UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 83

Washington, D. C. ▼ Issued September, 1927

SEEDS AND PLANTS IMPORTED BY THE OFFICE OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, DURING THE PERIOD FROM APRIL 1 TO JUNE 30, 1925 (NOS. 63490 TO 64428)

CONTENTS

INTRODUCTORY STATEMENT

For the second quarter of 1925, the period represented by this inventory, the general situation in respect to foreign agricultural explorations agrees rather closely with the period represented by the preceding inventory, No. 82. Doctor Fairchild was in Algeria and Morocco, Mr. Dorsett spent most of the time in the Province of Chihli, northern China, and Mr. McClure continued his work in the Province of Kwangtung, southeastern China.

Among the plant material obtained by Doctor Fairchild in Algeria were scions of three varieties of loquats (*Eriobotrya japonica*, Nos. 63557 to 63559). These were grown at the governor general's garden at Mustapha and are said to be superior types. From Dr. L. Trabut, also at Mustapha, Doctor Fairchild obtained seeds of a hybrid eucalypt (*Eucalyptus trabuti*, No. 63581). This was discovered by Doctor Trabut in the botanic gardens in Mustapha and is said to be an unusually rapid grower.

Mr. Dorsett's collections include an interesting series of native Chinese melon varieties (*Cucumis melo*, Nos. 63702 to 63713), six native cabbagelike vegetables (Brassica spp., Nos. 63910 to 63915), and many local types of beans, peas, wheat, and barley, obtained largely from the native markets in the villages of Chihli Province.

In 1925, according to the Yearbook of the Department of Agriculture for that year, about 25,000 acres were devoted to the growing of green peas in the United States. In order to assist horticulturists in extending this area by breeding disease-resistant strains and strains adapted to a variety of conditions, locally developed varieties were introduced from Germany, France, Sweden, England, and New South Wales.

One of the best date varieties grown in Lower Egypt is said to be the Samany (*Phoenix dactylifera*, No. 63975), offshoots of which have been obtained from the Egyptian Ministry of Agriculture. Date culture in the southwestern portion of the United States is progressing steadily, and Old World varieties are being sought which will be best adapted for growing in the different sections.

An Australian tree from the semiarid interior of New South Wales should be of interest for growing in the drier regions of the Southwest. This is the wilga (*Geijera parviflora*, No. 64000), a low tree resembling the weeping willow. The leaves of this drought-resistant tree are fed to cattle in New South Wales.

A collection of Crotalarias (Nos. 64058 to 64065) and one of Crotalarias and Sesbans (Nos. 64066 to 64070), the former from South Africa and the latter from Egypt, will be tested in the Southern States as cover plants and as forage.

Through the courtesy of Em. Miége, Chief of the Service de l'Expérimentation Agricole of Morocco, seeds have been obtained of a noteworthy cotton variety (Gossypium spp., Nos. 64002 and 64003). This variety is called "Sarsar," from the name of the tribe which has grown it from time immemorial in the interior of Morocco. Because of its unusual precocity, resistance to drought, and length and strength of fiber, comparable to that of the Yuma variety, it should be of interest to cotton breeders in this country.

Bureau specialists testing rubber-producing plants will be interested in the several introductions of Landolphias from tropical Africa, *Funtumia elastica* (No. 63786) from the Gold Coast Colony, Africa, and Ceara rubber (*Manihot glaziovii*, No. 63798), one of the important Brazilian rubber-producing plants.

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

ROLAND MCKEE,
Acting Senior Agricultural Explorer in Charge.

OFFICE OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., February 3, 1927.

INVENTORY [1]

63490 to 63495. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From Paris, France. Tubers purchased from Vilmorin-Andrieux & Co. Received May 6, 1925.

Locally developed varieties.

63490. *Chardon.*

63491. *Général Authaine.*

63492. *Institut de Beauvais.*

63493. *Maréchal Foch.*

63494. *Maréchal Joffre.*

63495. *Saucisse.*

63496. LILIUM CROCEUM Chaix. Liliaceae. **Lily.**

From Stuttgart, Germany. Bulbs purchased from Wilhelm Pfitzer. Received May 21, 1925.

Horticulturists engaged in lily-breeding experiments in the United States are endeavoring to obtain material of *Lilium bulbiferum*. This is said to be offered in the trade in Europe as *L. croceum*, the orange lily, and material of the latter is now being introduced for comparison tests.

