## UNITED STATES DEPARTMENT OF AGRICU



Agriculta



**INVENTORY No. 107** 



Washington, D. C.

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# PLANT MATERIAL INTRODUCED BY THE DIVISION OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, APRIL 1 TO JUNE 30, 1931 (Nos. 92337-93748)

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#### INTRODUCTORY STATEMENT

The plant introductions for the period from April 1 to June 30, 1931 (Nos. 92337 to 93748), include the results of several expeditions, as well as the additions that are being regularly made to several collections of genera that are receiving the particular attention of workers of this division.

From an expedition sent to Mexico particularly to study and collect wild potatoes that should be useful in breeding disease-resistant new varieties, many other useful plants were collected, among them the fiber-producing kapok. Nos. 92341 to 92373 represent the final collections from Erlanson and Souviron.

The Dorsett and Morse exploration in the Orient, while primarily concerned with the collection of soybeans, procured many other interesting seeds and plants. Soybeans from this source are recorded in this inventory by 205 introductions (Nos. 92556-92734, 93050-93060, 93557-93571). The next largest collection is represented by various squashes, pumpkins, gourds, luffas, and related vegetables from native markets (Nos. 92807-92837, 92841-92852, 93003-93044; Peter Liu later sent Nos. 93436-93459). In addition to these, various types of onion, spinach, tomato, and other vegetables and persimmons were collected for department specialists.

Through the cooperation of Allison V. Armour, who has assisted in other plant-hunting expeditions, several department specialists were able to search for cottons and cotton relatives through Mexico and Lower California, bringing back many interesting wild forms (Nos. 92884, 92885, 92900–92916) as well as papayas, annonas, and other tropical fruits. The cotton collection was also increased by the collections of Doyle and Taylor in the West Indies (Nos. 93496–93527).

A final shipment of plant material, in some cases northern types of plants native to the United States, originally collected in Canada by Ryerson, Alderman, and Leslie, was forwarded from the temporary Canadian nursery (Nos. 93144-93152).

The additions made to the permanent collections, on which work is being done by various department and division specialists, include a collection of new varieties of oriental cherries (Nos. 92487-92489, 92503-92506, 92523-92546, 92756); several new bamboos (Nos. 92508-92511, 93223-93225); Casuarina, 10 species, of which 6 are new introductions, for special study in Florida; Ficus, both fruiting and ornamental types (Nos. 92948-92955, 93271-93273); palms from

the Royal Botanic Gardens, Peradeniya, Ceylon (Nos. 93317–93319, 93321–93326, 93399–93418), and seven varieties collected by Doyle and Taylor in the West Indies (Nos. 93528, 93530–93533, 93535, 93536); grapes, including native types sent through the cooperation of the Institut Agricole de l'Algérie, Maison Carrée (Nos. 92412–92459), and through H. Brayard (Nos. 92765–92769); wheats through Parker from the Union of Soviet Socialist Republics (Nos. 92377–92393), from France (Nos. 92394–92405), from R. J. Lathbury, Plant Breeder, Plant Breeding Station, Njoro, Kenya Colony (Nos. 92471–92477); corn through J. G. Dickson from the Union of Soviet Socialist Republics (Nos. 93623–93747); as well as numerous smaller collections of ornamentals from many sources.

The botanical determinations of these introductions have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of

this inventory.

Knowles A. Ryerson,
Principal Horticulturist, in Charge.

Division of Foreign Plant Introduction, Washington, D. C., August 2, 1932.

#### INVENTORY

#### 92337 to 92340.

From Argentina, South America. Seeds presented by Dr. Lorenzo R. Parodi Laboratorio de Botanica. Facultad de Agronómica y Veterinaria, Buenos Aires. Seeds Received April 1, 1931.

92337. Axonopus iridaceus (Mez) Par-odi. Poaceae. Grass. Par-

Of possible value as forage.

92338 to 92340. Poa spp. Poaceae. Grass.

92338. POA BONARIENSIS (Lam.) Kunth.

No. 455. A rhizomatous perennial grass.

For previous introduction see 76885.

92339. POA LANIGERA Nees.

No. 456. Of possible value as forage.

92340. POA LIGULARIS Nees.

No. 450. Of possible value as forage.

#### 92341 to 92373.

From Mexico. Seeds collected by C. O. Erlanson and Max Souviron, Bureau of Plant Industry. Received April 1, 1931.

Nos. 92341 to 92865 were collected in the State of Chiapas.

92341. Annona muricata L. ceae. Soursop.

No. 57. Guanava. Collected near Acala at 2,800 feet altitude. A tree 40 feet high which was found on irrigated land. The tree is cultivated for its softspine fruit.

92342. Ardisia sp. Myrsinaceae.

No. 103. Collected at Chiapas, March 4, 1931. A tree 45 feet high, used as a shade tree on the plaza.

92341 to 92373—Continued.

92343. BIXA ORELLANA L. Bixaceae. Anatto-tree.

No. 56. Collected near Acala at 2,800 feet altitude, February 22, 1931. A tree 25 feet high found growing in open scrub. It is sometimes used as a hedge. The berries furnish a yellow coloring matter for butter and cheese.

For previous introduction see 76416.

92344. CEIBA sp. Bombacaceae.

No. 107. Mosmote. Collected in the dry valley of Tuxtla Gutierrez, March 4, 1931, where it was growing abundantly.

92345. CESTRUM Sp. Solanaceae.

No. 88. Collected along the road between San Cristobal and Tenedapa, February 28, 1931, at 3,900 feet altitude. A bush up to 15 feet high with white berries.

92346. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon. Cucurbitaceae.

No. 34. Collected in the market at Tuxtla Gutlerrez, February 17, 1931. This variety, that came originally from Spain, produces small elliptic fruits.

92347. DAHLIA Sp.

No. 89. Collected along the road between San Cristobal and Tenejapa, February 28, 1931, at 3,900 feet altitude. A herbaceous plant up to 30 feet high.

92348. DIALIUM Caesalpiniaceae. DIVABICATUM

No. 98. Unpace. Collected in the mountains north of Tuxtla Gutierrez, March 2, 1931. The endocarp of the nut of this tree is used by the natives in making a refreshing drink.

92349. ERYTHRINA GOLDMANIT Fabaceae.

No. 102. San Felipe. Found growing among dry scrub near Chiapas, March 4,

¹ It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the 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 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.

92341 to 92373—Continued

1931. A small tree about 15 feet high with red flowers.

92350. Ficus sp. Moraceae.

No. 39. From the market at Tuxtla Gutierrez, February 17, 1931. A small wild edible fig.

92351. FUCHSIA SPLENDENS Zucc. Onagraceae.

No. 83. Collected on the road between San Cristobal and Tenejapa, February 28, 1931, at 3,500 feet altitude. A much-branched ornamental shrub about 5 feet high. The single drooping flowers, over an inch long, are scarlet with greenish yellow tips and greenish petals. The tube is over twice the length of the calyx lobes; the pointed petals half as long as the tube; the stamens are much exserted, and the anthers are yellow.

92352. GAULTHERIA NITIDA Benth. Ericaceae.

No. 87. An evergreen shrub or small tree with oblong-ovate leaves 1 to 4 inches long and racemes 2 to 4 inches long of small pink flowers. It is native to Mexico.

92353. GYROCARPUS AMERICANUS Jacq. Hernandiaceae.

No. 105. Collected in dry scrub about Chiapas, March 4, 1931. A tree up to 60 feet high with thick branches, alternate, long-petioled, palmately lobed leaves, and broad cymes of small flowers said to be white, followed by ribbed fruits 1 inch long with two obovate wings 3 inches long. It is native to Mexico and throughout the Tropics.

92354. JACQUINIA PUNGENS A. Gray. Theophrastaceae.

No. 36. Collected in the mountains near Tuxtla Gutierrez, February 18, 1931, at 3,000 feet altitude. A small ornamental evergreen tree or shrub 8 to 10 feet high with sharp-pointed shining leaves. The small fragrant orangelike fruits are bright yellow and over 1 inch in diameter, and, when macerated, are thrown into the water to poison fish.

92355. LEUCOPREMNA MEXICANA (A. DC.) Standl. (Jacaratia mexicana A. DC.). Papayaceae.

No. 67. Boneta or papaya silvestre. A wild papaya collected near the Chiapas River at Acala, February 22, 1931, at 1,200 feet altitude. A tree with a smooth tapering trunk and many slender branches. The leaves are palmately seven parted, and the fruits, about 6 inches long, are five winged, each wing terminating in an incurved spur at the base. The sweetish edible fruits are preserved with sugar. It is native to Mexico and other parts of tropical America.

92356. Lycopersicon esculentum Mill. Solanaceae. Tomato.

No. 80. Variety oerasiforme. From the market at San Cristobal, February 27, 1931. A small tomato about onefourth inch in diameter.

92357 to 92363. Phaseolus spp. Fabaceae.

92357. Phaseolus coccineus L. Scarlet runner.

92358. PHASEOLUS LUNATUS L. Lima bean.

**92341** to **92373**—Continued.

92359 to 92363. PHASEOLUS VULGARIS L. Common bean,

92359. Bollito.

92360. Negro.

92361. Orotello.

92362. Pinto.

92363. Rosa.

92364. PINUS OOCARPA Scheide. Pinaceae. Pine.

No. 60. Collected between Acala and San Cristobal, February 24, 1931, at 6.000 feet altitude. A white pine up to 60 feet high, with a round, compact head and stout branches and bright-green leaves, usually in fives, 7 to 11 inches long. The cones, 2 to 4 inches long, are persistent, pendent or spreading, and are ocher yellow, often tinged with gray or green. Native to western and central Mexico.

For previous introduction see 81428.

92365. PITHECOCTENIUM ECHINATUM (Jacq.) Schum. Bignoniaceae. Mexican monkeycomb.

No. 106. Canoita. Collected near Chiapas, March 4, 1931. A small tree about 10 feet high with red flowers, found growing in dry scrub.

92366. PITHECOLLOBIUM DULCE (Roxb.) Benth. Mimosaceae. Gaumachil.

From the market at Coyoacan, Mexico, D. F., and presented by Mrs. Zelia Nuttall, March 4, 1931. 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 aril of the seed is eaten by the poorer classes as a food. The bark yields a yellow dye.

92367. RHUS SCHIEDEANA Schlecht. Anacardiaceae. Sumac.

No. 61. Collected at La Laguna, between Acala and San Cristobal, Chiapas, February 24, 1931, at 6,000 feet altitude. A shrub 10 feet high, much like the mountain-ash, found growing among oak and pine.

92368. RUBUS ADENOTRICHOS Schlecht. Rosaceae.

No. 72. Collected above San Andres, northwest of San Cristobal, Chiapas, February 26, 1931, at 2,000 feet altitude. A bush about 5 feet tall with pink flowers and black berries.

92369. SOLANUM AMAZONIUM Ker. Solanaceae.

No. 27. Collected near Navojoa, Sonora, January 18, 1931, at 150 feet altitude. A stellate-pubescent shrub 3 feet high, armed with slender prickles, ovate to oblong, sinuate-lobate leaves densely stellate-tomentose beneath; clusters of blue or violet flowers 1 to 2 inches across, and prickly fruits about half an inch in diameter. It is native to Mexico.

Nos. 92370 to 92372 were collected in the mountains near Tuxtla Gutierrez, Chiapas, February 18, 1931, at 3,000 feet altitude.

#### **92341 to 92373**—Continued.

92370. STERCULIA APETALA (Jacq.) Karst. Sterculiaceae.

No. 35. Castaño. A handsome tree up to 60 feet high, found growing in open shrub. It is used as an avenue tree throughout Mexico and Central America. The pods contain edible seeds which are enjoyed by children.

For previous introduction see 54535.

92371. SWIETENIA HUMILIS Zucc. Meliaceae. Mahogany.

No. 100. A deciduous tree up to 40 feet high with subsessile leaflets and light-brown seeds. The tree is a rapid grower and often forms pure stands; the hard dark red wood is used locally for furniture, canoes, and other purposes; it is not known to be exported in any quantity.

92372. VIROLA sp. Myristicaceae.

No. 90. Chauisof. Presented by Almado Zabadua, March 2, 1931. A tree whose seeds when once ignited burn with the steady light of a candle. They are used for this purpose by the natives.

92373. (Undetermined.)

No. 66. Collected near La Laguna, between Acala and San Cristobal, February 24, 1931, at 6,000 feet altitude. A shrub about 8 feet high with a capsule which looks like a small apple.

#### 92374 and 92375.

From Java. Seeds presented by the director, Botanic Garden, Buitenzorg. Received April 1, 1931.

92374. CASUARINA RUMPHIANA Miquel. Casuarinaceae.

A rather scraggly tree with very slender delicate green pendent branches and cones having few seeds. Native to Java.

For previous introduction see 67679.

92375. CASUARINA SUMATRANA Jungh. Casuarinaceae.

A handsome shrub sometimes over 6 feet high and densely branched. The branches, twigs, and little twigs are three angled, very slender, destitute of leaves, gracefully arched, sometimes pendent, forming by their union plumy masses or a kind of "foxtail," the whole of a deep shining green. As these twigs are leafless, they retain their plumy lightness for a long time.

For previous introduction see 74474.

#### 92376 to 92393.

From the Union of Soviet Socialist Republics. Seeds presented by the Bureau of Introduction, Leningrad, through Dr. John H. Parker, Kansas Agricultural Experiment Station. Received April 1, 1931.

92376. HORDEUM DISTICHON NUDUM L. Poaceae. Two-rowed barley.

No. 26965.

92377 to 92384. TRITICUM AESTIVUM L. (T. vulgare Vill.). Poaceae.

Common wheat.

**92377.** No. 3001. **92379.** No. 9449. **92378.** No. 9446. **92380.** No. 9450.

92376 to 92393—Continued.

92881. No. 10244. 92888. No. 36032.

92882. No. 35681. 92884. No. 118337.

92385 to 92393. TRITICUM DURUM Desf. Poaceae. Durum wheat.

92385. No. 2995-a. 92390. No. 17486.

92386. No. 2996-a. 92391. No. 35680.

92387. No. 3000. 92392. No. 41069.

92388. No. 10245. 92393. No. 41073.

92389. No. 17485.

92394 to 92405. TRITICUM AESTIVUM L. (T. vulgare Vill.). Poaceae.

From France. Seeds presented by the Station de Sélection de Montfort l'Amany, through Dr. John H. Parker, Kansas Agricultural Experiment Station. Received April 1, 1931.

92394. Blé des Alliés.

92395. Bon Fermier.

92396. Flèche d'Or.

92397. Galluis Trente.

92398. Goldendrop L 184.

92399. Goldendrop type.

92400. Leverson.

92401. Oscar Benoist.

92402. Yeoman variation Montfort.

92403. Hybride  $I \times I$ .

92404. Hybride Vilmorin 23.

92405. Hybride N. R.

92406. AMYGDALUS PERSICA L. (Prunus persica Stokes). Amygdalaceae.

Peach.

From South Africa. Seeds purchased from H. E. V. Pickstone & Bro. (Ltd.), Simondium, Cape of Good Hope Province. Received April 1, 1931.

Variety Pucelle de Malines.

92407 to 92409. LILIUM spp. Liliaceae.

From England. Bulbs presented by W. L. Constable, Paddock Wood, Kent. Received April 2, 1931.

92407. LILIUM BAKERIANUM Coll. and Hemsl.

A lily with a gray-green stem 3 to 4 feet high, scattered, ascending, linear to lanceolate leaves 2 to 3 inches long, and one to six nodding, fragrant, campanulate flowers 2 to 3 inches broad, opening greenish yellow and changing to creamy white, heavily spotted inside with chocolate purple. It is native to Burma and western China.

92408. LILIUM NEPALENSE D. Don.

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 in length, are oblong-lanceelate and 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

92407 to 92409—Continued.

only in the upper half. The purple-black filaments bear yellow anthers nearly an

For previous introduction see 52925.

92409. LILIUM WALLICHIANUM Schult. f.

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 80013.

92410. CITRUS AUBANTIFOLIA (Christm.). Swingle. Rutaceae.

From Manzanilla, Mexico. Bud wood collected by J. H. Kempton, of the Allison V. Armour expedition to the West Indies and Mexico. Received April 3, 1931.

Bud wood of a very aromatic lime, collected March 25, 1931.

92411. Commiphora sp. Balsameaceae.

From India. Seeds presented by Capt. D. S. Corlett, California Botanic Garden, Los Angeles, Calif. Received April 3, 1931.

Collected from trees growing in a stony sandy soil in a semiarid region which is very hot by day and very cold at night.

The commiphoras are balsamiferous, spiny trees or shrubs with alternate, compound leaves of one to five sessile, crenate, or serrate leafiets, small greenish axillary flowers, and small, oval, drupelike fruits. Various species yield gum resins which are known as myrrh. These plants are native to India, Arabia, and Africa.

92412 to 92459. VITIS VINIFERA L. Vitaceae. European grape.

rom Algeria, Africa. Cuttings presented by the Institut Agricole de l'Algérie, Maison Carrée. Received April 1, 1931. From Algeria, Africa.

92412. Adari 2. Beni ourtilane guerjour.

92413. Adari 3. Beni ourtilane guerjour.

92414. Adari 3. Cheria guerjour.

92415. Agourane 5. Beni Aissi.

2416. Ain Beugra. Berry dark black, medium, spherical; skin having a heavy bloom; pulp firm; cluster long, cylindrical, well filled; peduncle long, green and brittle; petiole long and slender; leaf resembles Grenache, but is a duller green; vine vigorous, large, and late. 92416. Ain Beugra.

2417. Ain Kelb. Berry golden yeilow, medium size, round, skin veined; cluster rather large, compact; stem having strong peduncle; leaf large, thick, orbicular; vine very vigorous and regularly fruitful; ripens August 1.

92418. Akhal 2. Bou Saada.

92419. Aneb Bou bezzoul.

92420. Aneb el Amar.

99421. Aneb el Korchi.

92422, Amellalt 9, Beni Aissi.

92423 Amoussiah 7. Beni Aissi.

92424. Boni Aissi 5.

92425 Beni Ferach 1.

92426 Beni ourtilane 2. Guerjour.

92412 to 92459—Continued.

92427. Beni ourtilane 7.

92428. Bezoulat el Kelba. Berry golden yellow, large, twice as long as wide, ellipsoidal; pulp crisp, sweet, of good flavor; seeds numerous and large; cluster conic-cylindrical and of good

92429 Bou Saada 3. Asili.

92430. Bou Saada 4.

92431. Bou Saada 5.

92432, Boukerdous 13.

92433 Boutziri 10. Beni Aissi.

92484. Cheria 1. Guerjour est.

92435 Chikhio 1. Bou Saada,

92436. Coudsi.

92437. El Bordj.

92438. El Main 4. Bilaus.

92439, Falera Beni Aissi.

92440. Fagrarasse 2.

92441. Famellalt 2. Tghil Ali.

92442. Fassifit 1. Tghil Ali.

92448, Fissefin 1. Beni ourtilane.

92444, Fourtrissin 4.

92445. Fsimeskieni 5. Cheria.

92446. Ladari Beni Ferah.

92447. Makfoul 1. Bilaus.

92448, Orléansville Corchet 34.

92449. Orléansville Farana 27.

92450. Orléansville Rose 36.

92451. Orléansville Rose 38. 92452. Oul b'ouzgueur 3. Beni Aissi.

92453. Oul b'ouzgueur 3. Tghil Ali.

92454. Out bouzgueur 5.

92455. Oul b'ouzgueur 6.

92456, Raisin Blanc 2. El Main.

92457. Tghil Ali 4.

92458, Thizourin n'Fahar arassi.

92459. Bezoul el Kadem. The foliage is incised with very pointed teeth. "Kadem" means slave, negress.

92460 to 92470. Soja max (L.) Piper (Glycine hispida Maxim.). Faba-Soybean. ceae.

rom the Union of Soviet Socialist Republics. Seeds presented by Station Ostrada, Agricultural Experiment Station of the All-Union Institute of Applied Botany and the Department of Agriculture. Received April 4, 1931. From

92460. From the Ussur country.

92461. From Gunchjulinsky Primorskaya Experiment Station.

92462. From the Transcaucasus.

92463. From the northern Caucasus.

92464. Kpynyrs No. 9/3 Ceb. Manrmypud.

92465. No. 111. Xapsunchoe onormnoe.

92466. No. 118. From the Charbin Experiment Field, Mandjur.

92460 to 92470—Continued.

92467. No. 199. Xapsunchoe onormnoe.

92468. No. 231a. Xapsunchoe onormnoe.

92469. No. 306. Konyeccur Dpycar.

92470. No. 911. Konyeccur Dpyear.

### 92471 to 92477. TRITICUM AESTIVUM L. (T. vulgare Vill.). Poaceae.

Common wheat.

From Kenya, Africa. Seeds presented by R. J. Lathbury, Plant Breeder, Plant Breeding Station, Njoro. Received April 6, 1931.

o, 1931.

92471. Equator. The only variety grown at the higher altitudes between 8,000 and 9,000 feet. Highly resistant to yellow rust, but susceptible to stem rust forms Nos. 17 and 21. A heavy yielder that matures in 7½ months at 9,000 feet. Sown with the start of the rains in April to June and harvested in the dry season from December to February. This variety originated as a selection from a field of wheat growing on a farm called Equator at Njoro. Sometimes known locally as K. 1.

92478. Kenya Governor. Grown at altitudes up to 7,000 feet. Too susceptible to yellow rust at higher altitudes. Resistant to one form, No. 17, of stem rust, but susceptible to form 21. Resistant to leaf rust. Matures in four months at 5,000 feet. A useful stopgap, but one that will fall out of cultivation as new rust-resistant varieties are produced.

92473. Kenya Standard. Similar to Kenya Governor, but is resistant to both physiologic forms of stem rust, Nos. 17 and 21; susceptible to leaf rust. Does not yield as well as Kenya Governor, but has stronger straw and tighter chaft.

92474. B. F.<sub>2</sub> 36 C. 1 (L.). Similar to Kenya Governor and with the same stem-rust resistance, but a better yielder. Little of this variety is grown.

92475. K, 2 R. 5 (L. 2). A new Njoro wheat which is resistant to forms Nos. 17 and 21 of stem rust and also to yellow rust. It matures in 5½ to 6 months at 7,000 feet altitude and in 6 to 6½ months at higher altitudes.

92476. Golden Ball. A wheat grown at 7,000 to 8,000 feet altitude. It is susceptible to all rusts, but generally gives a crop. Not largely grown. It originated from South Africa, where it is known as Groot Korn. Matures in six months.

92477. K. 2 G. 6 A. 9 (L.). A new Njoro wheat which is resistant to forms Nos. 17 and 21 of stem rust. It matures in 5½ to 6 months at 7,000 feet altitude and in 6 to 6½ months at higher altitudes.

### 92478 to 92486. Casuarina spp. Casuarinaceae.

From Australia. Seeds presented by Dr. Alexander McTaggart, Senior Plant Introduction Officer, Canberra. Received April 6, 1931.

A collection of casuarinas native to Australia.

92478 to 92486-Continued.

92478. CASUARINA DECUSSATA Benth.

A small tree closely resembling Casuarina torulosa, with slender elongated branches arranged in fours, but the angles are very acute, and two of them are more prominent than the others.

#### 92479. CASUARINA FRASERIANA Miquel.

A tall erect shrub or small tree closely related to *Casuarina distyla*, with leafless, rigid branches and with the leaves represented by very small scales in whorls.

For previous introduction see 73914.

92480. CASUARINA HUEGELIANA Miquel.

A shrub or small tree, native to Western Australia, with round branchlets arranged in whorls of 8 to 12.

92481 and 92482. CASUARINA INOPHLOIA Muell. and Bail.

A small tree with loose fibrous bark and thin slightly streaked branchlets in whorls of seven to nine. It is native to Queensland.

92481. Collected in New South Wales; No. S-219.

92482. Collected in Queensland; No. S-

92483. CASUARINA LEPIDOPHLOIA F. Muell.

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 casuarina has hitherto been confused with *C. glauca*.

92484. CASUARINA LUEHMANNI R. T. Baker.

A tree 80 to 100 feet high, with lightcolored branchlets and flattened cones half an inch in diameter. The wood is hard and close-grained.

For previous introduction see 74696.

92485. CASUARINA SUBEROSA Otto and Dietr.

A species with very large fruits (1½ inches) and long coarse pendent branch-lets, very distinct from Casuarina equisactifolia.

For previous introduction see 62663.

92486. CASUARINA TORULOSA Ait.

The wood of this tree is close-grained and very prettily marked. It is used for shingles and also as veneer for cabinetwork.

For previous introduction see 49854.

92487 to 92489. PRUNUS SERRULATA Lindl. Amygdalaceae.

Oriental cherry.

From England. Plants purchased from R. C. Notcutt, Woodbridge, Suffolk. Received April 6, 1931.

92487. Variety Kofima. A Japanese flowering cherry with very large semidouble, pure white fragrant flowers which are somewhat campanulate; these are produced in a long-stemmed drooping corymb. The tree is very vigorous and a rapid grower.

For previous introduction see 62101.

#### 92487 to 92489—Continued.

92488. Variety Ojochin (Senriko). A wide-spreading tree with brownish-gray bark; the young foliage is coppery green, and the flowers, single or nearly so, are white with a pink blush, fragrant, and about 2 inches across, with usually three or four in a cluster. The petals are slightly wrinkled, giving the flowers the appearance of being semi-double.

For previous introduction see 69085.

92489. Variety Shirofugen. Tree up to 25 feet high, wide-spreading in habit, with dark-brownish bark. The very young foliage is dull mahogany red, with the same hue shading the deep-cerise, truncate flower buds. The clear-pink, double flowers, up to 2½ inches across, become white with age, and are in drooping clusters of three or four. From the center of the flower protrude 2 or sometimes 3 to 5 leaf-like pistils. On the Pacific coast this variety has been grown under the name of Victory.

#### 92490 to 92501.

From England. Seeds presented by the director, Botanic Garden, Cambridge. Received April 6, 1931.

92490. ALLIUM FARRERI W. T. Stearn. Liliaceae. Onion.

An onion, native to Siku, China, with 4 to 6 linear leaves 10 to 15 inches long and lax umbels of 6 to 30 campanulate red-purple flowers.

92491. BERBERIS CHITRIA D. Don. beridaceae. Ba: 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. It is native to the Himalayas.

For previous introduction see 73530.

92492. BERBERIS EMPETRIFOLIA Pers. beridaceae. Crow barberry.

A low densely branched barberry, native to southern South America, 1 or 2 feet high, with linear, bright-green leaves and bluish-black fruits.

For previous introduction see 79507.

Aquifoli-92493. ILEX INTEGRA Thunb. aceae. Holly.

An evergreen Japanese shrub or tree, up to 40 feet in height, with oval or oblong, usually entire leaves 2 to 3 inches long and globular or ovoid red berries.

For previous introduction see 67361.

92494 to 92496. IRIS spp. Iridaceae.

92494. IRIS BULLEYANA Dykes. Hollowstem iris.

An iris from western China which resembles *Iris clarkei*, except that the stem is hollow. The narrow leaves are stem is hollow. The narrow leaves are glossy above and glaucous beneath, and the stem, 15 to 18 inches long, bears a single head of one or two flowers. The falls have a greenish-yellow oblong haft, veined and dotted with purple. On the obovate blade the coloring becomes clearer and consists of broken veins and blotches of bright blue purple on a creamy ground. The extremity is a uniform blue purple, paler at

92490 to 92501-Continued.

the edges. The oblanceolate, channeled standards are pale blue purple with deeper veins, and they diverge at an angle of about 60°. The keeled, dark-purple styles are held high above the falls.

For previous introduction see 67364.

92495. IRIS CHRYSOGRAPHES Dykes. Goldvein iris.

One of the handsomest of the beard-less irises; the velvety dark-purple flowers are brightened by golden retic-ulations at the throat, running into a single patch in the blade.

For previous introduction see 79029.

92496. IRIS WILSONI Wright ... Wilson iris.

An iris from western China, about 2 feet high. The flowers are yellow with some purple venation in the falls.

For previous introduction see 92319.

92497. NOTHOSCORDUM BIVALVE (L). Britton (N. striatum Kunth.). Liliaceae.

A bulbous perennial with linear basal leaves and a scape about 1 foot high, bearing an umbel of small yellow flowers.

92498 to 92500. PRIMULA spp. Primrose.

92498. PRIMULA FLORIBUNDA Wall.

Variety Isabellina. sulphur-yellow flowers. A form with

92499. PRIMULA FLORINDAE K. Ward.

A Tibetan primrose about 3 feet high, one of the Sikkimensis section, with fragrant, cowslip-yellow flowers in an immense head of 60 to 80 flowers. The very large leaves resemble those of Cattha palustris in shade, and the plant grows near running streams.

