

122066. *ASTER STRACHEYI* Hook. f.

No. 2003. A dwarf, nearly stemless aster with radical obovate-spatulate leaves about 1 inch long and pale lilac-blue solitary flower heads about three-

122048 to 122152—Continued

fourths of an inch in diameter. Native to the western Himalayas at altitudes of 12,000 to 16,500 feet.

122067. *ASTER TRICEPHALUS* Clarke.

No. 1968. A small vigorous subtropical herbaceous perennial, with reddish flower heads. Native to Sikkim, India.

For previous introduction see 99653.

122068. *A. STILBE RIVULARIS* Buch.-Ham. Saxifragaceae.

No. 2006. Obtained at Darjeeling, but grown in Sikkim at 9,000 feet altitude.

For previous introduction see 46581.

122069. *BETULA* sp. Betulaceae. Birch.

No. 2042. Grown in Tibet at 13,000 feet altitude. An ornamental birch received under the name "balsamifera," for which a place of publication has not been found.

122070. *Berberis umbellata* Wall. Berberidaceae.

No. 1994. A hardy, half-evergreen shrub, native to the Himalayas, about 3 feet high, with reddish-brown grooved branchlets, obovate leaves an inch long, and umbellike racemes of yellow flowers which are followed by red berries.

For previous introduction see 80077.

122071. *Berberis* sp. Berberidaceae.

No. 1995.

122072. *Calceolaria gracilis* H. B. K. Scrophulariaceae.

No. 1946. An annual calceolaria about 18 inches high, with pinnate leaves and attractive yellow flowers about one-half inch long. Native to Ecuador.

122073. *Castanopsis indica* (Roxb.) A. DC. Fagaceae.

No. 2043. An evergreen tree with thin, leathery, oblong or obovate-oblong leaves 5 to 8 inches long. Native to the temperate Himalayan region and Assam.

122074. *Clintonia alpina* (Royle) Kunth. Convallariaceae.

No. 2047. Grown in Tibet at 13,000 feet altitude. A low perennial, native to the temperate slopes of the Himalayas in India. The lanceolate leaves are 4 to 9 inches long, and the small white funnel-shaped flowers are borne in a loose raceme on a scape 1 to 2 feet high.

For previous introduction see 99658.

122075. *Codonopsis thalictrifolia* Roxb. Campanulaceae.

No. 1956. Grown at 10,000 feet altitude in the hills of Sikkim or Tibet. An herbaceous perennial with flexuose stems ascending to sub-scandent, small ovate or reniform leaves, and solitary flowers about 1 inch long. Native to Nepal.

122076. *Coix lacryma-jobi* L. Poaceae. Jobs-tears.

No. 1930. Plants 6 feet high, found along a stream at 7,000 feet altitude near Darjeeling, Bengal.

122077 to 122080. *Cotoneaster* spp. Malacaeae.

122077. *Cotoneaster* sp.

No. 2013. Grown in Tibet at 13,000 feet altitude.

122048 to 122152—Continued

122078. *Cotoneaster* sp.

No. 2014. Grown at high altitudes in Sikkim.

122079. *Cotoneaster* sp.

No. 1921. A tree much like an apple tree in size and form, covered with large red berries; from 7,000 feet altitude.

122080. *Cotoneaster* sp.

No. 2057. A cultivated tree.

122081. *Crawfordia* sp. Gentianaceae.

No. 1929. A herbaceous twiner with large axillary, bell-shaped, blue-purple flowers and attractive maroon capsules, grown at 7,000 feet altitude.

122082. *Crepis depressa* Hook. f. and Thoms. Cichoriaceae.

No. 1963. Grown at 12,000 feet altitude.

122083. *Cynanchum vincetoxicum* (L.) Pers. Asclepiadaceae.

No. 2026. A white-flowered perennial 2 to 3 feet high, grown at 12,000 feet altitude in Sikkim.

122084. *Cynoglossum denticulatum* A. DC. Boraginaceae.

No. 2038. Grown at 9,000 feet altitude in Sikkim. A hardy perennial with small blue flowers in long open one-sided spikes and stems 1½ to 2 feet high. Native to India.

122085. *Datura arborea* L. Solanaceae. Floripondio.

No. 1937. A shrub or small tree, with ovate-lanceolate leaves and large trumpet-shaped, greenish-white, fragrant flowers. Native to Peru and Chile.

For previous introduction see 110925.

122086. *Delphinium vestitum* Wall. Ranunculaceae. Larkspur.

No. 1960. Grown at nearly 12,000 feet altitude. An alpine perennial with a hispid stem 1 to 3 feet high, palmately 5- to 7-lobed leaves sometimes a foot across, on long stems, and blue flowers in long dense racemes. Native to the temperate Himalayas from 8,000 to 12,000 feet altitude.

For previous introduction see 104368.

122087. *Deutzia corymbosa* R. Br. Hydrangeaceae.

No. 1996. A deutzia with pure-white flowers.

For previous introduction see 53696.

122088. *Erigeron* sp. Asteraceae.

No. 2022. Grown at high altitudes in Sikkim.

122089. *Euonymus* sp. Celastraceae.

No. 1825. From the Government gardens, Saharanpur, United Provinces.

122090. *Fritillaria stracheyi* Hook. f. Liliaceae.

No. 1999. A bulbous plant with narrow linear leaves 4 to 6 inches long on slender stems up to a foot in length and solitary pale-purple flowers 1½ to 2 inches long. Native to the Himalayan region at altitudes of 9,000 to 13,000 feet.

122048 to 122152—Continued

122091. *GENTIANA TIBETICA* King. Gentianaceae. Himalayan gentian.

No. 1997. An erect perennial 18 inches high, with oblong-ovate leaves 5 to 7 inches long and small dull yellowish-white axillary flowers an inch long. Native to Tibet.

For previous introduction see 80285.

122092. *GENTIANA SIKKIMENSIS* C. B. Clarke. Gentianaceae. Gentian.

No. 1998. A decumbent perennial, native to the Sikkim Himalayas at altitudes between 10,000 and 14,000 feet. The radical leaves are orbicular and those of the stem are elliptic to oblong, and 1 inch long. The tubular, funnel-shaped blue flowers, about 1 inch long, are in headlike clusters.

For previous introduction see 102315.

122093. *HYDRANGEA ANOMALA* D. Don (*H. altissima* Wall.). Hydrangeaceae.

No. 2039. A climbing shrub up to 15 feet high, with ovate leaves 3 to 6 inches long and large corymbs of white flowers. Native to Nepal at 4,000 to 10,000 feet altitude.

For previous introduction see 114753.

122094. *HYPERICUM* sp. Hypericaceae.

No. 2020.

122095. *ILEX INSIGNIS* Hook. f. Aquifoliaceae. Holly.

No. 1919. An evergreen holly, native to the Sikkim Himalayas, where it grows at 7,000 feet altitude. It forms a small tree or shrub with thick grooved branches which are purplish when young. The dark-green, leathery leaves, 5 to 9 inches long, are armed at the margins with small spine-tipped teeth. The bright-red, oval berries are nearly one-half inch long.

For previous introduction see 102906.

122096. *ILEX* sp. Aquifoliaceae. Holly.

No. 1920. A tree much like the American holly.

122097. *IMPATIENS* sp. Impatiensaceae.

No. 2009. From high altitudes in the Sikkim mountains.

122098. *IPOMOEA* sp. Convolvulaceae.

No. 1948. A woody vine, with large cordate leaves, bearing an abundance of orange capsules 1 inch in diameter.

122099. *IRIS CLARKEI* Baker. Iridaceae.

No. 2025. From the Sikkim Himalayas.

122100. *LACTUCA* sp. Cichoriaceae.

No. 2045. Grown in the Sikkim highlands at 13,000 feet altitude.

122101. *LACTUCA MACRANTHA* Clarke. Cichoriaceae.

No. 2046. A stout perennial lettuce up to 2 feet high, with large pinnatifid leaves and loosely paniced heads of blue flowers. Native to the Sikkim Himalayas at altitudes of 10,000 to 14,000 feet.

For previous introduction see 116593.

122102. *LIGULARIA* sp. Asteraceae.

No. 1957.

122103. *LIGUSTRUM CONFUSUM* Decaisne. Oleaceae.

No. 1962. A small tree up to 40 feet high, which is one of the tropical relatives

122048 to 122152—Continued

of the California privet (*Ligustrum ovalifolium*). The obtuse leathery leaves are about 9 inches long, and the small white flowers are in panicles 1 to 5 inches long.

For previous introduction see 116594.

122104. *LILIUM* sp. Liliaceae. Lily. No. 2021.

122105. *LOBELIA* sp. Campanulaceae.

No. 2048. From 12,000 feet altitude in the Sikkim Highlands. Received as *Lobelia erecta*, an invalid name.

122106. *LONICERA TOMENTELLA* Hook. f. and Thoms. Caprifoliaceae. Honeysuckle.

No. 2040. Grown at 12,000 feet altitude in the Sikkim Highlands.

122107 to 122109. *MECONOPSIS* spp. Papaveraceae.

Native to the Sikkim Himalayas between 10,000 and 12,000 feet altitude.

122107. *MECONOPSIS SINUATA* Prain.

No. 2031. An annual 1 to 2 feet high, with irregularly lobed, sparsely prickly leaves and blue flowers 2 to 3 inches in diameter.

122108. *MECONOPSIS PANICULATA* (Don) Prain.

No. 2032. A tall perennial, soft-hairy throughout, with yellow flowers in lax cymes, found on the slopes of the Himalayas of western India and Tibet.

For previous introduction see 111065.

122109. *MECONOPSIS SIMPLICIFOLIA* (Don) Hook. f. and Thoms.

No. 2030. A stemless annual or biennial, native to temperate regions of northern India. The ovate-lanceolate, toothed or entire leaves, 2 to 3 inches long, are in a tufted rosette from which rise the deflexed hairy scapes, 12 to 18 inches high, bearing solitary, poppylike, clear-blue flowers 3 inches across.

For previous introduction see 102320.

122110. *DESMODIUM FLORIBUNDUM* (D. Don) G. Don. Fabaceae.

No. 1967. A woody, thickly pubescent, Himalayan plant with very copious axillary and terminal racemes of pale pink or lavender flowers.

For previous introduction see 116598.

122111. *MICHELIA EXCELSA* Blume. Magnoliaceae.

No. 1971. A tall tree, native to the temperate Himalayas of northeastern India between 5,000 and 6,000 feet altitude. The long narrow leaves are silky, brown beneath, and the handsome white flowers are from 4 to 5 inches across.

For previous introduction see 116602.

122112. *MOMORDICA CHARANTIA* L. Cucurbitaceae.

No. 2085. *Karela*. From Calcutta, January 1, 1937.

122113. *OSBECKIA NEPALENSIS* Hook. Melastomaceae.

No. 2051. An evergreen shrub, native to the Himalayas, with a rough erect stem 18 inches high, opposite, lanceolate, rigid leaves, and large purplish-rose flowers in terminal and axillary panicles or corymbs.

For previous introduction see 47744.

122048 to 122152—Continued

122114 and 122115. MELASTOMA MALABATH-
RICUM L. Melastomaceae.

An attractive spreading shrub up to 6 feet high, with broad-lanceolate leaves about 4 inches long and showy purple flowers about 2 inches across and 1 to 5 in a cluster. Native to the East Indies.

122114. No. 2041.

122115. No. 2074. From Siliguri, Bengal, December 29, 1936.

122116. PHILADELPHUS sp. Hydrangeaceae.

No. 2007. Grown in the Sikkim Himalayas at 9,000 feet altitude.

122117. PIPTANTHUS NEPALENSIS (Hook.)
Sweet. Fabaceae.

No. 1981. A shrub 2 to 11 feet high, with palmately trifoliolate leaves made up of lanceolate leaflets 2 to 4 inches long; the yellow pea-shaped flowers, 1 inch long, are borne in dense racemes resembling bunches of grapes.

For previous introduction see 103464.

122118. POLYGONUM CAMPANULATUM Hook.
f. Polygonaceae. Fleecflower.

No. 2008. A hardy perennial of compact bushy habit with handsome foliage; during the summer and autumn it produces dense racemes of charming bell-shaped, fragrant rosy-white flowers. Native to the Sikkim Himalayas up to 10,000 feet altitude.

For previous introduction see 60252.

122119. POLYGONUM MOLLE D. Don. Poly-
gonaceae. Fleecflower.

No. 2015. Grown in the Sikkim Himalayas at 12,000 feet altitude. A shrubby perennial 2 to 3 feet high, with white flowers in large thyrselike terminal panicles. Allied to *Polygonum polystachyum*. Native to Nepal.

For previous introduction see 116608.

122120 to 122123. PRIMULA spp. Primula-
ceae. Primrose.

122120. PRIMULA ELWESIANA King.

No. 2066. A Himalayan primrose with ovate-lanceolate leathery leaves about 4 inches long and solitary violet flowers on scapes up to 6 inches high.

122121. PRIMULA KINGII Watt.

No. 2067. A glabrous perennial native to high altitudes in the Sikkim Himalayas. The elliptic-lanceolate, crenulate leaves, 2 to 3 inches long, are in a crowded rosette, and the slender scapes, 6 to 10 inches high, bear 4 or 5 claret-colored, funnel-shaped flowers nearly an inch across.

For previous introduction see 108996.

122122. PRIMULA STUARTII Wall.

No. 2068. A mealy or quite glabrous perennial herb, native throughout the alpine and subalpine Himalayas of India and Tibet at altitudes between 12,000 and 16,000 feet. The coriaceous oblanceolate leaves, with entire or crenulate margins, are 4 to 10 inches long, and the scapes, 12 to 18 inches high, bear loose umbels of light-yellow, drooping flowers.

For previous introduction see 115984

122123. PRIMULA sp.

No. 2069. Native to the Sikkim Himalayas at high altitudes.

122048 to 122152—Continued

122124. PRUNUS ACUMINATA (Wall.) Hook.
f. (*Laurocerasus acuminata* (Wall.)
Roemer). Amygdalaceae. Laurel cherry.

No. 1984. A slender-branched tree 30 to 40 feet high, with narrow leaves up to 7 inches long and many-flowered racemes of yellowish-white flowers. The fruit is a small oval drupe. The tree is found in central and eastern Himalayas at altitudes between 5,000 and 7,000 feet.

For previous introduction see 62811.

122125. PRUNUS CERASOIDES D. Don (*P.*
puddum Roxb.). Amygdalaceae.
Sikkim cherry.

No. 1974. An Indian cherry, native to the temperate slopes of the Himalayas, with sharply serrate, lanceolate leaves 3 to 5 inches long, umbels of pendulous, campanulate, rosy-red to white flowers, and red fruits half an inch long with scanty red or yellowish acid flesh.

For previous introduction see 77594.

122126. RHAMNUS sp. Rhamnaceae.

No. 2023.

122127 to 122131. RHODODENDRON spp.
Ericaceae.

122127. RHODODENDRON ARBOREUM J. E.
Smith. Tree rhododendron.

No. 2060. A bushy tree.

For previous introduction see 105908.

122128. RHODODENDRON DALHOUSIAE
Hook. f.

No. 2062. A large epiphytic evergreen shrub, native to the Sikkim Himalayas at altitudes of 6,000 to 8,000 feet. The oblanceolate to obovate, obtuse leaves, 2 to 6 inches long, are scaly and papillose beneath. The funnel-shaped, fragrant, white flowers, tinged with rose outside, are 3 to 4 inches long with five broad lobes.

For previous introduction see 102778.

122129. RHODODENDRON MADDENI Hook. f.

No. 2063. A shrub 6 to 8 feet high, with red-stemmed, dark-green leaves. The large, delicately fragrant flowers, tinged with rose, are produced in threes at the ends of the branches. Native to the Himalayas.

For previous introduction see 103139.

122130. RHODODENDRON sp.

No. 2059. Received under the name "umbellatum," for which a place of publication has not been found.

122131. RHODODENDRON sp.

No. 2064.

122132. ROSA MACROPHYLLA Lindl. Rosa-
ceae. Bigleaf rose.

No. 1975. A large nearly thornless bush, native to the temperate Himalayas up to 10,000 feet altitude. The compound leaves have 9 to 11 oblong to ovate leaflets 1 to 2 inches long, pubescent beneath, and the red flowers, 2 inches across, in clusters of 1 to 3, are followed by oblong-ovoid red fruits which are sometimes 2 inches long.

For previous introduction see 115986.

122048 to 122152—Continued

122133. *ROSA* sp.

No. 1976. From 12,000 feet altitude in nearby highlands.

122134. *SAMBUCUS EBULUS* L. Caprifoliaceae.

No. 1973. Received under the name "odorata" for which a place of publication has not been found.

122135. *SAUSSUREA* sp. Asteraceae.

No. 2037. Grown at 10,000 feet altitude in the Sikkim Himalayas.

122136. *SAXIFRAGA HOOKERI* Engl. and Irm-scher. Saxifragaceae.

No. 1991.

122137. *SAXIFRAGA DIVERSIFOLIA* Wall. Saxifragaceae.

No. 1992.

122138. *SENECIO SCANDENS* Buch-Ham. Asteraceae. Climbing groundsel.

No. 1993. An attractive autumn-flowering composite from the Himalayas, with a woody stem and climbing habit. The yellow flower heads are in few-flowered, loose, paniclelike clusters.

For previous introduction see 111089.

122139. *SENECIO* sp. Asteraceae.

No. 1970.

122140. *SMILAX FEROX* Wall. Smilacaceae.

No. 1941. A stout prickly shrub with ovate leathery leaves about 3 inches long and umbels of small red berries. Native to the Himalayas at altitudes of 5,000 to 8,000 feet.

For previous introduction see 111090.

122141. *SPIRAEA* sp. Rosaceae.

No. 1965. Grown at 12,000 feet altitude in nearby highlands.

122142. *STYRAX HOOKERI* C. B. Clarke. Styracaceae. Snowbell.

No. 1979. A tree often 40 feet high, native to Sikkim and Bhutan at altitudes between 6,000 and 7,000 feet. The white flowers, 1 inch long, are tomentose outside, and the young branches are stellate-pubescent. The wood is white, close grained, and moderately hard.

For previous introduction see 99754.

122143. *SWERTIA HOOKERI* C. B. Clarke. Gentianaceae.

No. 1978. Grown at 12,000 feet altitude in nearby highlands. A perennial herb with a thick hollow stem 2 to 4 feet high, native to the Sikkim Himalayas between 12,000 and 13,000 feet altitude. The elliptic long-petioled leaves are lanceolate; the nodding purple flowers with blue nerves, on pedicels 2 inches long, are borne in dense axillary cymes.

For previous introduction see 102330.

122144. *TALAUMA HODGSONI* Hook. f. and Thoms. Magnoliaceae.

No. 2050. A tall evergreen tree, related to *Magnolia*, with obovate-oblong leaves 8 to 20 inches long and large fragrant flowers with white petals and purple calyx. Native to the Sikkim Himalayas between 4,000 and 5,000 feet altitude.

For previous introduction see 39139.

122048 to 122152—Continued

122145. *THALICTRUM CHELIDONII* DC. Ranunculaceae. Meadowruie.

No. 2001. A handsome perennial 15 inches high, with pale-green foliage, pubescent beneath. The delicate silvery lavender flowers, over 1 inch across, are borne in graceful sprays. Native to the temperate Himalayas at altitudes between 8,000 and 12,000 feet.

For previous introduction see 111097.

122146. *THALICTRUM FOLIOLOSUM* DC. Ranunculaceae. Meadowruie.

No. 2005. A stiff erect perennial, 4 to 8 feet high, native to the temperate slopes of the Himalayas at altitudes of 5,000 to 8,000 feet. The pinnately compound leaves are made up of orbicular leaflets less than 1 inch across, and the white, pale-green, or dull-purple flowers are in much-branched panicles.

For previous introduction see 102332.

122147. *TRACHYSPERMUM* sp. Apiaceae.

No. 2076. A handsome evergreen climber with an abundance of fragrant white flowers.

122148. *TRACHYCARPUS MARTIANUS* (Wall.) Wendl. Phoenicaceae. Martius palm.

No. 2065. A slender-trunked, fan-leaved palm from the temperate regions of the Himalayas, where it grows to a height of 20 to 50 feet. The unarmed trunk bears at its summit a crown of rigid leathery roundish leaves 4 to 5 feet in diameter, which are cut about half way down into narrow 2-lobed segments. The yellow flowers, followed by blue fruits, are borne on a nodding spadix about a foot long.

For previous introduction see 99758.

122149. *TRICHOSANTHES* sp. Cucurbitaceae.

No. 1922. An attractive vine with orange to madder-red globose fruits, 6 inches in diameter.

122150. *VIBURNUM STELLULATUM* Wall. Caprifoliaceae.

No. 2016. A large evergreen shrub with elliptic-lanceolate leaves about 3 inches long and small red berries. Native to the Sikkim Himalayas.

For previous introduction see 116620.

122151. *VIBURNUM NERVOSUM* D. Don. Caprifoliaceae.

No. 2024. A large shrub or small tree with elliptic-oblong, shiny green leaves about 3 inches long and cymes of few small rose-colored flowers followed by purple-black drupes. Native to the Himalayas at altitudes of 10,000 to 13,000 feet.

For previous introduction see 119657.

122152. (Undetermined.)

No. 2071. A scandent perennial up to 25 feet high, covered in the fall with small red fruits.

122153 to 122156.

From Argentina and Uruguay. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received February 25, 1937.

122153. *CUCURBITA ANDREANA* Naud. Cucurbitaceae.

No. 5005. From Córdoba, Argentina. Presented by Dr. L. R. Parodi, of the Fac-

122153 to 122156—Continued

ultad de Agronomía, Buenos Aires, in December 1936. A cucurbit related to the cushaw (*Cucurbita moschata*). The obovoid fruits, about 8 inches long, are marked with white and yellow. Native to Uruguay.

122154. *MEDICAGO DISCIFORMIS* DC. Fabaceae. Medick.

No. 4957. From Puerto Colonia, Uruguay, January 18, 1937.

For previous introduction see 90014.

122155. *PASPALUM Plicatulum arenarium* Arechav. Poaceae.

No. 4953. From Puerto Colonia, Uruguay, January 17, 1937. A perennial grass, native to South America, used as a binder on sand dunes.

122156. *SPARTIUM JUNCEUM* L. Fabaceae. Spanish broom.

No. 4969. From Puerto Colonia, Uruguay, January 18, 1937. A large round bush when grown in the open and is covered with light-yellow flowers.

For previous introduction see 110151.

122157 to 122206.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received February 26, 1937.

This material was all collected in 1936, unless otherwise mentioned.

122157. *ALLIUM* sp. Liliaceae. Onion.

No. 1348. From Pranu, Baltistan, Kashmir, September 1, at 8,000 feet altitude. Found growing in a field; an onion with rather fragrant white flowers one-half inch across.

122158 to 122165. *AMYGDALUS* spp. Amygdalaceae.

122158. *AMYGDALUS COMMUNIS* L. Almond.

No. 1238. *Badam*. From Skardo, Baltistan, Kashmir, August 17. The best variety grown in this district.

122159 to 122165. *AMYGDALUS PERSICA* L. Peach.

122159. No. 1249. *Tabushu*. From Skardo, Baltistan, Kashmir, August 16. A small tree said to live about 10 years. Fruit deep yellow with pink cheek, freestone, 2 inches in diameter; flesh white, rather watery.

122160. No. 1316. From Kapalu, Baltistan, Kashmir, August 26, at 6,000 feet altitude. Fruit greenish yellow with faint pink cheek, quince-shaped, freestone; flesh white, sweet, and of good flavor.

122161. No. 1319. From Kapalu, Baltistan, Kashmir, August 26, at 6,000 feet altitude. Fruit greenish yellow, freestone; flesh greenish yellow, coarse.

122162. No. 1329. From Kapalu, Baltistan, Kashmir, August 26, at 6,000 feet altitude. Fruit greenish yellow with trace of pink on cheek, 2½ inches in diameter, freestone; flesh yellow, very good flavor.

122163. No. 1342. From Marcha, Baltistan, Kashmir, August 29, at 6,000 feet altitude. Fruit yellowish green,

122157 to 122206—Continued

freestone, 2 inches in diameter; flesh yellow, sweet, of good flavor. Tree said to reach great age and size.

122164 and 122165. From Bandrole, Kulu, Punjab, November 14, at 6,000 feet altitude. Fruit small, white, and not of much account, but the large attractive tree is used as stock.

122164. No. 1657.

122165. No. 1658. *Aru*.

122166. *BENINCASA HISPIDA* (Thunb.) Cogn. Cucurbitaceae. Waxgourd.

No. 1928. *Kubendi*. From Darjeeling, Bengal, December 23. Fruit elongate, 14 by 8 inches. Used for confections and also as a vegetable.

122167. *CAPSICUM ANNUUM* L. Solanaceae. Common redpepper.

No. 1908. From Benares, United Provinces, December 24.

122168. *CORYLUS COLURNA* L. Betulaceae. Tree hazelnut.

No. 1644. Collected by the Seraj Forest Department in the Seraj Forest, Kulu, Punjab, between 7,000 and 8,000 feet altitude. Trees up to about 4 feet in diameter, well formed and attractive.

122169. *CORYLUS COLURNA* L. Betulaceae. Tree hazelnut.

No. 1778. *Shirori*. Seeds collected by the Forest Department of Kulu Division, Punjab. A large tree growing from 7,000 to 9,000 feet altitude.

122170. *CUCURBITA PEPO* L. Cucurbitaceae. Pumpkin.

No. 1399. *Rghon*. From Leh, Ladak, Kashmir, September 16, at 10,500 feet altitude. A mixed sample.

122171. *FRAGARIA* sp. Rosaceae.

No. 934. From Koti, Kulu, Punjab, June 4, at 8,000 feet altitude. Fruits one-half inch in diameter, crimson, well-flavored, but a shy bearer.

122172. *JUGLANS REGIA* L. Juglandaceae. Persian walnut.

No. 1659. *Akhrot*. From Rupi, Kulu, Punjab, November 14, at 6,000 feet altitude. A good thin-shelled walnut, of which there are many types in the Kulu Valley.

122173. *JUGLANS REGIA* L. Juglandaceae. Persian walnut.

No. 1626. *Akrot*. From Rahla, Kulu, Punjab, at 10,000 feet altitude. A large forest tree, with a trunk up to 6 feet or more in circumference.

122174. *LAGENARIA LEUCANTHA* (Duchesne) Rusby. Cucurbitaceae. Calabash gourd.

No. 2108. *Lauki*. From Calcutta, January 3, 1937. A long sweet gourd.

122175. *PISUM SATIVUM* L. Fabaceae. Pea.

No. 1931. Darjeeling, Bengal, December 24, at 7,000 feet altitude. Purchased in the market.

122176 to 122182. *MORUS* spp. Moraceae. Mulberry.

122176 to 122180. *MORUS ALBA* L. White mulberry.

From Skardo, Baltistan, Kashmir, August 16, at 6,500 feet altitude.

122157 to 122206—Continued

122176. No. 1167—A. *Karpo osse*. A sweet early variety.
122177. No. 1168—A. *Longrifino*.
122178. No. 1169—A. *Shah tut*. A sweet lavender variety.
122179. No. 1170—A. *Narzin osse*.
122180. No. 1171—A. *Gang osse*.
122181. *MORUS NIGRA* L. Black mulberry.
No. 1166—A. A delicious mulberry, sweet and juicy when mature.
- For previous introduction and description see 121453.
122182. *MORUS* sp.
No. 1158. Fruit 1 inch long, sweet, late, very good.
122183. *PHOENIX SYLVESTRIS* (L.) Roxb. Phoenicaceae. India date palm.
No. 2123. Presented by the Calcutta Botanic Garden, Calcutta, January 6, 1937.
122184. *POTENTILLA ATROSANGUINEA* Lodd. Rosaceae.
No. 1513. *Romentok*. From Tinu, Lahul, Punjab, September 16. An ascending or erect perennial, 2 to 3 feet high, growing in clumps and branching from the roots, with silvery digitate leaves and dark crimson, mahogany, or orange flowers three-fourths to over an inch in diameter. Native to the temperate Himalayas at altitudes of 6,000 to 12,000 feet.
- 122185 to 122195. *PRUNUS* spp. Amygdalaceae.
- 122185 and 122186. *PRUNUS ARMENIACA* L. Apricot.
From Shigar, Baltistan, Kashmir, August 16 and 20.
122185. No. 1291. Fruit round, reddish, 1½ inches in diameter; flesh sweet, liquid.
122186. No. 1260. Fruit round, greenish yellow, 1½ inches in diameter; flesh sweet, liquid.
122187. *PRUNUS CERASUS* L. Sour cherry.
No. 1435. From Shigar, Baltistan, Kashmir, August 19. A cherry much like our Montmorency in size, appearance, and taste, but the tree is less bushy.
- 122188 and 122189. *PRUNUS CORNUTA* (Wall.) Steud. Himalayan bird cherry.
A deciduous tree 50 to 60 feet high, native to the Himalayan region up to 10,000 feet altitude. The cylindrical racemes of small white flowers are followed by round red fruits, one-third of an inch in diameter, which become dark purple. Closely allied to *Prunus padus*.
- For previous introduction see 119232.
122188. No. 1564. *Krunn*. From Gunde, Lahul, Punjab, September 1, at 10,500 feet altitude.
122189. No. 1739. *Jamnoo*. From above Bandrole, Kulu, Punjab, November 14, at 10,000 feet altitude. A form of the Lahul *Krunn* and probably less hardy.
122190. *PRUNUS DOMESTICA* L. Common plum.
No. 1290. From Shigar, Baltistan, Kashmir, August 20. Fruit shaped like the German plum, 2 inches long.