63497. THUNBERGIA GRANDIFLORA **Roxb.** Acanthaceae.

From Kingston, Jamaica. Cuttings presented by W. S. Goodman, superintendent, Hope Gardens. Received May 2, 1925.

Variety *alba*. The typical form of *Thunbergia grandiflora* is well known in tropical gardens, where it is highly esteemed for its large, sky-blue flowers and the ornamental effect of its foliage. The white form (variety *alba*) is less widely cultivated, though perhaps as meritorious as the type. It is a strong-growing climber, useful for covering pergolas and fences, and is sufficiently frost resistant for cultivation in the warmer parts of Florida and the most favored sections of southern California. (*Note by Wilson Popenoe under S. P. I. No. 57216.*)

63498 and 63499.

From Matania el Saff, Egypt. Seeds presented by Alfred Bircher, director, Middle Egypt Botanic Station. Received April 28, 1925.

63498. ONCOBA SPINOSA Forsk. **Flacourtiaceae.**

The discovery of chaulmoogric acid in the seeds of *Oncoba echinata* has prompted the testing of other species of the same genus for the presence of this acid, now used in the treatment of leprosy. *O. spinosa* is described (Flora of Tropical Africa, vol. 1, p. 115) as a spiny shrub with elliptic, membranous leaves and showy, fragrant, white flowers about 2 inches across. The round, hard-shelled fruit, 2 inches in diameter, is eaten by the natives of tropical Africa, where the shrub is indigenous. The shells are often used as ornaments.

63499. SCLEROCARYA BIRREA (A. Rich.) Hochst. Anacardiaceae.

A tropical African tree 25 to 50 feet tall, with leathery pinnate leaves and light-yellow round fruits about an inch in length. The sweet resinous flesh incloses a stony nut containing two to four seeds which have a flavor similar to that of walnuts and are a favorite food of the natives of Abyssinia.

63500 to 63521. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki.**

From Nanking, China. Scions presented by M. Leslie Hancock, University of Nanking. Received April 1, 1925.

These scions are from our persimmon orchard here at the university; the material was received from many sources, and there are probably several duplications in the collection. (*Hancock.*)

63500. No. 6.	**63505.** No. 13.
63501. No. 7.	**63506.** No. 15.
63502. No. 10.	**63507.** No. 16.
63503. No. 11.	**63508.** No. 17.
63504. No. 12.	**63509.** No. 18.

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

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

63500 to 63521—Continued.

63510. No. 19.
63511. No. 20.
63512. No. 21.
63513. No. 23.
63514. No. 24.
63515. No. 27.
63516. No. 28.
63517. No. 29.
63518. No. 31.
63519. No. 32.
63520. No. 33.
63521. No. 34.

63522 to 63541. HELIANTHUS TUBEROSUS L. Asteraceae. **Jerusalem artichoke.**

From Paris, France. Tubers obtained from Vilmorin-Andrieux & Co., through D. N. Shoemaker, Bureau of Plant Industry. Received April 1, 1925.

Locally grown strains.

63522. No. 3/21.
63523. No. 4/21.
63524. No. 8/21.
63525. No. 10/23.
63526. No. 14/23.
63527. No. 15/22.
63528. No. 16/22.
63529. No. 12/23.
63530. No. 18/23.
63531. No. 19/22.
63532. No. 21/23.
63533. No. 26/23.
63534. No. 27/23.
63535. No. 29/23.
63536. No. 30/23.
63537. No. 33/23.
63538. No. 35/23.
63539. No. 38/23.
63540. No. 43/23.
63541. No. 45/23.

63542 to 63544. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From Klein Wanzleben, Germany. Tubers presented by Dr. Phil. Oskar Rabbethge. Received April 2, 1925. Notes by Doctor Rabbethge.

European varieties, not in the American trade, introduced for potato-breeding experiments.

63542. *Centifolia.* A cross between Borcken and Flora, originated by the plant breeder Von Kameke. It is a red-skinned, white-fleshed table variety, and is very healthy. Season medium and yield large.

63543. *Industry.* A cross between Richter's Early and Simon, originated by the plant breeder Modrow. It is grown on heavy soil. In western Germany it is the predominating yellow-fleshed table variety. It is a heavy yielder, matures late, but is susceptible to rot.