For previous introduction see 79103.

92500. 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 seven or eight tiers of soft-yellow flowers resembling in color and size those of *Jasminum primulinum*. It requires a moist but well-drained site and a fairly mild climate climate.

For previous introduction see 79105.

92501. ZEPHYRANTHES ANDERSONI (Herb.) Baker. Amaryllidaceae.

A bulbous perennial, native to Argentina, with narrowly linear, pale-green leaves 6 inches long and a scape as long as the leaves bearing a lilylike flower 1 inch long, bright yellow inside and coppery red outside.

92502. ENCEPHALARTOS LEMARINELIA-NUS Wildem. and Dur. Cycadaceae.

From Africa. Seeds presented by A. Cor-bisier-Baland, directeur, Jardin Botanique d'Eala, Belgian Congo. Received April

A cycad 3 to 7 feet high with compound leaves 2 to 3 feet long, made up of 18 to 22 rigid, coriaceous, glaucous, lanceolate leaflets 3 to 6 inches long It is native to tropical Africa.

. +4 1 j. + 3±31.

#### 92503 to 92511.

From England. Plants purchased from V. N. Gauntlett & Co. (Ltd.), Chidding-fold, Surrey. Received April 8, 1931.

92503 to 92506. PRUNUS SERBULATA Lindl. Amygdalaceae. Oriental cherry.

92503. Variety Manoga. Flowers double and soft pink.

92504. Variety Osaka. Flower pale rose changing to white. Flowers double.

92505. Variety Snowflake. A new Japanese cherry with large snow-white, fluffy flowers.

92506. Variety Wakihito. 'The double flowers are red in the bud, opening to a deep rich rose.

9x607. THAMNOCALAMUS FALCONERI Hook. f. Poaceae. Bamboo.

f. Poaceae. Bamboo.

Falconer bamboo. This was received under the name Arundinaria falconert, but the absence of tessellation (cross venation) in the leaves excludes it from Arundinaria. It bears a resemblance to some of the forms of Bambusa nama and probably is about as hardy as this species. The culm is cylindrical. The branches on a young plant are 8 to 12 at a node, variable in length, usually without branchlets, exceedingly slender, often purplish in color, and with four to seven leaves gathered near the tips. The leaves are lanceolate, 1½ to 4 inches long by three-sixteenths to about three-eights of an inch wide. The slenderness of the branches gives this bamboo a distinctive beauty. beauty.

92508. SASA VARIEGATA (Sieb.) E. G. Camus (Arundinaria fortunei Riviere). Poaceae. Bamboo.

Variety fortunei. A hardy dwarf bamboo with attractive green and white striped leaves. There are up to about 12 leaves on a branch, and they range up to 4 inches long by three-eighths of an inch wide. The species grows to a height of 12 to 18 inches and spreads rather rapidly by means of underground rhizomes.

92509. ARUNDINARIA GAUNTLETTI Hort.
Bamboo.

A name for which a place of publication has not been found. On a greenhouse-grown plant there are up to seven lanceolate leaves on a branch. They are from 2 to 6 inches long by three-eighths to three-fourths of an inch wide. The tessellation is rather open.

92510. SASA VEITCHII (Carr.) Rehder. Bamboo.

Received as Bambusa palmata, which name is now considered to be a synonym of Sasa tessellata. The plants agree more closely, however, with those received from the Kew Gardens as S. veitchii. The young plants have three to four broadly lanceolate leaves on a branch, and these are up to 4% inches long by seven-eighths of an inch wide. The secondary veins are very prominent, and the tessellation is rather close. S. veitchii grows to a height of about 4 feet, and the rhizomes are of running habit, as in the hardy bamboos. hardy bamboos.

92511. PHYLLOSTACHYS PUBERULA (Miquel) Munro (P. henonis Mitf.).
Poscesse Bamboo.

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#### 92503 to 92511—Continued.

Japanese name, Hachiku. A hardy giant bamboo of running habit, native to Japan and China, which reaches ultimately, under favorable conditions, a height of 50 or 60 feet. The leaves, usually two to four on a branchlet, are commonly 2½ to 3½ inches long by one-fourth to three-eighths of an inch wide. The fresh culm sheaths are plain mauve, tipped with brilliant green pseudophyllis, giving the young sprouts as they come up in the spring an appearance of singular beauty. The sprouts are edible.

92512 to 92517. ALLIUM CEPA L. Liliaceae.

om Australia. Seeds presented by John Douglas, Field Branch, Department of Agriculture, Sydney, New South Wales. Received April 9, 1931. From Australia.

92512. Early flat cape. A South African variety.

Nos. 92513 to 92517 are local selections which have done exceptionally well under all conditions in New South Wales.

92513. Early Hunter River (brown).

92514. Hunter River Brown Spanish.

92515. Hunter River (white).

92516. Long Keeping Brown Spanish.

92517. McKim.

92518 to 92522.

From Spain. Plants purchased from Juan Levya, La Quinta, Granada. Received April 9, 1931.

92518. PRUNUS AVIUM L. Amygdalaceae. Sweet cherry.

Rizado de Quentar.

92519 to 92521. Amygdalus Persica L. (Prunus persica Stokes). Amygdala-Peach.

92519. Fertile de Poiton.

92520. Champion.

92521. Triumph.

92522. POPULUS NIGRA B (Pursh) Torr. Salicaceae. BETULIFOLIA

Chopo. A form of poplar, striking because of the almost complete absence of true lateral branches, the stems being clothed with twigs which, as is common in poplars, are sooner or later thrown off by separative layers near the base. Because of this habit of growth the trees can be planted very close together, yielding an enormous amount of wood, as they are rapid growers.

For previous introduction see 33206.

92523 to 92546. PRUNUS SERRULATA Lindl. Amygdalaceae.

Oriental cherry.

From Japan. Plants purchased from the Yokohama Nursery Co., Yokohama. Re-ceived April 9, 1931.

A collection of Japanese flowering cherries received under the following names:

92523. Reni-damo.

92524. Daizen-zakura.

92525. Higurashi.

92526. Hi-zakura.

92523 to 92546—Continued.

92527. Hoki-zakura.

92528. Horaisan.

92529. Ito-kubiri.

92530. Kiku-shidare.

92531. Kirigaya.

92532. Ko-fugen.

92533. Koko-no-ye-zakura.

92534. Naden.

92535. Nara-zakura.

92536. Okiku-zakura.

92537. Oku-miyako.

92538. O-naden.

92539. O-sho-kun.

92540. Ruiran.

92541. Sakon.

92542. Sum-zome.

92543. Temari-zakura.

92544. Udzu-zakura.

92545. Yedo-zakura.

92546. Yo-ki-hi.

92547. Cassia sp. Caesalpiniaceae.

From Brownsville, Tex. Seeds presented through R. A. Young, Bureau of Plant Industry. Received April 9, 1931.

A silvery leaved, pendulous shrub.

92548 to 92554. SOLANUM TUBEROSUM L. Solanaceae. Potato.

From Scotland. Tubers presented by William Black, Scottish Society for Research in Plant Breeding, Craigs House, Corstorphine, Midlothian. Received April 10, 1931.

A collection of tubers introduced for the use of specialists interested in potato breeding.

92548. No. 220 (52).

92549. No. 249s (31).

92550. No. 236 (8).

92551. Papa sylvestra,

92552. No. 70 (13).

92558. No. 120 (58).

92554. No. 135 (10).

92555. ZEA MAYS L. Poaceae. Corn.

From Alindao, Ubangi Chari Territory, French Equatorial Africa. Seeds presented by Elizabeth Hermann, Mission Evangélique. Received April 11, 1931.

Bangou, or white corn, which matures in two months. The natives plant it near swamps at the beginning of the dry season, and in the rainy season they plant it in stony ground near the fertile ant hills. It yields two ears in good ground, but only one in less fertile situations.

For previous introduction see 91651.

92556 to 92734. Soja Max (L.) Piper (Glycine hispida Maxim.). Fabaceae. Soybean.

From Manchuria, China. Seeds collected by P. H. Dorsett and W. J. Morse, agri-

92556 to 92734—Continued.

cultural explorers, Bureau of Plant Industry. Received April 10, 1931.

Received from the South Manchuria Railway Experiment Station, Kungchuling, Manchuria, February 25, 1931.

92556. No. 7751. A medium-small bean, nearly round, greenish yellow with black hilum and yellow germ.

92557. No. 7752. A medium-large, oval, slightly flattened green bean with brown hilum and green germ.

92558. No. 7753. A medium-large, oval, glossy olive-green bean with pale hilum.

92559. No. 7754. A medium-large green bean, oval, slightly flattened, and semiglossy with a brown hilum.

92560. No. 7755. A medium-sized bean, flattened, glossy, and yellowish brown. It is very similar to the Virginia.

92561. No. 7756. A medium-sized, oval, slightly flattened olive-yellow bean with pale hilum.

92562. No. 7757. A mixed sample of semiglossy smoky yellow oval beans with brown hilum, small to medium in size.

92563. No. 7758. A medium small, oval, glossy, light-yellow bean with brown hilum.

92564. No. 7759. A medium-sized, oval, semiglossy, light-yellow bean with pale hilum.

92565. No. 7760. A medium-sized, oval, semiglossy, light-yellow bean with pale hilum.

92566. No. 7761. A medium-sized, oval, semiglossy, light-yellow bean with brown hilum.

92567. No. 7762. A medium-large, oval, light-yellow bean with pale hilum.

92568. No. 7763. A medium-sized, oval, semiglossy, yellow bean with pale hilum.

92569. No. 7764. A medium-sized, oval, semiglossy, yellow bean with pale hilum.

92570. No. 7765. Medium-small to medium-sized, oval, semiglossy, yellow beans with pale hilum.

92571. No. 7766. Medium-sized, oval, semiglossy, light-yellow beans with pale hilum.

92572. No. 7767. Medium-sized, oval, semiglossy, light-yellow beans with pale hilum.

92573. No. 7768. Medium-sized, oval, glossy, light-yellow beans with pale hilum.

92574. No. 7769. A medium-sized, oval, light-yellow bean with pale hilum.

92575. No. 7770. A medium-sized, oval, semiglossy, yellow bean with pale hilum.

92576. No. 7771. A medium-sized, oval, semiglossy, yellow bean with pale hilum.

92577. No. 7772. A medium-sized, oval, light-yellow bean with pale hilum.

92578. No. 7773. A medium-sized, nearly round, semiglossy yellow bean with pale hilum.

#### 92556 to 92734—Continued.

- 92579. No. 7774. A medium-sized, oval, slightly flattened, very light-yellow bean with pale hilum.
- 92580. No. 7775. A medium-sized, oval, semiglossy, yellow bean with pale hilum.
- 92581. No. 7776. A medium sized, oval, semiglossy, yellow bean with pale hilum.
- 92582. No. 7777. An oval, semiglossy, light-yellow bean of medium size with pale hilum.
- 92583. No. 7778. An oval, semiglossy, yellow bean which is medium small to medium in size with a pale hilum.
- 92084. No. 7779. A medium-sized, nearly round, semiglossy light-yellow bean with brown hilum.
- 92585. No. 7780. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.
- 92586. No. 7781. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.
- 92587. No. 7782. A medium-small to medium-sized, nearly round, yellow bean with brown hilum.
- 92588. No. 7783. Medium-small to medium-sized, nearly round, light-yellow beans with brown hilum.
- 92589. No. 7784. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.
- 92590. No. 7785. A medium-sized, nearly round, semiglossy, light-yellow bean with small brown hilum.
- 92591. No. 7786. A nearly round yellow bean of medium small to medium size with a brown hilum.
- 92592. No. 7787. A nearly round, semiglossy, yellow bean of medium size with small brown hilum.
- 92593. No. 7788. A nearly round, semiglossy, yellow bean of medium size with brown hilum.
- 92594. No. 7789. A nearly round, semiglossy, light-yellow bean with brown hilum.
- 92595. No. 7790. A nearly round semiglossy, light-yellow bean with brown hilum.
- 92596. No. 7791. A medium-sized, nearly round, semiglossy, yellow bean with brown hilum.
- 92597. No. 7792. A medium-sized, nearly round, semiglossy, light-yellow bean with pale hilum.
- 92598. No. 7793. An oval, semiglossy, light-yellow bean of medium-large size with brown hilum.
- 92599. No. 7794. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.
- 92600. No. 7795. A medium-sized, nearly round, glossy, yellow bean with brown hilum.
- 92601. No 7796. An oval, glossy yellow bean of medium size with brown hilum.
- 92602. No. 7797. A nearly round, semiglossy, light-yellow bean of medium size with small brown hilum.

- 92556 to 92734—Continued.
  - 92603. Ao. 7798. Medium-sized, oval to nearly round, semiglossy, light-yellow beans with brown hilum.
  - 92604. No. 7799. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.
  - 93605. No. 7800. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.
  - 92606. No. 7801. A medium-sized, nearly round, semiglossy, light-yellow bean with small brown hilum.
  - 92607. No. 7802. A medium-sized, nearly round, semiglossy, yellow bean with brown hilum.
  - 92608. No. 7803. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.
  - 92609. No. 7804. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.
  - 92610. No. 7805. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.
  - 92611. No. 7806. A medium-sized, nearly round, glossy, light-yellow bean with brown hilum.
  - 92612. No. 7807. A medium-sized, nearly round, glossy, yellow bean with brown hilum.
  - 92613. No. 7808. A medium-sized, nearly round, semiglossy, light-yellow bean with small brown hilum.
  - 92614. No. 7809. A medium-sized, nearly round, glossy, yellow bean with brown hilum.
  - 92615. No. 7810. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.
  - 92616. No. 7811. A medium-sized, nearly round, semiglossy, yellow bean with brown hilum.
  - 92617. No. 7812. A nearly round, semiglossy, yellow bean of medium size with brown hilum.
  - 92618. No. 7813. A nearly round, semiglossy, light-yellow bean of medium size with brown hilum.
  - 92619. No. 7814. A nearly round, semiglossy, light-yellow bean of medium size with brown hilum.
  - 92620. No. 7815. A nearly round, semiglossy, yellow bean with small brown hilum.
  - 92621. No. 7816. A medium-sized, nearly round, glossy, yellow bean with rather small brown hilum.
  - 92622. No. 7817. Oval to nearly round, semiglossy, light-yellow beans of medium size with brown hilum.
  - 92623. No. 7818. An oval, semiglossy, light-yellow bean of medium size with brown hilum.
  - 92624. No. 7819. An oval, light-yellow bean of medium size with brown hi-
  - 92625. No. 7820. Oval, slightly flattened, light-yellow beans, which vary in size from medium small to medium, with brown hilum.

#### 92556 to 92734—Continued.

- 92626. No. 7821. Oval, light-yellow beans which vary in size from medium small to medium, with light-brown hilum.
  - 92627. No. 7822. A medium-sized, oval, glossy, light-yellow bean with light-brown hilum.
  - 92628. No. 7823. An oval, slightly flattened, light-yellow bean of medium size with dark-brown hilum.
  - 92629. No. 7824. An oval, glossy, lightyellow bean of medium size with dark-brown hilum.
  - 92630. No. 7825. An oval, glossy yellow bean of medium size with brown hilum.
  - 92631. No. 7826. Oval, slightly flattened, glossy, light-yellow beans varying in size from medium small to medium; hilum, brown.
  - 92632. No. 7827. Oval, slightly flattened, semiglossy, yellow beans which vary in size from medium to medium large; hilum, light brown.
  - 92633. No. 7828. A medium-sized, oval, slightly flattened, semiglossy, very light-yellow bean with light-brown hilum.
  - 92634. No. 7829. A medium-sized, oval, light-yellow bean with brown hilum.
  - 92635. No. 7830. A medium-sized, oval, slightly flattened yellow bean with brown hilum.
  - 92636. No. 7831. A medium-sized, oval, slightly flattened, light-yellow bean with pale hilum.
  - 92637. No. 7832. Oval, slightly flattened, light-yellow beans which vary in size from medium small to medium; hilum, large and dark brown.
  - 92638. No. 7833. A medium-sized, oval, light-yellow bean with large, dark-brown hilum.
  - 92639. No. 7834. A medium-sized, oval, light-yellow bean with large dark-brown hilum.
  - 98640. No. 7835. A medium-sized, oval, light-yellow bean with large dark-brown hilum.
  - 92641. No. 7836. A medium-sized, oval, semiglossy, yellow bean with large dark-brown hilum.
  - 92642. No. 7837. A medium-sized, oval, slightly flattened, light-yellow bean with large dark-brown hilum.
  - 92643. No. 7838. Oval, light-yellow beans which vary in size from medium small to medium, with rather large brown hilum.
  - 92644. No. 7839. A medium-sized, oval, slightly flattened, semiglossy, yellow bean with brown hilum.
  - **92645.** No. 7840. Oval, slightly flattened, light-yellow beans varying in size from medium to medium large with brown hlum.
  - 92646. No. 7841. A medium-sized, oval, slightly flattened, semiglossy, light-yellow bean with large brown hilum.
  - 92647. No. 7842. A medium-sized, oval, glossy, light-brown bean with brown hilum.

- 92556 to 92734—Continued.
  - 92648. No. 7843. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.
  - 92649. No. 7844. Oval, slightly flattened, semiglossy, light-yellow beans which vary in size from medium small to medium; hilum, light brown.
  - 92650. No. 7845. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.
  - 92651. No. 7846. Nearly round, semiglossy, light-yellow beans which vary in size from medium small to medium; hilum, brown.
  - 92652. No. 7847. A medium-sized, oval, semiglossy, light yellow bean with brown hilum.
  - 92653. No. 7848. A bean of medium size, nearly round, semiglossy, light yellow, and with a brown hilum.
  - 92654. No. 7849. A medium-small, oval, glossy, light-yellow bean with pale hilum.
  - 92655. No. 7850. A medium-sized, nearly round, semiglossy, yellow bean with large black hilum.
  - 92656. No. 7851. A medium-sized, nearly round, semiglossy, light-yellow bean with large black hilum.
  - 92657. No. 7852. A medium-sized, oval, slightly flattened yellow bean with large, very dark-brown hilum.
  - 92658. No. 7853. A medium-small, nearly round, semiglossy, yellow bean with large black hilum.
  - 92659. No. 7854. A bean of medium size, oval, yellow with black hilum.
  - 92660. No. 7855. A medium-sized, nearly round, semiglossy, light-yellow bean with slate-black hilum.
  - 92661. No. 7856. A medium-large, nearly round, light-yellow bean with light slate-black hilum.
  - 92662. No. 7857. A medium-sized, nearly round, glossy, light-yellow bean with light slate-black hilum.
  - 92663. No. 7858. An oval, glossy, yellow bean which varies in size from medium small to medium; hilum, brown.
  - 92664. No. 7859 A medium-sized, oval, semiglossy, light-yellow bean with brown hilum.
  - 92665. No. 7860. Oval to nearly round, light-yellow beans varying in size from medium small to medium; hilum, pale brown.
  - 92666. No. 7861. A medium-sized, nearly round, semiglossy, yellow bean with light-brown hilum.
  - 92667. No. 7862. A medium-sized, nearly round, light-yellow bean with light-brown hilum.
  - 92668. No. 7863. A medium-sized, nearly round, semiglossy, light-yellow bean with light-brown hilum.
  - 92669. No. 7864. A medium-sized, nearly round, light-yellow bean with light-brown hilum.
  - 92670. No. 7865. A medium-sized, nearly round, pale-yellow bean with light-brown hilum.

- 92671. No. 7866. A medium-sized, nearly round, light-yellow bean with light-brown hilum.
- 92672. No. 7867. A medium-sized, nearly round, light-yellow bean with light-brown hilum.
- 92673. No. 7868. A medium-sized, nearly round, light-yellow bean with brown hilum.
- 92674. No. 7869. A medium-sized, nearly round, light-yellow bean with light-brown hilum.
- 92675. No. 7870. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.
- 92676. No. 7871. Nearly round, yellow beans which vary in size from medium to medium large; hilum, light brown.
- 92677. No. 7872. A medium-sized, nearly round, pale-yellow bean with light-brown hilum.
- 678. No. 7873. A medium-sized, oval, semiglossy, pale-yellow bean with light-brown hilum. 92678. No. 7873.
- 92679. No. 7874. A medium-sized, oval, pale-yellow bean with light-brown hilum.
- osu. No. 7875. A medium-sized, oval, semiglossy, pale-yellow bean with pale-brown hilum. 92680. No. 7875.
- 92681. No. 7876. A medium-sized, nearly round, semiglossy, yellow bean with light-brown hilum.
- 92682. No. 7877. A medium-sized, oval, pale-yellow bean with pale hilum.
- 92683. No. 7878. A medium-sized, oval, pale-yellow bean with pale hilum.
- 92684. No. 7879. A medium-sized, oval, slightly flattened, pale-yellow bean with pale hilum.
- 92685. No. 7880. A medium-sized, oval, light-yellow bean with pale hilum.
- 92686. No. 7881. A medium-sized, oval, semiglossy, pale-yellow bean with pale
- 92687. No. 7882. 687. No. 7882. A very light-yellow, oval bean of large size with pale hilum.
- 92688. No. 7883. A light-yellow, bean of medium size with pale hilum.
- 92689. No. 7884. A pale-yellow, oval bean of medium size with pale hilum.
- 92690. No. 7885. A medium-sized, oval, light-yellow bean with pale hilum.
- 691. No. 7886. Oval, light-yellow beans which vary in size from medium to medium large; hilum, pale. 92691. No.
- 692. No. 7887. Oval, slightly flat-tened, light-yellow beans of medium-large size with light-brown hilum.
- 92693. No. 7888. A medium-sized, oval, pale-yellow bean with pale hilum.
- 92694. No. 7889. Oval, slightly flat-tened, semiglossy, pale-yellow beans of medium-large size with pale hilum.
- 695. No. 7890. Medium large, oval, slightly flattened, semiglossy, pale-yellow beans with pale hilum.
- 92696. No. 7891. A medium-sized, oval, semiglossy, pule-yellow bean with pule hilum.

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- 92697. No. 7892. A medium-sized, oval, semiglossy, pale-yellow bean with pale
- 698. No. 7893. Oval, slightly flat-tened, light-yellow beans which vary in size from medium to medium large; hilum, pale.
- 699. No. 7894. Oval, light-yellow beans which vary from medium to large in size; hilum, pale. 92699. No.
- 92700. No. 7895. A medium-large, oval, semiglossy, yellow bean with pale
- 92701. No. 7896. A medium-sized, nearly round, sem pale hilum. semiglossy, yellow bean with
- 92702. No. 7897. Oval, glossy yellow beans which vary from medium to medium large in size; hilum, brown.
- 92703. No. 7898. A medium-sized, oval, cloudy brown bean with yellow germ.
- 92704. No. 7899. low beans, me 399. Oval, semiglossy yel-medium to medium large in size, with light-brown hilum.
- 92705. No. 7900. A medium-sized, oval, glossy yellow bean with light-brown hilum.
- 92706. No. 7901. A medium-sized, oval, slightly flattened yellow bean with light-brown hilum.
- 92707. No. 7902. A medium-large, nearly round, light-yellow bean with brown hilum.
- 92708. No. 7903. Oval, semiglossy, pale-yellow beans which vary in size from medium to medium large; hilum brown and rather small.
- 92709. No. 7904. A nearly round, semi-glossy, yellow bean of medium size with light-brown hilum.
- 92710. No. 7905. A medium-sized, nearly round, yellow bean with brown hilum.
- 92711. No. 7906. A medium-large, oval, slightly flattened, glossy light-yellow bean with pale hilum.
- 92712. No. 7907. A medium-sized, oval, pale-yellow bean with large dark-brown hilum.
- 92713. No. 7908. Oval light-yellow beans, medium to medium large in size with rather large, dark-brown hilum.
- 92714. No. 7909. A medium-sized, oval, slightly flattened, yellow bean with large dark-brown hilum.
- 92715. No. 7910. A medium-sized, oval, pale-yellow bean with rather large brown hilum.
- 716. No. 7911. A medium-sized, oval, pale-yellow bean with rather large brown hilum. 92716. No. 7911.
- 92717. No. 7912. A medium-sized, oval, pale-yellow bean with rather large dark-brown hilum.
- 718. No. 7913. A medium-large, oval, slightly flattened, pale-yellow bean with rather large brown hilum.
- 92719. No. 7914. A medium-large, oval, slightly flattened, light-yellow bean with large dark-brown hilum.
- 92720. No. 7915. A medium-sized, oval, pale-yellow bean with brown hilum.

#### 92556 to 92734—Continued.

92721. No. 7916. A medium-sized, oval, yellow bean with brown hilum.

92722. No. 7917. An oval, slightly flattened, light-yellow bean of medium size; hilum, brown.

92723. No. 7918. An oval, pale-yellow bean of medium size with rather large black hilum.

92724. No. 7919. An oval, pale-yellow bean of medium size with very light-brown hilum.

92725. No. 7920. A medium-large, oval, slightly flattened, pale-yellow bean with light-brown hilum.

92726. No. 7921. An oval, slightly flattened, pale-yellow bean of medium size; hium, dark brown and rather large.

92727. No. 7922. An oval, slightly flattened, yellow bean of medium size with rather large brown hilum.

92728. No. 7923. A medium-sized, oval, light-yellow bean with large dark-brown hilum.

92729. No. 7924. Oval to nearly round, light-yellow beans varying in size from medium to medium large; hilum, light brown.

92730. No. 7925. Nearly round, lightyellow beans of medium size with small brown hilum.

92731. No. 7926. Oval, slightly flattened, light-yellow beans varying in size from medium to medium large with pale hilum.

92782. No. 7927. A medium-sized, oval, cloudy yellow bean with pale hilum.

92733. No. 7928. A medium-small, nearly round, black bean with green germ.

92734. No. 7929. Oval, light-yellow beans which vary in size from medium to medium large; hilum, pale.

#### 92735 to 92762.

From England. Plants purchased from the Hon. Vicary Gibbs, through Edwin Beckett, Aldenham House Gardens, Elstree, Herts. Received April 10, 1931.

92735. ABELIA TRIFLORA R. Br. Caprifoliaceae.

A shrub, native to the Himalayan region, up to 15 feet high with corrugated bark, ovate-lanceolate leaves 2 to 3 inches long, and terminal clusters of rosy white, fragrant flowers.

For previous introduction see 76552.

92736 and 92737. Buxus semprevirens L. Buxaceae. Common box.

Dwarf, slow-growing varieties, introduced by Murray Hornibrook, said to be suitable for rockeries.

92736. Form 1. 92737. Form 2.

92738 to 92743. COTONEASTER spp. Malaceae.

92738. COTONEASTER ALDENHAMENSIS Hort

Seedlings raised from a magnificent new cotoneaster which forms a large bush of graceful arching, branched growths. The leaves are large and handsome, and the large bright-red

92735 to 92762—Continued.

berries are abundantly produced in large clusters,

For previous introduction see 76730.

92789. COTONEASTER HEBEPHYLLA Diels.

A graceful shrub or low tree with spreading branches, white flowers, and many dull-red fruits.

For previous introduction see 76232.

92740. COTONEASTER LINDLEY! Steud.

A tall-growing shrubby plant, native to the Himalayas, with long slender young branches, medium-sized oval leaves, and round black fruits.

For previous introduction see 76235.

92741. COTONEASTER MOUPINENSIS Franch.

A tall shrub with rather large glossy leaves and jet-black berries.

For previous introduction see 62570.

92742. COTONEASTER OBSCURA Rehd. and Wils.

A western Chinese shrub, about 10 feet high, with ovate dull-green leaves, short dense cymes of pinkish flowers, and dark-red pear-shaped fruits.

For previous introduction see 76238.

92743. COTONEASTER RUBENS W. W. Smith.

A nearly prostrate Chinese shrub, 2 to 4 feet high, with small orbicular leaves and small axillary red flowers.

For previous introduction see 76239.

92744 to 92747. ESCALLONIA spp. Escalloniaceae.

New varieties raised by Mr. Slinger at Donard.

92744. ESCALLONIA Sp.

Donard beauty. A lovely new pink variety.

92745. ESCALLONIA SP.

Donard brilliance. A very floriferous form with bright pink flowers.

92746. ESCALLONIA Sp.

Donard gem. A form with attractive pink flowers.

92747. ESCALLONIA Sp.

William Watson. A very fine variety with scarlet flowers.

92748 to 92755. LAVANDULA SPICA L. Menthaceae. Lavender.

92748. Miss Duddington. A charming variety with good blue flowers.

92749. Munstead blue. An early flowering plant of bushy habit which produces many spikes of bright blue flowers.

92750. Twickel purple. A plant with fine bold foliage and good heads of deep-purple flowers.

92751. Variety alba. A form with pure-white flowers.

92752. Variety nana. An excellent dwarf form.

#### 92735 to 92762—Continued.

92753. Variety nana. Glasnevin variety. This is quite distinct from the foregoing [No. 92752].

92754. A handsome evergreen suitable for shrubberies.

92755. The true Lavender Water species.

92756. PRUNUS SARGENTII Rehd. Amygdalaceae. Sargent cherry.

One of the loveliest of the Japanese cherries. The large deep-toned, single pink flowers appear in April. The young foliage is reddish and turns to a deep ruby red in the autumn.