122157 to 122206—Continued

- 122191 to 122194. *PRUNUS TOMENTOSA* Thunb. Manchur cherry.
122191. No. 1280. *Shogun*. From Shigar, Baltistan, Kashmir, August 20. An attractive small tree with curling bark; fruit very pale pink, hairy, not so good to eat as the red variety.
122192. No. 1281. *Shogun*. From Shigar, Baltistan, Kashmir, August 20, at 6,500 feet altitude. An attractive tree with curly bark; fruits red, hairy, one-half inch in diameter, pleasant to eat.
122193. No. 1320. *Shogun*. From Kapalu, Baltistan, Kashmir, August 26, at 6,000 feet altitude. An attractive tree with curly bark on trunk and branches; fruit hairy, red, three-fourths of an inch in diameter, pleasant flavor.
122194. No. 1326. *Shogun*. From Kapalu, Baltistan, Kashmir, August 26, at 6,000 feet altitude. Tree small, attractive with curly bark on trunk and branches; fruit very pale pink, edible.
122195. *PRUNUS* sp.
No. 1512. From Tinu, Lahul, Punjab, October 10, at 11,000 feet altitude. A low shrub to 2 feet high, with small red fruits. Found in dry situations; fruits sparingly.
- 122196 to 122201. *RIBES* spp. Grossulariaceae.
122196. *RIBES ORIENTALE* Desf.
No. 1457. *Nyanka*. From the upper Bhaga Valley, Lahul, Punjab, October 8, at 11,000 feet altitude. A well-formed dense shrub up to 5 feet high, found on dry slopes; fruit yellow to orange yellow, sweet, less than half an inch in diameter.
- For previous introduction see 58639.
122197. *RIBES RECLINATUM* L. European gooseberry.
No. 1465. *Pilitse*. From Kolung, Lahul, Punjab, October 10 at 12,000 feet altitude. Bush dense, well formed, up to 6 feet high; fruit orange, hirsute, pleasantly but strongly acid, much like a gooseberry. Used here as we use lemons or oranges.
- 122198 and 122199. *RIBES RUBRUM* L. Currant.
Rasta. A shrub, found usually in damp situations, up to 4 feet tall, fruits one-half inch in diameter, black with purple-red juice, acid.
- For previous introduction see 40478.
122198. No. 1458. From the Upper Bhaga Valley, Lahul, Punjab, at 12,000 feet altitude.
122199. No. 1609. From Pukar, Lahul, Punjab, at 12,000 feet altitude.
122200. *RIBES* sp.
No. 1114. From above Sodpur, Baltistan, Kashmir, August 10, at 12,500 feet altitude. Bush spreading, up to 4 feet high; fruit one-half inch in diameter, reddish black, fragrant; flavor pleasant, but slightly acid; seeds small.

122157 to 122206—Continued

122201. RIBES sp.

No. 1563. *Rupshu*. From Tinu, Lahul, Punjab, October 16, at 10,500 feet altitude. Bush low, to 3½ feet high, found in damp situations; fruit about one-half inch in diameter, greenish; flavor subacid; seeds small.

122202 to 122204. RUBUS spp. Rosaceae.

122202. RUBUS NIVEUS Thunb.

No. 1746. *Sura chlanch*. Purchased from the Director of Agriculture, Kashmir.

122203. RUBUS PURPUREUS Bunge.

No. 1517. *Kantakari*. From Pukar, Lahul, Punjab, September 1, at 12,000 feet altitude. A raspberry about 3 feet high, with usually trifoliate leaves 2 to 4 inches long and red fruits with a pleasant flavor. Native to eastern Asia.

122204. RUBUS sp.

No. 1647. From Jangi, Rampur-Bashahr, July 18 at 9,000 feet altitude.

122205. VITIS VINIFERA L. Vitaceae.
European grape.

No. 1369. From Surmo, Baltistan, Kashmir, August 28, at 9,000 feet altitude. Fruits blackish, elliptical, about 1 inch long, bunches large, 1 foot long; seed coats in most fruits so thin as to give the impression of the fruits being seedless.

122206. VITIS sp. Vitaceae. Grape.

122207 to 122413.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 21, 1937.

This material was all collected in the summer and autumn of 1936.

122207. ACANTHUS sp. Acanthaceae.

No. 3437. From Alma Dag, June 28.

122208. ADONIS sp. Ranunculaceae.

No. 3317. A wild plant from near Ankara, May 18.

122209. ADONIS sp. Ranunculaceae.

No. 3401. From Ankara, June 25. A plant with red, pink, and yellow flowers.

122210. ANCHUSA AZUREA Mill. Boraginaceae.

No. 3397. From Ankara, June 25. Flowers light blue with white center.

122211 to 122214. ALLIUM spp. Liliaceae.

122211. ALLIUM sp.

No. 1568. From 40 km. southeast of Diyarbekir, July 7. Low plants with pink to lavender flowers.

122212. ALLIUM sp.

No. 1584. From 40 km. southeast of Diyarbekir, July 7. Tall plants with large heads of white flowers.

122213. ALLIUM sp.

No. 2984. From the Kutahya bazar, September 28. Grown for the extra large purplish flower heads.

122214. ALLIUM sp.

No. 1249. *Cheragate*. From the Bursa bazar, June 18.

122207 to 122413—Continued

122215. AMARANTHUS sp. Amaranthaceae.

No. 2867. From the sea beach, 1 km. west of Yalova, September 12.

122216. ANCHUSA sp. Boraginaceae.

No. 2265. From 25 km. east of Erzincan, August 9.

122217. ANTHEMIS sp. Asteraceae.

No. 2803. From south of Dyke, at the summit of Ulu Dag, August 9. A small perennial with white flowers.

122218. ANTHEMIS sp. Asteraceae.

No. 2773. From Ulu Dag, 39 km. east of Bursa. A low perennial found growing in clumps. The white flowers appear early.

122219 to 122224. ANTIRRHINUM spp. Scrophulariaceae. Snapdragon.

122219. ANTIRRHINUM sp.

No. 2193. From 95 km. southeast of Susheri, August 7.

122220. ANTIRRHINUM sp.

No. 2628. From 34 km. southwest of Samsun, August 24.

122221. ANTIRRHINUM sp.

No. 595. From the Antalya bazar, June 4.

122222. ANTIRRHINUM sp.

No. 819. From the ruins of Ephesus, May 24. A perennial abundant on the rock walls of the ruins. Flowers deep and light pink, a mixed sample.

122223. ANTIRRHINUM sp.

No. 1135. From the ruins of Ephesus, June 12. A perennial with deep-pink flowers.

122224. ANTIRRHINUM sp.

No. 1137. From the ruins of Ephesus, June 12. A perennial with pale-pink flowers.

122225. AQUILEGIA sp. Ranunculaceae.

No. 611. From the Antalya bazar, June 4.

122226. ARBUTUS ANDRACHNE L. Ericaceae.

No. 3488. From between Haydarpasha and Shile, October 25. An evergreen shrub with large glossy-green leaves and abundant clusters of white or pale-pink flowers in October; fruits bright red, three-fourths to 1 inch in diameter, maturing the following fall. A very attractive shrub, common in the hills and mountains of western Turkey.

For previous introduction see 109035.

122227. ASPARAGUS sp. Convallariaceae.

No. 2656. From 66 km. southeast of Merzifon, August 25. A wild, semi-climbing asparagus with long coarse leaves.

122228. ASPARAGUS sp. Convallariaceae.

No. 2826. From Yalova Kaplijalari, August 11. A prickly, woody variety.

122229. ASTRAGALUS sp. Fabaceae.

No. 1512. From 25 km. east of Gaziantep, July 5.

122207 to 122413—Continued

122230. *BEGONIA SEMPERFLORENS* Link and Otto. Begoniaceae.

No. 1275. From the Bursa bazar, June 18. A low bushy succulent begonia with ovate leaves and few-flowered axillary clusters of white or rose-colored flowers. Native to Brazil.

122231. *BEGONIA TUBEROSA* Lam. Begoniaceae.

No. 1263. From the Bursa bazar, June 18. A herbaceous perennial about 6 inches high, with white flowers. Native to the East Indies.

122232. *BERBERIS* sp. Berberidaceae. **Barberry.**

No. 2316. From 24 km. north of Gemushane, August 10. A large shrub with red fruits.

122233. *BERBERIS* sp. Berberidaceae. **Barberry.**

No. 2414. From 29 km. west of Rize, August 13. A barberry with small red berries in clusters.

122234 to 122236. *BETA VULGARIS* L. Chenopodiaceae. **Common beet.**

122234. No. 2379. From the Trabzon bazar, August 11. Sugar beets.

122235. No. 3240. From the Adapazari bazar, October 20. Sugar beets.

122236. No. 3168. Sugar beets from the Kastamonu bazar, October 14.

122237 to 122247. *CAMPANULA* spp. Campanulaceae.

122237. *CAMPANULA* sp.

No. 1302. Tall bluebells from the hills 30 km. east of Bursa, June 19.

122238. *CAMPANULA* sp.

No. 1755. Bluebells from 30 km. southeast of Elaziz, July 13.

122239. *CAMPANULA* sp.

No. 1078. From Bergama, June 10.

122240. *CAMPANULA* sp.

No. 1117. From near Kirkagach, June 11.

122241. *CAMPANULA* sp.

No. 1141. From walls in the ruins of Ephesus, June 12.

122242. *CAMPANULA* sp.

No. 1269. From the Bursa bazar, June 18.

122243. *CAMPANULA* sp.

No. 2331. From 60 km. south of Trabzon, August 10.

122244. *CAMPANULA* sp.

No. 2382. From 60 km. south of Trabzon, August 10. A variety with very large clusters of beautiful blue flowers.

122245. *CAMPANULA* sp.

No. 2457. From 60 km. south of Trabzon, August 10. A variety with white flowers.

122246. *CAMPANULA* sp.

No. 2473. From 75 km. south of Giresun, August 17. A variety with large clusters of blue flowers.

122207 to 122413—Continued

122247. *CAMPANULA* sp.

No. 2486. From 40 km. south of Giresun, August 18. A large plant with light and dark-blue flowers in clusters.

122248. *MENTHA PULEGIUM* L. Menthaceae.

No. 2815. From Yalova Kaplijalari, September 11. A prostrate, much-branched mint with small oval leaves and dense axillary whorls of small bluish-lilac flowers. Native to Europe and Asia.

122249. *CAMPANULA* sp. Campanulaceae.

No. 2979. From the ruined walls of Ephesus, September 25. A perennial with large pale-blue flowers.

122250. *CENTAUREA* sp. Asteraceae.

No. 3313. From Kechioren, Ankara, May 13.

122251. *CENTAUREA* sp. Asteraceae.

No. 770. From near Denizli, May 31.

122252. *CHENOPODIUM* sp. Chenopodiaceae.

No. 2850. From Yalova Kaplijalari, September 12.

122253. *COCHLEARIA* sp. Brassicaceae.

No. 2443. From the Cilician Gates, July 24.

122254. *CHRYSANTHEMUM CORONARIUM* L. Asteraceae. **Crowndaisy.**

No. 634. From near Koshadasi, May 25. An edible chrysanthemum, the leaves of which are used as a garnish, as flavoring, and also cooked as greens.

For previous introduction see 113325.

122255. *CHRYSANTHEMUM SEGETUM* L. Asteraceae. **Corn-marigold.**

No. 725. From the mountains 30 km. southeast of Mugla, June 28. A wild chrysanthemum with yellow flower heads.

122256. *ANTHEMIS* sp. Asteraceae.

No. 2792. From Uludag at 7,000 feet altitude, September 9. An alpine daisy.

122257 to 122262. *CLEMATIS* spp. Ranunculaceae.

122257. *CLEMATIS* sp.

No. 1185. From the hills 35 km. west of Balikesir, June 16. A variety with purple flowers.

122258. *CLEMATIS* sp.

No. 1297. From 43 km. east of Bursa, June 19.

122259. *CLEMATIS* sp.

No. 1298. From 40 km. east of Bursa, June 19.

122260. *CLEMATIS* sp.

No. 2319. From 76 km. north of Gemushane, August 10.

122261. *CLEMATIS* sp.

No. 2509. From 35 km. east of Ordu, August 19. A blue and purple variety.

122262. *CLEMATIS* sp.

No. 2723. From Urgup, August 28. A variety with yellow flowers.

122263. *CLEOME* sp. Capparidaceae.

No. 2270. From 24 km. east of Erzincan, August 9.

122207 to 122413—Continued

- 122264 to 122266. CONVULVULUS spp. Convolvulaceae.
122264. CONVULVULUS sp.
No. 1509. From 25 km. east of Gasi-antep, July 5. Pink flowers, growing in clumps.
122265. CONVULVULUS HIRSUTUS Stev.
No. 1579. From 5 km. east of Siverek, July 7. A perennial decumbent or climbing bindweed, about 3 feet long, with pinkish or creamy white flowers. Native to Asia Minor.
122266. CONVULVULUS sp.
No. 2298. From 68 km. north of Gemushane, August 10. A herbaceous perennial vine with large white flowers.
122267. CORCHORUS sp. Tiliaceae.
No. 3108. From the Chankiri bazar, October 12.
122268. CORNUS sp. Cornaceae.
No. 2833. From Yalova Kaplijalari, September 11.
122269. CORNUS sp. Cornaceae.
No. 2313. From 75 km. north of Gemushane, August 10.
122270. CRATAEGUS sp. Malaceae.
No. 2472. From 106 km. south of Giresun, August 17.
- 122271 to 122273. DATURA spp. Solanaceae.
122271. DATURA sp.
No. 532. From the Mugla bazar, May 28.
122272. DATURA sp.
No. 600. From the Izmir bazar, May 23.
122273. DATURA METEL FASTUOSA (L.) Safford.
No. 612. From the Antalya bazar, June 4. An ornamental herbaceous annual, common throughout India and the East Indies, which varies in height from 2 to 6 feet. It has entire or deeply-toothed leaves about 4 inches long, and flowers, 7 or more inches in length, varying in color from white to lavender or rose.
- For previous introduction see 110187.
- 122274 to 122279. DELPHINIUM spp. Ranunculaceae. Larkspur.
122274. DELPHINIUM sp.
No. 1743. From the mountains south-east of Elaziz, July 13.
122275. DELPHINIUM sp.
No. 1778. From 35 km. southwest of Elaziz, July 14. Low-growing plants with flowers not borne in spikes.
122276. DELPHINIUM sp.
No. 2005. From 7 km. west of Chiftchane, July 25.
122277. DELPHINIUM sp.
No. 2336. A tall perennial from 50 km. south of Trabzon, August 10.

122207 to 122413—Continued

122278. DELPHINIUM sp.
No. 2450. From 45 km. north of Nigde, July 26.
122279. DELPHINIUM sp.
No. 2693. From 21 km. south of Tokat, August 28.
- 122280 to 122321. DIANTHUS spp. Silenaceae.
122280. DIANTHUS BARBATUS L. Sweet-william.
No. 3032. From the Amasya bazar, October 6.
122281. DIANTHUS sp.
No. 580. From the Izmir bazar, May 23.
122282. DIANTHUS sp.
No. 719. From the Lulum river bed, May 28. A species with white lace petals.
122283. DIANTHUS sp.
No. 769. From Denizli, May 31.
122284. DIANTHUS CARTHUSIANORUM L.
No. 1066. From Bergama, June 10.
122285. DIANTHUS sp.
No. 1084. A small plant from the ruins of Bergama, June 10.
122286. DIANTHUS sp.
No. 1091. From dry slopes 65 km. northwest of Izmir, June 10.
122287. DIANTHUS sp.
No. 1092. From a dry slope 80 km. northwest of Izmir, June 10.
122288. DIANTHUS sp.
No. 1093. A small plant from the ruins at Bergama, June 10.
122289. DIANTHUS sp.
No. 1107. From limestone hills south of Kirkagach, June 11.
122290. DIANTHUS CARTHUSIANORUM L.
No. 1179. From 10 km. west of Balikesir, June 16.
122291. DIANTHUS sp.
No. 1200. From 50 km. west of Balikesir, June 16, on a dry rocky area.
122292. DIANTHUS CARTHUSIANORUM L.
No. 1300. From 17 km. east of Bursa, June 19.
122293. DIANTHUS sp.
No. 1314. From Gemlik Bay, June 20.
122294. DIANTHUS sp.
No. 1452. From 6 km. north of Gaziantep, July 2. A plant with cream-colored, lacy petals.
122295. DIANTHUS sp.
No. 1453. From 31 km. north of Gaziantep, July 2. A species with pink flowers.
122296. DIANTHUS sp.
No. 1635. From 47 km. south of Diyarbekir, July 9.

122207 to 122413—Continued

122297. *DIANTHUS* sp.
No. 1574. From 41 km. southeast of Diyarbekir, July 7.
122298. *DIANTHUS* sp.
No. 1675. From 25 km. east of Diyarbekir, July 10.
122299. *DIANTHUS* sp.
No. 1724. From 32 km. east of Elaziz, July 13.
122300. *DIANTHUS CARTHUSIANORUM* L.
No. 1740. From 28 km. southeast of Elaziz, September 13.
122301. *DIANTHUS* sp.
No. 1963. From Birejik, July 22. A plant with dark-pink flowers.
122302. *DIANTHUS CARTHUSIANORUM* L.
No. 2064. From Alma Dag, 25 km. southeast of Ankara, August 1.
122303. *DIANTHUS* sp.
No. 2097. From Alma Dag, 25 km. southeast of Ankara, August 1.
122304. *DIANTHUS* sp.
No. 2202. From 95 km. southeast of Susheri, August 7.
122305. *DIANTHUS* sp.
No. 2279. From 55 km. east of Erzinjan, August 9. Flowers white, unusually long and graceful, petals deeply fringed.
122306. *DIANTHUS* sp.
No. 2288. From 203 km. east of Erzinjan, August 9. Flowers shell pink with slightly fringed petals.
122307. *DIANTHUS* sp.
No. 2294. From 203 km. east of Erzinjan, August 9. Flowers white, petals slightly fringed.
122308. *DIANTHUS* sp.
No. 2329. From 35 km. north of Gemshane, Aug. 9. Flowers red, borne in clusters.
122309. *DIANTHUS HAEMATOCALYX* Boiss. and Heldr.
No. 2474. From 106 km. south of Giresun, August 17.
122310. *DIANTHUS* sp.
No. 2483. From 97 km. south of Giresun, August 17.
122311. *DIANTHUS* sp.
No. 2492. From 75 km. south of Giresun, August 17.
122312. *DIANTHUS* sp.
No. 2602. From 4 km. west of Sam-sun, August 23.
122313. *DIANTHUS* sp.
No. 2637. From 50 km. southeast of Amasya, August 25.
122314. *DIANTHUS CARTHUSIANORUM* L.
No. 2670. From 16 km. south of Tokat, August 26. Flowers red.
122315. *DIANTHUS CARTHUSIANORUM* L.
No. 2671. From 41 km. south of Tokat, August 26.

122207 to 122413—Continued

122316. *DIANTHUS* sp.
No. 2692. From 21 km. south of Tokat, August 26.
122317. *DIANTHUS* sp.
No. 2747. From Ulu Dag, 35 km. south of Bursa, September 7.
122318. *DIANTHUS CARTHUSIANORUM* L.
No. 2823. From Yalova Kaplijalari, September 11.
122319. *DIANTHUS* sp.
No. 2801. From the summit of Ulu Dag, September 8.
122320. *DIANTHUS CARTHUSIANORUM* L.
No. 2831. From Yalova Kaplijalari, September 11.
122321. *DIANTHUS* sp.
No. 3355. From 35 km. east of Bandirma, June 18.
- 122322 to 122324. *ECHIUUM* spp. Boraginaceae.
122322. *ECHIUUM* sp.
No. 810. From 25 km. north of Antalya, June 3, on a limestone plateau. Flowers light blue.
122323. *ECHIUUM PLANTAGINEUM* L.
No. 679. From near Koshadasi, May 26.
122324. *ECHIUUM* sp.
No. 668. From near Chine, May 26. Flowers pink.
122325. *ERICÁ* sp. Ericaceae.
No. 2756. From Ulu Dag, 35 km. south of Bursa, September 7. A heather found growing by springs.
122326. *ERICA* sp. Ericaceae.
No. 2387. From 16 km. east of Trabzon, August 12.
122327. *FUCHSIA* sp. Onagraceae.
No. 3033-A. From the Amasya bazar.
- 122328 to 122331. *GENTIANA* spp. Gentianaceae. Gentian.
122328. *GENTIANA* sp.
No. 3146. From 25 km. north of Kastamonu, October 13.
122329. *GENTIANA* sp.
No. 2673. From the mountains, 46 km. south of Tokat, August 26.
122330. *GENTIANA* sp.
No. 2487. From 92 km. south of Giresun, August 17. Flowers blue, borne next to ground; found in mountain meadows.
122331. No. 2471. *GENTIANA* sp.
No. 2471. From 50 km. south of Giresun, August 17.
122332. *GLADIOLUS* sp. Iridaceae.
No. 1950. From Birejik, July 22.
- 122333 to 122335. *GYPSOPHILA* spp. Silenaceae.
122333. *GYPSOPHILA* sp.
No. 1870. From 50 km. north of Malatya, July 17.

122207 to 122413—Continued

122334. GYPSOPHILA sp.

No. 1430. *Babysbreath*. From 17 km. north of Gaziantep, July 2.

122335. GYPSOPHILA sp.

No. 2163. *Dwarf babysbreath*. From 49 km. east of Sivas, August 6.

122336. INULA sp. Asteraceae.

No. 2847. From Yalova Kaplijalari, September 11. A freely branching yellow-flowered perennial which blooms in the autumn.

122337. INULA CONYZA DC. Asteraceae.

No. 2864. From Yalova Kaplijalari, September 12. A tall herb with yellow flowers in umbellike clusters.

122338 to 122346. IRIS spp. Iridaceae.

122338. IRIS GATESII Foster.

No. 3376. From the Mission garden, Gaziantep, June 19. Seed from hand-pollinated, isolated plants. An iris native to Asia Minor with 1-flowered stems about 19 inches high. The outer flower segments, 3 to 5 inches across, are creamy white, covered with fine veins, producing a light-gray effect; the inner segments are larger, pale purple or yellow.

122339. IRIS LUPINA Foster.

No. 3365. *Wolf's ear* or *Duluk*. From the Mission garden, Gaziantep, June 19. An *Oncocylus* iris with a fleshy, creeping rhizome and about 6 erect narrow leaves 9 inches or more high. The stem, 6 inches high, bears a single flower with falls and standards greenish yellow marked with brownish-red veins. Native to Asia Minor.

For previous introduction see 106024.

122340. IRIS sp.

No. 627. Found on moist land near Ephesus, May 24. Flowers white.

122341. IRIS sp.

No. 734. From 50 km. southeast of Mugla, May 28, in moist soil. Flowers bright yellow.

122342. IRIS sp.

No. 1142. From a hillside near Ephesus, June 12.

122343. IRIS sp.

No. 2267. From 50 km. east of Erzincan, August 9.

122344. IRIS sp.

No. 2407. From 29 km. west of Rize, August 13.

122345. IRIS sp.

No. 2431. From 25 km. east of Ordu, August 19.

122346. IRIS sp.

No. 3105. From 15 km. north of Kalejik, October 12.

122347. LEPIDIUM SATIVUM L. Brassicaceae. Garden cress.

No. 585. From the Antalya bazar, June 4.

122348. LIMONIUM sp. Plumbaginaceae.

No. 2980. From Ephesus, September 25. Flowers blue.

122207 to 122413—Continued

122349. LINUM sp. Linaceae.

No. 635. From near Koshadasi, May 25. Wild flax.

122350. FUMANA sp. Cistaceae.

No. 641. From 25 km. southeast of Izmir, May 25. A perennial flaxlike rock plant related to *Helianthemum*, with yellow flowers.

122351 to 122360. LINUM spp. Linaceae. Flax.

122351. LINUM sp.

No. 647. Wild flax from the roadside 20 km. south of Izmir, May 25.

122352. LINUM sp.

No. 728. Wild flax from 60 km. south-east of Mugla, June 28.

122353. LINUM sp.

No. 732. From the Lulum Valley, May 28.

122354. LINUM sp.

No. 1098. Wild flax from Kirkagach, June 11.

122355. LINUM sp.

No. 1111. Wild flax from the road 20 km. east of Kirkagach, June 11.

122356. LINUM sp.

No. 1191. Wild flax from 85 km. west of Balikesir, June 16.

122357. LINUM sp.

No. 1203. Wild flax from 10 km. west of Balikesir, June 16.

122358. LINUM PUBESCENS Russ.

No. 1414. From bottom land, 48 km. north of Gaziantep, July 2. An annual flax 1 to 1½ feet high with oblong or oblong lanceolate leaves and pink flowers in cymes with spikelike branches. The handsome fragrant blossoms do not drop during the day. Native to Asia Minor.

122359. LINUM sp.

No. 1418. A perennial flax with yellow flowers, from dry lands 6 km. north of Gaziantep, July 2.

122360. LINUM sp.

No. 1674. A perennial flax with blue flowers, from 25 km. east of Diyarbekir, July 10.

122361. LITHOSPERMUM sp. Boraginaceae.

No. 1501. From 5 km. southeast of Gaziantep, July 4. A dry-land plant with gray foliage, found among limestone rocks.

122362 to 122365. LINUM spp. Linaceae. Flax.

122362. LINUM sp.

No. 2412. From 32 km. west of Rize, August 13. A flax with yellow miniature flowers.

122363. LINUM PERENNE L.

No. 2582. Wild flax from 20 km. west of Samsun, August 23.

122364. LINUM sp.

No. 2589. From 4 km. west of Samsun, August 23. A flax with yellow flowers, very attractive but very small.

122207 to 122413—Continued

122365. *LINUM* sp.
No. 2655. From 24 km. southeast of Merzifon, August 25.
122366. *LITHOSPERMUM* sp. Boraginaceae.
No. 1753. From 25 km. southeast of Elaziz, July 13. An attractive rock plant with nodding inflorescence.
122367. *LYCHNIS* sp. Silenaceae.
No. 3407. From a dry rocky slope, 3 km. northeast of Ankara, June 26.
122368. *MIMOSA PUDICA* L. Mimosaceae. Sensitiveplant.
No. 1276. *Kusen*. From the Bursa bazar, June 18.
122369. *MUSCARI* sp. Liliaceae. Grape-hyacinth.
No. 1132. From Kirkagach, June 11.
122370. *NERIUM OLEANDER* L. Apocynaceae. Oleander.
No. 2726. From Talas, but the seed was originally collected in the Taurus Mountains back of Antalya. A mixed sample from trees with red and white flowers.
For previous introduction see 109529.
122371. *NERIUM OLEANDER* L. Apocynaceae. Oleander.
No. 2947. From 5 km. north of Kemal Pasha, September 23.
122372. *PICEA* sp. Pinaceae. Spruce.
No. 2422. From 70 km. south of Giresun, August 17.
- 122373 to 122375. *RHAMNUS PETIOLARIS* Boiss. Rhamnaceae.
A spreading shrub or small tree 6 to 12 feet high, with fruits used as a yellow dye. Native to Asia Minor.
122373. No. 2921. From Gaziantep, but collected at the Izmir Fair, September 22.
122374. No. 2920. From Marash, but collected at the Izmir Fair, September 22.
122375. No. 1260. From the Bursa bazar, June 18.
122376. *RHODODENDRON* sp. Ericaceae.
No. 2616. From 30 km. southwest of Samsun, August 24.
122377. *RUMEX* sp. Polygonaceae.
No. 681. Found in pine woods on the road to Milas, June 26.
122378. *RUMEX* sp. Polygonaceae.
No. 1652. From 70 km. south of Diyarbekir, July 9; seeds boiled and the extract used as a dye.
122379. *SALVIA* sp. Menthaceae. Mint.
No. 3490-B. From Eskishehir.
122380. *SALVIA* sp. Menthaceae. Mint.
No. 1103. From Kirkagach, June 9.
122381. *SCABIOSA* sp. Dipsacaceae.
No. 3385. From Ankara, June 25. Occurs as a weed in all parts of Turkey.
122382. *SECALE CEREALE* L. Poaceae. Rye.
No. 2882. From Chanak Kale bazar, September 18.

122207 to 122413—Continued

- 122383 to 122390. *SILENE* spp. Silenaceae.
122383. *SILENE LATIFOLIA* (Mill.) Britten and Rendle.
No. 677. *Campion*. On the road to Milas, June 26.
122384. *SILENE* sp.
No. 1673. *Campion*. From 16 km. east of Diyarbekir, July 10.
122385. *SILENE* sp.
No. 2863. *Campion*. From the sea beach 1 km. west of Yalova, September 12.
122386. *SILENE* sp.
No. 1274. *Kayakurogi*. From the Bursa bazar, June 18.
122387. *SILENE* sp.
No. 1469. From 45 km. north of Gaziantep, July 3.
122388. *SILENE ARMERIA* L.
No. 2406. From 50 km. east of Trabzon, August 13.
122389. *SILENE ARMERIA* L.
No. 3348. From limestone cliffs 65 km. west of Balikesir, June 16. Flowers deep red, in large clusters.
122390. *SILENE* sp.
No. 1183. From hills 10 km. west of Balikesir, June 16.
122391. *LYCHNIS ALBA* Mill. Silenaceae.
No. 1301. From 43 km. east of Bursa, June 19. Flowers yellow.
- 122392 to 122394. *SILENE* spp. Silenaceae.
122392. *SILENE* sp.
No. 1756. From 39 km. southeast of Elaziz, July 13.
122393. *SILENE SEDOIDES* Poir.
No. 1783. From 52 km. southwest of Elaziz, July 14. A branching annual about 1 foot high, with fleshy oblong to oblong-spatulate leaves and reddish flowers in racemes. Native to the Mediterranean region.
122394. *SILENE* sp.
No. 1786. From 35 km. southwest of Elaziz, July 14. A low-growing plant with purplish flowers.
- 122395 to 122400. *SORGHUM VULGARE* Pers. Poaceae. Sorghum.
122395. No. 2941. *Urfa milo*. From the Izmir Fair, September 22.
122396. No. 540. From the Mugla bazar, May 28.
122397. No. 3017. From the Kutahya bazar, September 28.
122398. No. 2612. From 5 km. west of Samsun, August 23, where it is planted along the borders of corn fields.
122399. No. 3165. From the Kastamonu bazar, October 14.
122400. No. 1622. *Durra*. From the Diyarbekir bazar, July 8.