63544. *Pepo.* A cross between Deutsches Reich and Jubel, originated by the plant breeder Von Kameke. A light yellow-fleshed table variety, of very large yield. Resistant to rot and scarcely susceptible to fungous diseases; very resistant to wart disease. The lilac-colored flowers are inclined to vary.

63545. TRIFOLIUM REPENS L. Fabaceae. **White clover.**

From Edinburgh, Scotland. Plants presented by William Wright Smith, regius keeper, Edinburgh Botanic Garden. Received April 4, 1925.

Obtained from the Scottish Board of Agriculture. (*Smith.*)

Sent in response to a request for material of the brown-leaved strain of white clover; to be tested by clover specialists.

63546. SACCHARUM OFFICINARUM L. Poaceae. **Sugar cane.**

From Fortuna, Porto Rico. Cuttings presented by I. Mutz, through E. W. Brandes, Bureau of Plant Industry. Received April 1, 1925.

H 109.

A locally developed strain.

63547 and 63548. PISUM SATIVUM L. Fabaceae. **Pea.**

From Valence sur Rhone, France. Seeds obtained from Tézier Frères. Received April 2, 1925.

Locally grown strains.

63547. *Mange-tout violet.*

63548. *Serpette française.* An improved form with long pods.

63549. ELEOCHARIS TUBEROSA (Roxb.) Schult. Cyperaceae.

From Canton, China. Tubers collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received April 3, 1925.

No. 29. *Ma tai, Hon ma tai.* A variety of ma tai which differs in its cultural methods from the ordinary variety in that the irrigation water is withdrawn some time before the crop is ripe. The harvesting method is affected profoundly because with the variety commonly grown around Canton the crop is searched for blindly by women standing knee deep in mud and water, but with this variety the harvesting is done with a hoe, resulting in much less expenditure of labor. The culture of ma tai is rather complicated in that the corms are put through two preliminary "plantings" before they finally reach the field in which they produce. At the end of June or early in July the corms are set thickly in a bed and barely covered with soil. They are kept moist, and when their sprouts are 6 or 7 centimeters long they are transplanted to a wet culture plot and set about 1 foot apart each way. When the sprouts are about 30 centimeters high they are again transplanted to a wet culture field, usually one from which the first rice crop has just been harvested, and this time set about 3 feet apart in rows 3 feet apart, and alternated so that each plant is equally distant from all of its adjacent neighbors. Henceforth they are irrigated much the same as rice. When the plants become established each is given a small handful of powdered bean or peanut cake. The irrigation is discontinued in October. (*McClure.*)

63550. CITRUS AURANTIUM L. Rutaceae. **Sour orange.**

From Algeria. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received April 6, 1925.

From the Jardin d'Essais, Maison Carree. To be tested by citrus growers as a rootstock in comparison with strains of the same species already growing in the United States.

63551. ALPINIA sp. **Zinziberaceae.**

From Kwangtung Province, China, Rhizomes collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received April 3, 1925.

63551—Continued.

No. 28. January 17, 1925. Obtained from the village of Taichong. *Wong keung.* This is an important crop in this region, one village having harvested this year 1,000 mau [approximately 2 acres]. The yield is from 30 to 50 piculs [3,570 to 5,950 pounds] of the fresh rhizomes per mau [about one-sixth acre]. When dried, in preparation for the market, the rhizomes shrink from 25 to 30 per cent. The rhizomes are planted during April, sandy soil being preferred, about 10 inches apart in rows 14 inches apart, of which two occupy each raised bed. The number of rhizomes planted on each mau varies between 3,000 to 5,000, depending upon the richness of the soil. (*McClure.*)

63552. NERIUM OLEANDER L. Apocynaceae. **Oleander.**

From Algeria. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received April 6, 1925.

Seeds from wild plants growing in the Oasis of Bou Saada. To be tested for resistance to scale infestation.

63553. GOSSYPIUM HIRSUTUM L. Malvaceae. **Cotton.**

From Paris, France. Seeds presented by Vilmorin-Andrieux & Co., through Walter T. Swingle, Bureau of Plant Industry. Received April 6, 1925.

Coton Yerli.

To be tested by cotton specialists.

63554 to 63560.