92757. SORBUS AUCUPARIA L. Malaceae. European mountain-ash.

Variety Wilsonii. The large fruited mountain ash. The pink berries become almost white, and the large leaves color well in the autumn.

92758. MALUS SYLVESTRIS Mill. (Pyrus malus L.). Malaceae. Apple.

Variety Marshal Oyama. An ornamental apple with medium-sized, rich crimson fruit.

92759. SARCOCOCCA HOOKERIANA DIGYNA Franch. Buxaceae.

An evergreen shrub with black fruits, native to western Szechwan. It grows well in the shade.

92760. SARCOCOCCA SALIGNA (D. Don.) Muell. Arg. (S. pruniformis Lindl.). Buxaceae.

An evergreen shrub, 2 to 3 feet high, with smooth erect stems. The smooth, glossy, narrow-lanceolate leaves, 3 to 5 inches long and over 1 inch wide, have a long drawn-out point and a marginal vein on each side extending all around the leaves. The greenish-white flowers are in short axillary racemes, opening in winter and spring. The small purple fruits, less than 1 inch long, are egg-shaped.

For previous introduction see 42628.

92761. TEUCRIUM MASSILIENSE L. Menthaceae.

A herbaceous perennial with small yeliowish-green leaves, notched and deeply veined. The minute pink flowers are produced in the leaf and bract axils and form a terminal spike to the growth.

92762. VINCA DIFFORMIS Pourr. Apocy-

A trailing semishrub which dies down in the winter. The pale lilac-blue flowers are produced in November and December.

#### 92763 to 92769.

From Africa. Plants and scions presented by H. Brayard, directeur, Ferme Expérimentale, Marrakech, Morocco. Received April 11, 1931.

92763. AMYGDALUS PERSICA L. (Prunus persica Stokes). Amygdalaceae. Peach.

Plants of the wild peach of this region.

92764. Pyrus Mamorensis Trabut. Malaceae. Pear.

Plants of a native Morocco pear which grows well in the dry, sandy, noncalcare-

#### 92763 to 92769—Continued.

ous soils. The fruits are rather large and the seeds very large. It may be a good stock.

For previous introduction see 66167.

92765 to 92769. VITIS VINIFERA L. Vitaceae. European grape.

92765. Abbo. Scions of a very vigorous vine bearing large round black grapes which ripen in September and remain in good condition on the vines until mid-November.

92766. Asserin. Scions of a vine with large black round berries which ripen rather early.

92767. Bezzoult el Aouda or Sebra el Benet. Scions of a white table grape of medium size, ellipsoidal; the skin is thick and pulp firm but juicy; cluster conical and compact.

92768. Hadari. Scions of a large dull juicy pinkish grape which usually has just one seed and a not very thick skin. The cluster is medium to large winged; loose, short peduncle. The leaf is glabrous above and cobwebby below, the petiolar sinus is narrow, lateral sinuses overlapping. The vine is very fruitful.

92769. Le Gouz. Scions of a very early white grape. The berries are large, elongate, and rather firm.

#### 92770 to 92776.

From France. Seeds presented by Vilmorin-Andrieux & Co., Verrières-le-Buisson, Seine-et-Oise. Received April 13, 1931.

92770. BERBERIS MORRISONICOLA Hort. Berberidaceae. Barberry.

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

92771 to 92774. CLEMATIS spp. Ranuficulaceae.

92771. CLEMATIS TEXENSIS  $\times$  SIMSII (C. coccinea  $\times$  pitcheri).

A climbing shrub, more vigorous than either of its parents, with slender reddish stems. The leaves are pinnate with four pairs of orbicular-deltoid, glaucous-green leaflets. The numerous axiliary purplish-voilet flowers, woolly white within, emit an odor of vanilla. This hybrid originated with F. Morel, a horticulturist of Lyon, France.

92772. CLEMATIS FARGESII Franch.

A woody climber up to 20 feet high, with bipinnate leaves made up of five to seven 3-foliolate or incisely serrate ovate leaflets. The pure white flowers, 1 to 2 inches across, are solitary or in 3-flowered clusters and are borne on a peduncle 4 to 8 inches long. Native to western China.

For previous introduction see 82360.

92773. CLEMATIS GLAUCA ANGUSTIFOLIA Ledeb.

A slender woody climber with the leaflets three parted into narrowly linear-lanceolate segments. The noding, bell-shaped yellow flowers, 1 to 2 inches across, are borne in few-flowered axillary cymes. It is native to Mongolia.

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#### 92770 to 92776—Continued.

92774. CLEMATIS KOREANA Komar.

A prostrate vine, native to Chosen, with trifoliolate leaves having coarsely dentate, sharp-pointed leaflets 2 to 4 inches long, usually three lobed or three parted. The yellow to dull-violet, bell-shaped, nodding flowers, 1 to 2 inches long, are solitary and axillary.

92775. ILEX ALTACLARENSIS Dallim. (I. aquifolium wilsonii Hort.). Aquifoliaceae. Holly.

Considered to be a hybrid between *Ilex aquifolium* and *I. perado*, with elliptic leaves 2 to 4 inches long, which are thinner than those of *I. aquifolium* and have more numerous and more regular teeth.

92776. ILEX PERNYI Franch. Aquifoliaceae. Holly.

A dense-growing evergreen holly of very dwarf compact habit, with small dark-green spiny leaves, squarish at the base, and red berries. It is probably allied to \*Hex cornuta\*, and was first discovered by Pere Paul Perny in western China.

For previous introduction see 80403.

92777. COCCOTHRINAX ARGENTEA (Roem. and Schult.) Sarg. Phoenicaceae. Silver palm.

From Florida. Seeds presented by Charles T. Simpson, Little River. Received July 22, 1930. Numbered in April, 1931.

Seeds from a tree grown by Charles T. Simpson at Little River, Fla. A fine, tall-growing palm native to tropical America, with large, fan-shaped leaves, dark green above and brilliant silvery below. This is a different species from Coccothrinax garberi, the small native palm of southern Florida, which is sometimes called the silver palm.

92778. JATROPHA sp. Euphorbiaceae.

From Mexico. Seeds collected by J. H. Hirt, El Paso, Tex., and presented by R. E. Beckett, of Bard, Calif., through the Division of Cotton, Rubber, and Other Tropical Plants, Bureau of Plant Industry. Received April 13, 1931.

Of possible value as a source of rubber.

92779 to 92797.

From England. Seeds presented by Dr. A. W. Hill, director, Royal Botanic Garden, Kew. Received April 13, 1931.

Nos. 92779 to 92787 were introduced for the use of geneticists and are not for distribution.

92779 to 92784. CREPIS spp. Cichoriaceae.

92779. CREPIS ALPINA L.

No. 560.

For previous introduction see 66799.

92780. CREPIS BIENNIS L.

No. 561

For previous introduction see 66953.

92781. CREPIS DIOSCORIDIS L.

No. 562

For previous introduction see 66803.

92779 to 92797—Continued.

92782. CREPIS FOETIDA L.

No. 568.

For previous introduction see 66804.

92783. CREPIS SETOSA Hall. f.

No. 564.

For previous introduction see 66618.

92784. CREPIS SIBIRICA L.

No. 565.

For previous introduction see 67007.

92785 to 92787. DATURA spp. Solanaceae.

92785. DATURA INERMIS Jacq.

No. 595.

For previous introduction see 66807.

92786. DATURA STRAMONIUM L.

No. 597.

92787. DATURA TATULA L.

No. 598.

92788 to 92793. HELIANTHUS spp. Asteraceae. Sunflower.

92788. HELIANTHUS ANNUUS L. Common sunflower.

No. 868.

92789. HELIANTHUS COLOBADENSIS Cockerell.

No. 869. A stiff, erect, herbaceous perennial up to 6 feet high, native to Colorado. The rough narrowly lanceolate leaves have remotely dentate margins, and the bright-orange flowers are in loose cymes at the top of the stems.

92790. HELIANTHUS GIGANTEUS L. Giant sunflower.

No. 871. A tall, stout, herbaceous perennial up to 12 feet high, native to the eastern part of the United States. The very rough, usually serrate, lanceolate leaves are 3 to 7 inches long, and the pale-yellow flowers are 3 inches across.

92791. HELIANTHUS MOLLIS Lam.
Ashy sunflower.

No. 872. A stout, simple-stemmed, densely hirsute herbaceous perennial 2 to 4 feet high, native to the central part of the United States. The ovatelanceolate serrulate leaves, 2 to 5 inches long, are densely pubescent beneath; and the usually solitary, yellow flowers are 2 to 3 inches across.

92792. HELIANTHUS OCCIDENTALIS Riddell

No. 874. A slender, usually simple-stemmed, herbaceous, perennial 1 to 3 feet high, native to the eastern part of the United States. The oblong-lanceolate, serrulate leaves are mostly basal or below the middle of the stem; and the yellow flowers are 2 to 3 inches across.

92793. HELIANTHUS TOMENTOSUS Michx.

No. 875. A stout herbaceous perennial 4 to 10 feet high, native along the eastern coast of the United States. The thin ovate leaves, often 1 foot long, are densely woolly beneath, and the yellow flowers, 3 to 4 inches across, are borne in a large branching panicle.

#### 92779 to 92797—Continued.

92794 to 92796. RUBUS spp. Rosaceae. 92794. RUBUS INOPERTUS Focke.

A climbing shrub with stout stems and ovate green leaflets. The short-pedicelled flowers are either axillary or clustered at the tips of the branches. Native to southern and central China at an altitude of about 6,000 feet.

For previous introduction see 66606.

92795. RUBUS OCCIDENTALIS L.
Common blackcap.

A raspberry with very glaucous stems often 10 feet long, rooting at the tips. The compound leaves are made up of three to five ovate, doubly serrate leaflets, light green above and white tomentose beneath. The white flowers, less than an inch across, are borne in few-flowered corymbs and are followed by hemispheric, purple-black, bloomy, edible fruits. It is native to the eastern part of the United States.

For previous introduction see 11514.

92796. RUBUS XANTHOCARPUS Bur. and Franch.

A perennial Chinese climber, 1 to 4 feet long, sparsely prickly or unarmed, which dies to the ground every year. The edible fruit is composed of many golden drupes. Native to central and northwestern China.

For previous introduction see 53540.

92797. SOLANUM JASMINOIDES Paxt. Solanaceae. Jasmine nightshade.

A twining shrub up to 20 feet high, native to Brazil. The lower leaves have three narrow, ovate, entire leaflets and the upper ones are lanceolate and entire. The star-shaped white flowers, 1 inch across, are tinged with blue and are borne in short dense racemes.

#### 92798 and 92799. Solanum melongena L. Solanaceae. Eggplant.

From Morocco, Africa. Seeds presented by Dr. E. Melge, chief, Service de l'Expérimentation Agricole, Rabat. Received April 15, 1931.

Introduced for the use of specialists working on eggplant wilt.

92798, Europienne. 92799, Marocaine.

#### 92800 to 92882.

From Peiping, China. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received April 15, 1931.

92800 to 92804. BENINCASA HISPIDA (Thunb.) Cogn. Cucurbitaceae. Wax gourd.

A collection of commercial varieties, purchased in a seed store in Peiping for the use of department specialists.

92800. No. 6793.

92801. No. 6796. A winter gourd seen commonly in Peiping.

92802. No. 6895. Shih ping tung kwa, persimmon-cake, winter squash.

92803. No. 6904. Yang tung kwa, foreign winter gourd.

92804. No. 6907. Tung kwa, winter gourd.

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92800 to 92882-Continued.

92805. CELTIS KORAIENSIS Nakai. Ulmaceae. Hackberry.

No. 7735. Presented by Manshu Nosan Shokai (Inc.), wholesale seed growers and dealers, Dairen, southern Manchuria, China. A tree up to 40 feet high, native to Chosen, with coarsely serrate, broadly ovate leaves 4 to 6 inches long and dullorange, ovoid fruits a quarter of an inch long.

92806. CUCUMIS SATIVUS L. Cucurbitaceae. Cucumber.

No. 6814. From the Botanical Garden, Peiping, February 24, 1931. A late cucumber.

92807 to 92837. CUCURBITA spp. Cucurbitaceae.

A collection of commercial varieties collected for the use of department specialists.

92807 and 92808. CUCURBITA MAXIMA Squash.

92807. No. 6820. Honan Province bamboo shoot squash; from the Botanical Garden, Peiping, February 24, 1931.

92808. No. 6827. Wu Kuan south squash (Japanese variety); from the Botanical Garden, Peiping.

92809. CUCURBITA PEPO L. Pumpkin.

No. 6908. From the East Market, Peiping, March 2, 1931. Yang hsi hulu, meaning foreign western gourd.

92810 to 92825. CUCURBITA MOSCHATA Cushaw.

92810. No. 6794. From a seed store outside of Peiping. A variety grown in the vicinity of Peiping.

Nos. 92811 to 92820 are from the Botanical Garden, Peiping, February 24, 1931.

92811. No. 6818. Flat or persimmon-cake south squash. This is reported to have originally come from Chengtu, Szechwan.

92812. No. 6819. Early 1000 per cent sugar south squash.

92813. No. 6821. Golden squash of Shansi Province.

92814. No. 6822. Early Wu Kuan sugar squash, a Japanese variety.

92815. No. 6824. South squash of Kaopinghsien, Shansi Province.

92816. No. 6825. West capital south squash.

92817. No. 6826. Peiping south squash.

92818. No. 6828. So mien south squash.

92819. No. 6830. Chrysanthemum south squash.

92820. No. 6832. South squash of Longlinghsien, Hunan Province.

92821. No. 6870. Fang gwa. Presented by the Manshu Nosan Shokal (Inc.), wholesale seed growers and dealers.

92822. No. 6877. Long-stem pumpkin from the village of Hsiangtang, 25 miles north of Peiping.

#### 92800 to 92882—Continued.

- 92823. No. 6878. Shih ping wo kwa, persimmon-cake or flat pumpkin, from the village of Hsiangtang.
- 92824. No. 6888. Pa leng wo kwa, 8-cornered pumpkin, from the East Market, Peiping.
- 92825. No. 6902. Chang pa wo kwa, long stem pumpkin. From the East Market, Peiping, March 2, 1931.
- 92826 to 92837. CUCURBITA PEPO L. Pumpkin.
  - 92826. No. 6795. From a seed merchant outside of the city. A variety commonly grown in the vicinity of Peiping.
  - Nos. 92827 to 92830 were collected at the Botanical Garden, Peiping, February 24, 1931.
  - 92827. No. 6817. Peiping west gourd.
  - 92828. No. 6823. Bamboo short squash. Originally from Kaifeng, Honan Province.
  - 92829. No. 6829. Large flower horn squash.
  - 92830. No. 6831. Bitter Mongolia squash.
  - 92831. No. 6879. *Chiao kwa*, foot squash, from the village of Hsiangtang, 25 miles north of Peiping.
  - 92832. No. 6880. Hung chiao kwa, red-foot squash, from the village of Hsiangtang.
  - Nos. 92833 to 92837 were obtained in the East Market, Peiping, March 2, 1931.
  - 92833. No. 6889. Chiao kwa, foot squash.
  - 92834. No. 6891. Toar nan kwa, peach shape south squash.
  - 92835. No. 6892. Nan kwa, south squash.
  - 92836. No. 6893. Shih tzu nan kwa, persimmon south squash.
  - 92837. No. 6903. *Hsi hulu*, western gourd.
- 92838. DIOSPYROS KAKI L. f. Diospyraceae. Kaki persimmon.
- No. 7744. Seeds found in persimmons from the Toli region. These fruits are said to have thicker skins than persimmons from other regions, and, as a rule, are seedless.

### 92839. Dolichos Lablab L. Fabaceae. Hyacinth bean.

- No. 6875. Pien ton, a flat bean with pods, said to be edible. From the village of Hsiangtang, 25 miles north of Peiping.
- 92840. Gossypium nanking Meyen. Malvaceae. Cotton.
- No. 6801. From Chingtien, 10 miles south of Peiping, February 24, 1931. This is said to be a Chinese long-staple cotton.
- Nos. 92841 to 92868 are a collection of commercial varieties obtained for the use of department specialists.
- 92841 to 92847. LAGENARIA LEUCANTHA (Duchesne) Rusby. (L. vulgaris Seringe). Cucurbitaceae. Calabash gourd.

- 92800 to 92882—Continued.
  - 92841. No. 6881. Ching hulu, green gourd; from the village of Hsiangtang.
  - Nos. 92842 to 92847 were obtained in the East Market, Peiping, March 2, 1931.
  - 92842. No. 6896. Yu hulu, oil dipper gourd.
  - 92843. No. 6897. Huo kuo hulu, cricket gourd.
  - 92844. No. 6898. Hsiao tung yang hulu, small Japanese gourd.
  - 92845. No. 6899. Ta ya ya hulu, large ornamental gourd.
  - 92846. No. 6900. P'iao hulu, water dipper gourd.
  - 92847. No. 6901. Hsiao ya ya hulu, small ornamental gourd.
  - 92848. LUFFA ACUTANGULA (L.) Roxb. Cucurbitaceae. Singkwa towelgourd.
  - No. 6815. Canton 8-corner gourd. From the Peiping Botanical Garden, February 24, 1931.
  - LUFFA CYLINDRICA (L.)
    Roemer (L. aegyptiaca Mill.). Cucurbitaceae.
    Suakwa towelgourd.
    - 92849. No. 6816. Peiping thread gourd. From the Botanical Garden, February 24, 1931.
    - 92850. No. 6882. Ssu kwa, thread gourd. From the village of Hsiangtang.
    - 92851. No. 6905. Hsien ssu kwa, a thread gourd from the East Market, Peiping, March 2, 1931.
    - 92852. No. 6906. Pen ssu kwa, a thread gourd from the East Market, Peiping, March 2, 1931.
  - 92853 to 92866. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.
  - Nos. 92853 to 92862 were obtained in the Botanical Garden, Peiping, February 24, 1931. The Chinese call tomatoes foreign eggplants.
    - 92853. No. 6804. Huang se chieh, yellow foreign eggplant.
    - 92854. No. 6805. Peiping chieh, Peiping foreign eggplant.
    - 92855. No. 6806. Early ssubakus ali-
    - 92856. No. 6807. Ten hung tan chieh.
    - 92857. No. 6808. An early small red tomato.
    - 92858. No. 6809. Hung se tau chieh, a red tomato.
    - 92859. No. 6810. Yen se tan chieh, beautiful color, foreign eggplant.
    - 92860. No. 6811. An early tomato.
    - 92861. No. 6812. Early kus ali.
    - 92862. No. 6813. Kuantung fan chieh, Manchurian tomato.
    - 92863. No. 6869. Hong yuen. A Chinese variety presented by the Manshu Nosan Shokai (Inc.), wholesale seed growers and dealers, Dairen, Manchuria.
    - Nos. 92864 to 92866 were obtained in the East Market, Peiping, March 2, 1931.

92800 to 92882—Continued.

92864. No. 6883. Kwang hai hung shih, a yellow tomato.

92865. No. 6884. Ta hsi hung shih, a large tomato.

92866. No. 6885. Hsiao hsi hung shih, small tots tomato.

92867 and 92868. Momordica Charantia L. Cucurbitaceae. Balsam-pear.

From the East Market, Peiping, March 2, 1931.

92867. No. 6890. Lai kwa, horn squash.

**92868.** No. 6894. *K'u kwa*, bitter squash.

92869 and 92870. PANICUM MILIACEUM L. Poaceae. Proso.

From the village of Chingtien, 10 miles south of Peiping, February 24, 1931.

92869. No. 6802. Shutzu. A variety of millet with white seeds.

92870. No. 6803. A variety with yellow seeds.

92871 and 92872. PHASEOLUS VULGARIS L. Fabaceae. Common bean.

92871. No. 6800. From the village of Chingtien, 10 miles south of Peiping. A white garden bean,

92872. No. 6878. Pai yun ton, white garden bean. From the village of Hsiangtang, 25 miles north of Peiping.

92873. RHODODENDRON METTERNICHII Sieb. and Zucc. Ericaceae. Leatherleaf rhododendron.

No. 7736. From the Manshu Nosan Shokai (Inc.), wholesale seed growers and dealers, Dairen, Manchuria, February 11, 1931. A shrub 12 to 15 feet high, native to Japan. The oblanceolate leaves, 2 to 5 inches long, are dark green above and gray tomentose beneath; and the pale to deep rose-pink campanulate flowers, 2 to 3 inches across, are borne in loose clusters.

92874 and 92875. Soja Max (L.) Piper (Glycine hispida Maxim.). Fabaceae. Soybean.

Presented by Yen Yi Chai, at the village of Chingtien, 10 miles south of Peiping.

92874. No. 6797. Cat eye.

92875. No. 6798. A green soybean.

92876 to 92880. SPINACIA OLERACEA L. Chenopodiaceae. Spinach.

92876. No. 6868. From a Chinese seedsman, southwest of Peiping, February 19, 1931.

Nos. 92877 and 92878 were grown in the vicinity of Dairen, Manchuria, and presented by the Manshu Nosan Shokai (Inc.), wholesale seed growers and dealers, February 27, 1931.

92877. No. 6871. Yuen leu.

92878, No. 6872. San Juae.

Nos. 92879 and 92880 were obtained in the East Market, Peiping, March 2, 1931.

92879. No. 6886. Chin po tsai, autumn spinach.

92800 to 92882—Continued.

92880. No. 6887. Huo yuch tsai, fire leaf spinach. A summer variety.

92881. VIGNA SESQUIPEDALIS (L.) Fruwirth, Fabaceae.

No. 6874. Tsat tou, vegetable bean (long pod). A small oblong, rather flat, black bean with a prominent white hilum. From the village of Hsiangtang, presented by Chu Li Chi.

92882. VIGNA SINENSIS (Torner) Savi. Fabaceae. Cowpea.

No. 6799. From the village of Chingtien, 10 miles south of Peiping, February 24, 1931. A brown-eyed cowpea.

#### 92883 to 92932.

From Mexico, Central America, and the West Indies. Material collected by G. N. Collins and J. H. Kempton, with the Allison V. Armour expedition to Mexico and the West Indies, 1931. Received April 14, 1931.

92883. FOUQUIERIA sp. Fouquieriaceac.

No. 9177. Cuttings collected south of La Paz, Lower California, March 30, 1931.

The fouquierias are small trees or shrubs which become leafless in dry weather. The fleshy obovate leaves are produced from the axils of the thorns, and the showy tubular flowers are in terminal racemes.

92884 and 92885. Gossypium Harknessit T. S. Brandeg. Malvaceae. Cotton.

No. 9189. Collected on Carmen Island, April 3 and 4, 1931. A shrubby perennial plant forming rounded clumps 2 to 3 feet high, with angled branches, broadly cordate leaves, and sulphur-yellow flowers 2 to 3 inches across. It is native to Lower California.

92884. Plants. 92885. Cuttings.

92886. PERSEA AMERICANA Mill. (P. gratissima Gaertn. f.). Lauraceae. Avocado.

No. 9152. Seeds collected above Tecpan, Guatemala, at 10,000 feet altitude, March 11, 1931. A wild avocado which is frost resistant.

92887. TRIPSACUM sp. Poaceae. Grass

No. 9197. Plants collected at San Salvador, March 5, 1931. A grass with hairy sheaths.

92888. TRIPSACUM sp. Poaceae. Grass

No. 9198. Plants collected at Santa Cruz de Naranja, Guatemala, March 9, 1931. A grass with smooth sheaths which is cultivated in the region of Los Tezsinte.

92889. IBERVILLEA SONORAE (S. Wats.) Greene (Maximowiczia sonorae S. Wats.). Cucurbitaceae.

No. 9193. Root collected on the Esperitu Santo Islands, April 1, 1931. An ornamental, watermelonlike vine with a large root which projects above the ground. The leaves are 4 inches broad, twice three cleft, with the lobes coarsely sinuate toothed. The ovate fruits, 1 to 2 inches long, have a thick fleshy rind which while green is covered with about 10 longitudinal rows of white dots: when ripe the fruit becomes amber colored.

92883 to 92932-Continued.

92890. AGAVE Sp. Amaryllidaceae.

No. 9182. Collected on Gallito Island, Lower California, April 1, 1931. A species with yellow flowers.

Phoeni-92891. ATTALEA COHUNE Mart. caceae.

No. 9164. Collected at Manzanillo, Mexico, March 25, 1931. 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 the 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 introduction see 69063.

92892. ELAPHRIUM sp. (Bursera sp.) Balsameaceae.

No. 9173. Collected south of La Paz, Lower California, March 30, 1931. A tree with red bark; one of several species which furnish the copal gum that is used as incense by the Indians of Central

92893. CALOCARPUM VIRIDE Pittier. Sapotaceae. Green sapote.

No. 9161. Injerto. Obtained in the market at Guatemala City, March 13, 1931. A tree, native to Guatemala, which grows at altitudes between 5,000 and 6,000 feet. It is about 40 feet high, with long, slender leaves and commonly round to oval fruits often pointed at the tip. The fruits are from 2 to nearly 4 inches in diameter, smooth, dull yellow green, sometimes becoming almost dull yellow. The skin is not thick and adheres closely to the red-brown fiesh, which is often soft and melting with a sweet flavor. The one or two large deep-brown seeds are hard and polished and easily removed from the pulp.

For previous introduction see 80683.

92894, CARICA PAPAYA L. Papayaceae. Papaya.

No. 9154. Obtained in the market at Panama, February 26, 1931. A papaya with pink flesh.

92895. CARICA PAPAYA L. Papayaceae. Papaya.

No. 9155. Solo variety. Obtained from J. E. Higgins, director, Experiment Gardens, Summit, Canal Zone, February 26, 1931.

92896. ENTADA POLYSTACHYA (L.) DC. Mimosaceae.

No. 9168. Collected at Acapulco, Mexico, March 21, 1931. A woody vine, native to Mexico, with bipinnate leaves made up of oblong leaflets 1 to 2 inches long and dense spikes of small greenish flowers followed by flat pods 1 foot long and 2 to 3 inches wide.

92897. CEIBA Sp. Bombacaceae.

No. 9166. Collected near Acapulco, Mexico, in a dry arroyo. A tree 10 feet high.

92898. EUPHORBIA sp. Euphorbiaceae. Spurge.

92883 to 92932—Continued.

No. 9179. Collected at La Paz, Lower California, March 31, 1931. Poinsettia, a tree with a latex very much like rubber.

92899. FOUQUIERIA sp. Fouquieriaceae.

No. 9184. Collected at La Paz, Lower California, March 31, 1931. The fouquierias are small trees or shrubs which become leafless in dry weather. The fleshy obovate leaves are produced from the axils of the thorns, and the showy tubular flowers are in terminal

92900 to 92916. Gossypium spp. Malva-Cotton. ceae

92900 and 92901. GOSSYPIUM DAVID-SONII Kellogg.

92900. No. 9171. Collected at La Paz, Lower California, March 30, 1931, in the desert south of the city, where it was growing among cacti. A shrub up to 5 feet high, with broadly cordate, entire or rarely toothed leaves, densely velvety on both sides. The bright lemon-yellow flowers are 1 to 2 inches across and have a purple spot at the base of each petal. It is native to Lower California.

92901. No. 9183. Collected March 31, 1931.

92902 2 and 92903, Gossi NESSII T. S. Brandeg. GOSSYPIUM HARK-

For previous introduction see 92885.

92902. No. 9189. Collected on Carmen Island, April 3 and 4, 1931.

92903. No. 9196. Collected on San Marcos Island, Mexico, April 6, 1931.

92904. Gossypium Hirsutum L. Upland cotton.

No. 9167. Presented by the American consul, Acapulco, Mexico, March 21, 1931. Locally grown seed.

92905. Gossypium sp.

No. 9180. Collected at La Lower California, March 31, 1931. La Paz,

92906. Gossypium sp

92907. GOSSYPIUM Sp.

No. 9181. Collected at La Paz, Lower California, March 31, 1931.

No. 9195. Collected at Santa Rosalia, Lower California, April 6, 1931.

92908. Gossypium sp.

No. 9146. Collected at Pedro Miguel, Canal Zone, February 22, 1931.

92909. Gossypium sp.

No. 9147. Collected at Pedro M guel, Canal Zone, February 22, 1931.

92910. Gossypium sp.

No. 9148. Collected at Panama, February 27, 1931.