122207 to 122413—Continued

122401. *SPARTIUM JUNCEUM* L. Fabaceae. Spanish broom.
No. 2558. *Scotch broom*. From 4 km. east of Samsun, August 22.
122402. *SWERTIA* sp. Gentianaceae.
No. 2789. From Ulu Dag, 35 km. south of Bursa, September 9. A low plant found near springs on the mountain slope.
122403. *ANCHUSA* sp. Boraginaceae.
No. 3442. From Alma Dag, June 28.
- 122404 and 122405. *TRIGONOCARYUM INVOLUCRATUM* (Stev.) Johnst. Boraginaceae.
A low annual related to the forget-me-not, with white or blue flowers. Native to the Caucasus region at altitudes of 4,000 to 9,000 feet.
122404. No. 615. From Ephesus, May 28. Flowers deep blue with white center.
122405. No. 3320. From Ankara, May 20. Flowers deep blue with white center.
122406. *TRIGONELLA FOENUM-GRÆCUM* L. Fabaceae. Fenugreek.
No. 3173. From the Kastamonu bazar, October 14. Used for flavoring meat.
122407. *VERBASCUM LYCHNITIS* L. Scrophulariaceae. Mullein.
No. 2290. From 143 km. east of Erzincan, August 9. A tomentose biennial with oblong-elliptic, crenate leaves and panicles of small yellow flowers.
For previous introduction see 106534.
- 122408 to 122412. *VIOLA* spp. Violaceae. Violet.
122408. No. 2736. From near the old baths, 14 km. west of Yalova, September 6. A plant with a climbing habit.
122409. No. 743. From the mountains 11 km. south of Denizli, May 30.
122410. No. 745. From the mountains 11 km. south of Denizli, May 30.
122411. No. 1309. From 25 km. north-east of Bursa, June 19.
122412. No. 2781. From Ulu Dag, 36 km. south of Bursa, September 8.
122413. (Undetermined.)
No. 1369. *Camion*. From the Marash bazar, July 2. Used to flavor meat.
- 122414 and 122415. *PHASEOLUS VULGARIS* L. Fabaceae. Common bean.
From Australia. Seeds from the Hawkesbury Agricultural College, presented through Dr. H. Wenholtz, Director of Plant Breeding, Department of Agriculture, Sydney, New South Wales. Received March 11, 1937.
122414. *Canadian Wonder*, Burnley selection.
122415. *Pale Dun*.
- 122416 to 122418.
- From the Union of South Africa. Bulbs purchased from the Winton Nurseries, Bonnie Vale, Cape Province. Received March 19, 1937.
122416. *ACIDANTHERA CAPEENSIS* (Ker.) Benth. and Hook. Iridaceae.

122416 to 122418—Continued

- A South African bulbous plant resembling gladiolus, with numerous linear sword-shaped leaves about 1 foot long and spikes of pinkish-blue flowers on stems about 18 inches high.
122417. *BUPHANE CILIARIS* (L.) Herbert. Amaryllidaceae.
The creamy yellow flower stalks of this remarkable plant appear before the leaves and bear 50 to 100 flowers, chocolate purple with a pinkish flush, in a spherical umbel. The thick broad, strap-shaped leaves appear later. Native to South Africa.
For previous introduction see 61246.
122418. *GLADIOLUS ALATUS* L. Iridaceae.
For previous introduction and description see 119274.
- 122419 to 122427.
- From England. Plants purchased from Laxton Bros. Bedford Ltd., Bedford. Received March 19, 1937.
- 122419 to 122421. *FRAGARIA* spp. Rosaceae. Strawberry.
122419. *King George V* (Laxton).
122420. *Oberschlesien*.
122421. *Royal Sovereign* (Laxton).
- 122422 to 122427. *RUBUS* spp. Rosaceae.
122422. *Bedford Giant*, a new blackberry.
122423. *Bountiful*. A raspberry.
122424. *Renown*, a new raspberry.
122425. *Reward*, a new raspberry.
122426. *Red cross* raspberry.
122427. *Pyne's Royal* raspberry.
- 122428 to 122440. *SACCHARUM*. Poaceae. Sugarcane.
- From India. Cuttings presented by the Department of Agriculture, Bangalore, Mysore. Received March 20, 1937.
122428. No. H. M. 14.
122429. No. H. M. 320.
122430. No. H. M. 487.
122431. No. H. M. 544.
122432. No. H. M. 603.
122433. No. H. M. 606.
122434. No. H. M. 607.
122435. No. H. M. 608.
122436. No. H. M. 613.
122437. No. H. M. 619.
122438. No. H. M. 627.
122439. No. H. M. 629.
122440. *Ashy Mauritius*.
- 122441 to 122583.
- From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 22, 1937.
- This material was all collected in the summer and autumn of 1936.
122441. *ACANTHUS* sp. Acanthaceae.
No. 2085. From Alma Dag, August 1.

122441 to 122583—Continued

- 122442 to 122454. *ALTHAEA* spp. Malvaceae.
- 122442 and 122443. *ALTHAEA OFFICINALIS* L. Marshmallow.
122442. No. 716. From the mountains 25 km. southeast of Mugla, May 28.
122443. No. 722. From near Lake Gulguas, May 28.
- 122444 to 122454. *ALTHAEA ROSEA* (L.) Cav. Hollyhock.
122444. No. 562. From the Izmir bazar, May 23.
122445. No. 601. From the Antalya bazar, June 4.
122446. No. 609. From the Antalya bazar, June 4.
122447. No. 631. From Ephesus, May 24.
122448. No. 1064. From the Bergama ruins, June 30.
122449. No. 1505. From 22 km. southeast of Gaziantep, July 4. Flowers blue.
122450. No. 1773. From 9 km. southwest of Elaziz, July 14. Flowers white.
122451. No. 1415. From 15 km. south of Marash, July 2. Flowers white.
122452. No. 1866. From 22 km. west of Malatya, July 16. A hollyhock of recumbent habit with very deeply lobed leaves; flowers white.
122453. No. 1919. From Birejik, July 22. Plant 11 to 13 feet high; flowers pink.
122454. No. 1735. From the mountains 25 km. southeast of Elaziz, July 13. Plant recumbent; flowers white.
122455. *MALVA* sp. Malvaceae.
- No. 813. From Antalya, June 4. Growing on rocks.
- 122456 to 122458. *CISTUS* spp. Cistaceae.
122456. *CISTUS* sp.
- No. 718. From 10 km. southeast of Mugla, May 28. A shrub with white flowers, common on dry rocky soil.
122457. *CISTUS VILLOSUS CORSICUS* (Loisel.) Grosser.
- No. 2841. From Yalova Kaplijalari, September 11.
122458. *CISTUS* sp.
- No. 2863. From Yalova Kaplijalari, September 12. A perennial with pink flowers; occurs in many of the mountainous parts of Turkey.
- 122459 to 122475. *DELPHINIUM* spp. Ranunculaceae.
122459. *DELPHINIUM AJACIS* L.
- No. 1138. From Ephesus, June 12. Flowers light blue.
122460. *DELPHINIUM* sp.
- No. 1408. From 20 km. north of Gaziantep, July 2.
122461. *DELPHINIUM* sp.
- No. 1426. From 20 km. north of Gaziantep, July 2.

122441 to 122583—Continued

122462. *DELPHINIUM* sp.
- No. 1805. From 52 km. southwest of Elaziz, July 14. Flowers small, dark blue.
122463. *DELPHINIUM* sp.
- No. 1849. From 15 km. west of Malatya, July 16.
122464. *DELPHINIUM AJACIS* L.
- No. 1972. From Birejik, July 23. Common annual; flowers pink.
122465. *DELPHINIUM* sp.
- No. 1971. From Birejik, July 23. Flowers bronze, not a common type.
122466. *DELPHINIUM AJACIS* L.
- No. 1995. From Ulukishla, July 25.
122467. *DELPHINIUM* sp.
- No. 2072. From Alma Dag, June 29. Flowers purple.
122468. *DELPHINIUM* sp.
- No. 2167. From 49 km. east of Sivas, August 6.
122469. *DELPHINIUM* sp.
- No. 2190. From 30 km. northwest of Erzinjan, August 7.
122470. *DELPHINIUM AJACIS* L.
- No. 2449. From Ulukishla, July 25.
122471. *DELPHINIUM* sp.
- No. 2644. From 94 km. southeast of Merzifon, August 25.
122472. *DELPHINIUM* sp.
- No. 3316. From near Ankara, May 18; flowers dark purple.
122473. *DELPHINIUM* sp.
- No. 3337. From 80 km. north of Antalya, June 6. An annual larkspur.
122474. *DELPHINIUM* sp.
- No. 3389. From 2 km. southwest of Ankara, June 25; flowers deep purple.
122475. *DELPHINIUM* sp.
- No. 3395. From 3 km. southwest of Ankara, June 24; flowers blue.
122476. *GERANIUM* sp. Geraniaceae.
- No. 2314. From 64 km. north of Gemushane, August 10; plants tall; flowers large, brilliant dark red, cup-shaped with black centers.
- 122477 to 122491. *GLAUCIUM* spp. Papaveraceae.
122477. *GLAUCIUM* sp.
- No. 766. From near Isparta, June 2; flowers orange colored; pods long and slim.
122478. *GLAUCIUM* sp.
- No. 815. From rocks near Antalya, June 4; flowers flame colored; pods long, slender, smooth.
122479. *GLAUCIUM* sp.
- No. 1067. From 10 km. west of Soma, June 10; flowers orange; pods long and slender.

122441 to 122583—Continued

122480. *GLAUCIUM* sp.
No. 1119. From Akhisar, June 11; flowers orange and yellow; pods long and smooth.
122481. *GLAUCIUM* sp.
No. 1163. From near Edremit, June 16. Flowers light yellow.
122482. *GLAUCIUM* sp.
No. 1291. From 45 km. east of Bandirma, June 18; flowers flame colored with dark centers.
122483. *GLAUCIUM* sp.
No. 1508. From 20 km. east of Gaziantep, July 5.
122484. *GLAUCIUM* sp.
No. 1983. From Birejik, July 24.
122485. *GLAUCIUM* sp.
No. 1985. From Birejik, July 24.
122486. *GLAUCIUM CORNICULATUM* (L.) Curt.
No. 2000. From 25 km. southeast of Ulukishla, July 25. A hardy annual about 2 feet high, with pinnatifid leaves and medium large, scarlet flowers. Native to the Mediterranean region.
122487. *GLAUCIUM* sp.
No. 2017. From 9 to 25 km. north of Nigde, July 26; flowers orange.
122488. *GLAUCIUM* sp.
No. 2164. From 59 km. east of Sivas, August 6.
122489. *GLAUCIUM* sp.
No. 2874. From 1 km. west of Yalova on the sea beach, September 12; a perennial, flowers yellow.
122490. *GLAUCIUM* sp.
No. 3319. From near Ankara, May 18.
122491. *GLAUCIUM* sp.
No. 3402. From Ankara, June 25. Flowers orange yellow, pods long and slender.
- 122492 to 122504. *HYPERICUM* spp. Hypericaceae. St. Johnswort.
122492. *HYPERICUM* sp.
No. 1466. From 45 km. north of Gaziantep, July 3.
122493. *HYPERICUM* sp.
No. 1572. From 30 km. northeast of Urfa, July 7.
122494. *HYPERICUM* sp.
No. 1725. From 32 km. east of Elaziz; plant of medium height; flowers in umbellike clusters.
122495. *HYPERICUM* sp.
No. 1941. From Birejik, July 12.
122496. *HYPERICUM* sp.
No. 2285. From 55 km. east of Erzincan, August 9.
122497. *HYPERICUM* sp.
No. 2737. From near the old baths, 14 km. west of Yalova, September 6.

122441 to 122583—Continued

122498. *HYPERICUM* sp.
No. 2763. From Ulu Dag, 11 km. south of Bursa, September 7. Flowers large, yellow; seed capsule long.
122499. *HYPERICUM CALYCIUM* L.
No. 2729. From Yalova Kaplijalari, September 6.
122500. *HYPERICUM CALYCIUM* L.
No. 2764. From Ulu Dag, 16 km. south of Bursa, September 7. Large yellow flowers, borne singly.
122501. *HYPERICUM* sp.
No. 2774. From Ulu Dag, 35 km. south of Bursa, September 8.
122502. *HYPERICUM* sp.
No. 2904. From the ruins of Blagden's site of Troy, September 18. Plants 12 to 18 inches high; flowers medium size.
122503. *HYPERICUM* sp.
No. 2905. From the ruins of the old city of Troy, September 18. Plant about 4 inches high, spreading; flowers small.
122504. *HYPERICUM CALYCIUM* L.
No. 2806. From Ulu Dag, 35 km. south of Bursa, September 10; an ornamental shrub.
- 122505 to 122507. *IPOMOEA* spp. Convolvulaceae.
122505. *IPOMOEA* sp.
No. 602. From the Antalya bazar, June 4.
122506. *IPOMOEA* sp.
No. 2548. From the Samsun bazar, August 25.
122507. *IPOMOEA* sp.
No. 3268. From the Adapazari bazar, October 20.
122508. *AGROSTEMMA GITHAGO* L. Silenaceae.
No. 1282. From 70 km. west of Bursa, June 18.
122509. *LYCHNIS* sp. Silenaceae.
No. 1785. From 35 km. southwest of Elaziz, July 14. An ornamental.
122510. *MALOPE* sp. Malvaceae. Mallow.
No. 642. From near Aydin, May 25.
122511. *MALOPE* sp. Malvaceae. Mallow.
No. 1289. From 25 km. east of Bandirma, June 18. An annual mallow.
122512. *LAVATERA THURINGIACA* L. Malvaceae. Treemallow.
No. 2566. From 9 km. east of Samsun, August 22. A herbaceous perennial or winter annual about 4 feet high, with magenta flowers. Native to southern Europe.
122513. *MALOPE* sp. Malvaceae. Mallow.
No. 669. From the road between Aydin and Milas, May 26. Flowers large, deep pink.
122514. *MALVA SYLVESTRIS* L. Malvaceae. Mallow.
No. 622. From Ephesus, May 24.

122441 to 122583—Continued

122515 and 122516. *ALTHAEA HIRSUTA* L.
Malvaceae.

A hardy annual about 1 foot high, with obliquely lobed to palmatifid leaves and solitary white flowers. Native to the Mediterranean region.

122515. No. 650. From 20 km. south of Izmir, May 25.

122516. No. 676. On the road to Milas, May 26.

122517. *MALVA* sp. Malvaceae. Mallow.

No. 2653. From 123 km. southeast of Merzifon, August 25.

122518. *MALVA SYLVESTRIS* INCANESCENS Griseb. Malvaceae. Mallow.

No. 2353. From the Trabzon bazar, August 11.

122519. *MECONOPSIS* sp. Papaveraceae.

No. 2276. From 55 km. east of Erzincan, August 9. A low, profusely branching plant with orange flowers.

122520. *MYOSOTIS* sp. Boraginaceae.
Forget-me-not.

No. 788. From 25 km. west of Isparta, June 2.

122521. *MYOSOTIS* sp. Boraginaceae.
Forget-me-not.

No. 703. On the road between Milas and Mugla, May 27.

122522 to 122526. *NIGELLA* spp. Ranunculaceae.
Love-in-a-mist.

122522. *NIGELLA* sp.

No. 1801. From 45 km. southwest of Elaziz, July 14.

122523. *NIGELLA* sp.

No. 1867. From 16 km. west of Malatya, July 16. Flowers whitish and cream colored.

122524. *NIGELLA* sp.

No. 1868. From 16 km. west of Malatya, July 16.

122525. *NIGELLA* sp.

No. 1996. From Ulukishala, July 25; flowers yellow.

122526. *NIGELLA* sp.

No. 2650. From 25 km. southeast of Merzifon, August 25.

122527 to 122530. *PAEONIA* spp. Ranunculaceae.
Peony.

122527. *PAEONIA* sp.

No. 1918. From a mountain slope near Birejik, July 21. A wild peony.

122528. *PAEONIA* sp.

No. 2327. From 46 km. north of Gemushane, August 10.

122529. *PAEONIA* sp.

No. 2559. From 16 km. east of Sam-sun, August 22. A wild peony.

122530. *PAEONIA* sp.

No. 2588. From 30 km. west of Sam-sun, August 23.

122441 to 122583—Continued

122531 to 122542. *PAPAVER* spp. Papaveraceae.
Poppy.

122531. *PAPAVER MACROSTOMUM* Boiss. and Huet.

No. 648. From 20 km. south of Izmir, May 25.

122532. *PAPAVER RHOEAS* L.

No. 619. From Ephesus, May 24. Flowers red.

122533. *PAPAVER* sp.

No. 758. From 15 km. south of Denizli, May 20. Flowers orange colored.

122534. *PAPAVER* sp.

No. 782. From 17 km. west of Isparta, June 2. Flowers purple.

122535. *PAPAVER* sp.

No. 786. From 15 km. west of Isparta, June 2. Flowers pink and black.

122536. *PAPAVER* sp.

No. 803. En route from Isparta to Antalya, June 3. Flowers pink.

122537. *PAPAVER* sp.

No. 1846. From 12 km. west of Malatya, July 16.

122538. *PAPAVER* sp.

No. 1925. From Birejik, July 21.

122539. *PAPAVER* sp.

No. 2194. From 102 km. southeast of Susheri, August 7. A profusely branching perennial; flowers small, red.

122540. *PAPAVER SOMNIFERUM* L.

No. 3325. From Ankara, May 20. Flowers small, red.

122541. *PAPAVER* sp.

No. 3226. From Ankara, May 20. Flowers black.

122542. *PAPAVER* sp.

No. 3435. From Alma Dag, June 28.

122543. *POINSETTIA* sp. Euphorbiaceae.

No. 2968. From near Izmir, September 24; leaves orange and green.

122544. *PORTULACA* sp. Portulacaceae.

No. 602. From the Izmir bazar, May 23.

122545. *PRIMULA* sp. Primulaceae.
Primrose.

No. 2311. From 53 km. north of Gemushane, August 19.

122546 to 122574. *ROSA* spp. Rosaceae.
Rose.

122546. *ROSA* sp.

No. 1464. From 30 km. northwest of Gaziantep, July 3; flowers yellow, a wild rose.

122547. *ROSA* sp.

No. 729. A wild rose from near Mugla, May 28.

122548. *ROSA* sp.

No. 1407. A wild rose from 15 km. north of Gaziantep, July 2.

122441 to 122583—Continued

122549. *ROSA* sp.
No. 1909. From mountains 35 km. southeast of Elaziz, July 13.
122550. *ROSA* sp.
No. 1913. A wild yellow rose from 60 km. north of Malatya, July 17.
122551. *ROSA* sp.
No. 1967. A dwarf wild rose from Birejik, July 22.
122552. *ROSA* sp.
No. 2209. From 100 km. southeast of Susheri, August 7.
122553. *ROSA* sp.
No. 2175. A wild rose from 84 km. east of Sivas, August 6.
122554. *ROSA* sp.
No. 2173. From 84 km. east of Sivas, August 6.
122555. *ROSA* sp.
No. 2174. From 59 km. east of Sivas, August 6.
122556. *ROSA* sp.
No. 2263. From 70 km. east of Erzincan, August 9. A wild rose with large red fruits.
122557. *ROSA* sp.
No. 2458-A. From 34 km. east of Trabzon, August 12.
122558. *ROSA* sp.
No. 2459-B. From 34 km. east of Trabzon, August 12.
122559. *ROSA* sp.
No. 2461. From 34 km. east of Trabzon, August 12.
122560. *ROSA* sp.
No. 2462. From 29 km. west of Rize, August 13.
122561. *ROSA* sp.
No. 2463. From 29 km. west of Rize, August 13.
122562. *ROSA* sp.
No. 2563. From 5 km. east of Samsun, August 22.
122563. *ROSA* sp.
No. 2659. From 66 km. southeast of Merzifon, August 25.
122564. *ROSA* sp.
No. 2749. From Ulu Dag, 35 km. south of Bursa. September 7. Large deep-red fruits, somewhat spiny.
122565. *ROSA* sp.
No. 2765. From Ulu Dag, 16 km. south of Bursa, September 7.
122566. *ROSA* sp.
No. 2778. From Ulu Dag, 35 km. south of Bursa, September 8.
122567. *ROSA* sp.
No. 2785. From Ulu Dag, 37 km. south of Bursa, September 8.

122441 to 122583—Continued

122568. *ROSA* sp.
No. 2790. From Ulu Dag at 6,500 feet altitude, 35 km. south of Bursa, September 9.
122569. *ROSA* sp.
No. 2844. From Yalova Kaplijalar, September 11.
122570. *ROSA* sp.
No. 2845. From Yalova Kaplijalari, September 11; growing in partial shade.
122571. *ROSA* sp.
No. 2862. From Yalova Kaplijalari, September 12; growing in an exposed area.
122572. *ROSA* sp.
No. 3469. From 25 km. north of Chankiri, October 12.
122573. *ROSA* sp.
No. 3470. From 25 km. north of Chankiri, October 12.
122574. *ROSA* sp.
No. 3478. From 10 km. south of Inebolu, October 14.
- 122575 to 122578. *RUMEX* spp. Polygonaceae.
122575. *RUMEX* sp.
No. 2161. From 84 km. east of Sivas, August 6.
122576. *RUMEX* sp.
No. 2191. From 115 km. southeast of Susheri, August 7. Apparently an annual with a single short fruiting stalk.
122577. *RUMEX* sp.
No. 2142. From the Sivas bazar, August 5; used for medicine.
122578. *RUMEX* sp.
No. 2207. From 95 km. southeast of Susheri, August 7. An edible plant, also used as medicine.
122579. *TAGETES* sp. Asteraceae. Marigold.
No. 2222. From the Erzincan bazar, August 8.
- 122580 to 122583. *TEUCRIUM* spp. Mentha-ceae. Germander.
122580. *TEUCRIUM* sp.
No. 2168. From 84 km. east of Sivas, August 6. A perennial; flowers light blue with white streaks.
122581. *TEUCRIUM* sp.
No. 2500. From 128 km. southwest of Shebinkarahisar, August 18. A perennial with blue flowers.
122582. *TEUCRIUM* sp.
No. 1586. From 30 km. northeast of Urfa, July 7.
122583. *TEUCRIUM* sp.
No. 2010. From 9 km. north of Nigde, July 26. A perennial.

122584 and 122585. RUBUS spp. Rosaceae.

From England. Plants purchased from George Pyne, Denver Nurseries, Topsham, Devon. Received March 22, 1937.

122584. RUBUS sp.

Pyne's Imperial Raspberry, No. 22297.

122585. RUBUS sp.

Shirley Prolific Blackberry.

122586 to 122595.

From China. Seeds presented by Dr. Albert N. Steward, Department of Botany, College of Agriculture and Forestry, Nanking University, Nanking. Received February 24, 1937.

Seeds and fruits collected at Men Shan, Shantung Province, during the season of 1936.

122586. ARONIA sp. Malaceae.

No. 85. A shrub 5 feet high covered with red fruits. Used medicinally.

122587. CRATAEGUS sp. Malaceae.

No. 96.

122588. EUONYMUS sp. Celastraceae.

No. 100.

122589. GLEDITSIA MACRACANTHA Desf. Caesalpiniaceae. Honeylocust.

No. 94. A tree with large spines, closely related to *Gleditsia sinensis*.

For previous introduction see 33165.

122590. PINUS MASSONIANA Lambert. Pinaceae.

No. 88. A tall tree up to 80 feet high, with spreading branches and yellowish-brown branchlets. The thin slender light-green leaves, in pairs, are 5 to 8 inches long, and the dull-brown, ovate cones are 3 to 5 inches long. Native to southeast China, and closely related to *Pinus densiflora*.

For previous introduction see 91790.

122591. PYRUS sp. Malaceae.

No. 95.

122592. RUBUS sp. Rosaceae.

No. 3. A vine with sweet edible red fruits.

122593. VITIS sp. Vitaceae.

No. 2. A woody vine with dark-purple edible fruits.

122594. ZANTHOXYLUM sp. Rutaceae.

No. 1. A shrub, cultivated at the hill-foot for the seed coat which is used as a stimulant.

122595. ZIZIPHUS sp. Rhamnaceae.

No. 98.

122596 to 122607.

From France. Plants and scions purchased from Paul Lecolier, La Celle, St. Cloud. Received March 25, 1937.

122596. AMYGDALUS PERSICA L. Amygdalaceae. Peach.

Malta. Received as plants.

122596 to 122607—Continued

122597 to 122605. MALUS SYLVESTRIS Mill. Malaceae. Apple.

Received as scions.

122597. *Belle Fille*.

122598. *Binet Blanc*.

122599. *Binet Rouge*.

122600. *Bramtot*.

122601. *Gendreville*.

122602. *Court Pendu Rouge*.

122603. *Cramoisie de Gascogne*.

122604. *Grise Dieppoise*.

122605. *Reinette Franche*.

122606 and 122607. PYRUS COMMUNIS L. Malaceae. Common pear.

Received as plants.

122606. *Beurre Dumont*.

122607. *Louis Pasteur*.

122608 to 122614.

From India. Bulbs collected by Walter Koelz, Bureau of Plant Industry. Received March 25, 1937.

122608 to 122613. ALLIUM spp. Liliaceae.

122608. ALLIUM CEPA L. Onion.

No. 2304. From Bangalore, Mysore, February 9, 1937. A common type of onion grown in the south of India. Considered of better flavor than the large ones.

122609 to 122613. ALLIUM SATIVUM L. Garlic.

Nos. 122609 to 122611. *Lassan*. From Madras, February 6, 1937.

122609. No. 2234.

122610. No. 2235.

122611. No. 2236.

122612. No. 2249. *Tellagada*. From Bangalore, Mysore, February 8, 1937. Locally grown.

122613. No. 2233. *Lassan*. From Madras, February 6, 1937. Said to have been introduced from Italy.

122614. SOLANUM TUBEROSUM L. Solanaceae.

No. 2312. *Riekot* potato. From Bangalore, Mysore, February 9, 1937. Said to be a descendant of potatoes introduced into India about 50 years ago.

122615 to 122629.

From France. Plants purchased from F. Delaunay, Angers, Maine et Loire. Received March 25, 1937.

122615 to 122621. MALUS SYLVESTRIS Mill. Malaceae. Apple.

122615. *Calville D'août*.

122616. *Doux-amer*.

122617. *Fertile de Doué*.

122618. *Gros Bois de Doudeville*.

122619. *Pomme D'or*.

122620. *Pres. Descours-Desacres*.

122621. *Souvenir du Marais*.

122615 to 122629—Continued

- 122622 to 122628. *PYRUS COMMUNIS* L.
Malaceae. Common pear.
122622. *Beau Present d'Artois*.
122623. *Beurré des Enfants Nantais*.
122624. *Bon Chrétien Antoine Lorimer*.
122625. *Duc de Bordeaux*.
122626. *Francois Coppée*.
122627. *Prof. Lemoine*.
122628. *Williams d'Angers*.
122629. *RIBES* sp. Grossulariaceae.
Prolifique du Grand Jardin.

122630 to 122742.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 25, 1937.

This material was all collected in the summer and autumn of 1936.

122630. *ABIES* sp. Pinaceae. Fir.
No. 2925. From Ulu Dag, September 7.
122631. *ATRIPLEX HORTENSIS* L. Chenopodiaceae. Garden orach.
No. 613. From the Izmir bazar, May 23.

For previous introduction see 105936.

122632. *ATRIPLEX* sp. Chenopodiaceae.
No. 3102. From a garden in Yozgat, October 9.
122633. *BOREAVA ORIENTALIS* Jaub. and Spach. Brassicaceae.
No. 3386. From dry plains, 4 km. southwest of Ankara, June 25. An annual herb about 1 foot high, with small oblong leaves and pale-yellow flowers. Native to Asia Minor.
122634. *CEPHALARIA* sp. Dipsacaceae.
No. 2059. From Alma Dag, 26 km. southeast of Ankara, August 1.
122635 to 122638. *COIX LACRYMA-JOBI* L. Poaceae. Jobs-tears.
122635. No. 2982. From a village near Balikesir, September 26.
122636. No. 3025. From Bursa, October 1.
122637. No. 2930. From the prison at Balikesir, October 19.
122638. No. 3226. From Adapazari, October 20.

122639. *CORCHORUS* sp. Tiliaceae.
No. 1513. From the hotel garden at Urfa, July 5. A plant with small greenish flowers.
122640 to 122644. *CORIANDRUM SATIVUM* L. Apiaceae. Coriander.
122640. No. 3266. From the Adapazari bazar, October 20.
122641. No. 2132. From the Sivas bazar, August 5.
122642. No. 2225. From the Erzincan bazar, August 8.
122643. No. 2373. From the Trabzon bazar, August 11.
122644. No. 2522. From the Samsun bazar, August 21.

122630 to 122742—Continued

122645. *CORONILLA SCORPIOIDES* (L.) Koch. Fabaceae.
No. 1080. From near Soma, June 10. An erect yellow-flowered herbaceous perennial about 8 inches high, native to the Mediterranean countries.
For previous introduction see 104931.
122646. *CORONILLA* sp. Fabaceae.
No. 1201. From 60 km. west of Balikesir, June 16.
122647. *CREPIS* sp. Cichoriaceae.
No. 2791. From Ulu Dag, 35 km. south of Bursa, September 9.
122648. *CUMINUM CYMINUM* L. Apiaceae. Cumin.
No. 570. From the Isparta bazar, June 2.
122649. *CYNANCHUM* sp. Asclepiadaceae.
No. 3456. From 5 km. west of Samsun, August 23. A perennial vine, growing in sands on the Black Sea beach.
122650. *PERIPLOCA GRAECA* L. Asclepiadaceae.
No. 3464. From 10 km. north of Selchuk, September 25. A tall woody vine with ovate-lanceolate leaves and wheel-shaped brownish-green flowers 1 inch across in loose, terminal cymes. Native to Asia Minor and southern Europe.
122651. *DIANTHUS* sp. Silenaceae.
No. 597. From the Antalya bazar, June 4.
122652. *DICENTRA* sp. Papaveraceae.
No. 3432. From Alma Dag, June 28.
122653 to 122656. *EREMURUS* sp. Liliaceae.
122653. *EREMURUS* sp.
No. 820. From Ephesus, June 24.
122654. *EREMURUS* sp.
No. 637. From 2 km. west of Aydin, May 28.
122655. *EREMURUS* sp.
No. 1400. From 20 km. north of Gaziantep, July 2.
122656. *EREMURUS* sp.
No. 1852. From 11 km. west of Malatya, July 16.
122657. *ERYTHERINA* sp. Fabaceae.
No. 2944. From near Izmir, September 23. An ornamental tree with enormous clusters of brilliant red flowers.
122658. *EUCALYPTUS* sp. Myrtaceae.
No. 1348. From Adana, June. A species said to have a bright-red trunk and branches, with reddish leaves.
122659 to 122670. *HELIANTHUS ANNUUS* L. Asteraceae. Common sunflower.
For previous introduction see 119771.
122659. No. 3080. From the Yozgat bazar, October 9.
122660. No. 3149. From the Kastamonu bazar, October 14.
122661. No. 3213. From Chankiri, October 15.