From Algeria. Collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received April 6, 1925. Notes by Doctor Fairchild.

63554. BOUGAINVILLEA WARSZEWICZII Hort. Nyctaginaceae.

Cuttings of a horticultural variety of this gorgeous flowering climber. Instead of flowering feebly all through the season, this form bursts into bloom in the spring with a perfect mass of magenta flowers which completely hide the plant, and then it does not flower until the following spring.

63555 and 63556. DIOSPYROS SINENSIS Hemsl. Diospyraceae.

Trees grown from seed of fruits produced by a single tree in Galland Park, Algiers. Doctor Trabut says the fruits are especially fine, and Mrs. M. J. Melia, the wife of the head gardener of Galland Park, declares that they are finer flavored than any of the kaki she has eaten. I think this is the white-barked persimmon which Frank Meyer saw used as a stock for the kaki in Nangchow, south of Shanghai.

63555. Plants. **63556.** Scions.

63557 to 63559. ERIOBOTRYA JAPONICA (Thunb.) Lindl. Malaceae. **Loquat.**

These scions are from the governor general's garden in Mustapha.

63557. Since this variety did not have a name, I called it "Governor General." The head gardener said that it produced very delicious fruits much larger than the Tanaka, but that they were not good for shipping.

63554 to 63560—Continued.

63558. This variety, which Doctor Trabut calls the "Tanaka" and which he says came direct from Japan, has elongated fruits. According to Doctor Trabut it is the best of all the varieties for shipping.

63559. *Tanaka Type Improved.* According to M. J. Melia, head gardener, Galland Park, Algiers, this is a seedling from Tanaka and is larger fruited but not so good a shipper.

63560. FICUS NITIDA Blume. Moraceae.

Cuttings of the broad-leaved type which has been found far superior as a street tree here. It is called "Camellia" by Doctor Trabut and "Laevigata" by Mr. Melia.

63561 to 63568. PISUM SATIVUM L. Fabaceae. **Pea.**

From Trier, Germany. Seeds obtained from J. Lambert & Son, through D. N. Shoemaker, Bureau of Plant Industry. Received April 7, 1925.

Locally developed strains.

63561. *Rival.*

63562. *Schalerbsen.*

63563. *Schweizer Riesen.*

63564. *Staatsminister Eyschen.*

63565. *Trierer Bristallzlas.*

63566. *Verbesserte Flämische Riesen.*

63567. *Vorbote* (Eclipse).

63568. *Yuni Schwert.*

63569 and 63570. PISUM SATIVUM L. Fabaceae. **Pea.**

From Goteborg, Sweden. Seeds obtained from Göteborgs Tradgardsforening, through D. N. Shoemaker, Bureau of Plant Industry. Received April 7, 1925.

Locally developed strains.

63569. *Sabe Svenske.*

63570. *Sockerart smor.*

63571. FRAGARIA sp. Rosaceae. **Strawberry.**

From Orleans, France. Plants purchased from Barbier & Co. Received April 9, 1925.

Eugene Transon. This dwarf variety, with very thick, short flower stems, bears bright red, superb fruits which are enormous, nearly as big as Mademoiselle Moutot, but of a more regular shape, resembling Docteur Morère. The firm, sweet, melting flesh is a rosy salmon and richly perfumed. This is a mid-early sort and especially noted for its early crop. (*Catalogue of Barbier & Co.*)

63572 to 63577. PISUM SATIVUM L. Fabaceae. **Pea.**

From Lyon, France. Seeds obtained from Leonard Lille, through D. N. Shoemaker, Bureau of Plant Industry. Received April 6, 1925.

Locally developed strains.

63572. *Du Chemin Long, No. 10106.*

63573. *Mangetout Beurre, No. 10337.*

63572 to 63577—Continued.

63574. *Nain de Gonthier ou de Paris, No. 10088.*

63575. *Nain Leveque, No. 10150.*

63576. *Petit Provençal, No. 10091.*

63577. *Serpette d'Auvergne à très longue cosse, No. 9884.*

63578 and 63579. PISUM SATIVUM L. Fabaceae. **Pea.**

From Manchester, England. Seeds obtained from Dickson, Brown, & Tait, through D. N. Shoemaker, Bureau of Plant Industry. Received April 6, 1925.

Locally developed strains.