92911. Gossypium sp.

No. 9149. Collected at Panam February 26, 1931. A wild cotton. Panama,

92912. GOSSYPIUM SD.

No. 9151. Collected en route from La Union to San Salvador, El Salvador, March 6, 1931. A cultivated cotton.

**92883 to 92932—Continued.** 

92913. GOSSYPIUM Sp.

No. 9160. Collected at Acapulco, Mexico, March 21, 1931.

92914. GOSSYPIUM SD.

No. 9169. Kidney cotton, collected at Mazatlan, Sinaloa, Mexico, March 27, 1931.

92915. GOSSYPIUM Sp.

No. 9172. Collected in a garden at a Paz, Lower California, March 30,

92916. GOSSYPIUM Sp.

Collected in Panama.

92917. HIBISCUS CRYPTOCARPOS A. Rich. Malvaceae.

No. 9112. From Soledad, Cuba, February 8, 1931. A shrub with long-petioled, cordate, palmately 5-lobed leaves 3 to 4 inches long and wide, and solitary plum-colored flowers. It is native to Cuba.

For previous introduction see 90917.

92918. LYCIUM sp. Solanaceae.

No. 9178. Collected at La Paz, Lower California, March 31, 1931.

92919. LYCIUM sp. Solanaceae.

No. 9188. Collected at Agua Verde, April 3, 1931. An ornamental vine with good flowers.

92920. MAMMILLARIA sp. Cactaceae. Cactus.

No. 9185. Collected on the Isla Partidas, Lower California, April 1, 1931.

92921. MARTYNIA sp. Martyniaceae.

No. 9165. From Acapulco, Mexico, March 21, 1931. Wild plants found in an arroyo near the town.

92922. Opuntia sp. Cactaceae. Pricklypear.

No. 9186. Collected on the Isla Partidas, Lower California, April 1, 1931. 92923. PASSIFLORA FRUTICOSA Passifloraceae.

No. 9187. Collected on San Francisco Island, Gulf of California, April 2, 1931. A low shrub 8 to 16 inches high, with a few short sprawling branches. The circular leaves are three lobed, densely soft hairy, and about 1 inch wide. The globose fruit, 1 inch in diameter, is densely pubescent with long silky hairs. Native to Lower California.

92924. PERSEA AMERICANA Mill. gratissima Gaertn. f.) Lauraceae. Avocado.

No. 9153. Collected above Tecpan, Guatemala, at 10,000 feet altitude, March 11, 1931. Seeds from a frost-resistant

92925. PHYLLANTHUS EMBLICA L. Eu-Nelli.

No. 9119. Collected at Soledad, Cuba February 9, 1931. A small tree with Rebruary 9, 1931. A small tree with slender branches bearing numerous linear, 2-ranked leaves about half an inch long. The globose fruits are used as a purgative when raw, or cooked to make an acid sauce. Native to tropical Asia.

For previous introduction see 88130.

**92883 to 92932—**Continued.

92926. SICANA ODORIFERA (Vell.) Naud. Cucurbitaceae. Casabanana. Cucurbitaceae.

No. 9194. From the market at Guatemala City, March 14, 1931. A subtropical ornamental cucurbitaceous vine producing large fruits like a watermelon a foot or more long, which are edible but insipid.

For previous introduction see 80701.

92927. SORGHUM VULGARE Pers.

No. 9157. Collected on Grand Cayman Island, February 11, 1931.

92928. SPHAERALCEA CALIFORNICA Rose. Malvaceae.

No. 9176. Collected near La Paz, Lower California, March 30, 1931. A tall coarse herbaceous perennial 4 to 10 feet high, native to Lower California. The densely stellate, 3-lobed, triangular-oblong leaves are crenately toothed and are 2 to 3 inches long; and the small orange-colored flowers are borne in an open panicle.

92929 to 92932. ZEA MAYS L. Poaceae. Corn.

92929. No. 9150. Collected en route from La Union to San Salvador March 6, 1931. White corn.

92930. No. 9156. From the Panama market, February 23, 1931. Yellow corn.

92931. No. 9158. Collected at Chaca-lapa, Oaxaca, Mexico, March 19, 1931. Yellow and white corn.

92932. No. 9190. Collected at La Paz, Lower California, April 30, 1931. Shelled corn.

92933. VITIS VINIFERA L. Vitaceae. European grape.

rom Corsica. Cuttings presented by F. Durazzo, Sartene, through Niels Nielsen, agricultural commissioner, American consulate, Marseille, France. Received April 16, 1931. From Corsica.

Variety unknown.

92934 to 92938. Avena spp. Poaceae.

From Germany. Seeds presented by Dr. von Helmut Frenzel, through Dr. Arnold Scheibe, Berlin-Dahlem, Biologische Reichsanstalt. Received April 21, Reichsanstalt.

Introduced for the use of specialists working with the crown rust of oats.

92934 to 92936, AVENA SATIVA L.

92934. No. 4. Brie.

92935. No. 7. Odenwalder straus.

92936. No. 2. Uruguay.

92937. AVENA STERILIS L.

No. 8. C. 7. 840-49.

92938. AVENA sp.

No. 9. Mortgage Lifter.

92939 to 92941.

From Brazil. Seeds presented by Amadeu Barbiellini, São Paulo. Received April 16, 1931.

#### **92939** to **92941**—Continued.

92939. MIMOSA BRACAATINGA Hoehne. Mimosaceae.

A tree or large shrub, up to 50 feet high, with an erect trunk. The bipinnate leaves, up to 4 inches long, are composed of 3 to 14 pairs of pinnae and about 30 pairs of pinnules for each pinnae. The small yellowish flowers are in terminal heads less than an inch in diameter. It is native to Brazil.

92940. PENNISETUM SETOSUM (Swartz) L. Rich. Poaceae.

A robust perennial grass 2 to 4 feet high, distributed through the Tropics of both hemispheres and often used for forage.

For previous introduction see 74467.

92941. TERAMNUS Swartz. Fabaceae. UNCINATUS

slender tropical American leguminous vine, used as forage in Brazil and also in the Virgin Islands.

For previous introduction see 88188.

**92942** to **92947**. Alstroemeria spp. Amaryllidaceae.

From the Netherlands. Roots purchased from C. G. Van Tubergen (Ltd.), Haarlem. Received April 17, 1931.

92942. ALSTROEMERIA BRASILIENSIS Spreng. Brazilian alstroemeria. Spreng.

A fleshy rooted plant, native to Brazil, with a stem 3 to 4 feet high, remote thickish, oblong-lanceolate leaves 2 inches long, and umbels of brown-spotted, red-dish-yellow flowers 1 inch long.

943. BOMAREA SALSILLA (L. (Alstroemeria oculata Lodd.).

A twining vine, native to Chile, with parallel-veined, oblong-lanceolate leaves 2 to 4 inches long on twisted petioles, and small reddish flowers marked with blue and purple inside, in compound lumbels umbels.

#### 92944. ALSTROEMERIA PELEGRINA L.

A Chilean alstroemeria with thin, lanceolate leaves 2 inches long and a flower stem 1 foot high bearing an umbel of purple-spotted, lilac flowers 1 inch

92945. ALSTROEMERIA PELEGRINA L.

Variety alba. A form with pure white flowers.

92946. ALSTROEMERIA LIGTU PULC (Sims) Baker (A. tricolor Hook.).

A bulbous plant, native to Chile, with thin, linear-lanceolate leaves 2 to 3 inches long and a flower stem 2 feet high bearing a compound umbel of whitish lilac or pale red flowers 1 to 2 inches long, streaked with purple.

92947. ALSTROEMERIA VIOLACEA Philippi.

A Chilean species with a stem 1 to 2 feet high, scattered, spreading, ovate-oblong leaves 1 inch long, and compound umbels of bright lilac flowers 1 to 2 inches long.

92948 to 92955. Figure spp. Moraceae.

From Egypt. Cuttings presented by the director, horticultural section, Ministry

92948 to 92955—Continued.

of Agriculture, Giza. Received April 17, 1931.

92948. FICUS BENJAMINA L.
Benjamin fig.

A large tree, up to 80 feet high, native to India, with thin coriaceous ovate leaves 3 inches long and axillary pairs of small globose, blood-red fruits.

For previous introduction see 80080.

92949. FICUS ELASTICA L. India rubbertree.

In the Tropics this tree becomes 100 feet high with long shining leathery, oblong to elliptic, dark-green leaves which end with an abrupt dull point. It is commonly used as a house plant, but usually becomes unsightly under glass when it is 8 or 10 feet high.

92950. FICUS PLATYPODA (Miquel) Cunn.

A small tree with thick leathery ovate leaves 2 to 4 inches long and axillary pairs of small globular fruits. It is native to Australia.

92951. FICUS GIBBOSA Blume.

handsome medium-sized tree with a single gray trunk. The large glossy leaves are dark green, and the berries are deep orange and half an inch in diame-

For previous introduction see 67564.

92952. Ficus mysorensis Heyne.

A large broadly spreading tree, native to the forests of the subtropical Hima-layss from Sikkim eastward. The aerial roots are few embracing the trunk, and the ovate leathery leaves which are prom-inently veined are up to 8 inches in length.

For previous introduction see 58587.

92953. FICUS RELIGIOSA L. Sacred bo tree.

A large tropical tree up to 100 feet high, with the rotund-ovate coriaceous leaves suspended on slender petioles 4 inches long and with the apex produced into a long linear-lanceolate taillike appendage. The dark-purple axillary fruits are about half an inch in diameter. It is native to India.

For previous introduction see 81823.

92954. FICUS TSIELA ROXD.

A large spreading tree without aerial roots, native to southern India and Ceylon. The broadly ovate to ovate-lanceolate coriaceous leaves have a thickened marginal nerve, and the smooth purple fruits, about half an inch in diameter, are crowded in the axils of the leaves at the ends of the branches.

92955. FICUS VASTA FORSk.

A large tree with stout softly tomentose branchlets, native to northern Africa and Arabia. The broadly cordate, thin leaves are 1 foot wide by 10 inches long and are softly pubescent on both surfaces. The subglobose fruits, about half an inch in diameter, are in axillary clusters.

92956. Populus sp. Salicaceae.

From Canada. Cuttings presented by Norman M. Ross, chief, tree-planting division, Forest Service, Department of the

#### 92956—Continued.

Interior, Indian Head, Saskatchewan. Received April 17, 1931.

A hybrid poplar found on the banks of the South Saskatchewan River, near Sas-katoon. The tree grows readily from cut-tings and makes a rapid growth under cultivation.

#### 92957. Parkia speciosa Hassk. Mimosaceae.

rom Straits Settlements. Seeds collected in the Botanic Garden at Penang by P. J. Wester, Bureau of Agriculture, Manila, P. I. Received April 18, 1931. From Straits Settlements.

Petai. A smooth-barked tree up to 80 feet high and 3 feet in diameter, native to the Malay Peninsula. The pubescent, bipinnate leaves are made up of 10 to 15 pairs of pinnae each bearing 20 to 35 pairs of linear-oblong leaflets one-quarter of an inch long. The white flowers are borne in dense ovoid heads on long peduncles and are followed by thin flat pods about 18 inches long which are cooked and eaten as a vegetable by the Malays.

#### 92958 to 92991.

From the Union of Soviet Socialist Republics. Seeds presented by G. Grossmann, chief, Bureau of Introduction, Institute of Plant Industry, Leningrad. Received April 17, 1931.

A collection of plants growing under very dry arid conditions at the Repetek Sand Desert Station, Turkmenistan Republic.

92958. 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 des-erts in Turkestan.

92959. AGRIOPHYLLUM MINUS Fisch. and Mey. Chenopodiaceae.

An annual, native to sandy deserts in Turkestan, with sessile linear-subulate leaves and inconspicuous axillary flowers.

92960. AGROPYRON ORIENTALE LANU SUM (Griseb.) Richter. Poaceae. LANUGINO-Ġrass.

A perennial grass of possible value as a forage crop.

92961. AGROPYRON SQUARROSUM (Roth) Link. Poaceae. Grass.

A perennial grass of possible value for forage.

92962. AMMODENDRON CONOLLYI Bunge. Fabaceae.

An evergreen silky-leaved Siberian shrub used as a sand binder.

For previous introduction see 78474.

92963 and 92964. HALOXYLON AMMODENDEON (Meyer) Bunge. Chenopodiaceae. Saxaul.

A shrub or tree up to 20 feet high, native to Turkestan. It has a gnarled trunk, light-green branchlets which are leafless, and small fruits with thin papery suborbicular wings.

92963. Received as Arthrophytum arborescens.

92964. Received as Arthrophytum haloxylon.

92958 to 92991—Continued.

92965. ARISTIDA PENNATA MINOR Grass. Poaceae.

perennial grass of possible value as a forage crop.

92966. Aristida pennata karelini Trin. and Rupr. Poaceae. Grass.

A perennial grass of possible value as a forage crop.

92967. ASTRAGALUS CONFIRMANS Freyn and Bornm. Fabaceae.

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.

92968. ATRIPLEX DIMORPHOSTEGIA Kar. and Kir. Chenopodiaceae.

An annual 18 inches high with alternate membranous ovate leaves and terminal or axillary inconspicuous flowers. Native to dry regions in Arabia and Persia.

### 92969. Bromus Tectorum L. Poaceae.

An annual grass to be tested as ground cover in the arid Southwest. tested as a

92970 to 92974. CALLIGONUM spp. Polygonaceae.

92970. CALLIGONUM ARBORESCENS Litv.

A drought-resistant shrub 10 feet high, said to be a good sand binder. It is found in the region of the Cas-pian Sea.

For previous introduction see 73185.

92971. CALLIGONUM CAPUT-MEDUSAE Schrenk.

A leafless shrub with dichotomous branches, small reddish flowers in the axils of the sheaths, and nutlike fruits covered with filamentous reddish spines. Possibly of value as an orna-mental in desert regions and useful as a sand binder. It is native to western Asia.

#### 92972. CALLIGONUM COMOSUM L'Herit.

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.

92973. CALLIGONUM ERIOPODUM Bunge.

A slender-branched shrub with whitish branchlets and linear-subulate minute leaves which are early deciduous. Native to Turkestan.

#### 92974. CALLIGONUM SETOSUM Litv.

A leafless shrub much like C. caputmedusae, but the filaments on the fruits are brownish, longer, and more slender. It is native to the Caspian

92975. CAREX PHYSODES Bieb. Cypera-Sedge.

A sedge which is native to the desert sands of southern Turkestan. It is excellent as forage and also valuable as a sand-binding plant.

92976. CONVOLVULUS DIVARICATUS Regel and Schmalh. Convolvulaceae.

A densely hairy erect or ascending plant with small ovate acute sessile leaves

#### 92958 to 92991—Continued.

two-fifths of an inch long and very small terminal or axillary flowers. Native to sandy places near Chiva, central Asia.

92977. CORISPERMUM PAPILLOSUM (Kuntze) Iljin. Chenopodiaceae.

A low bushy plant up to 1 foot high, with slender arched branches. The lower leaves are oblanceolate, the upper ones almost linear. Native to Turkestan.

92978. CUTANDIA MEMPHITICA (Spreng.) Richter. Poaceae. Grass.

A perennial grass of possible value as a forage crop.

92979. DOREMA SABULOSUM Litv. Apiaceae.

A herbaceous perennial about 6 feet high with a thick stem and radical triangular pinnate leaves up to 18 inches long. Native to the Caspian region.

92980. EPHEDRA ALATA Decaisne. Gnetaceae.

A tall freely branching shrub with rough green equisetumlike branches, small scalelike leaves, and inconspicuous flowers; native to Arabia and northern Africa. Of possible value as a source of ephedrine.

For previous introduction see 77438.

92981. EREMOSPARTON FLACCIDUM Litv. Fabaceae.

A bushy tree about 15 feet high, native to sandy places in the trans-Caspian region. The branches are threadlike and limp, and the small flowers are dark violet.

92982. FERULA KARELINI Bunge. Apiaceae.

A perennial about 18 inches high, native to arid regions in Persia, with decompound leaves and umbels of yellowish flowers.

92983. FERULA LITWINOWIANA K.-Pol. Apiaceae.

A low herbaceous hairy perennial with numerous small triangular pinnately cut leaves and inconspicuous flowers in compound umbels. Native to the trans-Caspian region.

92984. GAGEA CHLORANTHA (Bieb.) Schult. f. Liliaceae.

A bulbous plant with filiform or narrow-lanceolate leaves and corymbs of greenish-yellow flowers. Native to stony dry places in the Caucasus.

92985. Isatis minima Bunge. Brassicaceae.

A low annual, native to central Asia, with oblong sinuate radical leaves, linear-lanceolate stem leaves, and yellow flowers.

92986. ISATIS VIOLASCENS Bunge. Brassicaceae.

A slender annual about 1 foot high with oblong-lanceolate entire leaves up to 2 inches long, with a lax panicle of yellow flowers. Native to desert places in Persia.

92987. R H E U M TURKESTANICUM Janischew. Polygonaceae.

A wild rhubarb, from the trans-Caspian region, over 2 feet high with a large thick rhizome and a short thickened

#### 92958 to 92991—Continued.

densely leafy stem. The cordate reniform leaves, up to eight in number, are about 1 foot wide.

92988 to 92990. SALSOLA spp. Chenopodiaceae.

92988. SALSOLA INCANESCENS Meyer.

An erect hairy annual about 6 inches high, native to Asia Minor, with alternate fleshy filiform deciduous leaves about an eighth of an inch long and numerous stiff branches.

92989. SALSOLA ARBUSCULA Pall. (S. reichleri Hort.).

A shrub up to 15 feet high, native to Turkestan, with linear leaves 3 inches long and inconspicuous flowers. It is used to bind sand along the trans-Caspian Railway.

For previous introduction see 33264.

#### 92990. SALSOLA SUBAPHYLLA Meyer.

A leafless much-branched shrub about 1 foot high, native to desert places on the shores of the Caspian Sea.

92991. SMIRNOWIA TURKESTANA Bunge. Fabaceae.

A much-branched shrub with long almost filiform branches and leaves reduced to a single obovate leaflet. Native to desert places in Turkestan.

#### 92992 to 93000.

From China. Material collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received April 20, 1931.

92992 to 92998. DIOSPYROS spp. Diospyraceae. Persimmon.

92992 to 92994. DIOSPYROS KAKI L. f. Kaki persimmon.

Scions obtained at Kutang, Hangchow, Chekiang Province, March 20, 1931, from Chang Shih Lun.

92992. No. 6921. Fire persimmon. 92993. No. 6923. Square persimmon.

92994. No. 6924. High foot persimmon.

Nos. 92995 and 92996 are trees obtained at Kutang, Hangchow, Chekiang Province, March 20, 1931, from Chang Shih Lun.

92995, DIOSPYROS Sp.

No. 6922. White-barked persimmon. 92996. Diospyros sp.

No. 6925. Yueh shih tzu. The wild persimmon of Hangchow. This variety is used extensively in the Kutang region as stock to graft the commercial varieties of persimmon. The red fruits are small, not more than 1 inch in diameter. It is reported that trees grafted on this stock produce more fruit than those grafted on the white-barked persimmon, but the quality is not quite so good.

#### 92997. Diospyros sp.

No. 6926. Scions of the trees sent in under No. 6925 [No. 92996].

92998. DIOSPYROS sp.

No. 6929. Scions of the trees sent in under No. 6922 [No. 92995].

#### 92992 to 93000—Continued.

92999 and 93000. TRAPA NATANS L. Trapaceae. Waterchestnut.

92999. No. 6927. Hang Chow hsiao ling chiao, small water nut of Hangchow. From Kutang, near Hangchow, Chekiang Province, March 20, 1931. Seeds presented by Chang Shih Lun. A locally grown variety. The nuts are said to be green when first taken from the water; later they turn black.

93000. No. 6928. Ka Hsing nan hu ling chiao, the south lake water nut of Kahsing, Chekiang Province. This nut is found only in this locality.

93001. AMYGDALUS PERSICA L. (Prunus persica Stokes). Amygdalaceae.

Peach.

From Africa. Seeds purchased from H. E. V. Pickstone & Bro. (Ltd.), Simondium, Cape of Good Hope Province. Received April 21, 1931.

Variety Inkoos. A freestone peach which is said to withstand warm weather during a normal cold winter.

93002. DIOSPYROS KAKI L. f. Diospyraceae. Kaki persimmon.

From China. Seeds presented by N. Gist Gee, Rockefeller Foundation, Peiping, China. Received April 24, 1931.

Big Peking.

#### 93003 to 93065.

From China. Seeds collected by P. H. Dorsett and W. J. Morse agricultural explorers, Bureau of Plant Industry. Received April 20, 1931.

Nos. 93003 to 93035 are commercial varieties, obtained for the use of department horticulturists.

93003 to 93006. BENINCASA HISPIDA (Thunb.) Cogn. Cucurbitaceae. Waxgourd.

Nos. 93003 and 93004 are from Hangchow, Chekiang Province, March 20, 1931.

93003. No. 6945. A winter gourd.

93004. No. 6953. A round winter gourd.

93005. No. 6964. Tung kua, long citron winter gourd. Obtained through Dr. Hugh W. Hubbard, Paotingfu, March 15, 1931.

93006. No. 7752. Large winter gourd from Shanghai, March 24, 1931.

93007 to 93023. CUCUMIS MELO L. Cucurbitaceae. Melon.

Obtained through Dr. Hugh W. Hubbard, Paotingfu, March 15, 1931. They are classed by the Chinese as varieties of squash.

93007. No. 6967. Ch'ing p'i hstao tsai kua. A small black-skinned melon, classed by the Chinese as a summer squash.

93008. No. 6968. Pai pi tien kua. A white-skinned melon.

93009. No. 6969. Hsiao pai pi tsai kua, meaning little white-skinned summer vegetable melon.

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93003 to 93065—Continued.

93010. No. 6970. Pa leng su kua, or 8-cornered crisp melon.

93011. No. 6971. Hung hsin pat pt tsai kua. A red-hearted, whiteskinned summer vegetable.

93012. No. 6972. Hsiao pai pi tien kua. A little white-skinned melon.

93013. No. 6973. Shih tao ch'ing t'ten kua, 10-stripe green melon.

93014. No. 6974. Chih ma li su t'ien kua, or sesame seed crisp melon.

93015. No. 6975. *Hsiao pai pi su kua*. A small white-skinned crisp vegetable melon.

93016. No. 6976. Chin pa ch'ih t'ien kua, or golden section muskmelon.

93017. No. 6977. Hei pi hua tien kua. A black-skinned field melon.

93018. No. 6978. Hei han t'ien ts'ai kua, or black-man's leg melon. A long slender summer melon.

93019. No. 6979. Hsiao hung tzu t'ien kua. A small red-seeded melon.

93020. No. 6980. Hsiao chih ma il su t'ien kua. A small sesame seed melon.

93021. No. 6981. He ma su kua, or toad-skin crisp melon. It resembles the Hubbard squash.

93022. No. 6982. Ta pai pi su kua. A large white-skinned melon.

93023. No. 6983. Hsieh hua t'ien kua, or drop flower melon. This melon is sweet as soon as the flowers drop.

93024. CUCURBITA PEPO L. Pumpkin.

No. 6961. Hsi hu lu, or western gourd. Obtained through Dr. Hugh W. Hubbard, Paotingfu, China.

93025 to 93033. CUCURBITA MOSCHATA Duchesne. Cushaw.

Nos. 93025 to 93029 were collected at Hangchow, Chekiang Province, March 20, 1931.

93025. No. 6947. Round south squash.

93026. No. 6948. Long red south squash.

93027. No. 6950. Early round south squash.

93028. No. 6951. Long red south squash.

93029. No. 6956. Round south red squash.

Nos. 93030 to 93032 were obtained through Dr. Hugh W. Hubbard, Paotingfu, China.

93030. No. 6959. Hsiao pa leng wo kwa, small 8-cornered pumpkin.

93031. No. 6960. Mixed varieties of pumpkin from the mountains northwest of Paotingfu.

93032. No. 6963. Dog-neck squash.

93033. No. 7754. Long south squash from Shanghai, March 24, 1931.

93034. CUCURBITA MAXIMA Duchesne. Squash.

No. 6962. Nan kua, or south squash. A very large squash obtained through 93003 to 93065—Continued.

Dr. Hugh W. Hubbard, of Paotingfu, China, March 15, 1931.

98085. CUCURBITA PEPO L. Pumpkin.
No. 7753. Flat south squash from

No. 7753. Flat south squash from Shanghai, March 24, 1931.

98036. HICORIA CATHAYENSIS (Sarg.) Chun. Juglandaceae. Hickory.

Cnun. Juglandaceae. Hickory.

No. 6930. From Yungyuang, 15 miles from Hangchow. A Chinese tree up to 75 feet high with a gray-barked trunk 1 to 2 feet in diameter and compound leaves about 1 foot long, composed of five to seven pairs of narrowly oval leaflets which are pale green above and rusty brown beneath. The thick-shelled nuts, about 1 inch long, are eaten as a sweetmeat, and a clear yellow oil is extracted from them for use in fancy pastry. The strong tough wood is used for tool handles.

For previous introduction see 75981.

Nos. 93037 to 93046 are commercial varieties collected for the use of department horticulturists.

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 93037 to 93041. Lagenaria Leucantha (Duchesne) Rusby (L. vulgaris Seringe). Cucurbitaceae.
 Calabash gourd.

Nos. 93037 to 93039 were collected at Hangchow, Chekiang Province, March 20, 1931.

93037. No. 6946. So-called long gourd.

93038. No. 6952. Round gourd.93039. No. 6955. Chang hulu, or long

gourd.

93040. No. 6965. Shan chia hu tzu.

A very long tender vegetable gourd

A very long tender vegetable gourd which grows on a trellis. Obtained through Dr. Hugh W. Hubbard, Paotingfu, March 15, 1931.

93041. No. 7751. Mixed sample of gourd seed from Shanghai.

93042 to 93044. LUFFA CYLINDRICA (L.) Roemer (L. aegyptiaca Mill.). Cucurbitaceae. Suakwa towelgourd.

93042. No. 6954. From Hangchow, Chekiang Province, March 20, 1931. A long thread gourd.

93043. No. 6966. Szu kua tzu. A long slender gourd which grows on a trellis and is a good shade vine. Obtained through Dr. Hugh W. Hubbard, Paotingfu, March 15, 1931.

93044. No. 7000. A thread gourd from Shanghai.

93045 and 93046. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

Obtained at Shanghai March 24, 1931. 93045. No. 6998.

93046. No. 6999. A large tomato.

93047. Phaseolus Aureus Roxb. Fabaceae. Mung bean.

No. 6943. From Hangchow, Chekiang Province, March 20, 1931. A variety with small green seeds.

93048. RAPHANUS SATIVUS L. Brassicaceae. Radish.

No. 6941. From Kutang, near Hangchow, Chekiang Province. A very red radish which is commonly eaten on the street by the natives. 93003 to 93065—Continued.

93049. RAPHANUS SATIVUS L. Brassicaceae. Radish.

No. 6942. From Hangchow. A long red radish.

93050 to 93060. Soja Max (L.) Piper (Glycine hispida Maxim.). Fabaceae. Soybean.

Nos. 93050 to 93058 were collected at Hangchow, China.

93050. No. 6931. A wild soybean, collected along the road near the Botanical Garden.

93051. No. 6933. Liu yuch pai mao ton, which means sixth-month white hairy bean. A yellow soybean.

93052. No. 6934. Chi yuch pai mao ton, which means seventh-month white hairy bean.

93053. No. 6935. Wu yueh kuo pan pai mao ton, which means fifth-month broad-pod white bean. A yellow soyhean.

93054. No. 6936. Wu yuch pai mao ton, which means fifth-month white hairy bean. A green and yellow soy.

93055. No. 6937. A yellow soybean.

93056. No. 6938. A variety with large black seeds.

93057. No. 6939. Ke lu ton, parrot grain bean. A variety with large green seeds.

93058. No. 6940. A variety with large yellow seeds.

Nos. 93059 and 93060 were purchased in Shanghai March 24, 1931.

93059. No. 6995. A variety with large yellow seeds.

93060. No. 6996. A large black soybean with yellow germ.

93061 to 93064. SPINACIA OLERACEA L. Chenopodiaceae. Spinach.

Commercial varieties obtained for the use of department horticulturists.

Nos. 93061 and 93062 were obtained at Hangchow, Chekiang Province, March 20, 1931.

93061. No. 6944. 93062. No. 6949.

93063. No. 6984. Po ts'ai. Obtained through Dr. Hugh W. Hubbard, Paotingfu, March 15, 1931.

93064. No. 6997. From Shanghai, March 24, 1931.

93065. VIBURNUM sp. Caprifoliaceae.

No. 6932. From the Botanical Garden at Hangchow. Seed of a plant about 8 feet high and 2 or 3 years old.

93066. Cordia tectonaefolia Hort. Boraginaceae.

From India. Seeds presented by B. S. Nirody, Secretary, Agricultural-Horticultural Society of Madras. Received April 25, 1931.