122630 to 122742—Continued

122662. No. 3227. From the Adapazari bazar, October 20.
122663. No. 3277. From Edirne, October 22.
122664. No. 614. From the Izmir bazar, May 23.
122665. No. 1148. From the Balikesir bazar, June 16. A form with white seeds.
122666. No. 1375. From the Marash bazar, July 2.
122667. No. 1665. From the Diyarbekir bazar, July 10.
122668. No. 2026. From the Nigde bazar, July 27.
122669. No. 3012. From the Kutahya bazar, September 28.
122670. No. 2152. From the Sivas bazar, August 5.
122671. *HYPERICUM* sp. Hypericaceae.
No. 1499. From 5 km. south of Gaziantep, July 4.
122672. *HYPERICUM* sp. Hypericaceae.
No. 3438. From Alma Dag, June 28.
122673. *ILEX* sp. Aquifoliaceae. Holly.
No. 2401. From 23 km. east of Trabzon, August 12.
122674. *ISATIS* sp. Brassicaceae.
No. 1902. From 50 km. north of Malatya, July 17. A plant with narrow succulent, cabbagelike leaves and a flower stalk 2 to 3½ feet high, bearing a large broad panicle of numerous bright-yellow flowers about one-half inch across.
- 122675 to 122682. *JUNIPERUS* spp. Pinaceae.
Juniper.
122675. *JUNIPERUS DRUPACEA* Labill.
No. 1917. From Birejik, July 21. A juniper up to 60 feet high, of pyramidal habit, in the wild state, but usually columnar in cultivation. Native to Asia Minor.
122676. *JUNIPERUS* sp.
No. 742. A dwarf juniper from 20 km. south of Denizli, May 30.
122677. *JUNIPERUS* sp.
No. 1931. A tall tree from Birejik, July 21.
122678. *JUNIPERUS* sp.
No. 1932. From Birejik, July 21. A scrubby tree.
122679. *JUNIPERUS* sp.
No. 2304. From 10 km. north of Gemushane, August 10.
122680. *JUNIPERUS* sp.
No. 2648. From 61 km. southeast of Merzifon, August 25.
122681. *JUNIPERUS* sp.
No. 2658. From 61 km. southeast of Merzifon, August 25.
122682. *JUNIPERUS* sp.
No. 2664. From the mountains 46 km. south of Tokat, August 26. A dwarf juniper.

122630 to 122742—Continued

122683. *LATHYRUS ANNUUS* Hoejer. Fabaceae. Pea.
No. 1081. From 40 km. northwest of Izmir, June 10.
122684. *LIGUSTRUM* sp. Oleaceae. Privet.
No. 3145. From 25 km. north of Kastamonu, October 13.
- 122685 to 122687. *LONICERA* spp. Caprifoliaceae. Honeysuckle.
122685. *LONICERA* sp.
No. 2335. From 60 km. south of Trabzon, August 10. A shrub 10 feet high with deep-red berries.
122686. *LONICERA* sp.
No. 2767. From Ulu Dag, 35 km. south of Bursa, September 8. A low shrub with large black fruits.
122687. *LONICERA* sp.
No. 2945. From Kemal Pasha, September 23.
122688. *LUPINUS* sp. Fabaceae.
No. 735. From 25 km. southeast of Mugla, May 28.
122689. *LYCHNIS* sp. Silenaceae.
No. 690. From near Milas, May 26. A species with deep-pink flowers.
122690. *PANICUM MILIACEUM* L. Poaceae. Broomcorn millet.
No. 1228. From the Bursa bazar, June 18.
122691. *PHASEOLUS CARACALLA* L. Fabaceae. Snail bean.
No. 561. From the Izmir bazar, May 23.
- 122692 to 122697. *PINUS* spp. Pinaceae.
122692. *PINUS* sp.
No. 1482. From 5 km. southeast of Marash, July 3.
122693. *PINUS* sp.
No. 2922. From the mountains between Sivas and Susheri, August 6.
122694. *PINUS* sp.
No. 3350. From 30 km. west of Balikesir, June 16.
122695. *PINUS* sp.
No. 3333. From 30 km. north of Koycegiz, May 31.
122696. *PINUS* sp.
No. 3468. From 55 km. north of Chankiri, October 12.
122697. *PINUS* sp.
No. 3475. From 5 km. north of Kastamonu, October 13.
- 122698 to 122708. *PORTULACA OLERACEA* L. Portulacaceae. Common purslane.
The fleshy leaves are sometimes used in salads, but more frequently boiled and served like spinach.
For previous introduction see 34510.
122698. No. 3000. From the Kutahya bazar, September 28.
122699. No. 3055. From the Amasya bazar, October 6.

122630 to 122742—Continued

122700. No. 3286. From the Edirne bazar, October 22.
122701. No. 3140. From the Inebolu bazar, October 12.
122702. No. 2367. From the Trabzon bazar, August 11.
122703. No. 2707. From the Amasya bazar, August 25.
122704. No. 3233. From the Adapazari bazar, October 20.
122705. No. 3199. From the Chankiri bazar, October 15.
122706. No. 2896. *Semizote*. From the Chanak Kale bazar, September 18.
122707. No. 527. From the Mugla bazar, May 28.
122708. No. 3445. From Alma Dag, June 28.
122709. RHODODENDRON sp. Ericaceae.
No. 2460. From between Trabzon and Rize, August 12.
122710. RHUS sp. Anacardiaceae. Sumac.
No. 2861. From Yalova Kapiljalari, September 12.
122711. RHUS sp. Anacardiaceae. Sumac.
No. 1507. From Gaziantep, July 5. Grown commercially for tannin.
122712. RUBIA TINCTORUM L. Rubiaceae.
Madder.
No. 3466. *Kökboja* (village dye). From gardens along the river near Amasya, October 7.
For previous introduction see 43037.
122713. RUMEX sp. Polygonaceae.
No. 1488. A shrub found on dry rocky hills 25 km. northwest of Gaziantep, July 3.
122714. SAMBUCUS sp. Caprifoliaceae.
No. 2439. From Birejik, July 22.
122715. SAPONARIA OFFICINALIS L. Silenaceae.
Bouncing-bet.
No. 2625. From 85 km. southwest of Samsun, August 24.
For previous introduction see 4758.
- 122716 to 122720. SCABIOSA spp. Dipsacaceae.
122716. SCABIOSA ATROPURPUREA L.
No. 1286. From 31 km. northeast of Bandirma, June 18. An annual about 2 feet high, with pinnately-parted stem leaves and white to dark-purple flowers in large peduncled heads. Native to southern Europe.
122717. SCABIOSA sp.
No. 1316. From 21 km. north of Bursa, June 20.
122718. SCABIOSA sp.
No. 2738. From 2 km. west of Yalova, September 6. A form with lavender flowers.
- 122719 and 122720. SCABIOSA PALAESTINA L.
Bird's eye. An annual with branching stems 2 feet high, linear to oblong, entire or lyrate-pinnatifid leaves and

122630 to 122742—Continued

- cream-colored to bluish flowers. Common everywhere in Turkey and native to Asia Minor.
122719. No. 1747. From 26 km. west of Diyarbekir, July 9.
122720. No. 1484. From 44 km. north of Gaziantep, July 3.
122721. SCORZONERA sp. Cichoriaceae.
No. 1969. From Birejik, July 23.
122722. SCORZONERA sp. Cichoriaceae.
No. 3425. From Alma Dag, 25 km. southeast of Ankara, June 28.
122723. SESAMUM ORIENTALE L. Pedaliaceae.
Sesame.
No. 2928. From Chanak Kale, September 19.
122724. SESAMUM ORIENTALE L. Pedaliaceae.
Sesame.
No. 1547. From the Urfa bazar, July 6.
122725. SETARIA ITALICA (L.) Beauv. Poaceae.
Millet.
No. 1834. *Proso*. From the Malatya bazar, July 16.
122726. SETARIA ITALICA (L.) Beauv. Poaceae.
Millet.
No. 1682. From the Elaziz bazar, July 13.
- 122727 to 122737. SILENE spp. Silenaceae.
122727. SILENE sp.
No. 1879. From 50 km. north of Malatya, July 17.
122728. SILENE sp.
No. 1770. From 35 km. southeast of Elaziz, July 13. A small compact plant with red flowers.
122729. SILENE sp.
No. 1989. From Ulukishla, July 25 and 26.
122730. SILENE sp.
No. 3404. From Ankara, June 25. An early spring wild ornamental.
122731. SILENE sp.
No. 3420. A form with pink flowers from dry hills, 3 km. north of Ankara, June 26.
122732. SILENE sp.
No. 643. From southwest of Izmir, May 25.
122733. SILENE sp.
No. 662. Small pale flowers from near Aydin, May 25.
122734. SILENE sp.
No. 759. From 30 km. south of Denizli, May 30. A compact dwarf rock plant with very attractive bright-red flowers.
122735. SILENE sp.
No. 1445. From 20 km. north of Gaziantep, July 2.
122736. SILENE sp.
No. 1764. From 39 km. southeast of Elaziz, September 13. A form with large pink flowers.

122630 to 122742—Continued

122737. *SILENE NOCTIFLORA* L.

No. 1954. From Birejik, July 22. A tall plant.

122738. *SCORZONERA* sp. Cichoriaceae.

No. 3312. From 20 km. south of Narle, May 4.

122739. *VERBASCUM SPECIOSUM* Schrad. Scrophulariaceae. Mullein.

No. 2293. From 34 km. east of Erzincan, August 9. A tall biennial mullein with pale-green, oblong-lanceolate leaves more than a foot long at the base of the stem, becoming much smaller toward the top. The yellow flowers are in a large paniced raceme. Native to eastern Europe.

For previous introduction see 108778.

122740. *VERBASCUM* sp. Scrophulariaceae. Mullein.

No. 1637. From 47 km. south of Diyarbakir, July 9. Not the common mullein, flowers more handsome.

122741. *VICIA VILLOSA* Roth. Fabaceae. Hairy vetch.

No. 3496. From the ruins of Philippi, Greece, November 11.

122742. *VITEX* sp. Verbenaceae.

No. 2931. From Ephesus, September 25.

122743. *SOLANUM TUBEROSUM* L. Solanaceae. Potato.

From Canada. Tubers presented by M. E. Davis, Central Experiment Farm, Ottawa. Received March 26, 1937.

*Early St. George.*122744 to 122752. *VITIS* spp. Vitaceae. Grape.

From Austria. Cuttings presented by Prof. Andre Teleki, Vienna. Received March 26, 1937.

122744. *Chasselas Tompa.*122745. *Ezerevesand.*122746. *Madam Johanna Mathias.*122747. *Memory of Queen Elizabeth.*122748. *Neuberger.*122749. *Reine des Vignes.*122750. *Riesling of the Rhine.*122751. *Veltliner* (red).122752. *Veltliner* (red and white).122753 to 122757. *FICUS* spp. Moraceae. Fig.

From Japan. Cuttings presented by Dr. T. Tanikawa, Acting Director, Imperial Horticultural Experiment Station, Okitsu. Received March 27, 1937.

122753. No. 9. *Hative d'argenteuil* × (*H. d'arg.* × *Roeding* No. 2).122754. No. 32. *Hative d'argenteuil* × (*H. d'arg.* × *Roeding* No. 2).122755. No. 45. *Hative d'argenteuil* × (*H. d'arg.* × *Roeding* No. 2).122756. *Horaigaki.* A fig, native to Japan.122757. No. 60. *Violet Dauphine* × *Roeding* No. 2.122758 and 122759. *ERICA* spp. Ericaceae. Heath.

From England. Seeds presented by Sir Lionel de Rothschild, St. Swithin's Lane, London. Received March 18, 1937.

122758. *ERICA* sp.

Received under the name "mimosa," for which a place of publication has not been found. Described as a red heather.

122759. *ERICA PILLANSII* Bolus.An evergreen shrub with ascending branches, small imbricate linear leaves, and scarlet flowers about one-half inch long. It is related to *Erica mertensiana*. Native to South Africa.122760. *INDIGOFERA TINCTORIA* L. Fabaceae. True indigo.

From France. Seeds presented by Vilmorin-Andrieux & Cie., Paris. Received March 18, 1937.

French-grown seed.

122761 and 122762. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

From Peru. Seeds presented by A. Martin Lynch, Chief, Estación Agronómica de Lambayeque. Received March 19, 1937.

122761. No. 1. Wild tomato.

122762. No. 2. Wild tomato.

122763. *MEDICAGO SATIVA* L. Fabaceae. Alfalfa.

From the Netherlands. Seeds presented by Zwaan & Van Der Molen, Plant Breeding & Seed Growing Co., Voorburg. Received March 22, 1937.

Giant alfalfa. A strain said to produce 70 percent more than any other European stock.122764 and 122765. *PRUNUS* spp. Amygdalaceae.

From New Zealand. Seeds presented by W. Meikle & Sons, New Lynn Nurseries, Auckland. Received March 30, 1937.

122764. *PRUNUS* sp.*George Wilson.* A blood plum which has no bitterness or sourness near the seed. It will keep 6 to 8 weeks after picking, and if kept long enough will dry like a prune, but will not rot. The tree is immune to brown rot.122765. *PRUNUS* sp.*Victory plum.* A freestone with dark red skin and orange flesh which will keep from 6 to 8 weeks after picking.

122766 to 122984.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received March 1, 1937.

122766. *ABIES PINDROW* Spach. Pinaceae. Fir.No. 1666. *Tos.* From above Bandrole, Kulu, Punjab, at 8,000 feet altitude, November 14, 1936. A tall fir with short branches forming a narrow pyramid and lustrous, dark-green, slender leaves 1 to 2 inches long. Native to the Himalayan region.

122766 to 122984—Continued

122767. *ACACIA* sp. Mimosaceae.

No. 2138. From Calcutta, January 7, 1937. A shrub 8 feet high.

122768. *ACACIA* sp. Mimosaceae.

No. 933. From Bandrole, Kulu, Punjab, June 2, 1936, at 5,000 feet altitude. A bushy tree of medium size, growing in semiarid situations. For 2 weeks in the spring it is covered with fragrant yellow flowers.

122769. *ACONITUM HETEROPHYLLUM* Wall. Ranunculaceae. Monkshood.No. 1527. *Patish*. From Kolung, Lahul, Punjab, August 20, 1936, at 12,000 feet altitude. A common plant in the meadows, growing 3 feet tall.122770. *ACONITUM* sp. Ranunculaceae.No. 1380. *Ladora*. From Karzong Pass, Ladak, Kashmir, at 15,000 feet altitude, September 14, 1936. An attractive perennial 18 inches high, growing in clumps, with large tomentose, blue-purple flowers which have a strong musky odor.122771. *ADONIS CHRYSOCYATHUS* Hook. f. and Thoms. Ranunculaceae.

No. 1721. From the Department of Agriculture, Kashmir. A tufted perennial with stems about 1 foot high, much divided leaves 3 to 6 inches long, and golden-yellow flowers 2 inches or more across. Native to the alpine Himalayan region.

122772. *ALLIUM* sp. Liliaceae.

No. 1354. From La Dang, Baltistan, Kashmir, September 4, 1936, at 15,000 feet altitude. Plants 18 inches high, growing in clumps on a dry slope.

122773. *ALNUS* sp. Betulaceae.No. 1649. *Chag*. From Chitkul, Rampur-Bushahr, August 20, 1936.122774. *AMARANTHUS* sp. Amaranthaceae.No. 1693. *Bhaji sag*. From the Director of Agriculture, Kashmir. A good pot herb with red leaves.122775. *ANAPHALIS* sp. Asteraceae.

No. 1495. From Rotang Pass, Kulu, Punjab, October 26, 1936, at 13,000 feet altitude. Clumps 1 foot high, with corymbs of small whitish flowers; found on a dry rock.

122776. *ANAPHALIS* sp. Asteraceae.

No. 1543. From Rotang Pass, Kulu, Punjab, October 26, 1936, at 13,000 feet altitude. A small-flowered species that grows on damp cliffs.

122777 to 122780. *ANEMONE* spp. Ranunculaceae.122777. *ANEMONE TETRASEPALA* Royle.

No. 1678. Presented by the Director of Agriculture, Kashmir. A large robust anemone with leathery, 5-lobed leaves and white flowers. Native to the Himalayan region from 8,000 to 11,000 feet altitude.

122778. *ANEMONE* sp.No. 1586. *Guantsimento*. From Pukar, Lahul, Punjab, July 31, 1936, at 12,000 feet altitude. A plant up to 2½ feet high, found in clumps in meadows. The attractive white flowers, more or less fragrant, are in clusters.

122766 to 122984—Continued

122779. *ANEMONE* sp.No. 1588. *Tsitaka*. From Pukar, Lahul, Punjab, at 12,000 feet altitude, August 1936. A form 2 feet high, with few small flowers; found in meadows.122780. *ANEMONE* sp.No. 1498. *Japshren*. From Kyelang, Lahul, Punjab, October 23, 1936, at 10,000 feet altitude.122781. *ANETHUM GRAVEOLENS* L. Apiaceae. Dill.No. 1426. *Badien*. From Leh, Ladak, Kashmir, September 16, 1936, at 10,500 feet altitude.122782. *ANGELICA* sp. Apiaceae.No. 1577. *Bodunger*. From Pukar, Lahul, Punjab, September 15, 1936, at 12,000 feet altitude. An umbellifer 6 feet tall with a fragrant celeriac-like root which is used along with garlic to flavor meat.122783. *ANTHEMIS* sp. Asteraceae.No. 1607. *Durchit*. From Dilburig, Lahul, Punjab, August 1936, at 13,000 feet altitude. A stemless perennial with a fragrant root; used in India as incense.122784 to 122787. *AQUILEGIA* spp. Ranunculaceae. Columbine.122784. *AQUILEGIA* sp.

No. 1357. From La Dang, Baltistan, Kashmir, September 4, 1936, at 15,000 feet altitude. Plants 2 feet high, growing in a colony on a dry rocky slope; flowers not seen.

122785. *AQUILEGIA* sp.

No. 1374. From Hundar, Baltistan, Kashmir, September 10, 1936. Plants 3 feet high, growing in clumps along a stream. Flowers not seen.

122786. *AQUILEGIA* sp.No. 1589. *Gerrimenbok*. From Pukar, Lahul, Punjab, August 1936, at 12,000 feet altitude. Attractive plants, 2 feet high; the large, very fragrant flowers, 1½ inches in diameter, have yellowish bells and pale blue-purple spurs.122787. *AQUILEGIA* sp.

No. 1648. From Chitkul, Rampur-Bushahr, August 19, 1936.

122788. *ARENARIA* sp. Silenaceae.No. 1520. *Autong makpo*. From Kolung, Lahul, Punjab, August 16, 1936, at 11,000 feet altitude. A low plant with an abundance of white flowers; found growing in mats on dry slopes.122789. *ARENCA PINNATA* (Wurmb.) Merr. Phoenicaceae. Sugar palm.

No. 2125. From the Royal Botanical Gardens, Calcutta, January 6, 1937. A handsome palm 20 to 40 feet high, with about 25 immense pinnate leaves and enormous bunches of fruit; the individual fruits are the size of an apple. A rich-flavored palm sugar is made from the sap which flows from the bruised fruitstalk.

122790. *ARTABOTRYS UNCINATUS* (Lam.) Merr. Annonaceae. Fragrant tailgrape.

No. 2130. Presented by the Royal Botanic Gardens, Calcutta, January 6, 1937. A half-scandent shrub with long slender drooping branches and greenish flowers. The inedible fruits are ovoid with a

122766 to 122984—Continued

pointed, slightly curved apex and are yellowish when ripe. The plant is very highly esteemed by the Chinese because of the rich fragrance of the flowers and fruits, and it is commonly planted in their monasteries.

For previous introduction see 95085.

122791. *ARTEMISIA* sp. Asteraceae.

No. 1492. *Karkatrag*. From the Upper Bhaga Valley, Lahul, Punjab, October 4, 1936, at 12,000 feet altitude. Plants 2 feet high, growing abundantly in clumps on dry slopes. It is eaten by horses, sheep, and goats when it is tender in the spring and also when dry in late fall and winter.

122792. *ARTEMISIA MARITIMA* L. Asteraceae.

No. 1544. *Burtsi*. From Kolung, Lahul, Punjab, October 17, 1936. A low straggly undershrub, up to 18 inches high, growing abundantly on dry slopes; grazed by all the domestic animals.

For previous introduction see 78477.

122793. *ASTER* sp. Asteraceae.

No. 1499. *Lukmik*. From Kolung, Lahul, Punjab, October 9, 1936, at 11,000 feet altitude. Found growing in clumps 18 inches high in both dry and damp situations. The lavender flower heads are very attractive.

122794. *ASTRAGALUS* sp. Fabaceae.

No. 1624. From Pukar, Lahul, Punjab, August 1936, at 12,000 feet altitude. Plants 12 to 18 inches high, found in damp places.

122795. *PELTOPHORUM INERME* (Roxb.) Llanos (*P. ferrugineum* Benth.). Caesalpinaceae.

No. 2163. From Dacca, Bengal, January 14, 1937. A large handsome leguminous tree bearing large terminal spikes of bright yellow flowers. A good shade tree, used for roadside planting.

122796. *BENINCASA HISPIDA* (Thunb.) Cogn. Cucurbitaceae. Waxgourd.

No. 1684. *Petha*. Presented by the Director of Agriculture, Kashmir. A form with large fruits, weighing from 20 to 30 pounds, whose flesh is used principally for candying.

122797 to 122802. *BERBERIS* spp. Berberidaceae. Barberry.122797. *BERBERIS* sp.

No. 1298. From Shigar Nulla, Baltistan, Kashmir, August 21, 1936. A very attractive caespitose shrub 4 feet high, with abundant foliage and fruits. The flowers are clear yellow; found on dry slopes.

122798. *BERBERIS* sp.

No. 1404. From Karzong, Baltistan, Kashmir, September 13, 1936. An attractive caespitose shrub up to 3 feet high, mostly unbranched, with an abundance of small leaves and glaucous berries. As it stands drought and cold, it should be useful as a low hedge plant.

122799. *BERBERIS ARISTATA* DC.

No. 1662. From 8,000 feet altitude, above Bandrole, Kulu, Punjab, November 14, 1936. A handsome shrub of elegant spreading habit, becoming at times 10 feet high. The spine-tipped leaves are

122766 to 122984—Continued

often whitish beneath, and the numerous flowers are bright golden yellow. The spindle-shaped berries, about half an inch in length, are red covered with a blue-white bloom. This is said to be one of the most vigorous of the Himalayan barberries.

For previous introduction see 66542.

122800. *BERBERIS* sp.

No. 1663. From 8,000 feet altitude, above Bandrole, Kulu, Punjab, November 14, 1936. A bush up to 6 feet high, with an abundance of red fruits; seems to prefer cooler locations than No. 1662 (P. I. 122799).

122801. *BERBERIS* sp.

No. 1785. *Kerpa*. From Labuktrang, Lahul, Punjab, at 11,000 feet altitude, November 1, 1936. A shrub 3 to 5 feet high, with handsome red berries.

122802. *BERBERIS ARISTATA* DC.

No. 1713. *Kawadach*. Purchased from the Director of Agriculture, Kashmir.

For previous introduction and description see 122799.

122803. *BETULA* sp. Betulaceae. Birch.

No. 1541. *Krosh*. A quick-growing tree found usually in river bottoms from 3,000 to 6,000 feet altitude. The trunks are commonly over 6 feet in diameter.

122804. *BETULA UTILIS* D. Don. Betulaceae. Birch.

No. 1480. *Takpa*. From Pukar, Lahul, Punjab, October 15, 1936, at 12,000 feet altitude. A tree 40 to 60 feet high, with a creamy-white trunk and branches, the bark peeling off in papery flakes. The oval, coarsely-toothed, sharp-pointed leaves, 3 inches long, are dark-green above and paler beneath. In winter the orange-chocolate color of the twigs is very striking.

For previous introduction see 99654.

122805. *BRASSICA* sp. Brassicaceae.

No. 1777. *Rai*. From Kulu, Kulu, Punjab, November 10, 1936, at 4,500 feet altitude. Seeds used for flavoring.

122806. *BRASSICA* sp. Brassicaceae.

No. 1431. *Asur*. From Leh, Ladak, Kashmir, September 17, 1936. Seeds and leaves used as spices.

122807. *BUXUS WALLICHIANA* Bail. Buxaceae.

No. 1652. From Bandrole, Kulu, Punjab, November 14, 1936. An attractive evergreen shrub of good habit, up to 18 inches in diameter; the linear-lanceolate leaves are from 2 to 4 inches long.

For previous introduction see 79521.

122808. *CALAMAGROSTIS PSEUDOPHRAGMITES* (Hall. f.) Koel. Poaceae.

No. 1569. From Lahul, Punjab, October 20, 1936. A conspicuous grass found on dry, rather inaccessible isolated slopes.

For previous introduction see 113088.

122809. *CAMPANULA COLORATA* Wall. Campanulaceae.

No. 1525. From Gundla, Lahul, Punjab, October 23, 1936, on dry rock at 10,000 feet

122766 to 122984—Continued

altitude. A small perennial usually found growing in crevices in dry cliff faces. The pale, bluish-purple, campanulate flowers are 6 inches in diameter and very attractive.

For previous introduction see 42615.

122810. CAMPANULA sp. Campanulaceae.

No. 1594. From Tinu, Lahul, Punjab, August 1936, at 12,000 feet altitude. A rare plant, 5 feet tall, with large flowers 2 inches across, white tinged with red inside.

122811. CANAVALLIA sp. Fabaceae.

No. 2166. From Dacca, Bengal, January 15, 1937. The tender pods of this vine are used as a vegetable.

122812. CARAGANA sp. Fabaceae.

No. 1448. *Drama*. From the Taklung Pass, Ladak, Kashmir, September 27, 1936, at 15,000 feet altitude. A low shrub found in dense clumps 3 to 4 feet across and 12 to 18 inches high; found on dry slopes and plains where it is browsed by sheep and goats when other forage is scarce.

122813. CAREX sp. Cyperaceae.

No. 1496. *Longams*. From Tsokar, Rupshu, October 1, 1936, at 15,000 feet altitude. A stout sedge with heavy stiff leaves 1 foot long; growing in masses in both wet and dry situations and forming one of the most important grazing associations of the Tibetan plateau.

122814 to 122816. CARUM CARVI L. Apiaceae. Caraway.

For previous introduction see 86309.

122814. No. 1591. From Pukar, Lahul, Punjab, August 1936, at 10,000 feet altitude. Found in dry isolated places.

122815. No. 1595. *Gonyot*. From Pukar, Lahul, Punjab, August 1936, at 12,000 feet altitude. A pink-flowered species that grows 2 feet high in hayfields; the seeds are used as spice.

122816. No. 1614. *Gonyot*. Said to have come from Zanskar, Punjab, a high province adjoining Lahul. Used as spice and considered better than the Lahul sort.

122817. CARUM OPTICUM (L.) Benth. and Hook. Apiaceae.

No. 1235. *Shuts; sheneid*. From Skardo, Baltistan, Kashmir, where it is used medicinally.

122818. CARYOTA MITIS Lour. Phoenicaceae. Fishtail palm.

No. 2124. Presented by the Royal Botanic Gardens, Calcutta, January 6, 1937. A palm, native to the Malay Peninsula, about 20 feet high, with a straight cylindrical spineless ringed trunk 4 inches or more in diameter and bipinnate leaves 4 to 9 feet in length. The purple fruits are about the size of cherries.

For previous introduction see 81584.

122819. CARYOTA URENS L. Phoenicaceae. Toddy palm.

No. 2126. Presented by the Royal Botanic Gardens, Calcutta, January 6, 1937. A fishtail palm up to 80 feet high and 18 inches in diameter, with bipinnate leaves 20 feet long by 12 feet wide, with curved and drooping segments. Native to the Malay Archipelago.

For previous introduction see 103160.

122766 to 122984—Continued

122820. CASSIA sp. Caesalpiniaceae.

No. 2127. From Calcutta, January 7, 1937. Said to be an ornamental shrub 8 feet high, with orange and red flowers.

122821. CEDRUS DEODARA (Lamb.) Loud. Pinaceae. Deodar cedar.

No. 1751. *Keoru*. From above Kulu, Kulu, Punjab, November 16, 1936, at 5,000 feet altitude.

122822. CEDRUS LIBANI Loud. Pinaceae. Cedar of Lebanon.

No. 2010. Presented by the Botanical Gardens at Darjeeling, December 25, 1936.

122823. CENTAUREA sp. Asteraceae.

No. 1241. From Safaranga, Baltistan, Kashmir, August 18, 1936, at 6,500 feet altitude. Found growing in clumps a foot high on rock faces; flowers small, rose-purple and thistlelike.

122824. CHAEROPHYLLUM sp. Apiaceae.

No. 1581. *Shakara*. From Pukar, Lahul, Punjab, August 1936, at 12,000 feet altitude. A biennial 3 feet high, with a white, carrotlike root, and umbels of white flowers.

122825 to 122827. CHENOPODIUM spp. Chenopodiaceae.

122825. CHENOPODIUM BOTRYS L.

No. 1493. *Sokann*. From Kolung, Lahul, Punjab, at 12,000 feet altitude, October 15, 1936. A wild plant 1 foot high whose leaves are used for flavoring.

122826. CHENOPODIUM sp.

No. 1400. *Ostahak*. From Leh, Ladak, Kashmir, September 16, 1936, at 10,500 feet altitude. A plant about 6 feet high, used as a potherb.

122827. CHENOPODIUM sp.

No. 1715. *Ostahak*. Presented by the Director of Agriculture, Kashmir. A delicious native potherb; sown in the fall and available early in the spring.

122828. CIRSIUM sp. Asteraceae.

No. 1519. *Tultsoak*. From Pukar, Lahul, Punjab, August 1936, at 12,000 feet altitude. A thistle 18 to 24 inches high, with attractive rose-purple flowers. Found on dry slopes and eaten by horses and donkeys when green.

122829 to 122832. CLEMATIS spp. Ranunculaceae.

122829. CLEMATIS ORIENTALIS L. Oriental clematis.

No. 1677. Presented by the Director, Department of Agriculture, Kashmir. An ornamental vine with finely cut leaves and erect, green-tinted yellow flowers, 1½ inches across. The seeds are borne in terminal clusters, each seed having a fluffy or featherlike appendage. Native to Iran (Persia).

For previous introduction see 115071.

122830. CLEMATIS sp.

No. 1526. *Emong*. From Gundla, Lahul, Punjab, October 16, 1936, at 10,500 feet altitude. A creeping vine with gold-sprinkled brown flowers 1 inch in diameter.

122766 to 122984—Continued

122831. CLEMATIS sp.

No. 1364. *Emong*. From the Shyok Valley, Tarkalung, Baltistan, Kashmir, at 10,000 feet altitude, September 6, 1936. An ornamental vine which covers bushes to a height of 8 feet. The small golden-yellow flowers are sprinkled with brown. The fruits are also attractive.