63578. *Centenary.*

63579. *St. Duthus.*

63580. ARRACACIA XANTHORRHIZA Bancroft (*A. esculenta* DC.). Apiaceae. **Arracacha.**

From Mayaguez, Porto Rico. Tubers presented by T. B. McClelland, horticulturist, Porto Rico Agricultural Experiment Station. Received April 9, 1925.

The arracacha is a perennial herbaceous plant, closely related to the carrot and indigenous to the higher altitudes of northern South America. It grows about 3 feet high, with carrotlike foliage and small umbels of purple flowers. The large fleshy roots are important food in parts of South America and Central America; they are eaten boiled like parsnips or sliced raw and fried, and are said to be very palatable either way. Propagation is affected by making cuttings of the crown with a small piece of the root attached.

63581. EUCALYPTUS TRABUTI Vilm. Myrtaceae.

From Mustapha, Algeria. Seeds collected by Dr. L. Trabut and presented through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received April 7, 1925.

Collected in the botanic gardens of the university, February 23, 1925. A remarkable hybrid between *Eucalyptus botryoides* Sm. (pistillate) and *E. rostrata* Schlecht (staminate) discovered by Doctor Trabut. The characters of the leaves are intermediate; the capsules could not well be more nearly intermediate. The great value of this hybrid is in its unusually rapid growth. (*Fairchild.*)

For previous introduction see S. P. I. No. 45769.

63582 and 63583.

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

63582. ALBIZZIA CHINENSIS (Osbeck) Merr. (*A. stipulata* Boiv.). Mimosaceae.

No. 20.

A large, rapidly growing tree, native to the subtropical regions of eastern India. It is said by Watt (Dictionary of the Economic Products of India) to have been found very satisfactory in Assam as a shade tree for tea. The roots do not penetrate the soil deeply, and the foliage does not make a dense shade.

For previous introduction see S. P. I. No. 61480.

63583. CHRYSOPHYLLUM MONOPYRENUM Swartz. Sapotaceae. **Satin leaf.**

No. 236.

An ornamental West Indian tree, up to 35 feet high, with broad green leaves, rusty white beneath, small white flowers, and oblong blackish berries about an inch and a half long.

For previous introduction see S. P. I. No. 45107.

63584. SYRINGA SWEGINZOWII Koehne and Ling. Oleaceae. **Lilac.**

From Paris, France. Plants purchased from Vilmorin-Andrieux & Co., through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received April 16, 1925.

An attractive hardy lilac, about 10 feet high, from western China. The dark-green, oval leaves are 2 to 4 inches long, and the fragrant, rosy lilac flowers are borne during June in terminal panicles up to 10 inches in length.

63585. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

From Montlucon, Allier, France. Seeds obtained from G. & M. Peronnin, through A. J. Pieters, Bureau of Plant Industry. Received April 23, 1925.

A locally developed strain.

63586. BOUEA OPPOSITIFOLIA (Roxb.) Meissn. (*B. burmanica* Griffith). Anacardiaceae. **Maprang.**

From Bangkok, Siam. Seeds presented by Dr. Yai S. Sanitwongse. Received May 16, 1925.

One of the wild relatives of the mango (*Mangifera indica*) is the maprang, an evergreen tree of moderate height, native to Burma and the Andaman Islands. The narrowly elliptic, pale-green, leathery leaves are opposite, and the small yellow flowers are produced in slender, lax, few-flowered panicles. There is considerable variation in the size and quality of the edible, yellow fruits. According to Doctor Sanitwongse, the trees grown in Burma and Indo-China bear only very small fruits which are very sour. In Siam, however, where the tree is cultivated in alluvial soil, with river irrigation, the fruits are large, light yellow, and have a flavor resembling that of a yellow plum or apricot. The hard, gray wood is said to be very durable. The tree may possibly be sufficiently hardy for growing in southern Florida.

For previous introduction see S. P. I. No. 55046.

63587. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soy bean.**

From London, England. Seeds presented by Dr. J. L. North, curator, Royal Botanic Gardens. Received May 16, 1925.

Grown at Budapest, Hungary, from seed obtained in Siberia. (*North.*)

63588. JUGLANS sp. Juglandaceae. **Walnut.**

From Ibarra, Ecuador. Seeds presented by José Felix Tamayo. Received June 17, 1925.