Said to be closely related to Cordia sebestena, but is larger and has lighter scarlet flowers. 93067. Gossypium sp. Malvaceae. Cotton.

From Puerto Rico. Seeds presented by the Puerto Rico Agricultural Experiment Station. Received April 20, 1931.

Haitien perennial cotton. From a planting of Mateo Fajardo, jr., of Mayaguez.

#### 93068 to 93070.

From Lithuania. Seeds presented by Frank Kakaska, Mariampole. Received April 21, 1931.

93068. ANTHYLLIS VULNERARIA L. Fabaceae. Kidney-vetch.

A perennial herb, found throughout Europe, northern Africa and Asia, which is grown for sheep fodder and is particularly recommended for lime soils.

For previous introduction see 84275.

93069. ONOBRYCHIS VULGARIS Hill (O. viciaefolia Scop.). Fabaceae. Sanfoin.

A pink-flowered, herbaceous perennial, 1 to 2 feet high, native to Europe.

For previous introduction see 77875.

93070. Ornithopus sativus Brot. Fabaceae. Serradella.

For use as winter forage and as a green manure.

For previous introduction see 81546.

#### 93071 and 93072.

From South Africa. Bulbs purchased from K. C. Stanford, Stellenbosch. Received April 21, 1931.

93071. LACHENALIA TRICOLOR AUBEA (Lindl.) Hook, f. Liliaceae.
Cape-cowslip.

A herbaceous perennial, native to South Africa, closely resembling Lachenalia rubida, but the flowers are bright orangeyellow.

For previous introduction see 79565.

93072. LACHENALIA TRICOLOR Jacq. Liliaceae. Threecolor Cape-cowslip.

A bulbous perennial, native to southern Africa, with usually two radical, tongue-shaped, often spotted leaves 1 foot long, and a scape 1 foot high bearing a raceme of three or more tubular flowers, the lower ones nodding. The outer segments of the perianth are yellow with green tips, and the inner segments are purplish red and longer than the outer ones.

#### 93073 to 93075.

From Hawaii. Seeds presented by Harold L. Lyon, in charge, Department of Botany and Forestry, Experiment Station, Hawaiian Sugar Planters' Association. Received April 21, 1931.

93073. SAGUERUS LANGKAB Blume (Arenga obtusifolia Mart.). Phoenicaceae.
Palm.

A Javanese palm, related to the sugar palm (Arenga saccharifera) of the Malay Archipelago, with a spineless thick-ringed trunk 20 feet high and 9 to 13 pinnate leaves about 15 feet long which have spiny petioles.

For previous introduction see 79565.

93073 to 93075—Continued.

98074. Barringtonia asiatica (L.) Kurz. Lecythidaceae.

A large handsome tree 50 feet high, with thick leathery leaves, bright green and I foot long, racemes of large showy flowers having white petals, and crimsontipped stamens resembling a brush. The smooth shining black fruits are shaped like a 4-sided pyramid and are 3 to 4 inches long on each side. It is native to the East Indies.

For previous introduction see 80176.

93075. HAEMATOXYLUM CAMPECHIANUM L. Caesalpiniaceae. Logwood.

A tropical American tree up to 40 feet high, which yields the logwood of commerce used for dyes and inks.

For previous introduction see 76756.

#### 93076 to 93084.

From England. Seeds presented by Edwin Beckett, Aldenham House Gardens, Elstree, Herts. Received April 22, 1931.

93076. ACER CAPPADOCICUM Gleditsch (A. laetum Meyer). Aceraceae. Maple.

Variety aureum; a form with red and golden-yellow leaves.

93077. ACER LAXIFLORUM Pax. Aceraceae. Maple.

A tree up to 50 feet high with cordateoblong leaves 4 inches long, having two to four short lobes near the base and serrate margins. The yellowish flowers are borne in slender pendulous racemes and are followed by winged fruits spreading at right angles. It is native to western China.

93078. Nothofagus obliqua (Mirb.) Oerst. Fagaceae.

A tall deciduous tree with oval-oblong, clear-green leaves and 3-seeded fruits. The wood, which is considered valuable timber, varies in quality with the nature of the soil. In Chile the wood is used as blocks for street paving. It is considered the most northerly of the Chilean beeches.

For previous introduction see 52593.

93079 to 93083. ROSA spp. Rosaceae.

93079. Rosa Banksiopsis Baker. False Banksian rose.

An erect shrubby rose, common in western Hupeh, China, where it is found on mountain slopes at altitudes between 4,000 and 7,000 feet. The flowers are rose red and the fruits are coral red.

For previous introduction see 66481. 93080. Rosa omeiensis Rolfe.

Variety atrosanguinea; a red-flowered form.

Mount Omei rose.

For previous introduction see 59264.

98081. Rosa setipoda Hemsl, and Wilsand Wolfruit rose.

A shrub often 10 feet high, native to central China, with pairs of widebased, straight prickles, seven to nine eliptical leaflets, loose corymbs of pale-pink flowers 2 inches across, and

#### 93076 to 93084—Continued.

oblong-ovoid, deep-red fruits 1 inch long.

For previous introduction see 54232. 93082. Rosa willmottiae Hemsl.

Willmott rose.

A western Chinese rose, forming a densely branched shrub often 10 feet high, with seven obovate leaflets, soll-tary, rose-purple flowers, and bright orange-red globose fruits.

For previous introduction see 54247. 93083. Rosa sp.

Purdon No. 845.

93084. STYRAX HEMSLEYANA Diels. Styracaceae.

A handsome Chinese shrub or small tree up to 20 feet high, with sharp-pointed obliquely oval leaves and pure-white flowers nearly half an inch long in racemes about 6 inches long.

For previous introduction see 78155.

#### 93085 to 93098.

From Sweden. Seeds presented by Dr. Robert E. Fries, Director, Botanic Garden, Stockholm. Received April 22, 1931.

93085 to 93088. CREPIS spp. Cichoriaceae.

The various species of Crepis are weedy herbaceous plants belonging to the lettuce family. The following were introduced for genetic studies, not for propagation.

93085. CREPIS ASPERA L.

For previous introduction see 66800.

93086. CREPIS BLATTARIOIDES (L.) Vill.

For previous introduction see 66802.

93087. CREPIS PULCHRA L.

93088. CREPIS TECTORUM L.

For previous introduction see 66524.

93089 and 93090. DATURA spp. Solanaceae.

The daturas are large, coarse plants likely to become weeds. These species were introduced for genetic studies, not for distribution.

93089. Datura bernhardii Lundstroem. 93090. Datura ceratocaula Jacq.

93091 to 93093. KALANCHOE spp. Crassulaceae.

93091. KALANCHOE CRENATA Haw.

A succulent perennial native to tropical Africa, 2 to 3 feet high, with a thick fibrous root, oblong or roundish, oval-crenate leaves about 2 inches long, and bright-yellow flowers half an inch long in terminal and axillary cymes.

For previous introduction see 86824.

93092. KALANCHOE SCHUMACHERI Koord.

An erect or ascending succulent 1 to 2 feet high, with oblanceolate doubly serrate leaves 5 to 8 inches long and axillary and terminal cymes of yellow flowers. It is native to Java.

For previous introduction see 86826.

93085 to 93098—Continued.

93093. KALANCHOE SPATHULATA DC.

A succulent perennial 1 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 trifoliolate. The clear yellow flowers are in flattish corymbs. Native to tropical Asia.

For previous introduction see 86827.

93094 to 93098. SOLANUM spp. Solanaceae.

Introduced for genetic studies, not for distribution.

93094. SOLANUM CITRULLIFOLIUM A. Br.

93095. Solanum gilo Raddi.

93096. SOLANUM GUINEENSE L.

93097. SOLANUM INSULAE-PASCHALIS Bitter.

93098. SOLANUM SISYMBRIFOLIUM Lam.

A plant with small round black fruit.

For previous introduction see 91553.

#### 93099 to 93107.

From Bulgaria. Seeds presented by Dr. A. Atanasoff. University of Sofia, through J. G. Dickson, United States Department of Agriculture. Received April 24, 1931.

93099. ARACHIS HYPOGAEA L. Fabaceae. Peanut.

93100. CICER ARIETINUM L. Fabaceae. Chickpea.

93101. Gossypium Hirsutum L. Malvaceae Upland cotton.

93102. ORYZA SATIVA L. Poaceae. Rice.

93103. ORYZA SATIVA L. Poaceae. Rice. 93104. PHASEOLUS VULGARIS L. Faba-

ceae. Common bean.

93105. PHASEOLUS VULGARIS L. Fabaceae. Common bean.

93106. PIMPINELLA ANISUM L. Apiaceae.

93107. SESAMUM ORIENTALE L. Pedaliaceae. Sesame.

#### 93108 to 93126.

From China. Seeds presented by Prof. Hsen-Hsu Hu, Fan Memorial Institute of Biology, Peiping. Received April 24, 1931.

A collection of seeds of native plants from Hopei Province.

93108. ACANTHOPANAX SENTICOSUM (Rupr.) Harms. Araliaceae.

A hardy spiny shrub with large palmate leaves and umbels of black berries.

For previous introduction see 72398.

93109, ACANTHOPANAX SESSILIFLORUM (Rupr. and Maxim.) Seem. Araliaceae.

A vigorous deciduous shrub with stout branches armed with only a few prickles. It forms a large spreading bush 10 feet high with 3-lobed or 5-lobed, irregularly toothed leaves. The flowers, brownish purple with yellow protruding stamens, are packed closely in a spherical, almost stalkless cluster about 1 inch in

#### 93108 to 93126—Continued.

The inky diameter, and appear in July. black berries are in round clusters, about an inch thick. This is one of the har-diest shrubs introduced from northern

For previous introduction see 76105.

93110. ACER TRUNCATUM Bunge. Acera-

A small tree up to 25 feet high. The deeply 5-lobed leaves, truncate at the base, are 3 to 4 inches across, and the greenish-yellow flowers, borne in erect corymbs, are followed by winged fruits which spread nearly at right angles.

93111. BETULA COSTATA Trauty. Betulaceae. Birch.

A brown or yellow birch which becomes 75 to 100 feet high and from 2 to 3 feet in diameter.

For previous introduction see 65487.

JAPONICA 93112. BETULA JAPONICA MA (Regel) Winkl. Betulaceae. MANDSHURICA Birch.

A white-barked birch up to 80 feet high, with the leaves often broadly wedge shaped at the base.

For previous introduction see 76735.

93113. CARPINUS TURCZANINOVII Hance. Betulaceae. Hornbeam.

A hardy shrubby tree with oval, sharp-pointed leaves 1 to 2 inches long. It is said to resemble Carpinus polyneura, also a Chinese species, and may have value as an ornamental.

'or previous introduction see 63679.

93114. DEUTZIA PARVIFLORA Bunge. Hy-drangeaceae. Mongolian deutzia. drangeaceae.

A hardy ornamental shrub 6 feet high with corymbs of white flowers.

For previous introduction see 71145.

93115. Evodia daniellii (Benn.) Hemsl. Rutaceae.

A bushy tree, 10 to 20 feet high, with unequally pinnate leaves up to 3 inches long, numerous corymbose panicles of whitish flowers which appear in June and July, and oblong or elongated fruit capsules which have a peculiar aromatic odor and a pungent bitter flavor.

For previous introduction see 76056. 93116. FRAXINUS CHINENSIS ROXD. Chinese ash.

ceae.

An ornamental tree 40 feet high with glabrous branchlets and brownish-black winter buds, covered with a rufus woolly tomentum when opening. The leaves, 5 to 8 inches long, are composed of five to seven short-stalked pinnate leaflets, cuneate at the base, dark green above and light green below. The panicles of small white flowers are followed by 1-seeded winged fruits.

For previous introduction see 63792.

93117. HYDRANGEA BRETSCHNEIDERII Dipp. Hydrangeaceae. Shaggy hydrangea.

A stout bushy shrub 8 to 10 feet high, with rough bark, dull-green slender-pointed leaves, and flattened corymbs, 4 or 5 inches wide, of white flowers which become rosy. This hardy hydrangea thrives best in a sunny position in good

For previous introduction see 58152.

**93108 to 93126**—Continued.

93118. LARIX DAHURICA PRINCIPIS-RUPP-RECHTII (Mayr) Rehd. and Wils. Larch. Pinaceae.

A hardy handsome tree, sometimes 70 feet high, with attractive bright-green feet high, with attractive bright-green foliage and shiny cones over 1 inch

For previous introduction see 71123.

93119. LESPEDEZA BICOLOR Turcz. Fa-Shrub bushclover.

A bushy herbaceous perennial which bears a profusion of rose-purple flowers during the early autumn, practically covering the drooping branches, which sometimes become 6 feet long.

For previous introduction see 90664.

93120. OSTRYA LIANA Hu. Betulaceae. Hophornbeam.

A tree up to 50 feet high with grayish-black bark. The thin membranous cordate-elliptic leaves are 2 to 4 inches long, and the small saclike fruits are borne in dense clusters of 8 to 10.

93121. PICEA WILSONI Masters. Pinaceae. Spruce.

A pyramidal tree up to 80 feet high, with short spreading branches densely clothed with stout, straight or curved, needlelike dark-green leaves less than 1 inch long. The cylindric-oblong cones, 2 to 4 inches long, persist for a year after receiver. after ripening.

93122. SORBUS ALNIFOLIA (Sieb. and Zucc.) Koch. (Pyrus alnifolia Franch.). Malaceae. Mountain-ash.

An upright tree with a dense round head, attractive bright-green foliage, and clusters of small red and yellow fruits.

For previous introduction see 82332.

93123. SYRINGA PEKINENSIS Rupr. Olea-ceae. Peking lilac.

A large shrub up to 18 feet high. The slender spreading branches are brownish red; the ovate-lanceolate leaves, 2 to 4 inches long, are dark green above and grayish green beneath; and the yellowish-white flowers are borne profusely in panicles 6 to 8 inches long.

93124. SYRINGA VILLOSA Vahl. Oleaceae. Late lilac.

A bushy lilac about 8 feet high, with stout upright branches, broadly oval bright-green leaves, and pinkish-lilac flowers in panicles 3 to 7 inches long.

For previous introduction see 79052. 93125. VITEX NEGUNDO INCISA (Lam.) C. B. Clarke. Verbenaceae. Cutleaf chaste-tree.

A half-woody wild shrub or small tree with 5-parted leaves and loose terminal clusters of pale bluish flowers. The leaves are fragrant when crushed, and the flowers are freely visited by bees.

For previous introduction see 63649.

93126. DIERVILLA FLORIDA (Bunge) Sieb. and Zucc. (Weigela rosea Lindl.). Caprifoliaceae. Pink weigela.

A shrub up to 10 feet high, with short-petioled, serrate leaves 2 to 4 inches long, tomentose beneath. The tubular flowers, more than 1 inch long, rosy pink outside and paler inside, are borne in axillary

#### 93127 to 93143.

From the Netherlands. Bulbs and roots purchased from C. G. Van Tubergen (Ltd.), Zwanenburg Nurseries, Haarlem. Received April 24, 1931.

93127 to 93141. CRINUM spp. Amaryl-

Nos. 93127 to 93132 are bulbs native to southern Africa.

93127. CRINUM LONGIFOLIUM (L.) Thunb. (Amaryllis longifolia L.). Hardy crinum.

variety album. A perennial with 12 or more strap-shaped leaves 2 to 3 feet long and a scape crowned with a cluster of 6 to 12 tubular white flowers 3 or 4 inches long.

93128, CRINUM SD

Variety H. J. Elwes.

93129. CRINUM LONGIFOLIUM (L.) Thunb. (Amaryllis longifolia L.). Hardy crinum.

A perennial with 12 or more strap-shaped leaves 2 to 3 feet long and a scape crowned with a cluster of 6 to 12 tubular red flowers 2 to 4 inches long.

93130. CRINUM LONGIFOLIUM Thunb. (Amaryllis longifolia L.).
Hardy crinum.

Variety album.

For previous introduction see 93127.

93131. CRINUM MOOREI Hook. f.
Longneck crinum.

A perennial with 12 to 15 strap-shaped leaves 2 to 3 feet long, and a scape 2 to 3 feet high crowned with funnel-shaped flowers having a green-ish tube 3 inches long and a pinkish limb of equal length.

93132. CRINUM MOOREI Hook. f. Longneck crinum.

Variety album. A form with white flowers.

93133. CRINUM PEDUNCULATUM R. Br.

Bulbs of a perennial native to Australia, with 25 to 30 leaves and an umbel of 20 to 30 greenish-white, salver-shaped flowers having linear spreading segments and red anthers.

93134 to 93141. CRINUM POWELLII Baker. Powell crinum.

bulbous plant with about 20 A fullous plant with about 2s preading strap-shaped leaves 3 to 4 feet long and about 8 rose-colored flowers in large showy heads, terminating a scape 1 foot or more high. It is considered to be a hybrid between Crinum longifolium and C. mooret.

For previous introduction see 79993.

93134. Typical form.

93135. Album.

93136. Harlemense.

93137. Intermedium.

93138. Krelagei.

93139. Prainianum.

93140. Rattrayi.

93141. Yemense.

93142. RANUNCULUS ACONITIFOLIUS L. Ranunculaceae. Aconite butteroup.

Roots of the variety fl. pleno.

93127 to 93143—Continued.

98143. RANUNCULUS ACRIS L. Ranuncu-Ranuncu-

Roots of the variety fl. pleno.

93144 to 93152. ASTER spp. Astera-

From The Pas, Manitoba, Canada. Plants collected by Knowles A. Ryerson, Bureau of Plant Industry; W. A. Alderman, Minnesota Agricultural Experiment Station; and W. R. Leslie, superintendent of the experiment station, Morden, Manitoba. Received September 30, 1929. Numbered in April, 1931.

144 and 93145. ASTER LINDLEYANUS Torr. and Gray. Lindley aster.

A perennial aster up to 6 feet high, with rather thick, sharply serrate ovate leaves 2 to 4 inches long and loose panicles of blue or violet flower heads 1 inch across. It is native to the northern part of North America.

98144. No. 106. A variety with purple flowers.

93145. No. 125. A variety with blue flowers.

93146. ASTER PANICULATUS Lam.

No. 127. A strain with pink flowers, A perennial branched aster 2 to 8 feet high, with lanceolate to linear, serrate leaves 3 to 6 inches long. The numerous flower heads, 1 inch across, are usually white or tinged with violet. It is native to the northern part of North America. America.

93147. ASTER NOVAE-ANGLIAE L.

New England aster.

No. 172. A strain with dark-red flowers. A perennial herb with stout leafy stems 2 to 8 feet high, native to the eastern part of North America. The thin, lanceolate leaves clasp the stem by an auriculate base, and the flower heads, often 2 inches across, are usually violet-purple, but vary through red and pink to white. to white.

93148. ASTER LAEVIS L. Smooth aster.

No. 174. A strain with light-blue flowers. A stout glabrous herbaceous per-ennial 2 to 4 feet high, native to North America. The thick, usually entire leaves are 1 to 4 inches long, and the flower heads, about 1 inch broad, are violet or light blue.

93149. ASTER sp.

No. 175. Flowers blue.

93150. ASTER MULTIFLORUS Ait.
Wreath aster.

No. 177. A bushy, much-branched, herbaceous perennial 1 to 7 feet high, native to eastern North America. The leaves on the main stem are linear, entire, and 1 to 2 inches long. On the branches the leaves are very small and closely crowded. The small white flower heads, one-fourth of an inch across, are crowded on the 1-sided branches, forming a dense mass. a dense mass.

93151. ASTER PANICULATUS Lam.

For previous introduction and description see 93146.

93152. ASTER NOVAE-ANGLIAE L. New England aster.

#### 93144 to 93152-Continued.

No. 180. A strain with dark-purple flowers.

For previous introduction and description see 93147.

#### 93153 to 93168.

From the Netherlands. Bulbs and roots purchased from C. G. Van Tubergen (Ltd.), Zwanenburg Nurseries, Haarlem. Received April 25, 1931.

93153. ALLIUM PULCHELLUM Don. Liliaceae.

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 90947.

93154. ZEPHYRANTHES CANDIDA (Lindl.). Herb. (Amaryllis candida Lindl.). Amaryllidaceae. Autumn zephyrlily.

A subtropical bulbous plant with linear leaves 1 foot long, appearing with the flowers; these are white, often rose tinted on the outside, and about 2 inches long. It is native to Argentina.

For previous introduction see 80015.

93155. SPREKELIA FORMOSISSIMA (L.) Herb. (Amaryllis formosissima L.). Amaryllidaceae. St. James lily.

A bulbous perennial, native to Mexico, with 3 to 6 linear leaves 1 to 2 feet long, a scape 1 foot high, and 1 large gaping bright-red flower 3 to 4 inches long.

93156 and 93157. POLYGONATUM VERTICIL-LATUM (L.) All. Convallariaceae. Solomonseal.

A perennial herb with a creeping knotted rootstock, angled and grooved stems 2 to 4 feet high, whorls of 4 to 8 linear leaves 3 to 6 inches long, and axillary peduncles bearing 2 to 3 tubular whitish flowers with green tips, followed by red berries. It is native to Europe and temperate Asia.

93156. Variety macrophyllum. Possibly a distinct variety with more robust habit and larger leaves.

93157. Typical form.

93158 to 93160. HIPPEASTRUM spp. Amaryllidaceae.

98158. HIPPEASTRUM AULICUM Herb.

A bulbous perennial with 6 to 9 broadly linear leaves 1 to 2 feet long and a scape 2 feet high bearing, usually, 2 large bright-red tubular flowers having segments 5 to 6 inches long and a green corona in the throat of the flower. It is native to Brazil.

93159. HIPPEASTRUM RETICULATUM (L'Her.) Herb.

A bulbous perennial with brightgreen radical leaves 1 foot long and a scape the same height bearing three to six flowers 4 to 5 inches across. The obovate segments of the perlanth are mauve to purple red with bars and cross lines of crimson. It is native to Brazil.

Variety striatifolium. A form with broader leaves, having a white keel.

93160. HIPPEASTRUM RUTILUM (Edwards) Herb.

#### 93153 to 93168-Continued.

A perennial with small bulbs, 2 to 3 inches in diameter, and bright-green leaves 1 foot long and over 1 inch wide; the glaucous scape, as long as the leaves, is somewhat compressed and bears two to four red flowers. It is a good house plant and flowers every year in living rooms, often sending up two or more flower stalks.

For previous introduction see 54042.

93161 to 93167. HYMENOCALLIS spp. Amaryllidaceae.

93161. HYMENOCALLIS CALATHINA (Ker) Nichols. Lilybasket.

A bulbous perennial, native to Peru and Bolivia, with 6 to 8 strap-shaped leaves less than 2 feet long and a 2-edged scape about 2 feet ling, bearing a sessile umbel of 2 to 5 flowers. The perianth tube, 3 to 4 inches long, is green and is enlarged above; the lanceolate segments, as long as the tube, are white; and the corollalike cup is green striped with rounded, fringed lobes.

#### 93162. HYMENOCALLIS CONCINNA Baker.

A Mexican spiderilly with a relatively small bulb and ovate sessile leaves 1 inch wide and 1 foot long. The flowers are in a dense umbel, the slender perianth tube is 2 inches long, and the linear lobes are the same length. The basal cup is funnel shaped and half an inch long, and the anthers are long and slender.

#### 98168. HYMENOCALLIS FESTALIS Hort.

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

93164. HYMENOCALLIS HARRISIANA Herb. Lilybasket.

A bulbous perennial, native to Mexico, with 3 to 6 narrowly obovate leaves 1 foot long, a slender glaucous scape shorter than the leaves, and a sessile umbel of 2 to 3 fragrant white flowers. The tube is 3 to 4 inches long, the linear segments are about 3 inches long, and the funnel-shaped cup is plicated and toothed.

93165. HYMENOCALLIS SD.

Sulphur Beauty.

93166. HYMENOCALLIS Sp.

Sulphur Gem.

93167. HYMENOCALLIS Sp.

Sulphur Queen.

93168. RANUNCULUS MONTANUS DENTATUS Baumg. (R. carpaticus Herbich). Ranunculaceae. Buttercup.

A perennial herb with a short, creeping rootstock, pubescent stems 6 to 12 inches high, 3-parted to 5-parted leaves with linear dentate lobes, and bright-yellow flowers more than 1 inch across. It is native to the mountains of Europe.

#### 93169 to 93222.

From India. Seeds presented by the curator, Lloyd Botanic Garden, Darjeeling.

Received April 27, 1931.

A collection of eastern Himalayan plants.

93169. ABROMA AUGUSTA L. f. Sterculiaceae.

A semishrubby herbaceous plant with large cordate hairy leaves, small purple flowers, and large angular seed pods, over 1 inch across, containing large quantities of small black seeds.

For previous introduction see 67794.

93170. ABRUS LAEVIGATUS E. Mey. (A. pulchellus Wall.). Fabaceae.

A climbing shrub, native to India and Ceylon, closely resembling the common rosary-pea (Abrus precatorius), but the leafiets are larger and more numerous, the reddish flowers are in longer racemes, and the incurved pods are thinner and longer and have more seeds.

93171. ACACIA CATECHU (L. f.) Willd. Mimosaceae.

A tree found in the wild parts of India and Burma, where it sometimes becomes 70 feet high, though usually smaller. The leaves are finely pinnate, and the white or pale-yellow flowers are in spikes. The pale-yellow gum obtained from this acacia has very strong adhesive powers and is considered a better substitute for the true gum arabic than that of A. scorpioides.

For previous introduction see 68325.

93172. ACER OBLONGUM Wall. Aceraceae. Maple.

A subtropical maple which becomes 40 to 50 feet high, with a trunk 1 or 2 feet in diameter and dark-green oblong entire leaves up to 7 inches long. The reddish wood is used for making agricultural implements.

For previous introduction see 68329.

93173. ACTINIDIA STRIGOSA Hook. f. and Thoms. Dilleniaceae.

A woody vine, resembling A. callosa, with strigose-hispid ovate leaves 5 inches long, axillary cymes of white flowers nearly 1 inch across, and ovoid edible fruits.

For previous introduction see 86665.

93174. ADENOSACME LONGIFOLIA Wall Rubiaceae.

A small shrub with brittle branches covered with bright-yellow spongy bark. The elliptic-lanceolate leaves are 4 to 10 inches long; the fleshy tubular yellow flowers, 1 inch long, are borne in cymes 6 to 8 inches across; and the round berries, one-fourth of an inch in diameter, are white. This shrub is native to the subtropical slopes of the Himalayas in India.

93175. ALANGIUM CHINENSE (Lour.) Rehd. (Marlea begoniaefolia Roxb.). Cornaceae.

This tree makes a remarkably rapid growth, reaching its full height of 50 feet in five years, after which the trunk merely thickens. The tree is planted for the timber.

For previous introduction see 67175, 93176. ALBIZZIA LUCIDA (Roxb.) Benth. Mimosaceae.

A handsome spreading leguminous tree with attractive feathery leaves, native to the East Indies.

For previous introduction see 75974.

93169 to 93222—Continued.

93177. ALLIUM VICTORIALIS L. Liliaceae. Onion.

One of the most distinct European alliums, with stems about 2 feet high, leaves resembling those of lily-of-the-valley, and white or greenish-white flowers.

For previous introduction see 86666.

93178. ALLOPHYLUS ZEYLANICUS L. Sapindaceae.

A shrub or small tree, native to India and Ceylon, with ovate to obovate leaves. 8 to 16 inches long, and racemes 9 inches long of small yellowish-white, globular flowers followed by red berries.

93179, ALNUS NEPALENSIS D. Don. Betulaceae. Alder.

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 68330.

93180. Ammannia Peploides Spreng. Lythraceae.

A low glabrous annual, erect or decumbent, 3 to 12 inches high, with opposite elliptic leaves less than 1 inch long and axillary spikes of small plnk flowers.

93181. AMOORA DECANDRA (Wall.) Hiern. Meliaceae.

A large spreading tree, native to India, with compound leaves 1 foot long, made up of 7 to 13 ovate leaflets 8 inches long: and panicles composed of cylindrical racemes 6 inches long of small globular fragrant yellow flowers.

93182. AMOORA ROHITUKA (Roxb.)-Wight and Arn. Meliaceae.

An evergreen tree with a large crown of branches. The pale-yellow or red fruit, over an inch in diameter, is smooth, rather soft and fleshy, three celled and three valved. An economic oil is extracted from the seeds.

For previous introduction see 38998.

93183. Anemone Rivularis Buch.-Ham. Ranunculaceae.

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 an inch long, in compound cymes. It is found at 5,000 feet altitude.

For previous introduction see 66917.