122832. CLEMATIS sp.

No. 1296. From Shigar Nulla, Baltistan, Kashmir, at 9,000 feet altitude, August 21, 1936. An ornamental vine found on a dry slope; the flowers, bell-shaped, are golden, sprinkled with brown and 1 inch across.

122833. CODONOPSIS FOETENS Hook. f. and Thoms. Campanulaceae.

No. 1530. *Ludut*. From Kolung, Lahul, Punjab, August 18, 1936, at 12,000 feet altitude. A tufted perennial 2 feet high, with large, pale blue-purple flowers which have an unpleasant odor. It is closely related to *Codonopsis thalictrifolia*.

122834. CORYDALIS sp. Papaveraceae.

No. 1445. *Tongzil*. From the Taklung Pass, Ladak, Kashmir, September 26, 1936, at 15,000 feet altitude. An ornamental yellow-flowered species about 18 inches high.

122835. CORYDALIS sp. Papaveraceae.

No. 1724. Purchased from the Director of the Department of Agriculture, Kashmir. Received as *Corydalis rumex*, for which a place of publication has not been found.

122836. CORTUSA MATTHIOLI L. Primulaceae.

No. 1738. Purchased from the Director of the Department of Agriculture, Kashmir. A herbaceous perennial about 6 inches high, with long-stalked, cordate leaves having 7 to 9 lobes, and an umbel of about 7 small, rosy-purple, drooping flowers. Native to the Alps.

122837 to 122839. CORYPHA sp. Phoenicaceae. Palm.

122837. CORYPHA ELATA Roxb.

No. 2128. Presented by the Royal Botanic Gardens, Calcutta, January 6, 1937. A tall palm up to 60 feet high, with a spirally ridged trunk and lunate, fan-shaped leaves 8 to 10 feet across, made up of 80 to 100 sword-shaped segments. Native to Burma and Bengal.

For previous introduction see 105349.

122838. CORYPHA TALLIERA Roxb.

No. 2131. Presented by the Royal Botanic Gardens, Calcutta, January 6, 1937. A stout unarmed fan palm up to about 30 feet high, with subtrotund leaves 6 feet long and 15 feet broad.

122839. CORYPHA UMBRACULIFERA L. Talipot palm.

No. 2132. Presented by the Royal Botanic Gardens, Calcutta, January 6, 1937. A large palm up to 80 feet high. The leaves, 12 feet long and 16 feet broad, are made up of lobed segments, and the creamy white flowers are in terminal panicles 20 feet long. It is native to Ceylon.

122766 to 122984—Continued

For previous introduction see 101386.

122840 to 122844. COTONEASTER spp. Malvaceae.

122840. COTONEASTER sp.

No. 1597. *Landepilitsi*. From Tinu, Lahul, Punjab, October 11, 1936, at 11,000 feet altitude. A slender attractive tree with long-stalked pink flowers. The fruits are bright crimson.

122841. COTONEASTER sp.

No. 1567. *Roktrolto*. From Kyelang, Lahul, Punjab, October 18, 1936, at 11,000 feet altitude. A low dense bush up to 5 feet high, with small leaves and black berries. Found on a dry slope.

122842. COTONEASTER sp.

No. 1753. From Chamba, Punjab, August 1936.

122843. COTONEASTER sp.

No. 1671. From above Bandrole, Kulu, Punjab, November 12, 1936, at 10,000 feet altitude. A small tree with handsome crimson fruits.

122844. COTONEASTER sp.

No. 1619. From Pukar, Lahul, Punjab, September 1936, at 12,000 feet altitude. An attractive small tree with red fruits.

122845. CRATAEGUS sp. Malaceae.

No. 1349. From Pranu, Baltistan, Kashmir, September 1, 1936, at 8,000 feet altitude. A small, well-formed tree with beautiful crimson fruits.

122846. CRATAEGUS sp. Malaceae.

No. 1130. From Skardo, Baltistan, Kashmir, August 12, 1936, at 6,500 feet altitude. A small ornamental tree with the usual *Crataegus* features. The red fruits are one-half inch in diameter.

122847. CUCUMIS SATIVUS L. Cucurbitaceae. Cucumber.

No. 2214. From Ellou, Madras Presidency.

122848. CYCLANTHERA sp. Cucurbitaceae.

No. 1599. *Serimentok*. A climbing annual with yellow flowers.

122849. DIANTHUS sp. Silenaceae.

No. 1531. From Kyelang, Lahul, Punjab, August 20, 1936, at 11,000 feet altitude. A small-flowered pink with glaucous leaves, growing in clumps on dry ground. The pink flowers are about one-half inch across.

122850. DELPHINIUM sp. Ranunculaceae.

No. 1582. *Jar Kang*. From Tinu, Lahul, Punjab, October 1, 1936, at 11,000 feet altitude. A species with large flowers clear cobalt blue to white, and 2 inches across.

122851. DIPSACUS INERMIS Wall. Dipsacaceae.

No. 1716. *Dapathak*. Presented by the Department of Agriculture, Kashmir. A stout erect shrub whose leaves are used as a potherb. The stems are 4 to 10 feet high, the leaves large, lanceolate to pinatifid, and the many small white flowers are in round dense heads about 1 inch in diameter. Native to the Himalayas from 6,000 to 10,000 feet altitude.

122766 to 122984—Continued

122852. DRACOCEPHALUM MOLDAVICA L. Menthaceae.

No. 1338. *Tsemnik*. From Kapalu, Baltistan, Kashmir, August 28, 1936, at 6,000 feet altitude. Seed used as a condiment. An annual with lanceolate, crenate leaves and loose clusters of small blue or white flowers. Native to Europe.

122853. EPHEDRA PACHYCLADA Boiss. Gnetaeae.

No. 1358. *Tscpat*. From Tarkalung, Baltistan, Kashmir, September 5, 1936, at 9,000 feet altitude, in both dry and damp situations. An attractive shrub growing in large rounded clumps 3 to 4 feet high, loaded with red berrylike fruits. Native to central Asia.

122854. FRAXINUS XANTHOXYLOIDES (G. Don) Wall. Oleaceae.

No. 1466. *Fungmaniguk*. From Tirot, Lahul, Punjab, October 22, 1936, at 9,600 feet altitude. A shrub or small tree found on dry slopes. The branches are spreading, and the leaves have 5 to 9 oval to oblong leaflets. Native to the western Himalayan region.

122855. FRITILLARIA sp. Liliaceae.

No. 1745. Presented by the Director, Department of Agriculture, Kashmir.

122856. FRITILLARIA ROYLEI Hook. Liliaceae.

No. 1679. Presented by the Director, Department of Agriculture, Kashmir. A fritillaria with whorled or opposite linear-lanceolate leaves, 2 to 4 inches long, and solitary or few nodding flowers on stems 1 to 2 feet high. The flowers are 1½ to 2 inches long, campanulate, yellow-green, tessellated with dull purple. Native to the Himalayan region at altitudes of 8,000 to 10,000 feet.

122857. GALIUM VERUM L. Rubiaceae. Yellow bedstraw.

No. 1552. From Kyelang, Lahul, Punjab, October 10, 1936, at 10,500 feet altitude. An attractive perennial found in dry places, growing in mats about 1 foot high, with very small, fragrant yellow flowers.

122858 to 122861. GENTIANA spp. Gentianaceae.

Nos. 122858 to 122860. *Tikta*. From Pukar, Lahul, Punjab, September 1936, from 12,000 to 13,000 feet altitude.

122858. GENTIANA sp.

No. 1611.

122859. GENTIANA sp.

No. 1603.

122860. GENTIANA sp.

No. 1605.

122861. GENTIANA sp.

No. 1500. *Tikta*. From Gundla, Lahul, Punjab, October 23, 1936, at 11,000 feet altitude. A biennial or perennial, growing 18 inches high in rather dry soil. The large blue-purple flowers are three-fourths of an inch across.

122862 to 122865. IMPATIENS spp. Impatiaceae.

122862. IMPATIENS sp.

No. 1539. From Manali, Kulu, Punjab, October 27, 1936, at 6,500 feet alti-

122766 to 122984—Continued

tude, in shady places. A tall plant up to 10 feet high, with large pink flowers.

122863. IMPATIENS sp.

No. 1592. *Mardonn*. From Pukar, Lahul, Punjab, August 1936, at 12,000 feet altitude. An attractive annual 2½ to 3 feet high, growing in hayfields. The flowers, about 1 inch long, are rose-purple with yellow in the throat.

122864. IMPATIENS sp.

No. 1593. *Fidonn*. A coarse annual growing to 10 feet high, in and along water. Flowers rose purple and 1 inch long.

122865. IMPATIENS sp.

No. 1782. A collection of seeds brought from Lahul by a native.

122866. INDIGOFERA LEPTOSTACHYA DC. Fabaceae.

No. 1524. From Koti, Kulu, Punjab, at 9,000 feet altitude. A well-formed graceful slender-branched shrub up to 8 feet high, producing an abundance of very attractive small, rose-purple flowers. Native to the Himalayan region.

122867. DESMODIUM THIAEFOLIUM (D. Don) G. Don. Fabaceae.

No. 1532. From Koti, Kulu, Punjab, October 26, 1936, at 9,000 feet altitude. An attractive deciduous shrub with loose slender branches, thick green trifoliolate leaves about 4 inches long, and rose to pink flowers in lax racemes often a foot long. The plant grows on dry isolated slopes and will stand freezing.

For previous introduction see 116600.

122868. INULA ROYLEANA DC. Asteraceae. Blackbud inula.

No. 1487. *Manruta*. From Kolung, Lahul, Punjab, October 14, 1936, at 12,000 feet altitude. A cultivated plant with large ovate, hairy leaves and orange-yellow flower heads 2 to 3 inches across, borne on a stem up to 5 feet high.

For previous introduction see 51037.

122869 to 122875. IRIS spp. Iridaceae.

122869 and 122870. IRIS KUMAONENSIS Wall.

A dwarf iris of the *Pseudevansia* section, 2 to 12 inches high, native to the western Himalayas from Kashmir to Kumaon between 9,000 and 12,000 feet altitude. The flaccid linear leaves are 12 to 14 inches long, and the solitary flowers have a perianth tube 2 to 3 inches long. The bright lilac falls, 1 to 2 inches long, are blotched with darker lilac, and the claw has a beard of yellow-tipped hairs on a white crest. The erect standards are 1½ inches broad.

For previous introduction see 110098.

122869. No. 1571. *Prangalch*. From Kolung, Lahul, Punjab, August 15, 1936, at 12,000 feet altitude.

122870. No. 1730. Presented by the Director, Department of Agriculture, Kashmir.

122871. IRIS sp.

No. 1646. From Chitkul, Rampur-Bushahr, August 26, 1936. A plant 2 feet high, with nearly stemless bloom and leaves 5 mm. wide.

122766 to 122984—Continued

122872. IRIS sp.

No. 1523. From Naggar, Kulu, Punjab, October 28, 1936. A tall species growing in dry pine forest or along streams. Flowers $2\frac{1}{2}$ inches across; falls wine, blotched darker, standards with bluish tinge.

122873. IRIS sp.

No. 1155. *Tisma*. From Skardo, Baltistan, Kashmir, August 15, 1936, at 6,500 feet altitude, common along water-courses and roads. Plants 3 feet high; leaves three-eighths of an inch wide; flowers said to be blue.

122874. IRIS sp.

No. 1377. From Deskit, Nubra, Shyok Valley, Kashmir, September 11, 1936, at 9,000 feet altitude. Found growing in clumps along the borders of fields. The plant is about 2 feet high and of the *Iris ensata* type.

122875. IRIS sp.

No. 1402. From Leh, Ladak, Kashmir, September 16, 1936, at 10,500 feet altitude. An iris $2\frac{1}{2}$ feet high, found in field borders; leaves 2 inches wide, flowers bluish.

122876. JAESCHKEA CANALICULATA (Royle) Knobl. (*J. latiseptala* C. B. Clarke). Gentianaceae.

No. 1736. Presented by the Director, Department of Agriculture, Kashmir. An erect-stemmed annual about 2 feet high, with oblong leaves about $1\frac{1}{2}$ inches long and small blue flowers in cymes. Native to the Himalayan region at altitudes of 9,000 to 13,000 feet.

122877 to 122879. JUNIPERUS spp. Pinaceae. Juniper.

122877. JUNIPERUS COMMUNIS L.
Common juniper.

No. 1562. *Pama*. From Kolung, Lahul, Punjab, October 10, 1936, at 12,000 feet altitude.

For previous introduction see 109093.

122878. JUNIPERUS MACROPODA Boiss.

No. 1455. *Shukpas*. From Kolung, Lahul, Punjab, October 10, 1936, at 11,000 feet altitude. A tree up to 50 feet high, with a trunk 33 feet in girth and light-green foliage. Native to the Himalayan region and westward between 5,000 and 14,000 feet altitude.

122879. JUNIPERUS sp.

No. 1111. From above Sodpur, Baltistan, Kashmir, August 10, 1936, at 2,000 feet altitude. The tree has a diameter of over 5 feet, is most attractively gnarled, and has an abundance of large fruits over one-fourth of an inch in diameter.

122880. LAVATERA THURINGIACA L. Malvaceae. Treemallow.

No. 1282. From Shigar, Baltistan, Kashmir, August 20, 1936, at 6,500 feet altitude. A cultivated perennial, 4 feet high, with rose-colored flowers 2 inches across.

122881. LIGUSTRUM sp. Oleaceae.

No. 1972. From Darjeeling, December 25, 1936, at 6,000 feet altitude. An ornamental shrub.

122766 to 122984—Continued

122882 to 122889. LONICERA spp. Caprifoliaceae. Honeysuckle.

122882. LONICERA sp.

No. 1297. From Shigar Nulla, Baltistan, Kashmir, August 22, 1936, at 9,000 feet altitude. A bush 5 feet high, growing along a river on a dry slope. The crimson fruits turn black as they ripen.

122883. LONICERA sp.

No. 1383. *Chenchen*. From Karzong, Baltistan, Kashmir, September 13, 1936. A low dense shrub about 3 feet high with small narrow leaves and large rose-pink flowers which are exceedingly fragrant.

122884. LONICERA sp.

No. 1447. *Chenchen*. From Rachogba, Rupshu, October 5, 1936, at 13,000 feet altitude. A low dense shrub up to 3 feet high, with large fragrant pink flowers. Like No. 1383 (P. I. 122883).

122885. LONICERA OBOVATA Royle.

No. 1461. *Peltsishing*. From Pukar, Lahul, Punjab, October 16, 1936, at 12,000 feet altitude. A low bushy shrub 1 to $1\frac{1}{2}$ feet high with slender branches and small leaves, growing usually in damp places. The flowers are yellowish and the fruit has a bluish bloom.

For previous introduction see 76264.

122886. LONICERA sp.

No. 1476. *Sett*. From Kyelang, Lahul, Punjab, October 21, 1936, at 10,500 feet altitude. A large shrub 10 to 12 feet high; very attractive when loaded with large currantlike translucent persistent white berries in which can be seen the black seeds.

122887. LONICERA sp.

No. 1494. *Sett*. From Kolung, Lahul, Punjab, October 19, 1936, at 11,000 feet altitude. A well-formed shrub 6 feet high; very attractive in the autumn when covered with bright-red translucent berries.

122888. LONICERA sp.

No. 1583. *Sett*. From Pukar, Lahul, Punjab, September 20, 1936, at 12,000 feet altitude. A low bushy honeysuckle up to 5 feet high, with black fruits.

122889. LONICERA sp.

No. 1782—H. Presented by a native.

122890. LUDWIGIA sp. Onagraceae.

No. 1793. From Dal Lake, Kashmir, November 23, 1936. A very attractive woody perennial growing in the water to a height of about 5 feet. The rosy-pink flowers are borne in long spikes and last for weeks.

122891. L Y C H N I S CASHEMERIANA Royle. Silenaceae.

No. 1585. *Chambozi*. From Kolung, Lahul, Punjab, September 1, 1936, at 12,000 feet altitude. An erect rigid perennial $2\frac{1}{2}$ feet high, related to *Lychnis indica*, with erect or nodding white flowers in contracted cymes. Native to Kashmir.

122892 to 122894. MALVA spp. Malvaceae. Mallow.

122766 to 122984—Continued

122892. MALVA SYLVESTRIS L.

No. 1417. *Gralchampa*. From Leh, Ladak, Punjab, September 16, 1936, at 10,500 feet altitude. A cultivated winter annual 4 feet tall with dark-magenta flowers $1\frac{1}{4}$ inches across, borne over a long season.

For previous introduction see 122518.

122893. MALVA VERTICILLATA L.

No. 1610. *Nikantsi*. From Pukar, Lahul, Punjab, August 1936, at 12,000 feet altitude.

122894. MALVA PARVIFLORA L.

No. 1782—I. Seeds presented by a native.

122895. MECONOPSIS ACULEATA Royle. Papaveraceae.

No. 1766. Presented by the Director, Department of Agriculture, Kashmir. A biennial Himalayan plant with hairy stems and rosettes of blunt pointed leaves. The flowers, bright blue with golden yellow throats, are borne in spikelike racemes, the flowers opening from the top of the raceme downward.

For previous introduction see P. I. 55300.

122896. MECONOPSIS sp.

No. 1782—D. Seeds presented by a native.

122897. MELIA sp. Meliaceae.*

No. 1505. From Kulu, Kulu, Punjab, November 12, 1936, at 4,500 feet altitude. An attractive tree with long trusses of large purple flowers.

122898. MELOTHRIA sp. Cucurbitaceae.

No. 1508. From Lahul, Punjab, November 1936.

122899. MELOTHRIA sp. Cucurbitaceae.

No. 2165. From Dacca, Bengal, January 14, 1936. An annual climber, hairy throughout, with small red fruits.

122900. MOMORDICA CHARANTIA L. Cucurbitaceae. Balsam-pear.

No. 1676. *Karela*. Presented by the Director, Department of Agriculture, Kashmir. A form with large fruits, less bitter than usual.

122901. MORINA sp. Dipsacaceae.

No. 1300. *Dohila*. From Morungkor, Baltistan, Kashmir, August 2, 1936. Found on a dry slope. The snowy white flowers, 3 inches across, have a strong Madonna-lily scent.

122902. MYRICARIA sp. Tamaricaceae.

No. 1360. *Ombu*. From Tarkalung, Baltistan, Kashmir, September 6, 1936, at 9,000 feet altitude. An attractive well-formed bush 8 feet high, with small leaves and long terminal spikes of small rose-colored flowers.

122903. NEPETA sp. Menthaceae.

No. 1546. From Koti, Kulu, Punjab, October 27, 1936, at 9,000 feet altitude. A tall perennial mint 3 feet high, with pale, bluish-purple flower heads $1\frac{1}{2}$ inches long. Found growing along the edges of fields.

122904. PAEONIA EMODI Wall. Ranunculaceae.

No. 1722. Presented by the Director, Department of Agriculture, Kashmir. A

122766 to 122984—Continued

peony up to 2 feet high, with ternatisect leaves 6 to 12 inches long and white flowers. Native to the temperate Himalayas.

122905. PASTINACA sp. Apiaceae.

No. 1601. *Shuass*. From Pukar, Lahul, Punjab, August 1936, at 12,000 feet altitude. An umbellifer 4 feet tall, found growing in meadows.

122906 to 122912. PEDICULARIS spp. Scrophulariaceae.

Nos. 122906 to 122908 were purchased from the Director, Department of Agriculture, Kashmir.

122906. PEDICULARIS EICORNUTA Klotzsch.

No. 1765.

122907. PEDICULARIS PECTINATA Wall.

No. 1764.

122908. PEDICULARIS SIPHONANTHA D. Don.

No. 1767.

122909. PEDICULARIS SIPHONANTHA D. Don.

No. 1522. *Hunamentok*. From Kulu, Lahul, Punjab, October 1, 1936, at 12,000 feet altitude. An attractive perennial 1 foot high; flowers large, old rose, with a large white eye. Found growing in sod, watered well by springs.

122910. PEDICULARIS sp.

No. 1572—A. From Pukar, Lahul, Punjab, August 20, 1936, at 12,000 feet altitude. An attractive pink-flowered species.

122911. PEDICULARIS sp.

No. 1576. *Lugruserpo*. From Pukar, Lahul, Punjab, August 15, 1936, at 12,000 feet altitude. A showy species 1 foot high with large yellow flowers.

122912. PEDICULARIS sp.

No. 1361. From Chalunka Nulla, Baltistan, Kashmir, September 5, 1936, at 10,000 feet altitude. A pedicularis about 8 inches high, with white flowers, the beaks tipped with rose.

122913. PHLOMIS SPECTABILIS Falc. Menthaceae.

No. 1723. Purchased from the Director, Department of Agriculture, Kashmir. A tall herbaceous perennial about 6 feet high, with large ovate-cordate basal leaves, the stem leaves smaller upwards, and whorls of rather large rose-purple flowers. Native to the Himalayas from 3,000 to 8,000 feet altitude.

122914. PHLOMIS sp. Menthaceae.

No. 1782—A. Seeds presented by a native.

122915. PICRORRHIZA KURROA Benth. Scrophulariaceae.

No. 1725. Purchased from the Director, Department of Agriculture, Kashmir.

122916. PINUS ROXBURGHII Sargent (*P. longifolia* Roxb.). Pinaceae.

No. 1673. *Kail*. From above Kulu, Kulu, Punjab, November 15, 1936, at 5,000 feet altitude. A tree, native to the lower Himalayas at altitudes of 1,500 to 7,500 feet, often over 100 feet high, with a round symmetrical head, but sometimes stunted and gnarled. The light green pendulous

122766 to 122984—Continued

leaves, in clusters of 3, are 9 to 12 inches long, and persist for 3 or 4 years. The ovoid-conical cones are 4 to 7 inches long. When young, this pine is attractive for its long drooping pale-green foliage.

For previous introduction see 102771.

122917. PLANTAGO TIBETICA Hook. f. and Thoms. Plantaginaceae.

No. 1606. *Naram*. From Pukar, Lahul, Punjab, August 1936, at 12,000 feet altitude. A dooryard perennial weed, also a potherb under certain conditions. Native to the Himalayan region.

122918. PLEUROSPERMUM sp. Apiaceae.

No. 1625. *Hurgatt*. From Pukar, Lahul, Punjab, August 1936, at 12,000 feet altitude. A stout perennial up to 2 feet high; root used as a condiment.

122919. PODOPHYLLUM EMODI Wall. Berberidaceae. Himalayan mayapple.

No. 1528. *Mukutumtsi*. From Pukar, Lahul, Punjab, October 6, 1936, at 10,000 feet altitude.

122920. PODOPHYLLUM EMODI Wall. Berberidaceae. Himalayan mayapple.

No. 1732. Presented by the Director, Department of Agriculture, Kashmir.

122921. POLYGONATUM sp. Convallariaceae.

No. 1575. *Birshaka*. From Pukar, Lahul, Punjab, August 20, 1936, at 12,000 feet altitude. The root is used to wash woollens.

122922. POLYGONATUM sp. Convallariaceae.

No. 1782-G. Seeds presented by a native.

122923 to 122927. POLYGONUM spp. Polygonaceae.

122923. POLYGONUM ALPINUM All.

No. 1734. Presented by the Director, Department of Agriculture, Kashmir. A hardy herbaceous perennial with very small white flowers. Native to Europe and Asia.

122924. POLYGONUM POLYSTACHYUM Wall. Fleecflower.

No. 1490. *Mushutsi*. From the Upper Bhaga Valley, Lahul, Punjab, October 1936, at 12,000 feet altitude. An attractive perennial sometimes 6 feet tall, with large dense panicles of creamy flowers. The stems, when young, may be stewed as rhubarb.

For previous introduction see 48340.

122925. POLYGONUM sp.

No. 1491. From Rahla, Kulu, Punjab, October 26, 1936, at 9,000 feet altitude. An attractive perennial 3 feet high, with sagittate leaves 6 inches long and spikes 4 inches long, of lovely crimson flowers.

122926. POLYGONUM sp.

No. 1449. *Nielo*. From Zingzingbar, Lahul, Punjab, October 9, 1936, at 13,000 feet altitude. A bushy perennial about 1 foot high, with small heads of cream-colored flowers. The plant is very ornamental in the fall when the leaves turn orange and red.

122927. POLYGONUM sp.

No. 1574. Presented by a collector.

122766 to 122984—Continued

122928. POTENTILLA ARGYROPHYLLA Wall. Rosaceae.

No. 1737. Purchased from the Director, Department of Agriculture, Kashmir. A perennial herb up to 3 feet high, with digitate leaves and many showy yellow flowers about 1 inch across, in panicles. Native to the Himalayan region from 8,000 to 13,000 feet altitude.

122929. POTENTILLA NEPALENSIS Hook. Rosaceae.

No. 1514. From Rahla, Kulu, Punjab, October 26, 1936, at 9,000 feet altitude. An erect or ascending perennial with stout stems about 2 feet high and showy purple flowers about 1 inch across. Native to the Himalayas between 5,000 and 9,000 feet altitude.

122930. GERANIUM NEPALENSE Sweet. Geraniaceae.

No. 1645. From Chitkul, Rampur-Bushahr, August 1936. Found growing in clumps 2 feet high, near springs in pine-fir forest. A perennial, sometimes procumbent, with cordate deeply five-lobed leaves with bright pink or red flowers. Native to Nepal.

For previous introduction see 115981.

122931. PRIMULA sp. Primulaceae.

No. 1333. From Talela, Baltistan, Kashmir, August 24, 1936, at 14,000 feet altitude. Plants 1 foot high; flowers rose-purple with a white eye.

122932. PRIMULA sp. Primulaceae.

No. 1385. From Karzong Pass, Ladak, Kashmir, September 14, 1936, at 15,000 feet altitude. Plants 18 inches high; flowers not seen.

122933. RAPHANUS SATIVUS L. Brassicaceae. Radish.

No. 1622. From Leh, Ladak, Kashmir, September 17, 1936, at 10,500 feet altitude.

122934. RHAMNUS sp. Rhamnaceae.

No. 1653. From above Bandrole, Kulu, Punjab, November 14, 1936, at 8,000 feet altitude. A spreading bush about 8 feet high; covered in spring with small fragrant green flowers and later with black fruits.

122935. RHAMNUS sp. Rhamnaceae.

No. 1579. *Tsado*. From Kolung, Lahul, Punjab, August 31, 1936, at 12,000 feet altitude. A low, gnarled dense bush growing at high altitudes.

122936. RHODODENDRON sp. Ericaceae.

No. 1558. *Balu*. From Dilburig, Lahul, Punjab, October 20, 1936, at 12,000 feet altitude. A low evergreen shrub 13 inches high with pale-yellow flowers 1 inch across.

122937. RHODODENDRON CAMPANULATUM Don. Ericaceae.

No. 1600. *Raduk*. Below Kukti Pass, Chamba, Punjab, July 1936, at 12,000 feet altitude. An evergreen 6 inches high, growing in masses; flowers large, purple-lavender and fragrant.

122938 to 122947. ROSA spp. Rosaceae.

Rose.

122938. ROSA EGLANTERIA L. Sweetbrier.

No. 1456. *Seaserpo*. From Kyelang, Lahul, Punjab, October 14, 1936, at 10,-

122766 to 122984—Continued

500 feet altitude. An ornamental shrub 5 to 6 feet high, covered in July with golden-yellow double flowers over 2 inches across.

122939 to 122942. *ROSA MACROPHYLLA* Lindl. Bigleaf rose.

122939. No. 1362. From Biokdang Nulla, Baltistan, Kashmir, September 5, 1936, at 10,000 feet altitude along a stream. A large shrub, 8 feet high, loaded with large globular red fruits one-half inch in diameter, crowned by persistent sepals.

122940. No. 1481. *Seamapo*. From the Upper Bhaga Valley, Lahul, Punjab, October 1936, at 12,000 feet altitude. A dense shrub 6 to 8 feet high, covered in the spring with very fragrant single flowers, over 2 inches across; some orange red and others three shades of pink, followed by large red hips. It grows well in dry situations.

122941. No. 1553. *Seamapo*. From Tsokang, Lahul, Punjab, October 21, 1936, at 9,000 feet altitude. Like No. 1481 (P. I. 122940), but collected at a lower altitude.

122942. No. 1482. Like No. 1481 (P. I. 122940), but this plant sent long thin shoots 20 feet up the tree among the branches of a juniper; fruited abundantly.

122943. *ROSA MOSCHATA* Mill. Musk rose.

No. 1635. *Kuāzi*. From above Bandrole, Kulu, Punjab, October 20, 1936, at 8,000 feet altitude. A climber 20 feet high, filled in June with intensely fragrant, single white flowers over an inch across.

For previous introduction see 105910.

122944. *ROSA* sp.

No. 1366. From Hund, Baltistan, Kashmir, September 7, 1936, at 9,000 feet altitude. A dense bush 20 feet high, filled with hips.

122945. *ROSA* sp.

No. 1375. From Hundar, Baltistan, Kashmir, September 10, 1936, at 9,000 feet altitude. Like No. 1376 (P. I. 122946), but with larger fruit.

122946. *ROSA* sp.

No. 1376. From Hundar, Baltistan, Kashmir, September 10, 1936, at 9,000 feet altitude. A large bush, 20 feet high, with a large crop of hips.

122947. *ROSA* sp.

No. 2145. From Parachinar, North West Frontier Province, December 1936. Presented by Ibrahim Shah, of the Department of Agriculture. A yellow rose with single flowers as big as a dime, borne profusely. The bush is about 5 feet high.

122948. *RUBUS SAXATILIS* L. Rosaceae.

No. 1516. *Sholshol*. From Pukar, Lahul, Punjab, September 1, 1936, at 13,000 feet altitude. A low unarmed woody perennial with trifoliate leaves about 6 inches long, found in a birch forest. The few fruits are scarlet, rather acid, but pleasant.

For previous introduction see 92301.

122766 to 122984—Continued

122949. *RUMEX* sp. Polygonaceae.

No. 1604. *Chumtsan*. From Pukar, Lahul, Punjab, August 1936, at 12,000 feet altitude. Found along streams.

122950. *SALVIA HIANIS* Royle. Menthaceae.

No. 1728. Presented by the Director, Department of Agriculture, Kashmir. A viscid-hairy perennial herb 2 to 3 feet high, with cordate toothed leaves, 4 to 7 inches long, on petioles often 10 inches long. The blue flowers, 1 to 2 inches long with inflated throats, are borne in large spreading panicles.

For previous introduction see 103326.

122951. *SALVIA* sp. Menthaceae.