The tocte is an Ecuadorian tree which closely resembles the black walnut, but the leaves are somewhat larger. The nuts are an inch and a half in diameter, with a very thick, bony shell and a kernel of mild, pleasant flavor. The wood is hard and fine grained. Although the nuts are very popular in parts of Ecuador, the tree is not cultivated, but grows wild around cultivated fields and dooryards.

63589 to 63599.

From Ayr, Scotland. Seeds purchased from McGill & Smith. Received April 7, 1925.

Locally grown seeds.

63589. ANTHYLLIS VULNERARIA L. Fabaceae. **Kidney vetch.**

63590 to 63595. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

63590. *English broad leaved.*

63591. *English late flowering.*

63592 and 63593. Harvested in Switzerland at an altitude of 3,000 feet. (*McGill & Smith.*)

63592. *Mountain red clover No. 1.*

63593. *Mountain red clover No. 2.*

63594. *Welsh.*

63595. *Wild.*

63596 to 63599. TRIFOLIUM REPENS L. Fabaceae. **White clover.**

63596. *English giant.*

63597. *English.*

63598. *New Zealand.*

63599. *Wild.*

63600. TRIFOLIUM REPENS L. Fabaceae. **White clover.**

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

Mixed natural seed harvested at the Edinburgh Plant-Breeding Station in 1923 from a large number of plants of wild white clover which were originally taken from Orkney, Shetland, Caithness, and the north of Scotland. (*Smith.*)

Sent in response to a request for material of the brown-leaved strain of white clover.

63601. PASSIFLORA EDULIS Sims. Passifloraceae. **Purple granadilla.**

From Epping, New South Wales, Australia. Seeds presented by L. P. Rosén & Son. Received April 7, 1925.

Perfecta. An improved strain of the granadilla or passion fruit. (*Rosén.*)

63602 to 63604. COFFEA spp. Rubiaceae. **Coffee.**

From Mayaguez, Porto Rico. Seeds presented by T. B. McClelland, horticulturist, Porto Rico Agricultural Experiment Station. Received April 1, 1925.

63602 to 63604—Continued.

63602. COFFEA EXCELSA Cheval.

According to the Philippine Review, vol. 9, p. 121, this coffee thrives from sea level to 700 meters, succeeds well on rather stiff clayey soils, and is the most resistant to blight and drought of any coffee. It might be grown with an annual rainfall of 48 inches. It is of strong vigorous growth and produces 1 kilogram of dried coffee from 7 to 8 kilograms of fresh berries. *Coffea excelsa* makes an excellent stock for other coffees. The first crop is obtained at the age of 4 to 5 years and a full crop at the age of 7 to 8 years.

For previous introduction see S. P. I. No. 57271.

63603. COFFEA LAURENTII Wildem. (*C. robusta* Hort.).

A white-flowered shrub, native to Belgian Congo, with oval dark-green leaves up to a foot in length and shortly elliptic 2-seeded fruits. The roundish seeds are sometimes nearly half an inch long.

For previous introduction see S. P. I. No. 57272.

63604. COFFEA sp.

Received as *Coffea dybowski*, for which a place of publication has not been found.

63605. INDIGOFERA ENDECAPHYLLA Jacq. Fabaceae.

From Peradeniya, Ceylon. Seeds presented by H. A. Deutrom, acting manager of the experiment station, at the request of F. A. Stockdale, Director of Agriculture. Received April 4, 1925.

An annual or biennial leguminous plant which has become popular as a cover plant in Ceylon, according to the Tropical Agriculturist (vol. 63, October, 1924). The trailing stems are 1 to 2 feet long, and the violet-purple flowers are in dense racemes.

63606. HELIANTHUS TUBEROSUS L. Asteraceae. **Jerusalem artichoke.**

From Montreal, Canada. Tubers obtained from the William Ewing Co. Received April 13, 1925.

Locally grown tubers.

63607 to 63609. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Yugakujo, Manchuria. Scions presented by Dr. R. Watanabe, director, Southern Manchurian Agricultural Experiment Station. Received April 15, 1925.

Manchurian varieties.