93184. ARALIA FOLIOLOSA Seem. Araliaceae.

A large prickly shrub, native to India, with bipinnate or tripinnate leaves made up of elliptic-acuminate leaflets 2 to 3 inches long and compound panicles 1 foot long of small greenish flowers followed by small black fruits.

93185. PANAX PSEUDOGINSENG Wall. Araliaceae. Ginseng.

A perennial herb whose tuberlike rootstock is mucilaginous and slightly aromatic. The erect purplish stem bears three or four palmate radical leaves and a number of roughly hairy upper leaves. The small white flowers, in umbellate

heads, are followed by globose berries which are half black and half red or entirely red.

For previous introduction see 58492.

93186. ARDISIA MACROCARPA Wall. Myrsinaceae.

A shrub 1 to 4 feet high with narrowly ovate leaves having crisped-crenate margins bearing conspicuous glands in the crenations. The umbels of inconspicuous flowers are followed by dotted, brightred berries one-half to one-third of an inch in diameter.

93187. ARDISIA NERIIFOLIA Wall. Myrsinaceae.

A large shrub with erect branches, terminated by panicles of small pink flowers, resembling the oleander. The narrowly obovate leaves are 5 to 7 inches long, and the globose-pentagonal berries one-fifth of an inch in diameter, are deep red. It is native to the subtropical slopes of the Himalayas in India.

93188. ARISAEMA NEPENTHOIDES (Wall.) Mart. Araceae.

A bulbous perennial, closely related to the American Indian turnip (Arisaema triphyllum). The two leaves are each made up of five sessile oblanceolate leaflets; the spathe, 6 to 8 inches long, has a cylindric tube 3 to 4 inches long and a limb whitish within and yellow without. On each side at the base of the limb is an auricle 1 inch broad, which is recurved and is spotted with brown and has a broad brown margin.

93189. CORTIA HOOKERI C. B. Clarke. Apiaceae.

A stemless, herbaceous perennial with a rosette of three to four times pinnate leaves, the ultimate segments being linear and about one-fourth of an 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.

93190. Corylus ferox Wall. Betulaceae. Hazelnut.

A wild hazel from Sikkim, India, whose small nuts, closely resembling the common hazelnut in taste, are much prized by the natives. The tree. 20 feet in height, grows at altitudes between 8,000 and 10,000 feet. The wood is pinkish white, even grained, and moderately hard.

For previous introduction see 73151.

93191 to 93195. Meibomia spp. Fabaceae. 93191 and 93192. Meibomia Hetero-CARPA (L.) Kuntze.

An erect or suberect undershrub. 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 47723.

93191. Received as Desmodium gyrans DC.

93192. Received as Desmodium polycarpum DC.

93193. MEIBOMIA FLORIBUNDA (D. Don) Kuntze (Desmodium floribundum Don).

#### 93169 to 93222-Continued.

A woody, thickly pubescent Himalayan plant abundantly covered with axillary and terminal racemes of red flowers.

For previous introduction see 86684.

93194. MEIBOMIA TILIAEFOLIA (D. Don) Kuntze (D e s m o d i u m tiliaefolium DC.).

A hardy and more or less ornamental deciduous shrub, with slender terete branches, thick green trifoliolate leaves about 4 inches long, and red flowers in lax racemes often a foot long. It is native to the Himalayas from 3,000 to 9,000 feet altitude. 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.

For previous introduction see 86692.

93195. MEIBOMIA TRIFLORA (L.) Kuntze (Desmodium triflorum DC.).

A small herbaceous annual which covers the ground with a dense mat resembling clover.

esembling clover.

For previous introduction see 85746.

93196. DICELLOSTYLES JUJUBIFOLIA (Griffith) Benth. Malvaceae.

A tree, more or less hairy throughout, with ovate leaves about 3 inches long and white flowers, over 1 inch in diameter, in panicles.

For previous introduction see 47673.

93197. DICENTRA SCANDENS (D. Don) Walp. Papaveraceae.

A perennial herb found between 5,000 and 6,000 feet altitude. The graceful angled stem is slender and bears yellow or purple flowers, nearly an inch long, in racemes of 8 to 12, which are followed by membranous lanceolate capsules.

For previous introduction see 49630.

93198. DICENTRA THALICTRIFOLIA (Wall.) Hook. f. and Thoms. Papaveraceae.

A slender climbing plant with a perennial root, native to the temperate regions of the Himalayas, at altitudes between 4,000 and 5,000 feet. It is very similar to Dicentra scandens except for the thick fleshy ovate-cordate capsule.

For previous introduction see 49631.

93199. DICHROA FEBRIFUGA Lour. Hydrangeaceae.

A tall shrub, abundant in the temperate Himalayas from 5,000 to 8,000 feet altitude. It has narrow leaves 3 to 8 inches long, terminal panicles of blue or purplish flowers, and berries of an intense blue.

For previous introduction see 73152.

93200. DOBINEA VULGARIS Buch.-Ham. Anacardiaceae.

A branching shrub with opposite elliptic acutely serrate leaves 4 to 6 inches long. The minute flowers are in lax panicles, the staminate are campanulate, the pistillate are apetalous. The narrow capsule has winged margins.

For previous introduction see 49632.

93201. DRACOCEPHALUM SPECIOSUM Benth. Menthaceae. Dragonhead.

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.

202. Dysoxylum binectariferum (Roxb.) Hook, f. Meliaceae. 93202. DYSOXYLUM

An evergreen tree, 30 feet or more in height, with compound leaves 9 to 18 inches long, composed of five to nine leaflets, and panicles of pale-green flowers. The leathery reddish fruits are over 2 inches long, and the dark-purple seeds are polished. are polished.

For previous introduction see 47840.

93203. SLOANEA DASYCARPA (Benth.) Hemsl. (Echinocarpus dasycarpus Benth.). Elaeocarpaceae. dasycarpus

A Chinese tree about 15 feet high, with rigidly erect flowering branches. The lanceolate leaves are corlaceous; the nodding flowers are axillary or in terminal corymbs; the sepals are broad, and the cup-shaped corolla is toothed and scarcely longer than the very numerous stamens. The prickly capsule dehisces into 5 valves, each valve bearing a fleshy golden aril containing 4 or 5 seeds.

For previous introduction see 49655.

93204. ELAEOCARPUS SIKKIMENSIS Masters. Elaeocarpaceae.

handsome evergreen tree, native to Sikkim, India, with erect racemes of small white flowers and sharp-pointed serrate leaves about 8 inches long.

For previous introduction see 65251.

93205. ELSHOLTZIA DENSA Benth. thaceae.

A dwarf annual, 6 to 18 inches high, native to northeastern India and western Tibet. The slender stems are branched from the base, the ovate to elliptic leaves are 1 to 3 inches long, and the small lavender flowers are borne in spikes about 2 inches long.

93206. ELSHOLTZIA FLAVA Benth. Menthaceae.

A bushy annual, 3 to 5 feet high, native to the temperate slopes of the Himalayas in India. The long-petioled, cordate leaves are 4 to 8 inches long, and the small yellow flowers are borne in axillary and terminal spikes 2 to 4 inches long.

93207. ENKIANTHUS DEFLEXUS (Griffith)
C. Schneid. (E. himalaicus Hook, f. and Thoms.). 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 76187.

93208. EPILOBIUM ORIGANIFOLIUM Lam. Onagraceae.

93169 to 93222—Continued.

A greatly variable herbaceous perennial with stems usually 8 inches high, but often up to 2 feet. The opposite ovate nearly sessile leaves are 1 inch long, but the leaves are sometimes petioled and 3 inches long. The small, purple to white flowers are axillary or gathered into spikes at the ends of the branches. It is native to the alpine slopes of the Himalayas in India.

93209. EPILOBIUM RETICULATUM C. B. Clarke. Onagraceae.

A perennial herb with pubescent stems 2 to 4 feet high, narrowly lanceolate, minutely denticulate leaves 3 to 6 inches long, and rose-purple flowers nearly 1 inch across, in terminal spikes. It is native to the Sikkim region in India.

93210. ERIANTHUS RUFIPILUS (Steud.)
Griseb. (E. fulvus Nees). Poaceae.
Plume grass.

A perennial grass found in the temperate Himalayas between 5,000 and 7,000 feet altitude. The stems are 6 to 8 feet high, and the leaves, 2 to 3 feet long and from one-fourth to 1 inch wide, are slightly rough. The margins of the sheath are hairy. The panicle, 8 to 18 inches long, is gray white or tinged with purple. The spikelets, about one-tenth of an inch long, are concealed by the dense white basal hairs about 1 inch long. The awn is half an inch long.

For previous introduction see 39689.

93211. ERIOBOTRYA PETIOLATA Hook. f. Malaceae.

A stout tree with leathery leaves 6 to 9 inches long and white flowers, half an inch in diameter, appearing in panicles 3 to 6 inches long and broad. It is native to Sikkim, India, and the eastern Himalayas, where it grows at altitudes between 5,000 and 9,000 feet.

For previous introduction see 47679.

93212. ERIOPHYTON WALLICHIANUM Benth. Menthaceae.

A dwarf woolly herbaceous perennial with a stout rootstock, simple stems 4 to 6 inches high, close-set orbicular toothed leaves 2 inches across, and large yellow tubular flowers, 1 to 2 inches long, crowded in the axils of the upper leaves. It is native to the alpine slopes of the Himalayas in Nepal and Sikkim, India.

98213. LILIUM GIGANTEUM Wall. Lilia-ceae. Giant lily.

ceae.

Ceae.

A lily, native to the Himalayas, with bulbs which grow close to the surface in rich black mold, at altitudes between 7,500 and 9,000 feet, where it is covered with snow from November to April. The smooth hollow stems, 6 to 9 feet high, are sometimes used for musical pipes. The handsome cordate leaves, shining dark green above and paler beneath, are 10 to 12 inches long on petioles of equal length; both become smaller near the apex. In the large white fragrant flowers, often 12 to a raceme, the perianth tube is slightly greenish, and the inner surface of the segments is tinged with deep purple.

For previous introduction see 80010

For previous introduction see 80010.

93214. MAESA MACROPHYLLA Wall. Myrsinaceae.

A large shrub or small tree, native to the eastern Himalayas. When the bark

is cut a resinous substance exudes. The wood is light brown and moderately hard.

For previous introduction see 47713.

93215. MUCUNA MACROCARPA Wall. Fabaceae.

A woody climber, native to northeastern India, which has purple flowers and torulose pods over a foot long.

For previous introduction see 61615.

93216. MELOTHRIA MADERASPATANA (L.) Cogn. (Mukia scabrella Arn.). Cucurbitaceae.

A rough climbing, cucurbitaceous plant with three to seven angled leaves, small yellow flowers, and bright red fruits up to half an inch in diameter. The leaves are used medicinally as a gentle aperient, and a decoction of the seeds is used as a sudorific.

For previous introduction see 47728.

93217. 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.

98218. CLEMENATIS ZEYLANICA (L.) Poir. (Naravelia zeylanica DC.). 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 greenishwhite petals and yellow stamens.

93219. NEILLIA THYRSIFLORA D. Don Rosaceae.

A little-branched shrub about 3 feet high, with deeply 3-lobed dentate leaves and terminal thyrsoid racemes of white flowers which appear at the beginning of autumn. It is native to the mountains of Nepal.

For previous introduction see 47739.

93220. PENTAGONIA PHYSALODES (L.)
Hiern (Nicandra physaloides Gaertn.).
Solanaceae. Apple-of-Peru.

A blue-flowered Peruvian annual with the fruit inclosed in the husk, as in Physalis. The campanulate flowers, over an inch in diameter, are light blue with a lighter throat; they are produced singly in the axils of the leaves.

For previous introduction see 66527.

93221. NYSSA SESSILIFLORA Hook. f. and Thoms. Cornaceae.

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 58911.

93222. SWERTIA MULTICAULIS D. Don. Gentianaceae.

A blue-flowered tufted plant occurring in poor black sodden soil among scree debris (granite) at an altitude of 15,000 feet.

For previous introduction see 41603.

#### 93223 to 93225.

From Japan. Plants purchased from the Yokohama Nursery Co. (Ltd.). Received April 27, 1981.

93223. PHYLLOSTACHYS PUBBRULA (Miquel) Munro (P. henonis Mitf.). Poaceae. Bamboo.

For previous introduction and description see 92511.

93224. PHYLLOSTACHYS EDULIS HETERC-CYCLA (Carr.) H. de Lehaie. Poaceae. Tortoise-shell bamboo.

A hardy bamboo of somewhat uncertain identity, the nodes and internodes of which have a peculiar form, suggesting, in appearance, the plates of a tortolse shell.

93225. ARUNDINARIA ANGULATA (Munro) Porterfield (Bambusa angulata Munro). Poaceae. Bamboo.

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 as much as 25 or 30 feet. The species has proved very difficult to propagate. Its systematic position was long in doubt, it having been erroneously placed at different times in the genera. Bambusa and Phyllostachys.

#### 93226 to 93233.

From Australia. Seeds presented by James MacRae, through R. E. Beckett, Bard, Calif. Received April 27, 1931.

93226. CASUARINA STRICTA Ait. Casuarinaceae.

This tree, commonly cultivated in California but more rare in Florida, is a fairly hardy species, making a low, often shrubby growth. It is conspicuous on account of its very thick, often pendulous branchlets and very big cones. In appearance it is not so elegant as some of the other casuarinas, but it is very striking and is also of some economic value. The branchlets are said to be a favorite forage of Australian cattle. The wood is especially valuable for shingles and posts.

For previous introduction see 67809.

93227 to 93231. EUCALYPTUS spp. Myrtaceae.

93227. EUCALYPTUS ALBA Reinw.

White gum. A tall tree with ashcolored rough persistent bark and glaucous leaves varying from ovate-oblong
and 3 inches long to ovate-lanceolateand 6 inches long. The small flowers
are gathered into panicles at the ends
of the branches, and the top-shaped
fruits are one-fourth of an inch in
diameter. It is native to North Australia.

93228. EUCALYPTUS AMYGDALINA Labill. Almond eucalyptus.

Peppermint gum, a variety of the almond eucalyptus, is a tall Australian tree up to 300 feet high, with lanceolate leaves 4 inches long, crowded umbels of small flowers, and hemispheric fruits a quarter of an inches broad. The leaves have a strong odor of peppermint and are rich in oil.

For previous introduction see 77608.

#### **93226 to 93233**—Continued.

93229. EUCALYPTUS CAPITELLATA J. E. Smith.

Stringy bark. A large tree, native to Australia, with dark-gray, furrowed, fibrous bark and thick, shining, swordshaped leaves 3 to 6 inches long. The small sessile flowers are in axillary clusters of 5 to 10, and the depressed globose fruits, nearly half an inch in diameter, have a prominent reflexed rim.

### 93230. EUCALYPTUS MELLIODORA A. Cunn. Honey gum.

Yellow box gum. A spreading tree up to 150 feet high, with drooping branches, narrow lanceolate leaves 3 to 5 inches long, and small flowers particularly rich in nectar. The timber is used in Australia by wheelwrights and shipbuilders.

93231. EUCALYPTUS sp.

Ash gum.

93232. Exocarpus cupressiformis Labill. Santalaceae.

Usually a tree about 20 feet high, with very numerous, green, rigid, wiry, apparently leafiess branches; the leaves are reduced to minute scales. The flowers are very small, appearing in short spikes; usually only one of these flowers is fertilized, and the small, roundish nut, borne on a red, succulent stem, is eaten by the natives. The close-grained, handsome wood is used by cabinetmakers and for tool handles. It is native throughout Australia.

For previous introduction see 56568.

93233. HAKEA SALIGNA (Andrews) Knight. Proteaceae.

An evergreen shrub, about 8 feet high, native to Australia, with oblanceolate leaves 3 to 6 inches long. The small white flowers are in dense clusters.

### 93234 and 93235. VITIS VINIFERA L. Vitaceae. European grape.

From Corsica. Cuttings presented by F. Durazzo, Sartene, through Niels Nielsen, agricultural commissioner, American consulate, Marseille, France. Received April 27, 1931.

93234. Montanaccio.

93235. Sciaccarello (Sciuchitajolo).

#### 93236 and 93237.

From England. Seeds purchased from Thompson & Morgan, Ipswich. Received April 28, 1931.

93236. LIBERTIA GRANDIFLORA (R. Br.) Sweet. Iridaceae.

A densely tufted herbaceous perennial, native to New Zealand, with stiff leathery linear leaves up to 3 feet long and a flowering stem as tall as the leaves, bearing a branching panicle of white flowers each an inch broad.

For previous introduction see 77563.

'93237. RUSCUS ACULEATUS L. Convallariaceae. Butchersbroom.

A rigid evergreen shrub, native to Europe, 2 to 4 feet high, with branching grooved stems and sessile ovate claddes replacing the leaves. The small white flowers are borne in the axil of a bract in

93236 and 93237-Continued.

the middle of each cladode and are followed by ovoid red berries half an inch in diameter.

For previous introduction see 79180.

93238 and 93239. Medicago sativa L. Fabaceae. Alfalfa.

From the Union of Soviet Socialist Republics. Seeds presented by L. P. Bordacoff, Kubanskaia, Institute of Applied Botany, North Caucasus Experiment Station, Otrada, Armavir District, through H. L. Westover, Bureau of Plant Industry. Received April 28, 1931.

93238. From the North Caucasian station of the Bureau of Applied Botany, Otrado-Kubanskaia, Asia Minor. Crop of 1929, collected in 1930.

93239. No. 14344. Beba. Kashgarian blue alfalfa.

93240. ALEURITES MONTANA (Lour.) Wilson. Euphorbiaceae. Mu-oil tree.

A tree with oil-producing nuts which is allied to the tung-oil tree. Native to southern China.

For previous introduction see 71177.

93241 and 93242. TRITICUM AESTIVUM L. (T. vulgare Vill.). Poaceae.

Common wheat.

From Australia. Seeds presented by W. L. Waterhouse, University of Sydney. Received April 29, 1931.

From the New Plant Breeding Branch of the New South Wales Department of Agriculture. Introduced for the use of department specialists.

93241. Thew. These grains are the progeny of a single plant.

93242. Thew. These grains were grown on another single plant.

93243. Zea mays L. Poaceae. Corn.

From Germany. Seeds collected by J. G. Dickson, United States Department of Agriculture. Received April 29, 1931.

Introduced for the use of department specialists who are working with corn.

93244 to 93255. Hibiscus Rosa-sinensis L. Malvaceae. Chinese hibiscus.

From the Canal Zone. Cuttings presented by J. E. Higgins, Director, Canal Zone Experiment Gardens, Summit. Received April 30, 1931.

93244. Coral.

93245. Dark red.

93246. Double orange.

93247. Large orange red.

93248. Large yellow.

93249. Orange with red centers.

93250. Pink.

93251. Pink with dark-red centers.

93252. Yellow.

93253. Yellow.

93254. Yellow with red centers.

93255. Velvet red.

93256 to 93258. TRIFOLIUM SUBTER-RANEUM L. Fabaceae.

Subterranean clover.

From Australia. Seeds presented by P. D. Forrest, of Boyup Brook, Western Australia, through A. B. Adams, Western Australia Agricultural College, Mursek. Received May 1, 1931.

An Australian clover which appears to have value as a forage plant for the southern United States.

98256. Forrest's Extra Early. A very early variety which is particularly suitable for dry districts, as the flowers set seed before the rains cease. The flowers do not set seed after the ground is too dry for them to bury themselves.

93257. Late variety. A very large variety that comes into flower approximately one month later than the Midseason.

93258. Midseason. This is the most widely grown variety in Western and South Australia.

93259 to 93261. CANNABIS SATIVA L. Moraceae. Hemp.

From Hungary. Seeds presented by Rudolf Fleischmann, Engineer, Kompolt Experiment Station. Received May 1, 1931.

93259. Bácskaer Hanf.

93260. Fleischmann's scher veredelter Hanf.

93261. Veredelter Hanf der Darusziget-er Landwirtschft.

### 93262 to 93270.

From Mexico and Central America. Seeds collected by G. N. Collins and J. H. Kempton, with the Allison V. Armour expedition to Mexico and the West Indies, 1931. Received May 1, 1931.

93262. COUSSAPOA REKOI Standl. Moraceae.

No. 9159. From Oaxaca, Mexico, March 19, 1931. A large Mexican tree with a spreading crown and prickly branchlets. The ovate entire leaves are 1 to 2 feet long, and the flowers, in globose pedunculate heads, are followed by succulent fruits 1 inch in diameter.

For previous introduction see 76398.

93263. DATURA DISCOLOR Bernh. Solanaceae.

From La Paz, Lower California. A low, somewhat hairy annual herb, found in Colorado, Arizona, and the southeastern part of California. It has more or less deeply toothed leaves, purplish white flowers 2 or 3 inches long, and round hairy capsules with large stout hairy prickles. The thickish seeds are dark colored with wrinkled or pitted crustaceous coats.

For previous introduction see 44129.

93264. EUCHLAENA MEXICANA Schrad. Poaceae. Teosinte.

From San Salvador. 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 41905.

93262 to 93270—Continued.

93265, MAMMILLARIA sp. Cactaceae. Cactus.

No. 9175. From La Paz, Lower California.

93266. MAXIMILIANEA VITIFOLIA (Willd.)
Krug and Urb. (Cochlospermum hibiscoides Kunth.). Cochlospermaceae.

No. 9162. Collected at Acapulco, Mexico, March 21, 1931. A deciduous tree, native to Central America, about 35 feet high, but flowering when only 5 feet high. The alternate leaves have five to seven serrate lobes, and the handsome bright-yellow flowers, 4 inches across, are in terminal clusters.

For previous introduction see 81268.

93267. SENECIO sp. Asteraceae.

From Puerto Barrios, Guatemala.

93268. (Undetermined.)

No. 9170. From La Paz, Lower California, March 30, 1931.

93269. (Undetermined.)

No. 9174. From La Paz, Lower California, March 30, 1931. A small treeused for making furniture.

93270. ACANTHORHIZA sp. Phoenicaceae. Palm.

No. 9191. From Concordia, Oaxaca, Mexico.

93271 to 93273. Figure spp. Moraceae.

From Egypt. Cuttings presented by Thomas W. Brown, director, horticultural section, Ministry of Agriculture, Cairo. Received May 1, 1931.

93271. FIGUS ERIOBOTRYOIDES Kunth and: Bouché.

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.

93272. FICUS ALTISSIMA Blume (F. laccifera Roxb.). Lofty fig.

A large spreading tree, native to the tropical Himalayas. It is said to yield as good caoutchouc as its relative, Ficuse elastica.

For previous introduction see 82398.

93273. FICUS NYMPHABAEFOLIA Mill.

A tropical American tree with erect branches and long-petioled, broadly heartshaped leaves 8 inches long, resembling those of a waterilly. The sessile, globular, pubescent fruits are in axillary pairs.

93274. GENTIANA LUTEA L. Gentianaceae. Yellow gentian.

From Paris, France. Seeds presented by Vilmorin-Andrieux & Co., through Dr. Raymond M. Hann, National Institute of Health, Public Health Service, Washington, D. C. Received May 4, 1931.

A coarse perennial species, too large for the rock garden, with 3-foot to 4-foot stems bearing handsome rugose foliage, crowned in late summer in the upper whorls of leaves with crowded clusters of slenderlobed, golden-yellow flowers.

For previous introduction see 78932.

93275 to 93278. FIGUS CARICA L. Moraceae. Common fig.

From England. Rooted cuttings purchased from George Bunyard & Co., the Royal Nurseries, Maidstone. Received May 4, 1931.

93275. Brown Turkey. A midseason variety which is medium long, deep brownish purple with a light bloom, and red flesh. It is very delicious, extremely fertile, and the best for main crop in or out of doors.

93276. Brunswick. An enormous, pear-shaped, midseason variety, pale green with a brownish-purple flush, and delicious white flesh with slight tinge of red at the center. It is very hardy, ripens after Brown turkey, and is the largest for outside culture. This variety has been grown in England for 200 years.

193277. Negro Largo (the San Pietro of Italy). This enormous pear-shaped jet-black fig is the second early in time of ripening and has pale-red flesh, most tender and delicious. It is a free bearer, but not hardy enough for outside culture in England.

93278. Osborne's Prolific. A roundish dark-brown fig which ripens early and is extremely prolific. The pale-yellow flesh has a rich sweet flavor.

93279. PHLEBOTAENIA COWELLII Britton. Polygalaceae. Violet tree.

From Puerto Rico. Seeds presented by H. T. Cowles, College of Agriculture and Mechanic Arts, University of Puerto Rico, Mayaguez. Received May 4, 1931.

A beautiful deciduous tree about 20 feet high, with elliptic to obovate leathery leaves and violet-purple flowers half an inch long, in 4-flowered to 10-flowered racemes, appearing in February before the leaves. It is native to Puerto Rico.

93280. CYRTOSTACHYS RENDA Blume. Phoenicaceae. Palm.

From Sumatra. Seeds presented by J. A. Lözing, Plantentuin Sibolangit, Sibolangit, Medan. Received July 7, 1928. Numbered in May, 1931.

A Sumatran palm of stately habit, about 25 feet high, with a slender spineless trunk crowned by a graceful cluster of pinnately divided leaves with bright-red leaf sheaths.

For previous introduction see 68116.

33281. CHAMAEDOREA TEPEJILOTE Liebm. Phoenicaceae. Palm.

From Zacuapam, Huatusco, Vera Cruz, Mexico. Seeds presented by Dr. C. A. Purpus. Received March 3, 1930. Numbered in May, 1931.

A palm, native to 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 80881.

:93282. GARCINIA sp. Clusiaceae.

From Indo-China. Seeds presented by M. Poilane, Institut des Recherches Agronomiques de l'Indochine, division de botanique, Annam. Received March 25, 1930. Numbered in April, 1931.

Possibly of value as a stock for the mangesteen.

93283 to 93289. AVENA spp. Poaceae.

From Germany. Seeds presented by Dr. William Nicolaisen, University of Halle, Halle-Saale. Received May 5, 1931.

A collection of oat varieties which have shown resistance to loose smut of oats under conditions in Germany. Introduced for the use of department specialists.

93283. AVENA BYZANTINA Koch.

No. 30. Algerian.

For previous introduction see 80219.

93284 to 93289. AVENA SATIVA L.

93284. No. 101. Black mesdago.

93285. No. 104. Champion a kadmae.

93286. No. 36. Kelsalls.

93287. No. 110. Monarch.

93288. No. 33. Reid.

93289. No. 39. Warrigal.

#### 93290 and 93291.

From the Union of South Africa. Seeds presented by I. B. Pole Evans, chief, division of plant industry, Department of Agriculture, Pretoria. Received May 6, 1931.

93290. HELIOPHILA SUAVISSIMA Burch. Brassicaceae.

A subshrubby perennial, 1 to 2 feet high, branched at the base, with wand-like branches, leafy in the lower part. The linear, awl-shaped leaves are 1 to 2 inches long, and the rather large, fragrant, violet or purple flowers are borne in racemes 6 inches long. It is native to southern Africa.

93291. PHYMASPERMUM PARVIFOLIUM (DC.) Benth. and Hook. Asteraceae.

A rigid, much-branched shrub, 1 to 2 feet high, with thinly silky, tufted, linear leaves 1 inch long or less, and chrysanthemumlike flowers having reddish or yellow disk flowers and white rays. It is native to southern Africa, where it is said to make a valuable pasture for merino sheep.

93292 to 93297. MANGIFERA INDICA L. Anacardiaceae. Mango.

From Hawaii. Cuttings presented by W. T. Pope, Senior Horticulturist, Agricultural Experiment Station, Honolulu. Received May 6, 1931.

93292. Holt.

93293. Jemshedi or Jamshedi.

93294. McDougall.

93295. Mulgoa.

93296. Whelan.

93297. Whitney.

93298. ACHRAS ZAPOTA L. Sapotaceae. Sapodilla.

From Java. Seeds presented by the Tuinbouwkundig Ambtenaar, Pasar Minggoe. Received March 19, 1930. Numbered in May, 1931.

A small symmetrical tree, 25 to 30 feet high, with shiny dark-green leathery leaves and round or oblong, fleshy fruits resembling in outward appearance a smoothskinned brown potato. It is native to

#### **93298**—Continued.

tropical America, although it is now cultivated in the Asiatic Tropics as well. When thoroughly ripe the fruit is fine for eating, a very thin skin inclosing a palebrown, juicy pulp of delicious flavor. The bark contains a milky latex known commercially as chicle. It is best propagated from cuttings, although it may also be raised from seed.

For previous introduction see 45907.

#### 93299 to 93305.

From Chihli Province, China. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 6, 1931.

93299 and 93300. BETA VULGARIS L. Che-Beet.

From Haitien, about 6 miles from eiping, March 8, 1931. Probably Peiping, March Chinese varieties.

93299, No. 6909. A green beet.

93300. No. 6910. A purple beet.

93301. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae.