No. 1618. *Zluptsi*. From Pukar, Lahul, Punjab, August 1936, at 12,000 feet altitude. An attractive mint, up to 2 feet high, found growing in field borders. The blue-purple flowers are in long heads.

122952. *SAPINDUS MUKOROSI* Gaertn. Sapindaceae. Chinese soapberry.

No. 1784. *Ritha*. From Kulu, Kulu, Punjab, November 20, 1936, at 4,500 feet altitude. A Chinese tree about 35 feet high, with alternate, pinnate leaves and round yellow fruits an inch in diameter. The flesh of the fruit is used as a soap to wash woolens.

For previous introduction see 105633.

122953 to 122955. *SAUSSUREA* spp. Astera-ceae.

122953. *SAUSSUREA* sp.

No. 1381. *Pangtsi*. From Karzong Pass, Ladak, Kashmir, September 14, 1936, at 15,000 feet altitude. The plant consists of a head of large flowers, 2 inches in diameter, with blue-purple stamens and a few basal leaves. Received under the name "minor," for which a place of publication has not been found.

122954. *SAUSSUREA* sp.

No. 1573. *Romentok*. From Tinu, Lahul, Punjab, September 16, 1936. A very attractive species, growing in clumps up to 2 feet high. The leaves are silvery and the flowers are a delicate mahogany brown.

122955. *SAUSSUREA* sp.

No. 1616. *Dafā*. From above Tinu, Lahul, Punjab, September 1936, at 11,000 feet altitude. A perennial over 3 feet tall, growing on dry slopes. The small rose-purple flowers are borne in clusters.

122956. *SAXIFRAGA* sp. Saxifragaceae.

No. 1580. *Shabora*. From Tinu, Lahul, Punjab, October 16, 1936. A species 10 inches high, with greenish flowers, but its chief attraction consists in the large oval leaves which turn red in the fall.

122957. *SCABIOSA* sp. Dipsacaceae.

No. 1521. From Gundla, Lahul, Punjab, October 23, 1936. A perennial growing on dry slopes, with attractive rose-purple flowers 2 inches across.

122958. *SCROPHULARIA SCOPOLI* Hoppe. Scrophulariaceae.

No. 1735. Presented by the Director, Department of Agriculture, Kashmir. A variable biennial with stout stems 2 to 3

122766 to 122984—Continued

feet high, ovate-oblong to cordate leaves 1 to 3 inches long, and large panicles of small greenish-purple flowers. Native to eastern Europe and western Asia.

122959. *SEDUM* sp. Crassulaceae.

No. 1384. *Sralto*. From Karzong Pass, Ladak, Kashmir, September 14, 1936, at 15,000 feet altitude. Found growing in clumps 18 inches high with corymbs, 1 inch across, of yellow flowers which turn red with age.

122960. *SENECIO* sp. Asteraceae.

No. 1587. *Zerjung*. From Pukar, Lahul, Punjab, August 1936, at 12,000 feet altitude. A perennial about 2 feet high, with corymbs of yellow flowers less than one-half inch across.

122961. *SENECIO* sp. Asteraceae.

No. 1752. From Tandl, Lahul, Punjab, October 26, 1936, at 10,000 feet altitude. A small perennial 1 foot high, growing in clumps in dry situations. The yellow flower heads are 1 inch across.

122962. *SIUM SISARUM* L. Apiaceae.

Skirret.

No. 1763. *Zirra*. From Kyelang, Lahul, Punjab, October 1936, at 10,500 feet altitude. A popular Indian spice.

122963. *SOLANUM* sp. Solanaceae.

No. 1242. From Shigar, Baltistan, Kashmir, August 18, 1936. A xerophytic shrub 4 feet high, with much flattened black berries; found on the sand plain of a river.

122964. *SPIRAEA CANESCENS* D. Don. Rosaceae.

No. 1515. *Katishing*. From Koti, Kulu, Punjab, at 9,000 feet altitude. A shrub from 6 to 12 feet high, with long slender arching branches, small broad-oval to ovate leaves, and rather small white flowers in dense corymbs 2 to 3 inches across. Native to the Himalayan region.

122965. *SORBARIA SORBIFOLIA* (L.) A. Br. Rosaceae.

No. 1473. *Kahan*. From Tirot, Lahul, Punjab, October 22, 1936, at 9,000 feet altitude. A shrub about 6 feet high, of spreading habit, with large compound leaves which turn red in the fall, and huge panicles of creamy white flowers in the spring. Found in dry open places.

122966. *SORBARIA SORBIFOLIA* (L.) A. Br. Rosaceae.

No. 1474. From Naggar, Kulu, Punjab, October 27, 1936, at 6,000 feet altitude. Much like No. 1473 (P. I. 122965), but will stand only light frost.

122967. *PTERYGOTA ALATA* (Roxb.) R. Br. Sterculiaceae.

No. 2139. From Calcutta, January 7, 1937. A large tree, native to India, with ash-colored bark and yellow-tomentose branchlets. The large, heart-shaped leaves, 10 inches long by 7 inches wide, are clustered at the ends of the branches. The panicles of small tomentose flowers, without petals, are shorter than the leaves.

For previous introduction see 116789.

122968. *STERCULIA* sp. Sterculiaceae.

No. 2144. *Peshawari Badam* (Peshawari almonds). From Calcutta, January 7, 1937; said to have come from Peshawar.

122766 to 122984—Continued

A handsome shade tree; the seeds are eaten.

122969. *SYRINGA EMODI* Wall. Oleaceae. Himalayan lilac.

No. 1462. From Kyelang, Lahul, Punjab, October 14, 1936, at 10,500 feet altitude. A shrub up to 8 feet high, inclined to be scraggly but nevertheless attractive with its large trusses of creamy fragrant flowers. This strain is the hardiest and most attractive of any found in the Himalayas.

122970. *SPINACIA OLERACEA* L. Chenopodiaceae. Spinach.

No. 1412. *Palag*. From Leh, Ladak, Kashmir, September 16, 1936, at 10,500 feet altitude. A potherb, perhaps not different from the ones sent from lower altitudes.

122971. *TOONA CILIATA* Roemer. Meliaceae. Toon tree.

No. 1781. From Kulu, Kulu, Punjab, November 17, 1936, at 4,500 feet altitude. A roadside tree, growing to a diameter of about 2 feet. The small whitish flowers are in long clusters, but the chief value of the tree is that the leaves stay green late in the fall.

122972. *TRAGOPOGON* sp. Cichoriaceae.

No. 1617. *To*. From Pukar, Lahul, Punjab, August 1936, at 12,000 feet altitude. A form with yellow flowers, found on dry slopes.

122973. *TRAGOPOGON* sp. Cichoriaceae.

No. 1754. From Pukar, Lahul, Punjab, September 1936, at 12,000 feet altitude.

122974 to 122977. *TRICHOSANTHES* spp. Cucurbitaceae.

122974 and 122975. *TRICHOSANTHES ANGUINA* L. Snakegourd.

Presented by the Director, Department of Agriculture, Kashmir.

122974. No. 1686. *Chichenda*. A white gourd about 3 feet long.

122975. No. 1694. *Hara Chichenda*. A green fruit about 3 feet long.

122976. *TRICHOSANTHES BRACTEATA* (Lam.) Voigt.

No. 1655. From Naggar, Kulu, Punjab, November 14, 1936, at 6,000 feet altitude. A vigorous vine, about 20 feet long, bearing an abundance of orange-red fruits the size and shape of duck eggs.

122977. *TRICHOSANTHES* sp.

No. 1791. From Kangra, Kangra, Punjab, November 23, 1936, at 2,500 feet altitude. An annual with an abundance of globose fruits three-fourths of an inch in diameter, brick-red with long blotches of white.

122978 to 122980. *TRIGONELLA FOENUM GRAECUM* L. Fabaceae. Fenugreek.

122978. No. 1701. *Methi*. Presented by the Director, Department of Agriculture, Kashmir.

122979. No. 1164. *Methi*. From Skardo, Baltistan, Kashmir, August 16, 1936. A potherb.

122980. No. 1422. *Shamilik*. From Leh, Ladak, Kashmir, September 17, 1936, at 10,500 feet altitude. A potherb.

122766 to 177984—Continued

122981. *VERBASCUM* sp. Scrophulariaceae.

No. 1573. *Kut*. From Kyelang, Lahul, Punjab, October 1, 1936, at 10,500 feet altitude. Cultivated for the roots, used in native medicine. The yield is heavy; one root may weigh 4 pounds when dried.

122982. *VERBASCUM* sp. Scrophulariaceae.

No. 1615. *Kolonasta*. From Pukar, Lahul, Punjab, August 1936, at 12,000 feet altitude.

122983. *VIBURNUM NERVOSUM* D. Don. Caprifoliaceae.

No. 1733. Presented by the Director, Department of Agriculture, Kashmir.

122984. *VICIA FABA* L. Fabaceae.
Broadbean.

No. 1172. [Received without notes.]

122985. *TRITICUM AESTIVUM* L. Pca-
ceae. Common wheat.

From Canada. Seeds presented by M. S. J. McMurachy, McConnell, Manitoba. Received March 22, 1937.

122986. *GOSSYPIUM* sp. Malvaceae.

From the Canal Zone. Seeds presented by S. P. Williams, Balboa Heights. Received January 12, 1937.

A tree cotton, native to the Canal Zone and to the Republic of Panama. It is not cultivated, but grows wild and becomes a small tree about 10 feet high.

122987 and 122988.

From the Straits Settlements. Seeds presented by the Botanic Gardens. Received March 22, 1937.

122987. *FICUS VARIEGATA* Blume. Mora-
ceae. Fig.

The "Gondang" tree of Java and Sumatra. A large forest tree with enormous numbers of long pedicelled fruits an inch or more across; when ripe, these are red marked with white streaks and dots.

For previous introduction see 67588.

122988. *ORYZA LATIFOLIA* Desv. Poaceae.
Rice.

A perennial wild rice distributed through parts of tropical Asia, Africa, and America. The tufted stems become 6 to 8 feet high, and the plant is said to flower and produce seeds throughout the year. The smooth leaves are 1 to 2 feet long and about an inch wide, and the erect spike is up to 4 inches long.

For previous introduction see 97259.

122989. *ALNUS NEPALENSIS* D. Don. Betulaceae.

From India. Seeds presented by the Range Officer, Ghum-Simana, Sukhiapokhri, Bengal, at the request of Walter Koelz, Bureau of Plant Industry. Received March 24, 1937.

A tree up to 70 feet high, with a trunk 3 to 4 feet in diameter, found between 4,000 and 7,000 feet altitude. It is a rapid grower, used chiefly for firewood.

For previous introduction see 116579.

122990 to 123002.

From the Union of Soviet Socialist Republics. Seeds purchased; received March 25, 1937.

122990 to 122996. *IRIS* spp. Iridaceae.

122990. *IRIS KOROLKOWI* Regel.
No. 53. Redvein iris.

For previous introduction see 112798.

122991. *IRIS ORCHIOIDES* Carr.

No. 54. A Juno iris from the mountains of Turkistan, with about 6 lanceolate leaves up to 9 inches long and a 3- to 6-headed stem, often a foot high. The bright-yellow falls have purple blotches on each side of the crest.

For previous introduction see 115077.

122992. *IRIS HALOPHILA SOGDIANA* (Bunge) Skeels.

No. 55. Leaves pale green, 1 to 1½ feet long; the stout terete stem, up to 2 feet high, often bears one or two spicate clusters of pale gray-lilac flowers below the end one. Native to Asia from Asia Minor eastward to Kashmir and Mongolia.

For previous introduction see 115078.

122993. *IRIS SONGARICA* Schrank.

No. 60. A densely tufted Apogon iris about 1 foot high, with narrow-linear, strongly ribbed leaves up to a foot in length and 2 or 3 lilac-colored flowers over an inch long. Native to central Asia.

For previous introduction see 113873.

122994. *IRIS STOLONIFERA* Maxim.

No. 59.

For previous introduction see 112802.

122995. *IRIS VICARIA* Vved.

No. 57. A Juno iris with about 6 lanceolate leaves 6 to 9 inches long, stems about twice as long, and lilac flowers with a bright yellow blotch in the center of the fall. Native to Turkistan.

122996. *IRIS WARLEYENSIS* Foster.

No. 58.

122997 to 123002. *TULIPA* spp. Liliaceae.
Tulip.

122997. *TULIPA FERGANICA* Vved.

No. 108.

122998. *TULIPA FOSTERIANA* Hoog.

No. 101.

For previous introduction see 109796.

122999. *TULIPA INGENS* Hoog.

No. 102.

123000. *TULIPA PRAESTANS* Hoog.

No. 104.

For previous introduction see 108413.

123001. *TULIPA KUSCHKENSIS* B. Fedtsch.

No. 113.

For previous introduction see 109800.

123002. *TULIPA TUBERGENIANA* Hoog.

No. 106.

123003. EVODIA MELIAEFOLIA (Hance)
Benth. Rutaceae.

From Cuba. Seeds presented by the Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received March 3, 1937.

Originally from the Forest Research Institute, Dehra Dun, India. A small, much-branched tree, native to India. The pinnately compound leaves are made up of 3 to 5 pairs of obliquely lanceolate leaflets 3 to 4 inches long, and the small white flowers are in cymes 8 inches across.

For previous introduction see 99671.

123004 to 123138.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received January 28, 1937.

123004. AGRIMONIA EUPATORIA L. Rosaceae.

No. 2398. From 16 km. east of Trabzon, August 12, 1936. An ornamental plant with attractive spikes of delicate yellow flowers.

123005. AJUGA sp. Menthaceae.

No. 1122. From between Akhisar and Manisa, June 11, 1936. A low-growing perennial with yellow flowers, found on dry rocky slopes.

123006. AJUGA sp. Menthaceae.

No. 1441. From 20 km. north of Gaziantep, July 2, 1936. An ornamental rock plant.

123007. AJUGA sp. Menthaceae.

No. 3323. From Ankara, June 20, 1936. A short, hairy rock plant with yellow flowers.

123008. NIGELLA SATIVA L. Ranunculaceae.
Black cumin.

No. 1386. From the Marsh bazar, July 2, 1936. Used as a flavoring for bread and other foods.

For previous introduction see 73490.

123009. ALLIUM sp. Liliaceae.

No. 1630. From 26 km. south of Diyarbakir, July 9, 1936.

123010. ALLIUM sp. Liliaceae.

No. 1150. *Charekotu*. From the Balikesir bazar, June 16, 1936. Used as flavoring for bread and other foods.

123011. ALLIUM sp. Liliaceae.

No. 1797. From 52 km. southwest of Elaziz, July 14, 1936.

123012. ALSINE sp. Silenaceae.

No. 2086. An ornamental rock plant from 25 km. southeast of Ankara on Alma Dag, August 1, 1936.

123013. ALYSSUM sp. Brassicaceae.

No. 566. From the Izmir bazar, June 23, 1935.

123014. ALYSSUM sp. Brassicaceae.

No. 1262. From the Bursa bazar, June 18, 1936.

123015. ANETHUM GRAVEOLENS L. Apiaceae.

No. 525. From the Mugla bazar, June 28, 1936.

123004 to 123138—Continued**123016. ANTHEMIS sp.** Asteraceae.

No. 791. From dry hills 46 km. north of Antalya, June 3, 1936.

123017. AQUILEGIA. Ranunculaceae.

No. 596. From the Izmir bazar, June 23, 1936. Garden hybrids.

123018. AQUILEGIA sp. Ranunculaceae.

No. 1273. *Hasake Kupe*. From the Bursa bazar, June 18, 1936.

123019 to 123022. ARENARIA spp. Silenaceae.**123019. ARENARIA sp.**

No. 2200. A rock plant from 102 km. southeast of Susheri, August 7, 1936.

123020. ARENARIA sp.

No. 2780. A rock plant from 35 km. south of Bursa, August 8, 1936.

123021. ARENARIA sp.

No. 2177. An ornamental rock plant from 100 km. southeast of Susheri, August 7, 1936.

123022. ARENARIA sp.

No. 721. A plant with small blue flowers, found in pine lands 5 km. south of Mugla, May 28, 1936.

123023. ASPARAGUS sp. Convallariaceae.

No. 1861. A wild asparagus from 26 km. west of Malatya, July 16, 1936.

123024. ATRIPLEX sp. Chenopodiaceae.

No. 3103. From the police station at Yozgat, October 9, 1936.

123025. BOREAVA sp. Brassicaceae.

No. 783. From a valley near Isparta, June 2, 1936.

123026. BRASSICA sp. Brassicaceae.

No. 2590. From 14 km. west of Sam-sun, August 23, 1936.

123027. BUPLEURUM sp. Apiaceae.

No. 726. From 2 km. south of Mugla, May 28, 1936.

123028. CAMPANULA sp. Campanulaceae.

No. 2761-A. A campanula with small blue bell-shaped flowers from Bursa.

123029. CENTAUREA sp. Asteraceae.

No. 1403. From 20 km. north of Gaziantep, July 2, 1936.

123030. CENTAUREA sp. Asteraceae.

No. 1490. A yellow composite from 42 km. north of Gaziantep, July 3, 1936.

123031. CEPHALARIA sp. Dipsacaceae.

No. 1487. From 44 km. north of Gaziantep, July 3, 1936.

123032. CERINTHE ASPERA Roth. Boraginaceae.

No. 638. From near Koshadasi, May 25, 1936. An annual with oval, auricled, often-spotted leaves, terminal clusters of rather large yellow flowers with dark crimson rings at the base, and the upper bracts often beautifully colored. Native to Europe.

123033. CHRYSANTHEMUM sp. Asteraceae.

No. 2333. From 60 km. south of Trabzon, August 10, 1936.

123004 to 123138—Continued

123034. *CISTUS* sp. Cistaceae.
No. 1186. *Second rose*. A pink-flowered shrub from 75 km. west of Balikesir, June 16, 1936. Found well distributed in Turkey.
123035. *CISTUS* sp. Cistaceae.
No. 2752. An ornamental shrub from Ulu Dag, 10 km. south of Bursa, September 7, 1936.
123036. *CONIUM* sp. Apiaceae.
No. 1631. From 70 km. south of Diyarbekir; found by a desert spring.
123037. *CORIANDRUM SATIVUM* L. Apiaceae.
Coriander.
No. 2646. From 24 km. southeast of Merzifon, August 25, 1936.
123038. *CORNUS* sp. Cornaceae.
No. 2409. A shrub from 32 km. west of Rize, August 13, 1936.
123039. *COTONEASTER* sp. Malvaceae.
No. 2639. From 66 km. southeast of Merzifon, August 25, 1936. A small tree with quantities of small, single-seeded red fruits.
123040. *COTONEASTER* sp. Malvaceae.
No. 2754. An ornamental shrub from Ulu Dag at 3,000 feet altitude, September 7, 1936.
123041. *CUMINUM CYMINUM* L. Apiaceae.
Cumin.
No. 1222. From the Bursa bazar, June 18, 1936. Used as a flavoring for meats.
- 123042 to 123044. *DELPHINIUM* spp. Ranunculaceae.
123042. *DELPHINIUM* sp.
No. 1664. From 44 km. east of Diyarbekir, July 10, 1936. A tall plant with blue-spurred flowers.
123043. *DELPHINIUM* sp.
No. 1667. From 25 km. east of Diyarbekir, July 10, 1936. A low plant with blue-spurred flowers.
123044. *DELPHINIUM* sp.
No. 1776. From 35 km. southwest of Elaziz, July 14, 1936.
123045. *VELEZIA RIGIDA* L. Silenaceae.
No. 1728. From 39 km. southeast of Elaziz, July 13, 1936. A rock plant with pink flowers.
- 123046 to 123048. *DIANTHUS* sp. Silenaceae.
123046. *DIANTHUS* sp.
No. 596. From the Antalya bazar, June 4, 1936.
123047. *DIANTHUS* sp.
No. 1788. From 9 km. southwest of Elaziz, July 14, 1936.
123048. *DIANTHUS* sp.
No. 2396. From 47 km. east of Trabzon, August 12, 1936. A small plant with attractive small flowers.
123049. *DRACOCEPHALUM* sp. Menthaceae.
No. 1721. From 39 km. east of Elaziz, July 13, 1936.

123004 to 123138—Continued

123050. *LALLEMANTIA PELTATA* (L.) Fisch. and Mey. Menthaceae.
No. 1860. From 11 km. west of Malatya, July 16, 1936.
123051. *EUONYMUS* sp. Celastraceae.
No. 2505. From 35 km. east of Ordu, August 19, 1936.
123052. *FERULA* sp. Apiaceae.
No. 613. From Ephesus, May 24, 1936.
123053. *FIBIGIA CLYPEATA* (L.) Medic. Brassicaceae.
No. 1739. From 30 km. southeast of Elaziz, July 13, 1936. A low herbaceous perennial 18 inches high, with small yellow flowers. Native to Europe.
123054. *FOENICULUM VULGARE* Hill. Apiaceae.
Fennel.
No. 1397. From the Marash bazar, July 2, 1936. Used for flavoring.
123055. *FUMANA* sp. Cistaceae.
No. 1311. From 20 km. north of Bursa, June 20, 1936. A perennial with yellow flowers, found in the hills among rocks.
123056. *HELIANTHEMUM* sp. Cistaceae.
No. 787. On the road to Dinar, west of Isparta, June 2, 1936. An annual with small yellow flowers.
123057. *HIPPOPHAE RHAMNOIDES* L. Elaeagnaceae.
Common sea-buckthorn.
No. 2397. From 68 km. east of Trabzon, August 12, 1936. A tree, growing near the seashore.
For previous introduction see 115076.
123058. *HYOSCYAMUS* sp. Solanaceae.
No. 814. From Antalya, June 4, 1936.
123059. *HYPERICUM* sp. Hypericaceae.
No. 1519. From 25 km. east of Gaziantep, July 5, 1936. A species with beautiful brown flowers.
123060. *INULA* sp. Asteraceae.
No. 2970. From 17 km. northeast of Izmir, September 24, 1936. A rock plant with handsome white, feltlike foliage.
123061. *LATHYRUS ODORATUS* L. Fabaceae.
Sweet pea.
No. 563. From the Izmir bazar, May 23, 1936.
123062. *LYCHNIS* sp. Silenaceae.
No. 2793. From Ulu Dag, at 8,000 feet altitude, September 9, 1936. A rock plant.
123063. *AGROSTEMMA GITHAGO* L. Silenaceae.
No. 640. On the road to Milas, May 26, 1936. A form of this species with beautiful large purple flowers $2\frac{1}{2}$ inches across, borne profusely. Plant slender and much branched.
123064. *LYCHNIS* sp. Silenaceae.
No. 1503. From 5 km. southeast of Gaziantep, July 4, 1936.
123065. *LYTHRUM* sp. Lythraceae.
No. 2292. From 45 km. east of Erzincan, August 9, 1936.

123004 to 123138—Continued

123066. *MATTHIOLA* sp. Brassicaceae.
No. 1567. From 30 km. north of Urfa, July 7, 1936. A plant with crumpled lavender flowers, common in dry waste places in Anatolia; it makes a good cover crop in the spring.
123067. *ERYSIMUM* sp. Brassicaceae.
No. 1798. From 9 km. southwest of Elaziz, July 14, 1936.
123068. *MIMOSA PUDICA* L. Mimosaceae.
Sensitiveplant.
No. 598. From the Antalya bazar, June 4, 1936.
For previous introduction see 88157.
123069. *MUSCARI* sp. Liliaceae.
No. 1529. From 22 km. southeast of Urfa, July 6, 1936.
123070. *NICOTIANA* sp. Solanaceae.
No. 2399. From 68 km. east of Trabzon, August 12, 1936. A species with yellow flowers.
123071. *PAPAVER* sp. Papaveraceae.
No. 1729. From 42 km. southeast of Elaziz, July 13, 1936.
123072. *PASTINACA* sp. Apiaceae.
No. 2413. From 32 km. west of Rize, August 3, 1936. A fragrant umbellifer with leaves like the parsnip.
123073. *RANUNCULUS* sp. Ranunculaceae.
No. 2303. From 76 km. north of Gemushane, August 10, 1936. A species with double yellow flowers.
123074. *RANUNCULUS* sp. Ranunculaceae.
No. 1591. From 32 km. east of Siverek, July 7, 1936. Plants growing near a spring in the desert.
123075. *RAPISTRUM* sp. Brassicaceae.
No. 771. From ruins near Denizli, May 31, 1936.
- 123076 to 123078. *RHAMNUS* sp. Rhamnaceae.
123076. *RHAMNUS* sp.
No. 2310. A shrub found on dry rocks 10 km. north of Gemushane, August 10, 1936.
123077. *RHAMNUS* sp.
No. 2405. A large bush or small tree; from 45 km. east of Trabzon, August 13, 1936.
123078. *RHAMNUS* sp.
No. 2576. A shrub from 7 km. west of Terme, August 27, 1936.
123079. *RHUS* sp. Anacardiaceae.
No. 3415. From a dry rocky slope, 3 km. northeast of Ankara, June 26, 1936.
123080. *RINDERA* sp. Boraginaceae.
No. 1420. From 17 km. north of Gaziantep, July 2, 1936.
123081. *RUTA GRAVEOLENS* L. Rutaceae.
No. 1451. From 17 km. north of Gaziantep, July 2, 1936.
- 123082 to 123095. *SALVIA* spp. Menthaceae.
Sage.

123004 to 123138—Continued

123082. *SALVIA* sp.
No. 1444. From 37 km. north of Gaziantep, July 2, 1936.
123083. *SALVIA* sp.
No. 714. From 2 km. south of Mugla, May 28, 1936. A mint with white flowers.
123084. *SALVIA TRILOBA* L.
No. 1100. Along the road between Manisa and Izmir, June 11, 1936.
123085. *SALVIA* sp.
No. 1101. From near Kirkagach, June 11, 1936. A mint with light-blue flowers.
123086. *SALVIA* sp.
No. 1210. From 40 km. west of Balikesir, June 16, 1936.
123087. *SALVIA NAPIFOLIA* Jacq.
No. 1280. From 25 km. east of Bandirma, June 18, 1936. A perennial sage similar to *Salvia verticillata*, with stems about 2 feet high, the lower leaves lyrate, the upper ones ovate-subcordate, and dark-blue flowers. Native to the Mediterranean region.
123088. *SALVIA* sp.
No. 1670. From 16 km. east of Diyarbekir, July 10, 1936.
123089. *SALVIA* sp.
No. 1781. From 52 km. southwest of Elaziz, July 14, 1936.
123090. *SALVIA* sp.
No. 1787. From 9 km. southwest of Elaziz, July 14, 1936.
123091. *SALVIA* sp.
No. 1921. From Birejik, July 21, 1936.
123092. *SALVIA* sp.
No. 1955. From Birejik, July 22, 1936.
123093. *SALVIA* sp.
No. 2002. From 7 km. west of Chiftahane, July 25, 1936. A mint with white sickle-shaped flowers, spaced far apart.
123094. *SALVIA* sp.
No. 2166. From 84 km. east of Sivas, August 6, 1936.
123095. *SALVIA FORSKAHLII* L.
No. 2330. From 50 km. south of Trabzon, August 10, 1936. A hardy perennial sage up to 18 inches high, with broad ovate leaves and violet flowers in long racemes. Native to Asia Minor.
123096. *MELISSA OFFICINALIS* L. Menthaceae.
Common balm.
No. 2392. From 16 km. east of Trabzon, August 12, 1936.
For previous introduction see 73488.
- 123097 to 123100. *SALVIA* spp. Menthaceae.
123097. *SALVIA* sp.
No. 2501. From 125 km. southwest of Shebinkarahisar, August 18, 1936. A species with the leaves covered with long silky hairs.

123004 to 123138—Continued

123098. *SALVIA* sp.
No. 3357. From 65 km. west of Bursa, June 18, 1936. A species with white flowers.
123099. *SALVIA* sp.
No. 3436. From Alın Dag, June 28, 1936.
123100. *SALVIA* sp.
No. 1096. A pungent herb from 15 km. northwest of Izmir, June 11, 1936.
123101. *SCABIOSA* sp. Dipsacaceae.
No. 1730. A low, white-flowered rock plant from the mountains 32 km. southeast of Elaziz, July 13, 1936.
123102. *SCABIOSA* sp. Dipsacaceae.
No. 3106. From 40 km. north of Kalejik, October 12, 1936. A spiny compact rock plant, very attractive when in bloom.
123103. *PTEROCEPHALUS PLUMOSUS* (L.) Coult. Dipsacaceae.
No. 628. From Ephesus, May 24, 1936. An ornamental plant with lavender flowers.
- 123104 to 123106. *SCABIOSA* spp. Dipsacaceae.
123104. *SCABIOSA SICULA* L.
No. 1310. From 20 km. north of Bursa, June 20, 1936. A low annual with red flowers. Native to the Mediterranean region.
123105. *SCABIOSA* sp.
No. 1312. From 20 km. north of Bursa, June 20, 1936. An ornamental plant with white flowers.
123106. *SCABIOSA* sp.
No. 3321. *Bird's eye*. From Ankara, May 20, 1936. An ornamental found both wild and cultivated.
123107. *SCORZONERA* sp. Cichoriaceae.
No. 752. From the mountains between Denizli and Tavas, May 30, 1936.
123108. *SCUTELLARIA* sp. Menthaceae.
No. 1746. From 39 km. east of Elaziz, July 13, 1936.
- 123109 to 123112. *SEDUM* spp. Crassulaceae.
123109. *SEDUM GRACILE* C. A. Mey.
No. 2301. From 53 km. north of Gemushane, August 10, 1936. A low succulent with white flowers borne next to the ground.
123110. *SEDUM HISPANICUM* L.
No. 2328. From 35 km. north of Gemushane, August 10, 1936. A succulent with pink flowers.
123111. *SEDUM ALBUM* L.
No. 2481. From 97 km. south of Giresun, August 17, 1936.
123112. *SEDUM* sp.
No. 2684. From the mountains 46 km. south of Tokat, August 26, 1936. A succulent with brilliant red flowers and leaves.
123113. *SENECIO NEBRODENSIS* L. Astera-ceae.
No. 2176. From 84 km. east of Sivas, August 6, 1936. An annual or, under some

123004 to 123138—Continued

- conditions, a perennial, with tall erect stems, pinnatisect leaves, and attractive yellow flower heads. Native to southern Europe.
123114. *SERRATULA* sp. Asteraceae.
No. 687. On the road to Milas, June 26, 1936, in dry pine woods. A purple-flowered, thistlelike composite.
123115. *SETARIA ITALICA* (L.) Beauv. Poa-ceae. Millet.
No. 1898. From 50 km. north of Malatya, in dry rocky soil. July 17, 1936.
- 123116 to 123124. *SILENE* spp. Silenaceae.
123116. *SILENE* sp.
No. 2761. From south of Bursa, September 7, 1936.
123117. *SILENE* sp.
No. 2799. A rock plant from Ulu Dag, September 9, 1936.
123118. *SILENE* sp.
No. 706. From 15 km. west of Mugla, May 27, 1936.
123119. *SILENE* sp.
No. 1184. From 10 km. west of Balıkesir, June 16, 1936, on a dry slope.
123120. *SILENE* sp.
No. 1585. From 5 km. east of Siverek, July 7, 1936.
123121. *SILENE* sp.
No. 1777. From 52 km. southwest of Elaziz, July 14, 1936.
123122. *SILENE* sp.
No. 1671. From 44 km. east of Diyarbekir, July 10, 1936.
123123. *SILENE* sp.
No. 2411. From 29 km. west of Rize, August 13, 1936. An ornamental with pink flowers.
123124. *SILENE GALLICA* L.
No. 2630. From 43 km. southwest of Samsun, August 24, 1936.
123125. *STAPHYLEA PINNATA* L. Staphyleaceae. European bladdernut.
No. 2385. In the woods between Trabzon and Rize, August 12, 1936. A tree-like shrub with deciduous leaves and terminal clusters of small white flowers and much inflated membranous podlike fruits.
For previous introduction see 109162.
- 123126 to 123128. *TEUCRIUM* spp. Menthaceae.
123126. *TEUCRIUM* sp.
No. 1569. From 30 km. north of Urfa, July 7, 1936.
123127. *TEUCRIUM* sp.
No. 1761. From the mountains 25 km. southeast of Elaziz, July 13, 1936. A fragrant, low-growing plant.
123128. *TEUCRIUM* sp.
No. 2093. A rock plant from Alma Dag, 25 km. southeast of Ankara, August 1, 1936.