63607. *Chin chou ta hsing.*

63608. *Erh hsing mei.*

63609. *Li tzu hsing.*

63610 to 63617. SACCHARUM OFFICINARUM L. Poaceae. **Sugar cane.**

From Rio Piedras, Porto Rico. Cuttings presented by the Insular Experiment Station, through E. W. Brandes, Bureau of Plant Industry. Received April 15, 1925.

Locally developed strains.

63610 to 63617—Continued.

63610. *H. 109.*
63611. *B. 11569.*
63612. *P. R. 433.*
63613. *P. R. 729.*
63614. *P. R. 828.*
63615. *P. R. 492.*
63616. *P. R. 543.*
63617. *P. R. 358.*

63618 to 63621. SACCHARUM OFFICINARUM L. Poaceae. **Sugar cane.**

From Fajardo, Porto Rico. Cuttings presented by the Fajardo Sugar Co., through E. W. Brandes, Bureau of Plant Industry. Received April 15, 1925.

Locally developed strains.

63618. *F. C. 462.*
63619. *F. C. 86.*
63620. *F. C. 306.*
63621. *F. C. 305.*

63622 to 63627.

From China. Seeds collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received April 3, 1925. Notes by Mr. McClure.

63622. CANARIUM PIMELA Koen. Balsameaceae.

No. 53. Foh Tsun, Lohkongtang, Kwangtung. December 5, 1924. *U lam.* The fruits, black when ripe, exude a viscous, milky juice with a pungent flavor when the skin is broken. They are commonly eaten after having been scalded for a moment and flavored with soy sauce or sugar. In preparing them for the market the fruits are scalded, the seeds removed, and the flesh dried in the sun.

63623. CELASTRUS HINDSII Benth. Celastraceae.

No. 55. Honam Island. January 2, 1925. *Tsing kung t'ang.* A half-woody, slender vine, 2 to 4 meters long, growing wild on trees and shrubs in poor soil, chiefly granite clay. It is an attractive ornamental with bright reddish orange seeds which are exposed at maturity by the splitting of the pod into a three-pointed star.

63624. DESMOS CHINENSIS Lour. Annonaceae.

No. 57. Honam Island. January 2, 1925. *Ka ying chau.* A shrub, 1 to 2 meters high, growing wild in a shady place along the roadside in clay soil. The very fragrant, greenish yellow flowers are followed by curious clusters of attractive fruits which turn from yellow to red and are composed of many moniliform pods radiating from a short peduncle.

63625. GLEDITSIA FERA (Lour.) Merr. (*G. australis* Hemsl.). Caesalpiniaceae. **Honey locust.**

No. 59. *Tai ip ying.* A large tree growing wild on Honam Island, valuable as a lumber tree and as an ornamental.

63626. ILEX ROTUNDA Thunb. Aquifoliaceae.

No. 48. Honam Island. January 2, 1925. *Pak lan heung.* A small wild shrub, usually less than 1 meter high, with glossy foliage and attractive red fruits.

63627. MUSSAENDA sp. Rubiaceae.

No. 51. Honam Island. December, 1924. *Pak chi sin.* A wild ornamental vine with inconspicuous yellow flowers and conspicuous white bracts.

63628. CALYCOPHYLLUM CANDIDISSIMUM (Vahl) DC. Rubiaceae.

From Summit, Canal Zone. Seeds presented by Holger Johansen, Plant Introduction Garden. Received June 12, 1925.

A Central American timber tree known commercially as the degame is described by S. J. Record (Timbers of Tropical America, p. 547) as being 40 to 65 feet high, with a straight trunk free from limbs. The wood has the strength, toughness, and resilience of hickory and is used for making agricultural implements, tool handles, and similar articles.

63629 to 63650.

From China. Seeds collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received April 3, 1925. Notes by Mr. McClure.

63629. MYROXYLON SENTICOSUM (Hance) Warb. (*Xylosma senticosum* Hance). Flacourtiaceae.

No. 50. Near Chukliu, Kwangtung. January 18, 1925. *Kai na lak.* A very ornamental and large shapely shrub or small tree, having dense glossy foliage and producing an abundance of small dark-red fruits which are borne in short-stemmed clusters along the branches.

63630. PANDANUS sp. Pandanaceae.

No. 43. Lamt'au Island, Hong Kong Colony. December, 1924. *Lo tau lak. Lak poh loh.* This plant is widely used by the Chinese as a hedge. The long ribbonlike leaves are stripped of their marginal and midrib hooks, rolled into "spools," dried, and used to weave a coarse matting, and in a few instances they are used for hats.