No. 4619. From W. J. Simpson, Methodist Episcopal Mission, Changli, March 12, 1931. Said to be a Chinese variety.

'93302. LYCOPERSICON ESCULENTUM Tomato.

No. 6920. Chang li. A small yellow pear-shaped fruit presented by W. J. Simpson, Methodist Episcopal Mission, Changll, March 12, 1931.

93303. Phaseolus vulgaris L. Fabaceae. Common bean.

No. 6912. A red garden bean from Haitien, about 6 miles west of Peiping.

93304. PISUM SATIVUM L. Fabaceae.

No. 6911. From Haiten, about 6 miles west of Peiping, March 8, 1931. Probably a Chinese variety.

93305. SPINACIA OLERACEA L. Chenopodiaceae. Spinach.

No. 6918. From Changli, March 12, **19**31.

93306. MANGIFERA INDICA L. Anacardiaceae. Mango.

A native variety.

From Pasar Minggoe, Java. Plants received from the Tuinbouwkundig Ambtenaar September 12, 1930. Numbered in May, 1931.

Gadoeng grafted on Madoe.

93307. Fragaria sp. Rosaceae.

Strawberry.

From Germany. Plants purchased from Nonne & Hoepker, Abrensburg, Hamburg. Received May 7, 1931. Upper Schlesian.

### 93308 and 93309.

From Sweden. Seeds presented by Robert E. Fries, Stockholm Botanic Garden. Received May 7, 1931.

Collected in Kansu Province, western China, during the Swedish Hedin expedi-tion, February, 1930.

93308 and 93309-Continued.

308. MECONOPSIS INTEGRIFOLIA (Maxim.) Franch. Papaveraceae. Yellow Chinese-poppy. 93308. MECONOPSIS

A fine alpine plant over 2 feet high, found rather commonly at altitudes of 14,000 to 15,000 feet among limestone boulders. The leaves are linear, with the basal ones forming a rosette, and are covered with red hairs. The large bright-yellow flowers are 4 inches across.

For previous introduction see 84011.

93309. MECONOPSIS PUNICEA Maxim. Pa-paveraceae. Chinese-poppy.

A stemless annual with a rosette of ovate-lanceolate leaves and scapes 16 to to 20 inches high, bearing pendulous dark-pink flowers with four or more petals each 4 inches long and 2 to 3 inches across. It is native to western China and Tibet.

93310 to 93314. ANANAS SATIVUS Schult, f. Bromeliaceae. Pineapple.

From British Guiana. Suckers presented by F. Burnett, acting director, Depart-ment of Agriculture, Georgetown, Deme-rara. Received May 7, 1931.

93310. Chocoma.

93311, Mainpouri,

93312. White Montserrat.

93313. Red Spanish.

93314. Sugar Loaf.

93315 to 93326.

om Ceylon. Seeds presented by T. H. Parsons, curator, Royal Botanic Gardens, Peradeniya. Received May 7, 1931. From Ceylon.

93315. ALSTONIA MACROPHYLLA Wall. Apocynaceae.

A tall Malayan evergreen tree with milky juice, oblanceolate leaves 1 foot long, and terminal clusters of small white flowers

For previous introduction see 79972.

93316. AMOMUM HEMISPHAERICUM (Blume) Schum. Zinziberaceae.

A very striking and handsome species from Java, with great pinnate leaves rising from the ground to a height of 12 feet, which have leaflets 2 feet long. The under surface of the leaflets is a lovely bronze claret color, making the plant, when seen against the sunlight, a wonderfully beautiful thing. It is propagated nepally by rhizome cuttings. gated usually by rhizome cuttings.

For previous introduction see 66196.

93317. ARECA TRIANDRA Roxb. Phoenicaceae. Palm.

A graceful and 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 olives, are orange scarlet. It is native to India.

For previous introduction see 88864.

93318. Borassus flabellifer L. Phoenicaceae. Palmyra palm.

A handsome though slow-growing palm found on the dry coastal regions of Ceylon, where it is apparently able to withstand any amount of lime and is said to have been used successfully as a binder for sand dunes. In the number

#### 93315 to 93326—Continued.

of ways in which this palm is used in Ceylon, it rivals the coconut. A delicate sugar is made from the sap which flows in abundance from its inflorescence when cut. The seeds are germinated and the young subterranean hypocotyl used as a vegetable. The leaves are used in many different ways. The fruit, half the size of a coconut, is very attractive in appearance, and when ripe exhales a delicate fragrance. The hull also is eaten by the Tamils of Ceylon.

For previous introduction see 88611.

93319. Calyptrocalyx spicatus (Lam.) Blume. Phoenicaceae. Palm.

A graceful palm 30 to 40 feet high with pinnate leaves and slender spikes of red fruits.

For previous introduction see 69001.

93320. ERYTHRINA VARIEGATA ORIENTALIS (L.) Merr. (L. lithosperma Blume). Fabaceae. Dadap.

A moderate-sized spineless leguminous tree native to the East Indies. It is of very rapid growth, with trifoliolate leaves and red flowers. In Ceylon the tree is used, as a shade tree for crop plants, and also, the foliage is lopped for use as green manure. It is being tested as a cover plant at the experiment station in Peradeniya.

For previous introduction see 81923.

93321. LICUALA GRACILIS Blume. Phoenicaceae. Palm.

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 88672.

93322. LICUALA SPINOSA Thunb. Phoenicaceae. Palm.

A dwarf fan-leaved palm, native to the East Indies, 10 to 12 feet high, with roundish leaves 3 feet or more in diameter and 3-angled petioles armed with brownish hooked spines. It requires abundant heat and moisture.

For previous introduction see 88673.

93323 to 93325. Phoenix spp. Phoenicaceae.

93323. PHOENIX PUSILLA Gaertn. (P. farinifera Roxb.). Date palm.

A dwarf palm about 4 feet high, with pinnate leaves having spiny petitoles and dark-green, sword-shaped leaflets and black fruits. The stem is said to contain a farinaceous pith. It is native to Ceylon.

For previous introduction see 88676.

93324. Phoenix canariensis Chabaud (P. tenuis Versch.).
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.

93325. Phoenix Zeylanica Trimen. Ceylon date palm.

A pinnate-leaved palm, native to Ceylon, with a stem 8 to 20 feet high

93315 to 93326—Continued.

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.

93326. PTYCHOSPERMA ANGUSTIFOLIA Blume. Phoenicaceae. Palm.

A tropical Australian pinnate palm which grows in great clumps. When young it is suited for pot culture, but should be tried out in the open in southern Florida in private gardens. The small, slender stems make it especially adapted to small gardens.

For previous introduction see 88677.

#### 93327 to 93335.

From Japan. Plants presented by the director, Imperial Horticultural Experiment Station, Okitsu. Received May 7, 1031

93327 to 93334. CITRUS NOBILIS UNSHIU Swingle. Rutaceae. Satsuma orange.

93327. Bito-Wase.

93328. Fujii-Wase.

93329. Higuchi-Wase.

93330. Osugi-Wase.

93331. Sueoka-Wase. 93332. Suzuki-Wase.

93333. Ueno-Wase.

93334. Yakushiji-Wase.

93335. Myrica Rubra Sieb. and Zucc. Myricaceae.

A handsome tree about 20 feet high, with dark-green glossy foliage. The globular fruits are quite acid, and, owing to their fragility and peculiar structure, they do not ship well. The fruits are salted and dried, because the fresh fruits are too soft to appeal to the Chinese palate.

For previous introduction see 70974.

# 93336. TALAUMA MEXICANA (DC.) Don. Magnoliaceae.

From Zacuapam, Huatusco, Vera Cruz, Mexico. Seeds presented by Dr. C. A. Purpus. Received May 8, 1931.

A large tree up to 90 feet high, with persistent, oval leaves 10 inches long and large, white, sweet-scented flowers.

## 93337 to 93339.

From Spain. Seeds presented by P. Patay, Seville, through S. F. Morse, Morse Agricultural Service, Malaga. Received May 8 1931.

93337. Triticum Aestivum L. (T. vulgare Vill.). Poaceae. Common wheat.

Trijo roji. A red winter wheat which is grown as a dry-land crop near Seville. It yields about 1,000 pounds of grain per acre and produces a good quality of flour.

93338 and 93339. VICIA FABA L. Fabaceae. Broadbean.

93340. PSIDIUM GUAJAVA L. Myrtaceae. Guava.

From Java. Seeds presented by the Tuinbouwkundig Ambtenaar, Pasar Minggoe.

# 93340—Continued.

Received March 19, 1930. Numbered in May, 1931.

Djamboe bidji.

93341 to 93347. FICUS CARICA L. Moraceae. Common fig.

From Palestine. Cuttings presented by A. Grasovsky, inspector of agriculture, Jerusalem. Received March 27, 1928. Numbered in May, 1931.

Introduced for the use of specialists working with figs.

93341. Bivadi.

93342. Haroubi.

93343. Hedari.

93344. Moazi.

93345. Molessi.

93346. Sounari.

93347. Swadi.

93348 to 93350. FIGUS CARICA L. Moraceae. Common fig.

From Palestine. Cuttings presented by Amram Khazanoff, Jewish Colonization Association, Halfa. Received April 30, 1928. Numbered in May, 1931.

Introduced for the use of specialists working with figs.

93348. Khedari (the greenish).

93349. Khurtmani (the carob-tasting).

93350. Sultani (the Sultan's own).

93351. PERSEA AMERICANA Mill. Lauraceae. Avocado.

From Mexico. Seeds collected by G. N. Collins and J. H. Kempton, with the Allison V. Armour expedition to Mexico and the West Indies, 1931. Received May 11, 1931.

No. 9199. Collected at 6,000 feet altitude at a cafetal near Concordia, Oaxaca.

93352 to 93357. PHLEUM PRATENSE L. Poaceae. Timothy.

From the Union of Soviet Socialist Republics. Seeds presented by the Bureau of Introduction, Leningrad. Received May 12, 1931.

93352. A family selection from a cross of dial method,  $T_2 \frac{N}{H} \frac{3}{20}$  from Esthonia.

93353. From the Government of Leningrad. A family selection from  $T_2$  N  $\frac{8}{59-3-20}$ 

93354. A family selection from a cross of dial method,  $T_2 N \frac{10}{3.2}$  from the Station Livoricu.

93355. A family selection from a cross of dial method,  $T_2$  N  $\frac{10}{1.2.10}$  from the Station Livoricu.

93356. A family selection from  $T_2N\frac{41}{20-4-20}$ 

93357. A family selection from a cross of dial method,  $T_2 N \frac{42}{7.14}$  from Lifland.

#### 93358 to 93364.

From Colombia. Seeds presented by Eduardo Hernandez, Department of Caldas, Pijao. Received May, 12, 1931.

93358. CARYOPHYLLUS JAMBOS (L.) Stokes (Eugenia jambos L.). Myrtaceae. Rose apple.

Pomarrosa. 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, and is propagated by seed.

For previous introduction see 44891.

93359. GUILIELMA GASIPAES (H. B. K.) Bailey (G. speciosa Mart.). Phoenicaceae. Pupunha.

An Amazonian palm which becomes 60 feet high and is closely related to the pejibaye (Guilielma utilis). Like the pejibaye, it furnishes food for great numbers of people in regions where it is indigenous and appears to be of promise for cultivating as a food plant throughout the Tropics in congenial situations.

For previous introduction see 87383.

93360 to 93362. Phaseolus vulgaris L. Fabaceae. Common bean.

93360. Cargamanto.

93361. Radical.

93362. Sangre de Toro.

93363. RHEEDIA MADRUNO (H. B. K.) Planch, and Triana. Clusiaceae.

A handsome pyramidal tree, 35 feet high, found between 3,000 and 4,000 feet altitude. The dark-green, elliptic leaves are about 6 inches long. The fruits are about the size of a small lemon and the same color, with thick leathery, very rough skin and whitish translucent flesh of aromatic, subacid taste. The two or three rather large seeds are oblong.

For previous introduction see 52301.

93364. SAMANEA SAMAN (Jacq.) Merr. (Pithecollobium saman Benth.). Mimosaceae.

A large spreading tree up to 60 feet high, native to Central America, but widely distributed throughout the Tropics as an ornamental shade tree; the horizontal branches are extremely long. The wood is not very hard, but the heartwood is a handsome red color and takes on a fine polish. The pods are eagerly eaten by cattle.

For previous introduction see 51455.

93365. LAPAGERIA ROSEA ALBIFLORA Hook. Liliaceae. White Chile-bells.

From England. Plants purchased from Robert Veitch & Sons (Ltd.), Exeter. Received October 17, 1930. Numbered in May, 1931.

A form in which the flowers are cream colored with a tinge of rose at the base; purchased for a special experiment.

For previous introduction see 88323.

#### 93366 to 93387.

From China. Plants presented by G. Weid-mann Groff, Lingnan University, Can-ton. Received May 13, 1931.

93366. ATALANTIA Sp. Rutaceae.

No. 168. A tree form from Saigon, French Indo-China.

93367 to 93386. CITRUS spp. Rutaceae.

Nos. 93367 to 93376 are varieties grafted on Australian lemon.

93367 and 93368. CITRUS GRANDIS (L.) Osbeck (C. decumana Murr.). Grapefruit.

93367. No. 107. Song ma yau.

93368. No. 142-a. Kwong sai sha t'in yau.

93369 and 93370. CITRUS NOBILIS Lour. King orange.

93369. No. 96. Sz ooi kom, a fine variety from Lokongtung.

93370. No. 227. Sz ooi kom. An excellent variety from the Lingnan University gardens.

93371 to 93375. CITRUS SINENSIS (L.) Osheck. Orange.

93371. No. 106. Heung shui chang.

93372. No. 223. 372. No. 223. Heung shui chang, from the Lingnan University gar-

93373. No. 153. from Towah. Laan fa ip chang,

93374. No. 165. from Towah. Laan fa ip chang,

93375. No. 224. Ming. lau chang, from the Lingnan University gardens.

93376. CITRUS sp.

No. 109. Chu sha kat, vermilion kat, from Fatei.

93377. CITRUS sp.

No. 208. Hung ling mung, red ling mung, from Paakshan.

93378. CITRUS Sp.

No. 213. Hung ling mung, red ling mung, from Towah.

93379. CITRUS Sp.

No. 183. Paak ling mung, white ling mung, from Paakshan; grafted on Australian lemon.

93380. CITRUS Sp.

No. 155. Paak ling mung, white ling mung, from Towah; budded on Australian lemon.

93381. CITRUS sp.

No. 45. Chiu chau suen kat, Chiu-chow sour kat, from Chiuchow (Swatow area).

Nos. 93382 to 93386 were grafted on Australian lemon.

93382. CITRUS Sp.

No. 69. Taai hung kat, large red kat, from Kootsun, Heungshan.

93383. CITRUS SD.

No. 95. Taai hung taap kat.

93366 to 93387—Continued.

93384. CITRUS Sp.

No. 229. Taap kat, from the Lingnan University gardens.

93385. CITRUS sp.

No. 228. Tong hung kat, from the Lingnan University gardens.

93386. CITRUS sp.

No. 226. Toi toi kwoh, from the Lingnan University gardens.

93387. CLAUCENA LANSIUM (Lour.) Skeels-(C. wampi Oliver). Rutaceae. Wampi.

No. 209. Yat laap tuk wat, inarched. on sour Wongpei.

For previous introduction see 74212.

93388. MANGIFERA INDICA L. Anacardiaceae. Mango.

om the Canal Zone. Scions presented by J. E. Higgins, director, Canal Zone Ex-periment Gardens, Summit. Received. From the Canal Zone. May 11, 1931.

Variety Fairchild.

#### 93389 to 93393.

From China. Seeds purchased from J. W. Dyson, director, College of Arts and Sciences, Soochow University, Soochow, through P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 14, 1931.

Commercial varieties introduced for the use of department specialists.

93389 to 93391. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae.

93392. CUCURBITA PEPO L. Cucurbitaceae.

93393. SPINACIA OLERACEA L. Chenopo-Spinach. diaceae.

93394 to 93396. MANGIFERA INDICA L. Mango. Anacardiaceae.

From Tahiti. Society Islands. Bud wood presented by Harrison W. Smith, Papeari. Received May 16, 1931.

93394. Bougico or Brander.

93395. Mission. This is considered the best variety on the island.

93396. Tutehau. An excellen which comes true from seed. An excellent variety

93397 and 93398. Figure spp. Moraceae. Fig.

rom India. Seeds presented by P. A. Dain, superintendent, Ganeshkhind Bo-tanical Gardens, Kirkee, district of Poona. Received May 18, 1931. From India.

93397. FICUS GLOMERATA ROXD.

A large tree with membranous, obovate to oblanceolate leaves 7 inches long and edible red fruits more than 1 inch in diameter. It is native to India and Ceylon.

For previous introduction see 52496.

93398. FICUS TSIELA ROXD.

For previous introduction and description see 92954.

# 93399 to 93418. Phoenicaceae. Palm.

From Ceylon. Seeds presented by T. H. Parsons, curator, Royal Botanic Gardens, Peradeniya. Received May 18, 1931. 93399. ACROCOMIA SCLEROCARPA Mart. Macauba palm.

A graceful spiny tropical American palm, 30 to 40 feet high, with a terminal cluster of narrow, pinnate leaves. When mature, the inside of the trunk furnishes excellent starch, equal in quality to that of the cassava plant. The leaves yield strong fiber, utilized by the natives of Paraguay for making hammocks. From the yellowish fruits, about an inch in diameter, an excellent edible oil is expressed.

For previous introduction see 86520.

#### 93400. ARECA TRIANDRA ROXD.

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 olives, are orange scarlet. Native to India.

For previous introduction see 88864.

93401. CALYPTROCALYX SPICATUS (Lam.) Blume.

For previous introduction and description see 93319.

#### 93402. CARYOTA MITIS Lour.

A palm, native to the Malay Peninsula, 15 to 20 feet high, which sends out 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 80179.

# 93403. CARYOTA PLUMOSA Hort.

A form of fishtail palm with leaves resembling those of Caryota mitis and C wrens

For previous introduction see 75750.

### 93404. CARYOTA MITIS Lour.

Received as C. sobolifera, which is now generally considered to be the same as C. mitis.

For previous introduction and description see 93402.

93405. ARECASTRUM ROMANZOFFIANUM (Cham.) Becc. (Cocos plumosa Hook. f.).

A palm, native to Brazil, with an unarmed trunk about 30 feet high and a foot in diameter, bearing a crown of plumelike, pinnate leaves 12 to 15 feet long. The fruit is a pale-orange drupe about the size of a large acorn, inclosing a bony seed which has three eyes near the base.

For previous introduction see 81687.

### 93406, CYRTOSTACHYS RENDA Blume.

A Sumatran palm of stately habit, about 25 feet high, with a slender spineless trunk crowned by a graceful cluster of pinnately divided leaves with brightred leaf sheaths.

For previous introduction see 68116.

93407. LINOMA ALBA (Bory) O. F. Cook (Dictyosperma aureum Wendl. and Drude).

## 93399 to 93418-Continued.

A form of this well-known, arecalike palm with yellow or orange petioles and veins on the leaves of the young plants. It reaches a height of about 30 feet, and the pinnate leaves are 4 to 8 feet long. It is native to tropical Asia.

93408. CHRYSALIDOCARPUS MADAGASCARI-ENSIS Beccari (Dypsis madagascariensis Hort.).

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 81511.

#### 93409. HETEROSPATHE ELATA Scheff.

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 89203.

#### 93410. SEAFORTHIA ELEGANS R. Br.

A palm up to 30 feet in height, 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 51738.

### 93411. LICUALA SPINOSA Thunb.

For previous introduction and description see 93322.

# 93412. LIVISTONA CHINENSIS (Jacq.) R. Br. Chinese fan palm.

A palm, native to China, with a short thick trunk up to 6 feet high and a 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 85742.

## 93413. 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 72599.

#### 93414. 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 blackish-violet fruits, half an inch in diameter, are borne in a panicle on a spadix about a foot long.

For previous introduction see 45589.

93415. PHOENIX PUSILLA Gaertn. (P. farinifera Roxb.). Date palm.

For previous introduction and description see 93323.

# 93416. PTYCHOSPERMA ANGUSTIFOLIA Blume.

For previous introduction and description see 93326.

#### 93399 to 93418—Continued.

#### 93417. PTYCHOSPERMA MACARTHURI Wendl.

A palm, native to Australia, which grows to a height of 30 feet, but is usually a dwarf in cultivation and 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 80190.

## 93418. WALLICHIA CARYOTOIDES ROXD.

A pinnate-leaved palm, native to India, with clustered, branching stems. The compound leaves, 8 to 10 feet long, are made up of linear-oblong leaflets 1 to 2 feet long, having fiddle-shaped lobes on the margins. The small yellow or purple flowers are borne on a spadix about 18 inches long and are followed by red or purple ovoid fruits an inch long.

# 93419. PINUS KORAIENSIS Sieb. and Zucc. Pinaceae. Korean pine.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Applied Botany, Leningrad. Received May 19, 1931.

A 5-needle pine, up to 100 feet high. It produces valuable lumber and edible seeds and is also of ornamental value, being slow of growth and forming a dense broad pyramidal head with handsome foliage. It is native to Japan.

For previous introduction see 82483.

#### 93420 and 93421.

From Argentina. Seeds presented by Enrique C. Clos, Ingeniero Agrónomo, Ministerio de Agricultura, Buenos Aires. Received May 19, 1931.

93420. Cassia bicapsularis L. Caesalpiniaceae.

A tropical American evergreen shrub 4 feet high, with pinnate leaves and yellow flowers.

For previous introduction see 74577.

93421. Cassia corymbosa Lam. Caesalpiniaceae. Flowery senna.

A very handsome shrub, native to Argentina, which attains a height of from 4 to 10 feet. The leaves are composed of three pairs of leaflets. In the spring the branches are clothed with numerous corymbs of bright yellow flowers. This is one of the best known garden species, being an excellent conservatory plant for spring, summer, and autumn bloom.

For previous introduction see 43648.

93422. PANDANUS UTILIS Bory. Pandanaceae. Common screwpine.

From Cuba. Seeds presented by Robert M. Grey, Harvard Botanic Garden, Soledad, Cienfuegos. Received May 21, 1931.

A treelike plant, reaching a height of 60 feet in Madagascar where it is native. The branches of the trunk bear crowns of erect, glaucous, linear-lanceolate leaves 1 to 3 feet long, having red spines on the margins. The leaves are used in the Tropics for making bags, baskets, mats, and other articles.

### 93423 to 93432.

From French Indo-China. Seeds presented by M. Poilane, Institut des Recherches

93423 to 93432—Continued.

Agronomiques de l'Indochine, Division de Botanique, Tonking. Received May 22, 1931.

93423. Annona sp. Annonaceae.

93424. BAUHINIA RETICULATA DC. Caesalpiniaceae.

A small tree, 25 feet high, which grows in dry lateritic soil and can endure long periods of drought. The rather small flowers are in compound racemes not much longer than the leaves, and are followed by abundant pods which fall to the ground in March, at the beginning of the dry season. Cattle are very fond of these pods.

93425. CARYOTA sp. Phoenicaceae. Palm.

98426. Cassia nodosa Buch.-Ham.

Pink and white shower. A moderatesized, deciduous tree with long, drooping branches and glossy leaves; during May and June it bears a profusion of beautiful, bright-pink, rose-scented flowers borne in dense clusters on long stalks. It is native from the eastern Himalayas to the Malay Archipelago and the Philippines.

For previous introduction see 65732.

93427. Chrysophyllum sp. Sapotaceae.

A large tree with pink flowers, collected in the arboretum of Trang Bôm, May 4, 1931.

93428. DIOSPYROS sp. Diospyraceae.

From the arboretum of Trang Bôm, May 4, 1931.

93429. Ormosia sp. Fabaceae.

93430. Rollinia sp. Annonaceae.

93431. Sabal sp. Phoenicaceae. Palm.

93432. Uvaria sp. Annonaceae.

#### 93433 to 93435.

From British Honduras. Seeds presented through H. H. Bartlett, director, department of botany, University of Michigan, Ann Arbor. Received June 1, 1931.

93433. CHAMAEDOREA sp. Phoenicaceae.

From El Cayo, British Honduras. A small pinnate-leaved palm which fruits abundantly when the plant is 2 feet tall. The leaf segments are narrow and the fruits are blue-black. To be tried as a house plant.

93434. PLECTIS OWENIANA O. F. Cook. Phoenicaceae. Palm.

No. 11834. Mountain cabbage palm, from the mountains of Pine Ridge, Cayo district. A tall slender palm up to 75 feet high with a trunk diameter of 15 inches. The pinnate leaves, 12 feet long, are made up of numerous narrowly linear, horizontal or drooping leafiets. It is native to Guatemala and Honduras.

93435. Ormosia sp. Fabaceae. Necklacebean tree.

No. 11775. Pine Ridge Mountains, An ornamental tree whose red and black seeds hang from the open pods. The wood is fine grained and a beautiful orange-yellow in color. 1600

#### 93436 to 93466.

From China. Seeds purchased through Peter Liu, Peiping. Received May 22, 1931.

Commercial varieties, collected in Harbin in March, 1931, and introduced for the use of department specialists.

93436 to 93450. CUCUMIS MELO L. Cucurbitaceae. Melon.

Chinese sweet melons.

 93436.
 No. 1.
 93444.
 No. 9.

 93437.
 No. 2.
 93445.
 No. 11.

 93438.
 No. 3.
 93446.
 No. 12.

 93439.
 No. 4.
 93447.
 No. 13.

 93440.
 No. 5.
 93448.
 No. 14.

 93441.
 No. 6.
 93449.
 No. 15.

 93442.
 No. 7.
 93450.
 No. 16.

93443, No. 8.

93451 to 93458, Cucurbita spp. Cucurbitaceae.

93451 to 93454. CUCURBITA MAXIMA Duchesne. Squash,

93455 and 93456. CUCURBITA MOSCHATA Duchesne. Cushaw.

93457 and 93458. CUCURBITA PEPO L. Pumpkin.

93459. LUFFA CYLINDRICA (L.) Roemer. (L. aegyptiaca Mill.). Cucurbitaceae. Suakwa towelgourd.

A smooth variety.

93460 and 93461. Solanum melongena L. Solanaceae. Eggplant.

93460. No. 1. 93461. No. 2.

93462 to 93465. SPINACIA OLERACEA L. Chenopodiaceae. Spinach.

93462. No. 1. 93464. No. 3.

93463. No. 2. 93465. No. 4.

93466. CUCUMIS MELO L. Cucurbitaceae. Melon.

**93467.** Cassia bicapsularis L. Caesalpiniaceae.

From Egypt. Seeds presented by Thomas W. Brown, director, horticultural section, Ministry of Agriculture, Cairo. Received May 23, 1931.

A tropical American everygreen shrub 4 feet high, with pinnate leaves and yellow flowers.

For previous introduction see 74577.

93468 to 93473. VITIS VINIFERA L. Vitaceae. European grape.

From India. Cuttings purchased from the Quetta Fruit Agency, Quetta. Received March 30, 1931. Numbered in May, 1931.

93474. Diospyraceae.

From Africa. Seeds presented by Dr. W. L. Thompson, Mount Silinda, Southern Rhodesia. Received May 27, 1931.

A shrub related to the persimmon, which bears a fruit about the size and somewhat the appearance of a red cherry.

93475 to 93481.

From China. Seeds purchased through S. D. Hslao, department of biology, Central China College, Wuchang. Received May 27, 1931.

A collection of commercial varieties, introduced for the use of department specialists.

93475. BENINCASA HISPIDA (Thunb.) Cogn. Cucurbitaceae. Waxgourd.

Tung-kua.

93476 to 93478. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.

98479. CUCUMIS SATIVUS L. Cucurbitaceae. Cucumber.

Huang-kua.

93480. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. Cushaw.

93481. SPINACIA OLERACEA L. Chenopodiaceae. Spinach.

Bo-tsai.

Nan-kua.

93482. KOKIA DRYNARIOIDES (Seem.) Lewton. Malvaceae.

From Hawaii. Seeds presented by C. S. Judd, Hawaiian forester, through D. T. Fullaway, Honolulu. Received May 27, 1931.

An ornamental tree with long-stemmed, heart-shaped leaves and red, silky flowers. It is native to the Hawaiian Islands, but has become practically extinct because of the ravages of cattle, sheep, and goats that eat the bark and leaves.

For previous introduction see 80267.

93483. CEDRUS LIBANOTICA Link. Pinaceae. Cedar of Lebanon.

From Turkey. Seeds presented by Henry E. Pears, Istanbul. Received May 28, 1931.

Taurus. A fine elegant type.

93484 and 93485. ZEA MAYS L. Poaceae. Corn.

From Mexico. Seeds presented by Emil Makrinius, Concordia, Oaxaca. Received May 28, 1931.