123004 to 123138—Continued

123129 to 123131. *THYMUS* spp. Mentha-ceae.

123129. *THYMUS* sp.

No. 2308. From 53 km. north of Gemushane, August 10, 1936. Flowers borne in cloverlike heads.

123130. *THYMUS* sp.

No. 2099. From Alma Dag, 25 km. southeast of Ankara, August 1, 1936. A low compact shrub, covered with very fragrant flowers.

123131. *THYMUS SERPYLLUM* L.

No. 3447. From Alma Dag, June 28, 1936. A plant with fragrant leaves, found growing in cushionlike clumps among rocks.

123132. *TRIFOLIUM REPENS* L. Fabaceae.
White clover.

No. 1295. A large-flowered white clover, found 40 km. east of Bursa, June 16, 1936.

123133. *TUNICA PROLIFERA* (L.) Scop. Silenaceae.

No. 646. From Tire, May 25, 1936.

123134. *TUNICA* sp. Silenaceae.

No. 1079. From dry slopes 80 km. northwest of Izmir, June 10, 1936.

123135. *VERONICA* sp. Scrophulariaceae.

No. 2484. From 40 km. south of Giresun, August 17, 1936.

123136. *VIBURNUM* sp. Caprifoliaceae.

No. 2326. A shrub from 46 km. north of Gemushane, August 10, 1936.

123137. *VICIA TETRASPERMA* (L.) Moench. Vetch.

No. 1350. From Adana, June 10, 1936.

123138. *VIOLA* sp. Violaceae.

No. 1257. From the Bursa bazar, June 18, 1936.

123139 to 123143. *ORYZA SATIVA* L. Poaceae. Rice.

From China. Seeds presented by the Rice and Wheat Imperial Institute, Nanking. Received March 3, 1937.

123139. No. 28785. A pure line selection.

123140. No. 28865. Var. *Red chaff*.

123141. *Moh Tse Oza*.

123142. *Fee Lah Fow*.

123143. No. 30305. A pure line rice.

123144 to 123270.

From India. Seeds collected by Walter Koelz, Bureau of Plant Industry. Received March 23, 1937.

123144. *ABIES PINDROW* Spach. Pinaceae.
Fir.

No. 2300. *Tos*. Presented by the Kulu Forest Service, Kulu, Punjab, February 10, 1937.

For previous introduction see 122766.

123145. *ACACIA CONCINNA* (Willd.) DC. Mimosaceae.

No. 2225. *Sikaka*. From Madras, February 4, 1937. A large and very prickly woody climber with bipinnate leaves of

123144 to 123270—Continued

12 to 6 pinnae, 2 to 3 inches long, and small cream-colored to pink flowers in panicled globose heads. Native to southeastern Asia.

123146. *ALBIZZIA FALCATA* (L.) Backer. Mimosaceae.

No. 2259. From Bangalore, Mysore, February 9, 1937. A rapid-growing tropical Asiatic tree with large feathery leaves and small globular flower heads. It is used for shade in coffee plantations.

For previous introduction see 81406.

123147. *ALBIZZIA ODORATISSIMA* (L. f.) Benth. Mimosaceae.

No. 2261. From Bangalore, Mysore, February 9, 1937. A tall erect unarmed tree, with bipinnate leaves and very numerous small heads of fragrant white flowers. Native to the central Himalayas.

For previous introduction see 66648.

123148. *ALLIUM CEPA* L. Liliaceae. Onion.

No. 2271. From Bangalore, Mysore, February 9, 1937. A red globe onion; said to be native.

123149. *AMARANTHUS* sp. Amaranthaceae.

No. 2290. *Harive*. From Bangalore, Mysore, February 9, 1937. An all-season potherb.

123150. *AMARANTHUS* sp. Amaranthaceae.

No. 2291. *Clukarive*. From Bangalore, Mysore, February 9, 1936. An all-season potherb.

123151. *ANETHUM GRAVEOLENS* L. Apiaceae.

No. 2292. *Sabakshi*. Bangalore; Mysore, February 9, 1936. A common potherb in the hot parts of India.

123152. *ARGYREIA* sp. Convolvulaceae.

No. 2185. From Mahendra, Madras Presidency, January 23, 1937, at 4,000 feet altitude. A vigorous evergreen woody climber with large heart-shaped leaves nearly a foot long.

123153. *PELTOPHORUM INERME* (Roxb.) Llanos (*P. ferrugineum* Benth.). Caesalpiniaceae.

No. 2228. From Madras. A large unarmed tree used for street planting, with finely pinnate leaves and showy terminal racemes of small yellow fragrant flowers, followed by short flattened pods.

123154 to 123157. *BAUHINIA* spp. Caesalpiniaceae.

123154. *BAUHINIA VAHLII* Wight and Arn. Malu-creeper.

No. 2181. From Mahendra, Madras Presidency, January 22, 1937, at 4,000 feet altitude. A vigorous woody climber up to 40 feet high, with large velvety coriaceous leaves a foot long and terminal dense racemes of flowers. The large flat velvety brown pods are gathered by the natives of India, roasted, and the seeds eaten.

For previous introduction see 103489.

123155. *BAUHINIA ACUMINATA* L.

No. 2137. From Calcutta, January 7, 1937. A small ornamental shrub 5 feet high.

123144 to 123270—Continued

123156. *BAUHINIA* sp.
No. 2229. From Madras, Madras Presidency, February 6, 1937. A shrub about 6 feet high, bearing unscented white, starlike flowers about 1 inch across.
123157. *BAUHINIA* sp.
No. 2303. From Bangalore, Mysore, February 9, 1937.
- 123158 and 123159. *BRASSICA OLERACEA* *BO-TRYTIS* L. Brassicaceae. Cauliflower.
123158. No. 2133. *Phulgobi*. From Calcutta, January 6, 1937. Said to be a Patna variety.
123159. No. 2248. *Snowball*. From Bangalore, Mysore, February 7, 1937. A native variety, said to produce good heads throughout the year.
123160. *BUTEA MONOSPERMA* (Lam.) Taub. Fabaceae.
No. 2250. From Bangalore, Mysore, February 9, 1937. A small erect tree with large trifoliate leaves 4 to 8 inches long and large orange-red flowers 1 inch across in axillary and terminal racemes. Native to the Himalayas up to 4,000 feet altitude.
For previous introduction see 32792.
123161. *DICHOSTACHYS NUTANS* (Pers.) Benth. Mimosaceae.
No. 2190. From Mahendra, Madras Presidency, January 25, 1937, at 2,000 feet altitude. A spiny scraggly shrub about 8 feet high, native to central Africa, with rose-colored flowers in dense axillary spikes. The bipinnate leaves are composed of 5 to 10 pairs of pinnae, each with 10 to 20 pairs of leaflets.
For previous introduction see 50152.
123162. *CAJANUS INDICUS* Spreng. Fabaceae.
Pigeon pea.
- No. 2197. *Barda Kandals*. From Bengasai, Madras Presidency, January 26, 1937.
123163. *CANAVALIA VIROSA* (Roxb.) Wight and Arn. Fabaceae.
No. 2203. From Rati, Madras Presidency, January 29, 1937. An ornamental perennial climber which grows 10 feet long in thickets. The large fragrant flowers are deep rose color; the pods are not edible.
- 123164 to 123167. *CAPSICUM ANNUM* L. Solanaceae. Common redpepper.
123164. No. 2171. *Mirchi*. From Islampur, Bengal, January 15, 1937. Fruit red, about 2 inches long by three-fourths of an inch wide; flesh slightly pungent; seeds hot.
123165. No. 2212. *Mupokai*. From Ellore, Madras Presidency, February 1, 1937. A hot, red, elongate pepper, 3 to 4 inches long and 1 inch wide at the base.
123166. No. 2230. From Madras, Madras Presidency, February 6, 1937. A hot redpepper about 2 inches long by five-eighths of an inch wide.
123167. No. 2177. From Bengasai, Madras Presidency, January 22, 1937. Fruit scarlet, very hot, 3 inches long and pointed, wrinkled and furrowed, quite different from the usually grown strains.

123144 to 123270—Continued

- 123168 to 123170. *CASSIA* spp. Caesalpiniaceae.
123168. *CASSIA JAVANICA* L.
No. 2247. From Bangalore, Mysore, February 7, 1937. A small tree with gorgeous pink flowers over 2 inches across, borne in large clusters during the spring and early summer. It is deciduous in the dry season.
For previous introduction see 97954.
123169. *CASSIA NODOSA* Buch-Ham.
No. 2288. From Bangalore, Mysore, February 9, 1937.
For previous introduction see 116778.
123170. *CASSIA RENIGERA* Wall.
No. 2278. From Bangalore, Mysore, February 9, 1937. A tropical tree with compound leaves a foot long; the 30 to 40 obtuse leaflets, 1½ inches long, are leathery and finely hairy beneath. The small reddish flowers are in short dense racemes, and the cylindrical pod is a foot in length. Native to northern Burma.
For previous introduction see 103835.
123171. *CEDRUS DEODARA* (Lamb.) Loud. Pinaceae. Deodar cedar.
No. 2302. *Kelo*. Presented by the Kulu Forest Service, Punjab, February 10, 1937.
For previous introduction see 122821.
123172. *CENTROLOBIUM PARAENSE* Tul. Fabaceae.
No. 2286. *Porcupine tree*. From Bangalore, Mysore, February 9, 1937. A medium-sized, attractive Brazilian tree, with compound leaves and large clusters of orange-yellow flowers, followed by curious fruits like gigantic maple keys with wings 6 inches long which whirl with a circular motion as they fall. The egg-shaped basal portion, as large as a pullet's egg, is covered with spines like a sea-urchin.
For previous introduction see 97977.
123173. *CHENOPODIUM* sp. Chenopodiaceae.
No. 2289. *Chakavathe*. From Bangalore, Mysore, February 9, 1937. An all-season potherb.
- 123174 to 123181. *CITRULLUS* spp. Cucurbitaceae.
123174. *CITRULLUS COLOCYNTHIS* (L.) Schrad. Colocynth.
No. 2226. From Madras, Madras Presidency, February 5, 1937. A perennial herbaceous vine, allied to the watermelon. The small globose fruits, less than 3 inches in diameter, are mottled green and brown.
For previous introduction see 91528.
- 123175 to 123181. *CITRULLUS VULGARIS* Schrad. Watermelon.
123175. No. 2118. *Matira*. From Calcutta, January 4, 1937. Fruit subglobose, mottled, about 1 foot long.
123176. No. 2120. *Matira*. From Calcutta, January 4, 1937. An unmarked, dark-green, subglobose fruit 1 foot long.
123177. No. 2121. *Matira*. From Calcutta, January 4, 1937. A deep-green, unmarked, subglobose fruit 1 foot long.

123144 to 123270—Continued

123178. No. 2209. From Ellore, Madras Presidency, February 1, 1937. Fruit much attenuated, about 16 inches long by 6 inches in diameter; rind medium green with irregular blotched lines of lighter green, very tough; flesh red, firm, of fair quality.
123179. No. 2220. *Tarbuuz*. From Madras, Madras Presidency, February 4, 1937. Seeds used as medicine.
123180. No. 2282. *Tarbuuz*. From Bangalore, Mysore, February 9, 1937. Said to be a native variety.
123181. No. 2178. From Bengasai, Madras Presidency, January 22, 1937. An ornamental form with globose fruit 4 inches across, of a lovely maroon color.
123182. *COIX LACHRYMA-JOBI* L. Poaceae.
Jobs-tears.
No. 1790. From Jagendernaga, Mandi State, November 22, 1936, at 3,500 feet altitude.
123183. *COLVILLEA RACEMOSA* Boj. Caesalpinaceae.
No. 2273. From Bangalore, Mysore, February 9, 1937. An evergreen tree 30 to 40 feet high, with pinnate leaves 3 feet long and brilliant scarlet, curiously shaped flowers with 10 protruding stamens, borne in drooping racemes more than a foot long. Native to Madagascar.
For previous introduction see 103476.
123184. *CROTALARIA* sp. Fabaceae.
No. 2188. From Mahendra, Madras Presidency, January 24, 1937, at 4,000 feet altitude. An attractive perennial about 3 feet high, bearing spikes of large yellow flowers followed by large inflated pods.
- 123185 to 123189. *CUCUMIS MELO* L. Cucurbitaceae.
Muskmelon.
123185. No. 2134. *Kumriya*. From Calcutta, January 6, 1937; a Lucknow variety.
123186. No. 2135. *Kumriya*. From Calcutta, January 7, 1937; a Patna variety.
123187. No. 2281. *Kharbuza*. From Bangalore, Mysore, February 9, 1937. A native variety.
123188. No. 2297. From Montgomery, Punjab, February 10, 1937. Presented by the Deputy Director of Agriculture. An excellent native melon which will tolerate much heat.
123189. No. 2223. From Madras, February 4, 1937. A mixed sample.
- 123190 to 123193. *CUCUMIS SATIVUS* L. Cucurbitaceae.
Cucumber.
123190. No. 2198. From Mahendra, Madras Presidency, January 25, 1937, at 2,000 feet altitude. Fruit 2 inches long; skin yellow green, tough, flesh bitter. Probably keeps for months.
123191. No. 2221. *Vildreveli*. From Madras, February 4, 1937.
123192. No. 2214. *Doskai*. From Ellore, Madras Presidency, February 1, 1937. Fruit ovoid, to 6 inches long; rind yellow, more or less marked with brown blotches; pulp sour; used fried; a good keeper.

123144 to 123270—Continued

123193. No. 2246. *Sandakai*. From Bangalore, Mysore, February 7, 1937. Possibly a mixture of green and white varieties.
- 123194 to 123198. *CUCURBITA MOSCHATA* Duchesne. Cucurbitaceae.
Cushaw.
123194. No. 2122. *Kadu*. From Calcutta, January 4, 1937. Fruit oval, 18 inches long, orange brown mottled sparingly with green, moderately sweet.
123195. No. 2175. From Behrampur, Orissa, January 21, 1937. A smooth, cream-colored, pumpkin-shaped fruit with faint ribs, weighing about 10 pounds.
123196. No. 2176. From Behrampur, Orissa, January 21, 1937. A cream-colored, pumpkin-shaped fruit, mottled with green and spotted with darker green. Possibly the same as No. 2175 (P. I. 123195); it weighs 15 pounds.
123197. No. 2210. *Kumsa*. From Ellore, Madras Presidency, February 1, 1937. Fruits small, flattened, 1 by 6 inches, sometimes nearly globose and larger, smooth, ribbed, and orange buff. The flesh, orange yellow, is sweet and about 2 inches thick.
123198. No. 2232. *Kumsa*. From Madras, February 6, 1937.
123199. *DALBERGIA* sp. Fabaceae.
No. 2254. From Bangalore, Mysore, February 6, 1937. A medium-sized tree used as roadside shade.
123200. *DERRIS SCANDENS* (Roxb.) Benth. Fabaceae.
No. 2173. From Dacca, Bengal, January 16, 1937. A woody climber with compound leaves 3 to 6 inches long, composed of 9 to 19 leathery oblong leaflets, 1 to 2 inches in length. The pale-rose flowers are in dense axillary racemes. Native to the East Indies.
For previous introduction see 116744.
123201. *DOLICHOS LABLAB* L. Fabaceae.
Hyacinth-bean.
No. 2222. *Machukuti*. From Madras, February 4, 1937. Used both green and as dried beans.
123202. *DOLICHOS LABLAB* L. Fabaceae.
Hyacinth-bean.
No. 2242. *Awara*. From Bangalore, Mysore, February 7, 1937. A drought-resistant field crop, usually planted with *Eleusine indica*, and allowed to creep over the field.
123203. *DUABANGA SONNERATIODES* Buch-Ham. Lythraceae.
No. 2280. From Bangalore, Mysore, February 9, 1937. A handsome tree with shining evergreen leaves and white flowers, from the subtropical regions of north-eastern India. The light-brown bark peels off in thin flakes, and the gray, soft-yellow-streaked wood is used extensively in Bengal and Assam for making tea boxes, as it seasons well, takes a good polish, and does not warp.
For previous introduction see 61602.

123144 to 123270—Continued

123204. *ELAEOCARPUS SPHAERICUS* (Gaertn.) Schum. *Elaeocarpaceae*.

No. 2255. From Bangalore, Mysore, February 9, 1937. A medium-sized tree which bears small blue fruits about the size of a plum; the curious seeds are rough and attractive and are often used as ornaments.

For previous introduction see 66264.

123205. *ELYMUS SIBIRICUS* L. *Poaceae*.
Grass.

No. 1386. From Katzong Pass, Ladak, Kashmir, September 15, 1936, at 13,000 feet altitude. A grass growing in very dry places where it forms clumps 18 inches tall.

123206. *ERYTHRINA VARIEGATA* Stickm. *Coraltree*.

No. 2204. From Rati, Madras Presidency, January 29, 1937. A tree 20 to 30 feet high, native throughout India, with clusters of large bright-red flowers which appear before the leaves. The pods are 4 to 8 inches long and contain dark carmine seeds.

For previous introduction see 116038.

123207. *ERYTHRINA VARIEGATA ORIENTALIS* (L.) Merr. *Fabaceae*. *Coraltree*.

No. 2257. From Bangalore, Mysore, February 9, 1937. A moderate-sized spineless tree native to the East Indies. It is of very rapid growth, with trifoliolate leaves and red flowers. In Ceylon the tree is used to shade crop plants; also the foliage is lopped for use as green manure.

For previous introduction see 94188.

123208. *EUPATORIUM ODORATUM* L. *Asteraceae*.

No. 2169. From Dacca, Bengal, January 15, 1937. An erect or semiscandent shrubby perennial often seen in thickets where it is covered with ageratumlike lavender flowers.

For previous introduction see 110189.

123209 to 123211. *FICUS* spp. *Moraceae*. *Fig*.

123209. *FICUS RUBIGINOSA* Desf. *Rusty fig*.

No. 2309. From Bangalore, Mysore, February 9, 1937. An evergreen tree 60 to 80 feet high, with wide-spreading branches, throwing out aerial roots like the banyan tree. The elliptical coriaceous leaves, 3 to 4 inches long, are smooth above and covered with attractive rusty tomentum beneath. Native to Australia.

For previous introduction see 101333.

123210. *FICUS BENJAMINA* L. *Benjamin fig*.

No. 2307. From Bangalore, Mysore, February 9, 1937.

For previous introduction see 92948.

123211. *FICUS KRISHNAE* C. DC.

No. 2308. From Bangalore, Mysore, February 9, 1937. A very distinct small tree with large cup-shaped leaves. The yellow fruits are axillary, sessile, and about one-half inch in diameter. It has been considered a horticultural variety of *Ficus benghalensis*.

123144 to 123270—Continued

123212. *GARCINIA* sp. *Clusiaceae*.

No. 2189. *Olakuli*. From Mahendra, Madras Presidency, January 20, 1937, at 4,000 feet altitude. A beautiful tree with horizontal branches and handsome elliptical leaves nearly 1 foot long. The yellow fruits, 2 to 3 inches across, are shaped like tomatoes and are delightfully acid.

123213. *LIMNANTHEMUM CRISTATUM* (Roxb.) Griseb. *Menyanthaceae*.

No. 2206. From Mandassa, Madras Presidency, January 30, 1937. An aquatic herb with an abundance of small fragrant white flowers, borne over a long period, at the base of the nymphaealike leaf.

123214. *GLIRICIDIA SEPIUM* (Jacq.) Kunth. *Fabaceae*.

No. 2258. From Bangalore, Mysore, February 9, 1937.

For previous introduction see 110930.

123215 to 123218. *IPOMOEA* spp. *Convolvulaceae*.

123215. *IPOMOEA* sp.

No. 2184. From Mahendra, Madras Presidency, January 22, 1937, at 3,000 feet altitude. A herbaceous climber 20 feet long, found in thickets. The yellow flowers are about 3 inches across.

123216. *IPOMOEA* sp.

No. 2237. From Madras, February 6, 1937. A plant with large-toothed palmate leaves and yellow blossoms about 2 inches across with a wine-madder spot in the throat.

123217. *IPOMOEA* sp.

No. 2216. From Ellore, Madras Presidency, February 2, 1937. A convolvulus with flowers over 2 inches across, wine colored with a deep throat, remaining open all day. Found growing on the edge of mudholes; the long runners float on the water and bear an abundance of beautiful flowers.

123218. *IPOMOEA* sp.

No. 2208. From Rati, Madras Presidency, January 20, 1937. A small morning-glory with small linear leaves and whitish flowers about one-half inch across, with a magenta spot in the throat.

123219. *JACARANDA MIMOSIFOLIA* Don. *Bigoniaceae*. *Green-ebony*.

No. 2253. From Bangalore, Mysore, February 9, 1937.

For previous introduction see 116043.

123220. *JOANNESIA PRINCEPS* Vell. *Euphorbiaceae*.

No. 2306. From Bangalore, Mysore, February 9, 1937. A large tropical American tree with handsome evergreen 3- to 7-foliolate leaves about 4 inches long and coconutlike fruits about 5 inches in diameter with 4 large oily seeds. It is related to the tung-oil tree (*Aleurites fordii*).

For previous introduction see 102624.

123221. *LUFFA ACUTANGULA* (L.) Roxb. *Cucurbitaceae*. *Singka towelgourd*.

No. 2136. *Gina tori*. From Calcutta, January 7, 1937. A small variety, used as a vegetable when young.

For previous introduction see 121955.

123144 to 123270—Continued

123222. *MEDICAGO* sp. Fabaceae.

No. 2283. From Bangalore, Mysore, February 9, 1937. Purchased from the Government Seed Farm; said to be Mysore naturalized seed and the best grown in this region.

123223. *MEDICAGO* sp. Fabaceae.

No. 2284. From Bangalore, Mysore, February 9, 1937. Purchased in the market.

123224. *MILLETIA OVALIFOLIA* (Wight and Arn.) Kurz. Fabaceae.

No. 2129. From Calcutta, January 6, 1937. Presented by the Royal Botanical Gardens. A medium-sized tree with odd-pinnate leaves from 4 to 18 inches long and slender axillary racemes of small blue fragrant flowers.

For previous introduction see 116049.

123225. *MOMORDICA CHARANTIA* L. Cucurbitaceae. Balsam-pear.

No. 2086. *Uckhey*. From Calcutta, January 1, 1937. Fruits smaller and less bitter than the usual sorts.

123226. *MOMORDICA CHARANTIA* L. Cucurbitaceae. Balsam-pear.

No. 2211. From Ellore, Madras Presidency, February 1, 1937. Fruit pale green to whitish, about 1 foot long, thin and tapering; less bitter than most.

123227. *NYCTANTHES ARBOR-TRISTIS* L. Oleaceae. Nightjasmine.

No. 2256. From Bangalore, Mysore, February 9, 1937. A large evergreen shrub or small tree with ovate leaves about 4 inches long and small, very fragrant white night-blooming flowers in sessile heads. The flowers yield a yellow dye. Cultivated generally in India between 1,000 and 3,000 feet altitude.

For previous introduction see 33577.

123228. *NYMPHAEA* sp. Nymphaeaceae.

No. 2207. From Mandassa, Madras Presidency, January 30, 1937. A waterlily which grows in shallow ponds. The fragrant single, blue-violet flowers are on a stem 2 inches above the water and close at night.

123229. *NYMPHAEA* sp. Nymphaeaceae.

No. 2215. From Kula Lake, Madras Presidency, February 2, 1937. A plant which grows in about 3 feet of water; the elongate leaves, about 1 foot long, are conspicuously toothed; and the white flowers, 6 inches across, are closed in the daytime.

123230 to 123233. *ORYZA SATIVA* L. Poaceae. Rice.

123230. No. 2158. *Katakara*. From the Government Rice Farm, Dacca, Bengal, January 14, 1937. A medium-fine, highland rice, sown broadcast; high yielding and maturing in 4 months.

123231. No. 2159. *Surpamukhi*. From the Government Rice Farm, Dacca, Bengal, January 14, 1937. A medium-fine highland rice, sown broadcast.

123232. No. 2161. *Charmok*. From the Government Rice Farm, Dacca, Bengal, January 14, 1937. A very fine highland rice suited to lighter soils. A medium-ripening variety, recommended for quality and yield.

123144 to 123270—Continued

123233. No. 2201. *Oryabim*. From Mandassa, Madras Presidency, January 27, 1937. One of the most popular of the locally grown varieties.123234. *PARKIA BIGLANDULOSA* Wight and Arn. Mimosaceae.

No. 2268. From Bangalore, Mysore, February 9, 1937. A large, handsome, quick-growing tree with feathery leaves 12 to 20 inches long and dense heads of small creamy flowers on a long peduncle. Native to the Malayan region.

123235. *PARMENTIERA CEREIFERA* Seem. Bignoniaceae. Candletree.

No. 2311. From Bangalore, Mysore, February 9, 1937. A tropical tree, native to Panama, which grows 30 to 40 feet high and produces from its stem and old branches a profusion of almost sessile, white flowers. These are followed by yellowish, cylindrical, smooth fruits 1 to 4 feet long and about 1 inch in diameter, resembling wax candles.

For previous introduction see 41722.

123236 to 123242. *PHASEOLUS* spp. Fabaceae.123236 and 123237. *PHASEOLUS LUNATUS* L. Lima beans.

123236. No. 2251. From Bangalore, Mysore, February 9, 1937. Sold in the market as green beans.

123237. No. 2196. From Bengasai, Madras Presidency, January 26, 1937. From the hill people who say they gather the beans in the forest.

123238 to 123242. *PHASEOLUS VULGARIS* L. Common bean.

123238. No. 2272. From Bangalore, Mysore, February 9, 1937.

123239. No. 2244. *Hurulikia*. From Bangalore, Mysore, February 7, 1937. Said to be disease resistant. Used both as green beans and as dry beans.

123240 to 123242. From Bengasai, Madras Presidency, January 26, 1937. From the hill people who say they gather the beans in the forest.

123240. No. 2196-A.

123241. No. 2196-B.

123242. No. 2196-C.

123243. *PHRAGMITES COMMUNIS* Trin. Poaceae. Grass.

No. 1378. From Deskit, Baltistan, Kashmir, September 9, 1936, at 9,000 feet altitude. A grass up to 18 inches high found on sand dunes; said to be eaten by cattle.

123244. *PICEA SMITHIANA* (Wall.) Boiss. Pinaceae. Himalayan spruce.

No. 2299. *Rai*. Presented by the Kulu Forest Service, Kulu, Punjab, February 10, 1937. A lofty tree, native to the mountains of northwestern India at altitudes of 7,000 to 11,000 feet; the terminal, drooping, pale-green cones are 4 to 6 inches long. The stiff, sharp, spirally arranged green leaves are crowded on pendulous, taillike twigs.

For previous introduction see 116605.

123144 to 123270—Continued

123245. *PINUS GRIFFITHII* McClelland (*P. excelsa* Wall.). Pinaceae.

No. 2301. *Kail*. Presented by the Kulu Forest Service, Kulu, Punjab, February 10, 1937. A pine, 50 to 100 feet high, growing between 5,000 and 11,000 feet altitude in the Himalayan region. The slender gray-green leaves, in fives, are 5 to 8 inches long, and the pale-brown, cylindrical cones are 6 to 12 inches long.

123246. *PISUM SATIVUM* L. Fabaceae. Pea.

No. 2224. *Patani*. From Madras, Madras Presidency, February 4, 1937. Said to be mildew resistant.

123247. *PISUM SATIVUM* L. Fabaceae. Pea.

No. 2243. *Batani*. From Bangalore, Mysore, February 7, 1937. Said to be a hardy, disease-resistant pea.

123248. *SEMECARPUS ANACARDIUM* L. f. Anacardiaceae.

No. 2194. *Baliakuli*. From Bengasai, Madras Presidency, January 26, 1937, at 5,000 feet altitude. An attractive tree with large oval leaves and an abundance of yellow fruits that lose their astringency when fully ripe, and are eaten after roasting.

123249 to 123251. *SOJA MAX* (L.) Piper. Fabaceae. Soybean.

From the Government Gardens, Bangalore, Mysore, February 7, 1937. Said to have come from Java.

123249. No. 2240.

123250. No. 2238.

123251. No. 2239.

123252 to 123259. *SOLANUM* spp. Solanaceae.

123252 to 123258. *SOLANUM MELONGENA* L. Eggplant.

123252. No. 2170. *Pegan*. From Islampur, Bengal, January 15, 1937. Fruit pale green, about 10 inches long and 2 inches in diameter.

123253. No. 2172. *Pegan*. From Islampur, Bengal, January 15, 1937. Fruit greenish purple, elongate, 1 foot long and about 5 inches wide.

123254. No. 2205. From Islampur, Bengal, January 16, 1937. Fruit greenish purple, globose, weighs about 3 pounds. Of good flavor; the plant is a good bearer and is one of India's best eggplants.

123255. No. 2218. *Wangkai*. From Ellore, Madras Presidency, February 3, 1937.

123256. No. 2245. *Badanskai*. From Bangalore, Mysore, February 7, 1937. A mixture of long purple and long green eggplants which grow 8 or 9 inches long, but are usually used when much smaller. The purple form is said to be alkali tolerant.

123257. No. 2260. From Bangalore, Mysore, February 9, 1937. A strong bushy shrub about 4 feet high, said to be peculiar to Mysore. The fruit is green, finally about 9 inches long, but cut when about 5 inches long.

123258. No. 2287. From Bangalore, Mysore, February 9, 1937. Fruit globose, about 3 inches across, green

123144 to 123270—Continued

streaked with pink purple. A common type here.

123259. *SOLANUM* sp.

No. 2285. From Bangalore, Mysore, February 9, 1937. A wild plant 4 feet high, with purplish flowers followed by red-orange berries about one-half inch in diameter.

123260 and 123261. *STIPA SPLENDENS* Trin. Poaceae. Feathergrass.

Silkia. Found in clumps 8 feet high, with large loose tops; stems used for making baskets, brooms, etc. The grass is found in dry, well-isolated places and is quite ornamental.

123260. No. 1437. From Leh, Ladak, Kashmir, September 17, 1936.

123261. No. 1367. From Hundl, Baltistan, Kashmir, September 17, 1936, at 9,000 feet altitude.

123262. *TAGETES* sp. Asteraceae.

No. 2179. From Mahendra, Madras Presidency, January 22, 1937, at 2,000 feet altitude. Flowers orange, consisting mostly of conspicuous tubular disk flowers with only a row of small reflexed rays. Said to have been grown in the hills from earliest times.

123263. *TERMINALIA CHEBULA* Retz. Combretaceae.

No. 2187. *Harar*. From Mahendra, Madras Presidency, January 24, 1937, at 4,000 feet altitude. An ornamental tree with oval-elliptic leaves and terminal racemes of small white flowers. The fresh fruit is rich in tannin, and the dried fruit yields a black or yellow dye.

For previous introduction see 114456.

123264. *THYSANOLAENA MAXIMA* (Roxb.) Kuntze. Poaceae. Grass.

No. 2186. From Mahendra, Madras Presidency, January 22, 1937, at 4,000 feet altitude. A forest grass growing also in half shade, up to 6 feet high, with broad leaves and light airy heads which are often used as ornaments.

123265 and 123266. *TRICHOSANTHES ANGUINA* L. Cucurbitaceae. Snakegourd.

Fruits from 3 to 10 feet long. Used as a vegetable when young.

For previous introduction see 116761.

123265. No. 2219. *Potalokai*. From Ellore, Madras Presidency, February 3, 1937.

123266. No. 2241. From Bangalore, Mysore, February 7, 1937.

123267. *VIGNA CYLINDRICA* (Stickm.) Skeels. Fabaceae. Catjang.

No. 2227. *Kharannuli*. From Madras, Madras Presidency, February 5, 1937. Used as food both as green beans cooked in the pods and as dried beans.

123268. *VIGNA SINENSIS* (Torner) Savi. Fabaceae. Cowpea.

No. 2231. *Kharamuni*. From Madras, February 6, 1937. Used as dried beans.

123269. *VITIS* sp. Vitaceae.

No. 2294. From Bangalore, Mysore, February 9, 1937. A naturalized Asiatic grape, the only sort grown here. Vine

123144 to 123270—Continued

resembles our *Concord* in habit and appearance; bunches 5 inches long, compact; berries blue-black, ovoid, three-fourths of an inch long, sweet, keep well. Vines give two crops a year here.

123270. *ALSTONIA VENENATA* R. Br. Apocynaceae.

No. 2193. From Mahendra, Madras Presidency, January 26, 1937, at 1,000 feet altitude. A low shrub 5 feet high, said to bear an abundance of attractive white flowers.

For previous introduction see 65248.

123271. *GOSSEYIUM* sp. Malvaceae.
Cotton.

From Cuba. Seeds presented by Thomas R. Towns, Holguin. Received February 25, 1937.

123272 to 123341.

From Turkey. Seeds collected by H. L. Westover and F. L. Wellman, Bureau of Plant Industry. Received February 1, 1937.

123272. *AJUGA* sp. Menthaceae.

No. 3419. An attractive mint from 3 km. northeast of Ankara, June 26, 1936.

123273. *MATTHIOLA* sp. Brassicaceae.

No. 3030. From the Amasya bazar, October 6, 1936.

123274. *ANTHEMIS TINCTORIA DISCOIDEA* (All.) Vahl. Asteraceae.

No. 2735. From 5 km. west of Yalova.

123275. *ASCLEPIAS* sp. Asclepiadaceae.

No. 1926. From Birejik, July 21, 1936.

123276. *ASPHODELUS FISTULOSUS* L. Liliaceae.

No. 603. From Antalya, June 4, 1936.

123277. *BRASSICA* sp. Brassicaceae.

No. 2143. From the Sivas bazar, August 5, 1936.

123278. *CAESALPINIA* sp. Caesalpiniaceae.

No. 1270. *Gil Abershim*. From the Bursa bazar, June 18, 1936.

123279. *CEPHALARIA SYRIACA* (L.) Schrad. Dipsacaceae.

No. 2254. From the Erzincan bazar, August 8, 1936. Seeds mixed with wheat flour to add flavor to bread.

123280. *CERINTHE* sp. Boraginaceae.

No. 3439. From Alma Dag, June 28, 1936.

123281. *CORONILLA* sp. Fabaceae.

No. 1947. From Birejik, July 22, 1936.

123282. *CUMINUM CYMINUM* L. Apiaceae.
Cumin.

No. 2149. From the Sivas bazar, August 5, 1936.

123283. *DAPHNE* sp. Thymelaeaceae.

No. 3147. From 25 km. north of Kastamonu, October 10, 1936. A shrub with handsome foliage and insignificant greenish flowers.

123284. *DAPHNE* sp. Thymelaeaceae.

No. 2794. From Ulu Dag, September 9, 1936, at 7,000 feet altitude. A low orna-

123272 to 123341—Continued

mental shrub with bright salmon-colored berries. Found growing on rocks.

123285. *DAUCUS* sp. Apiaceae.

No. 2287. From 55 km. east of Erzincan, August 9, 1936.

123286. *DAUCUS* sp. Apiaceae.

No. 2606. A plant with pink flowers, from 30 km. west of Samsun, August 23, 1936.

123287. *DELPHINIUM* sp. Ranunculaceae.
Larkspur.

No. 1973. From Birejik, July 23, 1936.

123288. *DIGITALIS* sp. Scrophulariaceae.
Foxtail.

No. 2482. From 97 km. south of Giresun, August 17, 1936.

123289. *DIOTIS MARITIMA* (L.) Smith. Asteraceae.

No. 2873. From the sea beach, 1 km. west of Yalova, September 12, 1936. An erect or ascending herbaceous perennial about 1 foot high, with alternate oblong leaves and dense terminal clusters of small yellow flower heads. The plant is covered with white cottony down. Native to Asia Minor.

123290. *HELICHRYSUM* sp. Asteraceae.

No. 2686. From 16 km. south of Tokat, August 26, 1936. A yellow-flowered composite.

123291. *EREMOSTACHYS* sp. Menthaceae.

No. 2870. From 1 km. west of Yalova, September 12, 1936. A compact mint found on the sea beach.

123292. *ERODIUM* sp. Geraniaceae.

No. 757. From 11 km. south of Denizli, May 30, 1936.

123293. *ERUCA* sp. Brassicaceae.

No. 1986. From Ulukishla, July 25, 1936.

123294. *EUONYMUS* sp. Celastraceae.

No. 2697. From 15 km. south of Samsun, August 24, 1936.

123295. *EUPATORIUM* sp. Asteraceae.

No. 2687. From 41 km. south of Tokat, August 26, 1936.

123296. *FERULA* sp. Apiaceae.

No. 2022. From gardens in Nigde, July 27, 1936.

123297. *FERULA* sp. Apiaceae.

No. 2023. From gardens in Nigde, July 27, 1936.

123298. *GYPSOPHILA* sp. Silenaceae.

No. 1885. From 50 km. north of Malatya, July 17, 1936.

123299. *CONRINGIA ORIENTALIS* (L.) Dum. Brassicaceae.

No. 1994. From Ulukishla, July 25, 1936.

123300. *CONRINGIA ORIENTALIS* (L.) Dum. Brassicaceae.

No. 3387. From dry plains 4 km. south-west of Ankara, June 25, 1936.

123301 to 123303. *HYOSCYAMUS* spp. Solanaceae.

123272 to 123341—Continued

123301. *HYOSCYAMUS* sp.
No. 1990. From Ulukishla, July 25, 1936.
123302. *HYOSCYAMUS* sp.
No. 2480. From 34 km. south of Giresun, August 17, 1936.
123303. *HYOSCYAMUS* sp.
No. 3324. From Ankara, June 20, 1936.
123304. *INULA* sp. Asteraceae.
No. 2098. From Alma Dag, 25 km. southeast of Ankara, August 1, 1936.
123305. *INULA* sp. Asteraceae.
No. 2668. From 46 km. south of Tokat, August 26, 1936. A composite with narrow yellow ray flowers.
- 123306 to 123308. *JASMINUM* spp. Oleaceae.
123306. *JASMINUM* sp.
No. 1065. A shrub from the ruins at Bergama, June 10, 1936.
123307. *JASMINUM* sp.
No. 2657. A shrub from 61 km. southeast of Merzifon, August 25, 1936.
123308. *JASMINUM FRUTICANS* L.
No. 2731. A low ornamental shrub with black fruits, from woods near Yalova Kaplijalari, September 6, 1936. A half-evergreen, shrubby jasmine with a mass of slender erect stems 3 to 5 feet high and smooth deep-green leaflets. The yellow flowers are produced in early summer, usually in threes or fives at the ends of short twigs, and the round shining-black fruits are the size of peas.
For previous introduction see 62020.
123309. *LEPIDIUM* sp. Brassicaceae.
No. 2160. From 84 km. east of Sivas, August 6, 1936.
123310. *LIGUSTRUM* sp. Oleaceae.
No. 569. An ornamental border plant from the Izmir bazar, May 25, 1936.
123311. *LINUM* sp. Linaceae. Flax.
No. 3383. From dry plains around Ankara, June 25, 1936.
123312. *LINUM* sp. Linaceae. Flax.
No. 3399. A flax with yellow flowers, from dry hillsides near Ankara, June 25, 1936.
123313. *LITHOSPERMUM* sp. Boraginaceae.
No. 1401. A rock plant from 20 km. north of Gaziantep, July 2, 1936.
123314. *LITHOSPERMUM* sp. Boraginaceae.
No. 2654. From 94 km. southeast of Merzifon, August 25, 1936.
123315. *SILENE DENSIFLORA* D'Urv. Silenaceae.
No. 1924. From Birejik, July 21, 1936. A perennial with tall stems and distant, dense whorls of many small pale yellow flowers. Allied to *Silene otites*. Native to the Crimean region.

123272 to 123341—Continued

123316. *LYCHNIS* sp. Silenaceae.
No. 2720. From Talas, August 27, 1936.
123317. *LYSIMACHIA* sp. Primulaceae.
No. 2946. From 20 km. west of Tutumlu, September 23, 1936.
123318. *ONONIS* sp. Fabaceae.
No. 2498. From 8 km. south of Shebinkarahisar, August 18, 1936.
123319. *PEDICULARIS* sp. Scrophulariaceae.
No. 2067. From Alma Dag, 25 km. southeast of Ankara, August 1, 1936.
123320. *PETROSELINUM CRISPUM* (Mill.) Nym. Apiaceae. Parsley.
No. 1863. From 26 km. west of Malatya, July 16, 1936.
123321. *PHYTOLACCA* sp. Phytolaccaceae.
No. 1945. From Birejik. July 22, 1936.
123322. *PHYTOLACCA AMERICANA* L. Phytolaccaceae. Pokeberry.
No. 2418. From Trabzon, August 14, 1936.
123323. *POTENTILLA RECTA* L. Rosaceae.
No. 1956. From Birejik, July 22, 1936.
- 123324 to 123326. *SALVIA* spp. Menthaceae.
123324. *SALVIA* sp.
No. 1581. From 54 km. north of Urfa, July 7, 1936.
123325. *SALVIA* sp.
No. 2075. From Alma Dag, 25 km. southeast of Ankara, August 1, 1936.
123326. *SALVIA* sp.
No. 3310. From 25 km. south of Gaziantep, June 1, 1936.
123327. *SCUTELLARIA* sp. Menthaceae.
No. 1495. A rock plant from 5 km. southeast of Gaziantep, July 4, 1936.
123328. *SCUTELLARIA* sp. Menthaceae.
No. 1782. An attractive rock plant for dry areas, from 52 km. southwest of Elaziz, July 14, 1936.
123329. *SCORZONERA* sp. Cichoriaceae.
No. 2800. From the summit of Ulu Dag, September 8, 1936.
123330. *SCROPHULARIA* sp. Scrophulariaceae.
No. 1959. From Birejik, July 22, 1936.
123331. *SEDUM* sp. Crassulaceae.
No. 2302. From 53 km. north of Gemushane, August 10, 1936.
123332. *SILENE* sp. Silenaceae.
No. 1897. From 50 km. west of Malatya, July 16, 1936.
123333. *SILENE* sp. Silenaceae.
No. 2065. From 25 km. southeast of Ankara, June 25, 1936.
123334. *SILENE* sp. Silenaceae.
No. 2796. From the summit of Ulu Dag, September 8, 1936.

123272 to 123341—Continued

123335. *TEUCRIUM* sp. Menthaceae.

No. 1875. From 50 km. north of Malatya, July 13, 1936.

123336. *TEUCRIUM ARDUINI* L. Menthaceae.

No. 2849. From the Yalova Baths, Kaplijalari, September 11, 1936. An erect or ascending herbaceous perennial over a foot high, with ovate leaves 1 to 2 inches long and dense spikes of yellow flowers. Native to Europe.

123337. *TRIGONELLA* sp. Fabaceae.

No. 1992. From Utukishia, July 25, 1936.

123338. *TRIGONELLA* sp. Fabaceae.

No. 2652. From 24 km. southeast of Merzifon, September 25, 1936.

123272 to 123341—Continued

123339. *CELSIA ORIENTALIS* L. Scrophulariaceae.

No. 2488. From 58 km. west of Shebin-karahisar, August 18, 1936. An annual with simple or sparingly branched stems about a foot high, pinnatisect leaves, and small yellow flowers. Native to Asia Minor.

123340. *VERBASCUM* sp. Scrophulariaceae.

No. 3028. From the Amasya bazar, October 6, 1936.

123341. *ORIGANUM VULGARE* L. Menthaceae.

No. 2830. From the Yalova Baths, Kaplijalari, September 12, 1936.

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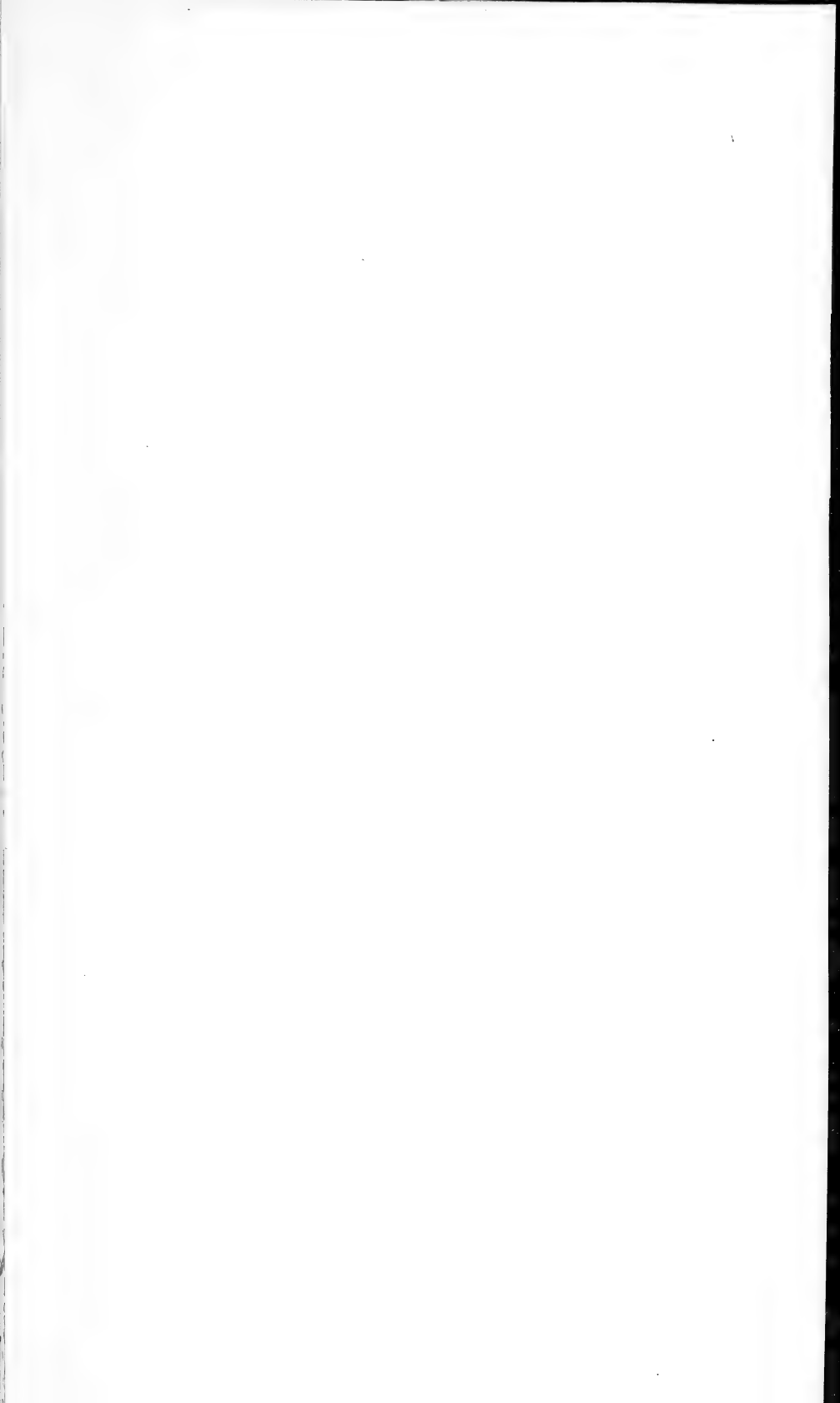
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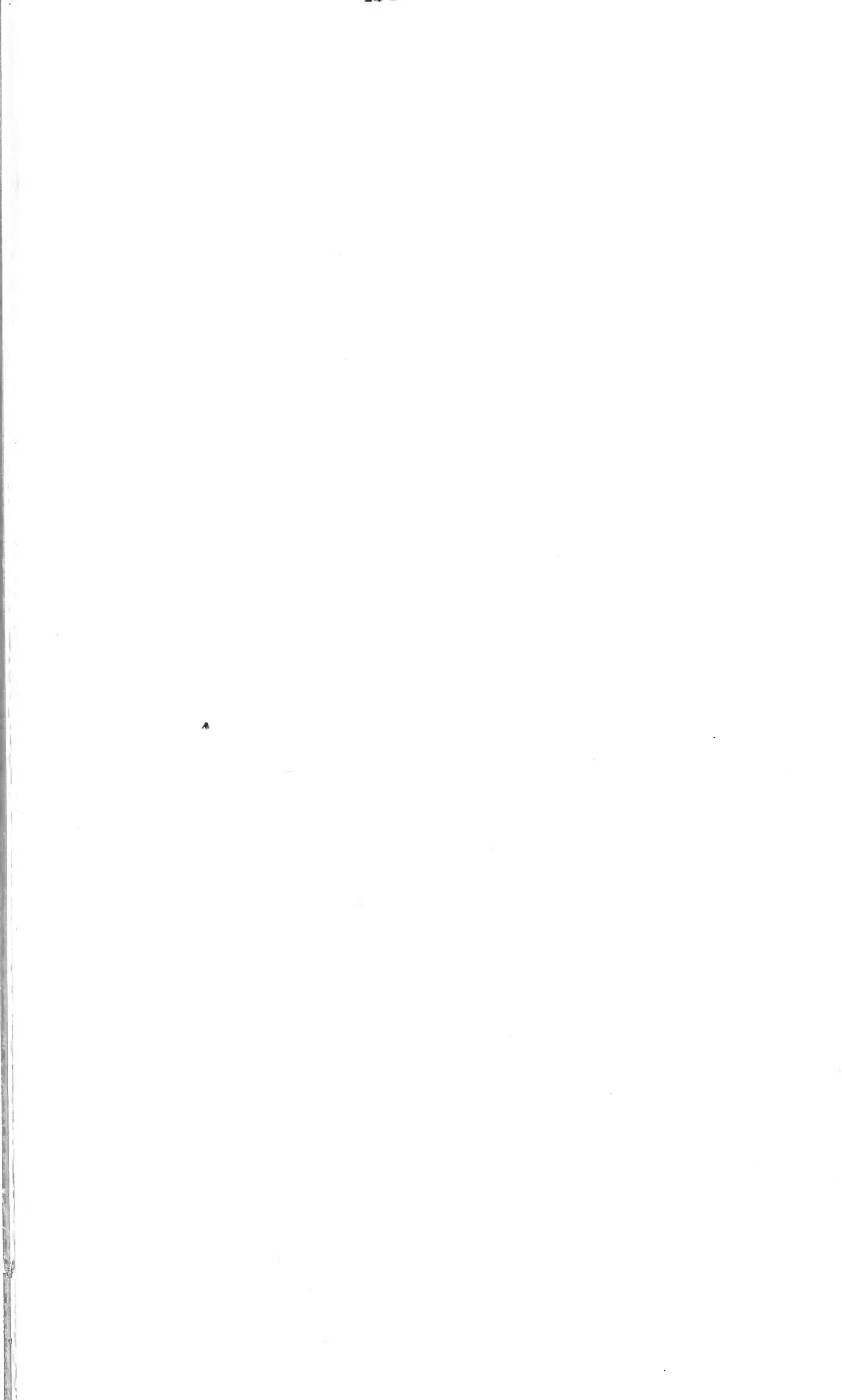
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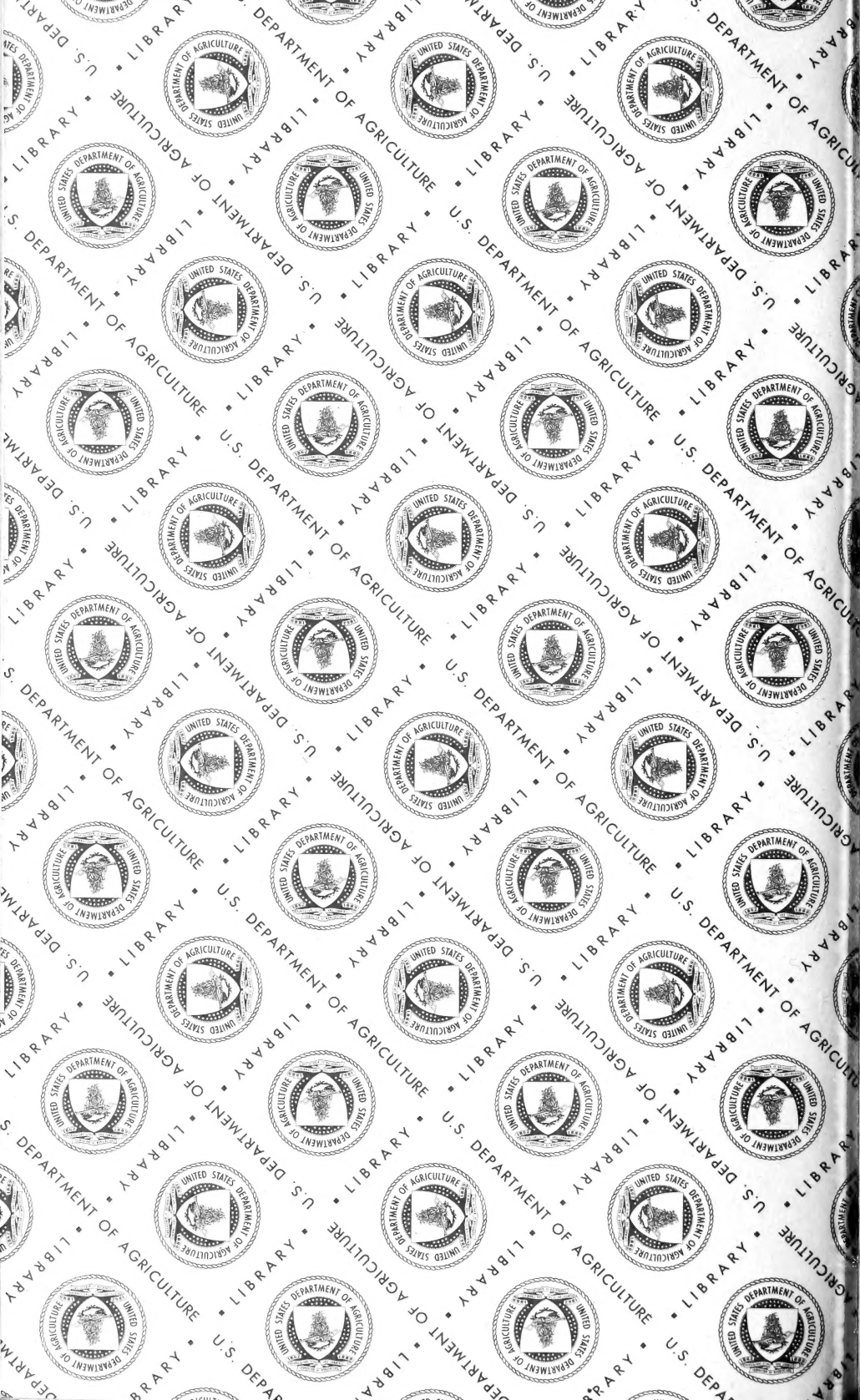
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vinifera, 121367-121369, 122205.
 Walnut, Persian. See *Juglans regia*.
 Watermelon. See *Citrullus vulgaris*.
 Waxgourd. See *Benincasa hispida*.
 Wheat. See *Triticum* spp.
 common. See *Triticum aestivum*.
 Wheatgrass, crested. See *Agropyron cristatum*.
Xanthosoma spp., 119808, 119809.
atrovirens, 119805.
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 Yautia. See *Xanthosoma caracu*. See also *X. sagittaeifolium*.
Zanthoxylum sp., 122594.
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Zephyranthes spp., 119803, 119804, 119931, 121076.
Ziziphus sp., 122595.

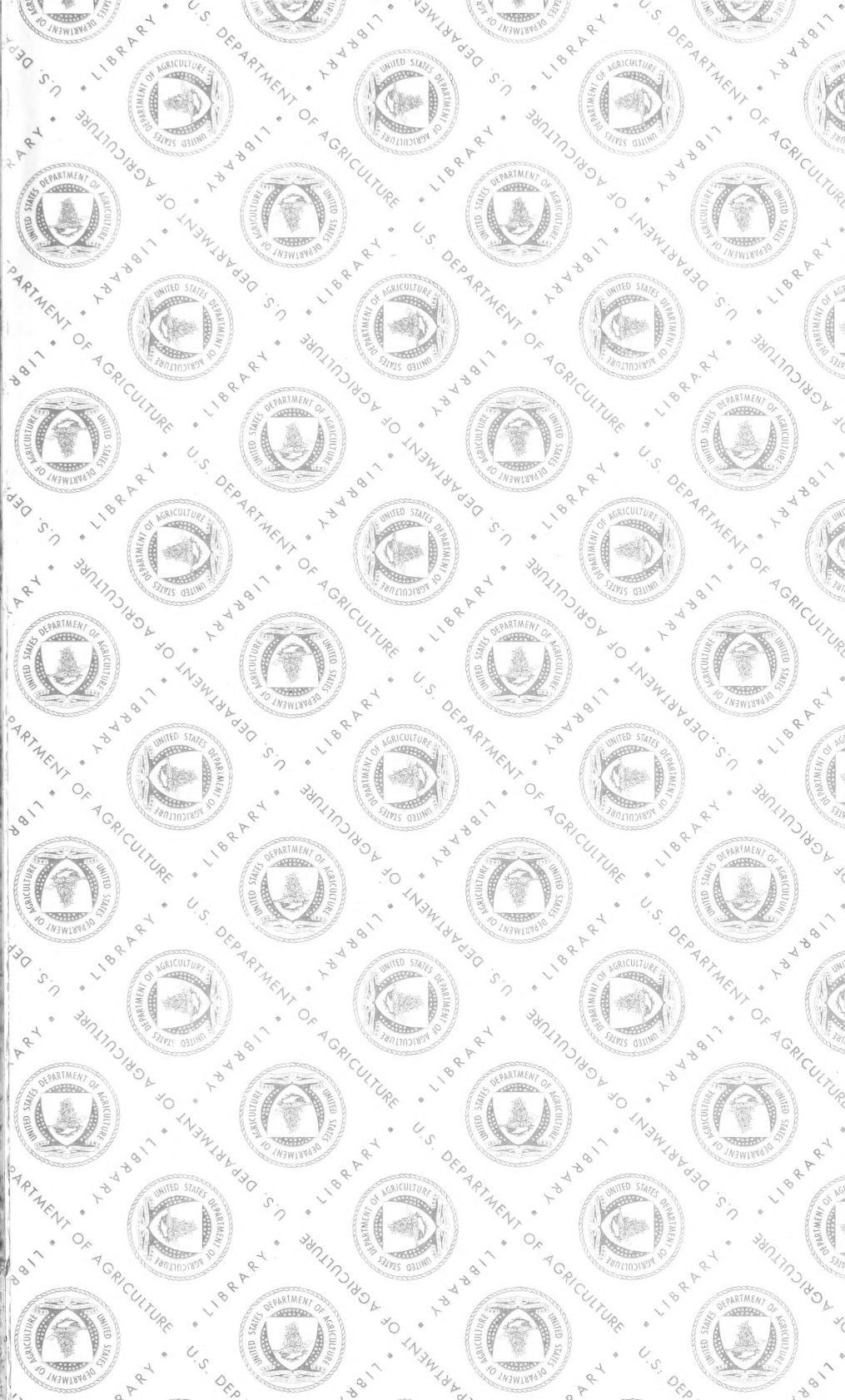
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