Introduced for the use of department specialists.

93484, White. 93485, Red.

93486 to 93489.

From Africa. Seeds presented by Ernestina Fenzi, Tripoli, Libya. Received June 1, 1931

93486. CHRYSANTHEMUM sp. Asteraceae.

An everblooming, woody perennial with silvery gray-green leaves and large, bright, lemon-yellow, daisylike flowers. It grows wild in gravelly soils and should make a good border plant, as it is very compact and is from 6 to 8 inches high.

93487. GENISTA MONOSPERMA (L.) Lam. Fabaceae. Bridal-veil broom.

A tall spreading bush, covered with white fragrant flowers in late winter and early spring. It is used as a sand binder.

93486 to 93489—Continued.

93488. PANCRATIUM MABITIMUM L. Amaryllidaceae.

A bulbous perennial with evergreen leaves and large, fragrant, white flowers which appear all through the winter.

For previous introduction see 65030.

93489. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.

Mech-mech. A small, round subacid variety about an inch long. In Tripoli it ripens at the end of April.

93490. Syringa sp. Oleaceae. Lilac.

From France. Seeds presented by Vilmorin, Andrieux & Co., Verrières-le-Buisson, Seine-et-Oise. Received May 1, 1931.

No. 2117 Hers.

93491. EUGENIA UNIFLORA L. (E. brasiliana Aubl.). Myrtaceae. Pitanga.

From Funchal, Madeira Islands. Seeds presented through Prof. William T. Horne, College of Agriculture, Riverside, Calif. Received June 1, 1931.

An evergreen shrub, native to tropical Brazil, up to 20 feet high with ovatelanceolate, glossy leaves 1 to 2 inches long, creamy-white flowers, and edible red-ribbed fruits an inch in diameter, resembling a miniature tomato.

For previous introduction see 59313.

93492. DIOSCOREA ALATA L. Dioscoreaceae. Winged yam.

From Cuba. Tuber presented by Robert M. Grey, Harvard Botanic Garden, Soledad, Cienfuegos. Received May 29, 1931.

A purple-skinned yam, introduced originally by the United States Department of Agriculture from Hawaii and recorded under No. 10314, erroneously named Smilaw sandwicensis.

93493 and 93494. ZEA MAYS L. Poaceae. Corn.

From Mexico. Seeds presented by Emil Makrinius, Concordia, Oaxaca. Received June 2, 1931.

Introduced for the use of department specialists.

93493. Yellow.

93494. White.

93495. PERESKIA GRANDIFOLIA Haw. Cactaceae.

From the Canal Zone. Cuttings presented by J. E. Higgins, director, Canal Zone Experiment Gardens, Summit. Received June 3, 1931.

A shrub or tree 6 to 15 feet high, with a short spiny trunk, fleshy branches, oblong leaves 3 to 6 inches long, and terminal clusters of rose-colored to white flowers 1 to 2 inches across. It is native to Brazil.

### 93496 to 93536.

From the West Indies. Seeds collected by C. B. Doyle and R. L. Taylor, Bureau of Plant Industry. Received June 3, 1931.

93496 to 93527. Gossypium spp. Malvaceae. Cotton. 93496 to 93536-Continued.

93496 to 93507. GOSSYPIUM BARBADENSE L. Sea-Island cotton.

Nos. 93496 to 93498 were collected on the island of St. Kitts.

93496. Hand picked.

93497. Second grade.

93498. New seed cotton.

93499. Average from the island of Nevis.

93500. Second generation from the island of Montserrat.

Nos. 93501 to 93509 were collected on the island of Puerto Rico.

**93501.** Grade 1.

93502. Grade 2.

93503. Grade 3.

93504. Grade 4, Amarillo (South).

93505. Pelan cotton.

93506. Haitian cotton.

93507. Lowest grade.

93508 to 93516. Gossypium barbadense × tomentosum.

Collected on the island of Puerto Rico.

93508. Grade 1.

93509. Grade 2.

93510. Grade 3.

93511. Grade 7.

93512. Grade 8.

93513. Grade 11.

93514. Grade 12. 93515. Grade 14.

93516. From the town of Rio Piedras.

93517. Gossypium sp.

Collected on the island of Nevis. Seed presented by the Cotton Spinners' Association.

Nos. 93518 to 93520 were collected on the island of Antigua.

93518. Gossypium sp.

Peasant seed.

93519. Gossypium sp.

Planting seed.

93520. Gossypium sp.

93521. Gossypium sp.

Unselected seed from the island of St. Vincent.

93522. Gossypium sp.

Collected on the island of Puerto Rico, at Jones's planting.

93523. Gossypium sp.

Collected on the island of St. Kitts.

Nos. 93524 to 93527 are samples of wild cotton.

93524. Gossypium sp.

#### 93496 to 93536—Continued.

93525. GOSSYPIUM SD.

Collected at East End, island of St. John, Virgin Islands.

93526. Gossypium sp.

Collected on St. Croix, Virgin Islands.

93527. GOSSYPIUM sp.

Collected on Nevis Island, British West Indies.

98528, ACROCOMIA ACULEATA Lodd. Phoenicaceae. Grugru palm.

A tall palm up to 50 feet high, native to Trinidad, with pinnate leaves 10 to 12 feet long and brownish fruits about half the size of those of A. sclerocarpa of Brazil, to which it is closely related.

93529. COFFEA ARABICA L. Rubiaceae. Arabian coffee.

Collected at the Brown estate, island of Trinidad.

93530. CORYPHA UMBRACULIFERA L. Phoenicaceae. Talipot palm.

Collected on the island of Trinidad. 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.

For previous introduction see 76758.

93531. Hyophorbe sp. Phoenicaceae.

Collected in the public park at Basseterre, island of St. Kitts.

93532. LICUALA PELTATA ROXD. Phoenicaceae. Palm.

Collected on the island of Trinidad. An Indian palm, native to the foothills of the Himalayas, with stems 8 to 15 feet high and round leaves, 3 to 5 feet in diameter, deeply lobed into 12 to 30 obtusely 2-parted segments each bearing several teeth up to 2 inches long. The ellipsoid, orange-colored fruits, half an inch long, are borne in large clusters.

For previous introduction see 34742.

93533. MAURITIA FLEXUOSA L. f. Phoenicaceae. Mirity.

Collected on the island of Trinidad. A palm, native to tropical Brazil, which grows to a height of 150 feet and 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 small smooth reticulated scales. The spadix, loaded with fruit, is of immense weight, often more than two men can carry. The tree forms extensive forests in the Amazon Delta and provides material for subsistence and arts of the Indians.

For previous introduction see 31311.

93534. MYRISTICA FRAGRANS Houtt. Myristicaceae. Common nutmeg.

Collected on the island of Trinidad. An East Indian tree 20 to 25 feet high with smooth, grayish-brown bark, oval, dark-green, sharp-pointed leaves, 3 to 6 inches long, slightly aromatic when bruised, and pale-yellow flowers in axillary racemes, followed by nearly spher-

# 93496 to 93536—Continued.

ical, pearlike drupes. The flesh of these drupes is yellow and full of astringent juice and incloses a hard-shelled nut, the seed of which is the nutmeg of commerce.

For previous introduction see 44565.

Nos. 93535 and 93536 were collected in a public park at Basseterre, on the island of St. Kitts.

93535. PTYCHOSPERMA sp. Phoenicaceae, Palm.

93536. THRINAX sp. Phoenicaceae.

#### 93537 and 93538.

From the Union of Soviet Socialist Republics. Seeds presented by G. Grossmann, Bureau of Introduction, Leningrad. Received June 3, 1931.

93537. CASSIA MEDSGERI Shafer. Caesalpiniaceae.

A perennial herb, 3 to 4 feet high, closely resembling Cassia marilandica, from which it differs in the orange-colored flowers and in having the joints of the pod broader than long. Of possible value as a forage crop or for green manure.

93538. PSORALEA CORYLIFOLIA L. Fabaceae. Scurf-pea.

An erect annual herb 1 to 3 feet high, with round, sinuate-margined, black-dotted leaves 1 to 3 inches long and dense heads of 10 to 30 small yellow flowers. It is native to India and is used as green manure.

## 93539 and 93540.

From the Union of South Africa. Seeds purchased from Kate C. Stanford, Stellenbosch. Received June 4, 1931.

93539. LACHENALIA UNICOLOR Jacq. Liliaceae. Cape-cowslip.

A bulbous perennial with usually strapshaped leaves 6 inches long and an inch broad and a stiffly erect peduncle 6 inches high, bearing a dense raceme 2 to 4 inches long and bell-shaped, bright-red flowers one-fourth of an inch long. It is native to South Africa.

93540. LACHENALIA UNIFOLIA Jacq., Liliaceae. Cape-cowslip.

A bulbous perennial usually having a single linear leaf clasping the base of the flower stem for 2 to 3 inches. The bell-shaped white flowers, tinged with red or blue, are half an inch long and are borne in a lax raceme on a peduncle 1 foot high. It is native to South Africa.

93541. BARRINGTONIA ASIATICA (L.) Kurz (B. speciosa Forst.). Lecythidaceae.

From Jamaica, British West Indies. Seeds presented by H. Hood-Daniel, Port Antonio. Received June 5, 1931.

A handsome tree 50 feet high, with thick leathery leaves, bright-green and a foot long, racemes of large showy flowers having white petals, and crimson-tipped stamens resembling a brush. The smooth shining black fruits are shaped like a 4-sided pyramid and are 3 to 4 inches long on each side. It is native to the East Indies.

For previous introduction see 80176.

93542. ZEA MAYS L. Poaceae. Corn.

From Mexico. Seeds presented by Emil Makrinius, Concordia, Oaxaca. Received June 8, 1931.

Indian name, Chisè. Corn grown in the mountains 10,000 feet above sea level. It matures in 11 months.

93543. Gossypium davidsonii Kellogg. Malvaceae.

From San Marco Island, Lower California, Mexico. Seeds presented through E. H. Page, Oakland, Calif. Received June 8, 1931.

For previous introduction and description see 92901.

93544. MICHELIA CHAMPACA L. Magnoliaceae. Champac.

From Brazil. Seeds presented by 1'. H. Rolfs, Consultor Technico de Agricultura do Estado de Minas Geraes. Received June 8, 1931.

A tall evergreen tree, native to the Himalayas, with pubescent branchlets, ovate-lanceolate leaves 8 to 10 inches long, and axilary, usually solitary, pale-yellow fragrant flowers 2 inches across.

For previous introduction see 73860.

93545. ZEA MAYS L. Poaceae. Corn.

From Mexico. Seeds presented by Emil Makrinius, Concordia, Oaxaca. Received June 8, 1931.

Introduced for the use of department specialists.

93546 and 93547. LOPHIRA ALATA Banks. Dipterocarpaceae.

From Africa. Seeds presented by the conservator of forests, Forestry Department, Accra, Gold Coast. Received June 9, 1931.

A large tree, native to tropical Africa, with obovate, crispate-undulate, coriaceous leaves 30 inches long, and terminal. pyramidal panieles of creamy white flowers 1 to 2 inches across. The fruit is subtended by the calyx, one lobe of which is enlarged to 4 inches long and is crimson when the nut is ripe.

93546. Oda No. 1. Collected in a high forest in the Oda district near Foso.

93547. Kumasi No. 2. Collected in a savanna forest in northwest Ashanti, a few miles south of Kintampo.

93548. IPOMOEA sp. Convolvulaceae.

From El Cayo, British Honduras. Tubers collected by H. H. Bartlett, director, department of botany, University of Michigan, Ann Arbor. Received June 9, 1931.

Wild sweetpotatoes, obtained from the Indians at San Antonio, a Maya village in the Cayo district. These tubers are used as food by the Indians.

93549. PIMENTA OFFICINALIS Lindl.

Myrtaceae.

Allspice.

From Honolulu, Hawaiian Islands. Seeds presented by Harold L. Lyon, in charge, department of botany and forestry, experiment station of the Hawaiian Sugar Planters Association. Received June 9, 1931. 93549—Continued.

A small tree, native to tropical America, whose unripe berries, when dried, form the allspice of commerce. It prefers a hot, rather dry climate, with alluvial, well-drained soil.

For previous introduction see 55102.

93550 to 93554. SORGHUM VULGARE Pers. Poaceae. Sorghum.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Applied Botany. Leningrad. Received June 10, 1931.

A collection of native varieties of dwarf broomcorn from Turkmenistan.

93550. Archman. C. I. No. 1005.

93551. Bairam-Ali. C. I. No. 1006.

93552. Duslu-Tepé. C. I. No. 1004.

93553. Mokhtum-Kala. C. I. No. 1003.

93554. Tolotan. C. I. No. 1007.

93555. DIOSCOREA Sp. Dioscoreaceae.

From China. Tubers collected by P. H.
Dorsett and W. J. Morse, agricultural
explorers, Bureau of Plant Industry.
Received November 7, 1930. Numbered
in June, 1931.

No. 7313. From Fou Chow Ssu Temple, September 29, 1930. Aerial tubers of a yam with cylindrical roots; one of the small-tubered yams of northern China.

93556. Pieris sp. Ericaceae.

From China. Seeds presented by T. D. Payne, China Inland Mission, Luchang, Yunnan. Received June 11, 1931.

A small tree collected at 5,000 feet altitude in latitude 26° north.

93557 to 93571. Soja Max (L.) Piper (Glycine hispida Maxim.). Fabaceae. Soybean.

From Manchuria and Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received June 12, 1931.

Nos. 93557 to 93566 were received through the Mitsubishi Shoji Kaisha (Ltd.), Dairen, Manchuria.

Nos. 93557 to 93559 came originally from Yinkkou, Manchuria.

93557. No. 7930. A mixed sample of medium to medium-small yellow varieties, used for oil and oil meal.

93558. No. 7931. *Green.* A medium-sized light yellowish-green bean with pale hilum and yellow germ.

93559. No. 7932. Paimei tou (white eyebrow). A medium-sized oval, very light-yellow bean with pale hilum.

93560. No. 7933. Paimei tou (white eyebrow). Medium-small to medium-sized oval, light-yellow beans with pale hilum; originally from Mukden (Fengtieng), Manchuria.

93561. No. 7934. Ching yuan tou (excellent grade). An oval light-yellow bean of medium size with light-brown hilum; originally from Tielling, Manchuria.

# 93557 to 93571—Continued.

93562. No. 7935. A mixed sample of light-yellow oval beans, small to medium in size; originally from Kaiyuan, Manchuria.

93563. No. 7936. A yellow bean, small to medium in size; originally from Ssupingkai, Manchuria.

93564. No. 7937. A light-yellow, nearly round bean of medium size with brown hilum; originally from Kungchuling, Manchuria.

93565. No. 7938. A light-yellow bean of medium size; originally from Kirin, Manchuria.

93566. No. 7939. A light-yellow bean, medium-small to medium in size; originally from Changchung, Manchuria.

Nos. 93567 to 93571 were received from Fukushima Ken, Japan.

93567. No. 7940. Asahi No. 60 (sunrise No. 60). A medium large, oval, light-yellow bean with brown hilum.

93568. No. 7941. Shiroke No. 9 (white hair No. 9). A medium large, oval, slightly flattened, light-yellow bean with pale hllum.

93569. No. 7942. Mejiro No. 1 (white eye No. 1). A medium large, nearly round, light-yellow bean with pale hilum.

93570. No. 7943. Daruma No. 2. A medium size, oval, light-yellow bean with brown hilum.

93571. No. 7944. Shiro hachikoku. A large nearly round, light-yellow bean with pale hilum.

93572. SEDUM DENDROIDEUM Moc. and Sesse. Crassulaceae.

From Mexico. Seeds collected by Paul Russell and Max Souviron, Bureau of Plant Industry. Received September 26, 1930. Numbered in June, 1931.

No. 16. Collected southwest of Tlalpam, Distrito Federal, in a lava field. A muchbranched shrub 2 to 3 feet high, often forming dense masses. The flat, fleshy, obovate leaves are 1 to 2 inches long, and the small bright-yellow flowers are borne in paniculate cymes. It is native to Mexico.

#### 93573. Bambusa vulgaris Schrad. Feather bamboo.

From India. Seeds presented by R. N. Parker, forest botanist, Forest Reserve Institute and College, Dehra Dun, United Provinces. Received June 13, 1931.

This seed was received under the name Bambusa longispiculata, but specimen culm sheaths sent later from the same source are typical of B. vulgaris, and the young plants grown from the seeds appear to be of that species.

93574 and 93575. HAYLOCKIA PUSILLA Herbert. Amaryllidaceae.

From Uruguay, Bulbs presented through Dr. William A. Maxon, United States National Museum, Received June 13,

A bulbous perennial, native to Uruguay, with linear, radical leaves appearing after the flowers. The scape is very short and bears a single flower with greenish tube 1

#### 93574 and 93575—Continued.

to 2 inches long and a white or straw-colored limb of equal length, tinged outside with purple or rose.

93574. A form with white flowers.

93575. A form with yellow flowers.

93576. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

From Morocco. Seeds presented by H. Brayard, director, Ferme Expérimentale, Marrakech. Received June 16, 1931.

Luzerne of Tafilalet.

93577. Enterolobium cyclocarpum (Jacq.) Griseb. Mimosaceae.

From Mexico. Seeds presented by Aurelio Miza, Piedras Negras, Vera Cruz. Received June 17, 1931.

One of the most beautiful and largest trees of 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 up during the night, and the pods are twisted into a short spiral. The leaves and pods are much relished by cattle.

For previous introduction see 80690.

#### 93578 and 93579.

From the Hawaiian Islands. Seeds presented by the experiment station of the Hawaiian Sugar Planters' Association, Honolulu, through Mr. Wray, of Flamingo Groves, Fla. Received June 17, 1931.

93578, BARYXYLUM AFRICANUM (Sond.) Pierre (Peltophorum africanum Sond.). Caesalpiniaceae.

A handsome, yellow-flowered tree with a habit like a mimosa, native to tropical and subtropical Africa. It becomes 20 to 30 feet high and should be tested in southern Florida and also in southern California as an ornamental shade tree.

For previous introduction see 62899.

93579. BARYXYLUM BRASILIENSE (L.) Pierre. Caesalpiniaceae.

A tree up to 80 feet high with bipinnate leaves of small leaflets and axiliary 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 87499.

# 93580. OLEA EUROPAEA L. Oleaceae. Common olive.

From Greece Cuttings presented by George Choremis, Chios. Received June 18, 1931.

93581. LITCHI CHINENSIS Sonner. (Nephelium litchi Cambess.). Sapindaceae. Lychee.

From China. Plants presented by G. Weidman Groff, Lingnan University, Canton. Received June 22, 1931.

No. 197. Nomai lychee, from the Lingnan University orchards.

#### 93582 to 93584.

From Central America. Plants purchased from the United Fruit Co., through Wilson Popenoe, Research Department, Tela, Honduras. Received in June and September, 1930. Numbered in June, 1931.

93582. GARCINIA MANGOSTANA L. Clusiaceae. Mangosteen.

98583 and 98584. Persea schiedrana Nees. Lauraceae. Coyo.

This plant, known as yas in Costa Rica and coyo in Guatemala, occurs from southern Mexico to Panama. In Costa Rica it is found abundantly on the slopes of Irazu at altitudes between 4,000 and 6,000 feet. The fruits greatly resemble avocados. The tree is of slow growth and probably does not bear until it is 8 or 10 years old.

For previous introduction see 80540.

## 93585 to 93588.

From the Hawaiian Islands. Seeds presented by D. T. Fleming, Lahaina, Maui Island. Received June 22, 1931.

93585. Cassia sp. Caesalpiniaceae. Hybrid showers.

93586. Cassia sp. Caesalpiniaceae.

Rainbow showers.

93587. CASUARINA sp. Casuarinaceae.

93588. DESMANTHUS VIRGATUS (L.) Willd. Mimosaceae.

A white-flowered woody plant, common in many places in the West Indies. The leaves, which are sensitive, are bipinnate, and the pods are linear compressed. The brown polished seeds are sometimes used as beads.

For previous introduction see 49407.

# 93589. OLEA EUROPAEA L. Oleaceae. Common olive.

From Greece. Cuttings presented by George Choremis, Chios. Received June 22, 1931.

For previous introduction and description see 93580.

# 93590 to 93598.

From China. Plants presented by G. Weidman Groff, Linguan University, Canton. Received June 23, 1931.

93590. Ficus sp. Moraceae. Fig

No. 331. A wild fig which gives promise as a stock for better varieties.

93591 to 93595. CITRUS SINENSIS (L.) Osbeck. Rutaceae. Orange.

93591. No. 230. Ming lau chang. From Lingtam (near Towah), Honan Island, Canton. Grafted on Australian lemon.

93592. No. 97. Om lau chang. From Lokongtung. Grafted on C. grandis, Kwangsai shatin yau.

98598, No. 214. Om lou chang. From Towah, Honan Island, Canton. Grafted on Australian lemon.

93594. No. 232. Om lou chang. From Lingtam (near Towah), Honan Island, Canton. Grafted on Australian lemon. 93590 to 93598—Continued.

93595. No. 279. Om low chang. From Lokongtung. Grafted on C. grandis, Kwangsai shatin yau.

93596 and 93597. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Rutaceae.

Mandarin orange.

93596. No. 258. Szwui kom, Szwui mandarin. From Lokongtung. Grafted on Australian lemon.

93597. No. 259. Szwii kom, Szwii mandarin. From Lokongtung. Grafted on C. grandis, Kwangsai shatin yau.

93598. CITRUS Sp. Rutaceae.

No. 248. 'T'in ling mung, sweet ling mung. From Towah, Honan Island, Canton. Grafted on Australian lemon. An interesting and important form for study.

93599. Soja Max (L.) Piper (Glycine hispida Maxim.). Fabaceae.

Sovbean.

From England. Seeds presented by Dr. J. L. North, Royal Botanic Society, London. Received June 23, 1931.

Originally from Yugoslavia (Belgrade).

93600. Begonia engleri Gilg. Begoniaceae.

From England. Seeds grown in the Royal Botanic Gardens, Kew, presented by Mrs. H. H. Buxton, Peabody, Mass. Received June 23, 1931.

A stout herbaceous perennial, native to tropical Africa, with red hairy stems 5 feet high and large, ovate-oblong, deeply serrate leaves having red veins. The numerous pink flowers are borne on long pendulous peduncles.

### 93601 and 93602.

From Java. Seeds presented by the Tuinbouwkundig Ambtenaar, Pasar Minggoe. Received March 19, 1930. Numbered in June, 1931.

93601. CITRUS AMBLYCARPA (Hassk.) Ochse. Rutaceae.

A small, almost unarmed tree, native to Java. The lanceolate leaves are 2 to 3 inches long, and the roundish fruits are only about an inch in diameter, the smallest of any of the Javanese species of citrus.

93602. CITRUS AURANTIFOLIA (Christm.) Swingle. Rutaceae. Lime.

Djeroek nipis.

93603. PITHECOLLOBIUM PRUINOSUM Benth. Mimosaceae.

From New South Wales, Australia. Seeds presented by G. P. Darnell-Smith, director, Botanic Gardens, Sydney. Received June 25, 1931.

A tree, native to Australia, with the branchlets, leaves, and inflorescence covered with rusty tomentum. The bipinnate leaves are made up of 2 to 5 pairs of pinnae, each bearing 3 to 4 pairs of rhomboidal leaflets 2 to 3 inches long. The small white flowers are borne in globular umbels and are followed by flat, curved, or twisted pods several inches long.

#### 93604. CYCLAMEN SD. Primulaceae.

From the island of Chlos, Greece. Corms presented by M. Pantiledes, through David Fairchild, with the Allison V. Armour expedition. Received July 14, 1930. Numbered in June, 1931.

#### 93605. Pelargonium sp. Geraniaceae. Geranium.

From Italy. Cuttings presented by William McLeod Braggins, superintendent, La Mortola Gardens, Ventimiglia, through David Fairchild, with the Allison V. Armour expedition. Received August 5, 1930. Numbered in June, 1931.

No. 3619. Variety Bragginsis. A hybrid between the ivy-leaved and the common pelargonium, found in the La Mortola Gardens. Because of its resistance to drought, its extremely long flower stalks, and its brilliant scarlet color and everblooming habit it is thought worthy of dissemination in America.

#### 93606. Cucumis melo L. Cucurbi-Melon taceae.

From Spain. Seeds presented by Stanley F. Morse. Morse Agricultural Service. Received June 26, 1931.

Melon de Sevilla. A delicious melon which can be kept for two or three months into the winter. It is said to be much richer and juicier than the honeydew.

#### 93608. SACCHARUM CINARUM L. Poaceae. Sugarcane.

From Australia. Cuttings presented by the Colonial Sugar Refining Co. (Ltd.), Syd-ney, New South Wales. Received June ney, New 26, 1931.

93607. No. 219. 93608. No. 221.

#### 93609. ZEA MAYS L. Poaceae. Corn.

From Mexico. Seeds presented by Emil Makrinius, Concordia, Oaxaca. Received June 29, 1931.

Maiz muchito. A variety which matures in eight months.

## 93610. Dolichos lablab L. Fabaceae. Hyacinth-bean.

om India. Seeds presented by the Deputy Director of Agriculture, North-ern Circle, Mandalay, Burma. Received June 30, 1931.

A large-seeded variety.

#### 93611 to 93622.

From Quibdo, Colombia. Seeds collected by W. A. Archer. Received June 9, by \ 1931

#### 93611. CARICA PAPAYA L. Papayaceae. Papaya.

The fruit is globular, 8 inches in diameter, and the fiesh is sweet with a delicious flavor and the color and consistency of a cantaloupe.

98612. CASSIA OCCIDENTALIS L. Caesalpiniaceae.

Potra. No. 2029. This plant is used as a substitute or adulterant of coffee in the Choco.

## 93611 to 93622—Continued.

93613. VIGNA SINENSIS (Torner) Savi.
Cowpea.

Frizol flanco. Said to grow wild in Rio Sinu.

93614. Lycopersicon esculentum Mill.
Coloregee Tomate. Solanaceae.

Solanaceae. Tomato.

Collected at Quibdo, Choco Province, June 1, 1931. The tomatoes of Choco grow under most dire conditions. Everyhouse has a hanging garden which may consist merely of a few tin pails on the window sill or on a post or perhaps perched all along a trestle of boards 5 or 6 feet above the ground; it may be a wooden box. The soil is always mixed with a large percentage of charcoal to prevent water-logging. The plants are spindling, 1 to 2 feet high, and the small round fruits, 2 to 4 inches in diameter, are flattened at the stem end and yellowish red in color. ish red in color.

# 93615. Passiflora Ligularis Juss. Passiforaceae. Sweet granadilla.

No. 1852. Badea. A cultivated vine, collected in Quibdo, April 10, 1931. The fruit is eaten raw or cooked; it is also used in sherbets or iced drinks.

93616 to 93619. Persea americana Mill. (P. gratissima Gaertn. f.). Lauraceae.

Collected near Quibdo, June 1, 1981. The flavor of these fruits is much superior to the Florida varieties, but some are slightly fibrous.

616. A. A large-fruited variety 5 inches in diameter and 9 inches long, with a short curved neck.

98617. B. A pear-shaped variety 5 inches long and over 3 inches in diameter. The stem is often at one

93618. C. Aguacate de pepa floja. A necked variety 7 inches long and over 3 inches in diameter. The seed is loose in the cavity.

619. D. A cucumber-shaped variety 7 inches long and over 3 inches indiameter.

93620. EPIDENDRUM NOCTURNUM Jacq. Orchidaceae. Orchid.

No. 1866. An epiphytic orchid collected April 11, 1931.

93621. SCHRADERA SD. Rubiaceae.

Queda. Collected at the headwaters of the Rio Tutunendo, north of Quibdo, May 21, 1931. A native plant which the na-tives chew to preserve their teeth. It is rambling in habit, 6 to 10 feet long, and grows in dense woods where the climate is hot and humid and the rainfall heavy.

93622. ZEA MAYS L. Poaceae. Indian corn collected on the Atrato River, at Lloro, above Quibdo, May, 1981.

# 93623 to 93747. ZEA MAYS L. Poaceae.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Plant Industry and New Cultures, Leningrad, through J. G. Dickson, United States Department of Agriculture. Received June 30, 1931.

93623 to 93747—Continued.

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93748. STEVIA REBAUDIANA Bertoni. Asteraceae.

From Cuba. Cuttings presented by Robert M. Grey, Harvard Botanic Garden, Soledad, Cienfuegos. Received June 30, 1931.

Ka-á he-é (sweet herb). A herbaceous perennial 20 inches high with small leaves

#### 93748—Continued.

about an inch long which are said to be 200 times as sweet as cane sugar. It is native to Paraguay, where it grows wild in the highlands. The sweet taste is due to a glucoside, which is said to be safe for diabetics.

For previous introduction see 54677.

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