63631. PSYCHOTRIA ELLIPTICA Ker. Rubiaceae.

No. 54. Honam Island, Kwangtung. January 2, 1925. An attractive ornamental 1 to 6 meters high, growing wild in a ferruginous sandy clay loam and having large leaves and rather inconspicuous white flowers. The clusters of fruits are at first yellow, turning red in the autumn.

63632. RAPHIOLEPIS INDICA (L.) Lindl. Malaceae.

No. 49. Honam Island, Kwangtung. January 2, 1925. *Ch'un fa.* This very pretty little shrub, which was found wild, produces clusters of delicate pink flowers that are reminiscent of cherry blossoms, and berries which become red in the autumn.

63633. SMILAX sp. Smilacaceae. **Smilax.**

No. 56. From the wild near Fohtsuen, Kwangtung. December 5, 1924. *Ma kap.* A sturdy glossy-leaved vine bearing in the autumn an abundance of brilliant red berries in dense umbels. This fine ornamental seems to thrive equally well on any soil and grows naturally under very difficult conditions on starved clay soil in burned or cut-over places.

63634 and 63635. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

63634. No. 30. Kochau, Kwangtung. *Luk tau.* Compared with the other varieties, luk tau is very small and cylindrical, and, as its name suggests, it is dark green. It is harvested twice a year, June and September, and is used in many forms, the chief of which are flour and sprouts,

63629 to 63650—Continued.

63635. No. 31. From the vicinity of Shiuhing, on the West River, Kwangtung. *Shiuhing luk tau.* This variety is harvested twice yearly, June and September, and is used in the same ways as No. 30 [S. P. I. No. 63634].

63636 to 63642. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soy bean.**

63636. No. 32. Kochau, Kwangtung. *Tsing tau.* A small light-green bean which is harvested and used in the same ways as No. 30 [S. P. I. No. 63634].

63637. No. 35. Pakmiu, Heungshan district, Kwangtung. *Hak tau.* This variety, harvested during July, produces black seeds which are flatter and more elliptical than the other varieties. These seeds are used mostly as "hung tau" in boiled dishes.

63638. No. 36. From the vicinity of Shiuhing, on the West River, Kwangtung. *Shiuhing hak tau.* Harvested during June or July, and used the same as No. 35 [S. P. I. No. 63637].

63639. No. 37. Kochau, Kwangtung. *Tai u tau.* Harvested during June or July and used the same as No. 35 [S. P. I. No. 63637].

63640. No. 39. Kochau, Kwangtung. *Wong tau, Pak tau.* These beans are nearly globular and yellow, and are harvested twice annually, during June or July and September or October. They are used in making bean curd and for the oil contained in them, though in this region they are rarely ever used for the latter.

63641. No. 40. The Canton Christian College Agricultural Department Gardens. *Pak tau, Wong tau.* This white or yellowish white bean is harvested in June or July, and the chief uses are the making of bean curd and of a soy sauce or "pak yau."

63642. No. 41. Koiu, Kwangtung. *Pak tau.* These beans are whiter than No. 39 [S. P. I. No. 63640] and have a suggestion of an "eye" around the hilum. Harvesting and use the same as No. 39.

63643. STIZOLOBIUM DEERINGIANUM Bort. Fabaceae.

No. 43. Canton Christian College Farm. January 20, 1925. *Kau tsau tau.* This vine grows from 2 to 3 meters in length and is harvested once a year. The Chinese farmers around Tsinguen and Linchow soak the vines and beans in water and use them as fertilizer, but the method used at the college is to plow them under as green manure. This variety makes a very heavy growth and is considered a valuable crop for the purpose of fertilizing.

63644 and 63645. TERMINALIA CHEBULA Retz. Combretaceae.

63644. No. 44. Kongtau village, Lohkongtung, Kwangtung. December 5, 1924. *Ho tsai.* The flesh of the fruits is crushed and steeped in a small quantity of water, and the liquid that is drained off is used as a gray dye.

63629 to 63650—Continued.

63645. No. 45. Kongtau village, Lohkongtung, Kwangtung. December 5, 1924. *Yuk hoh tsz.* Used in the same manner as No. 44 [S. P. I. No. 63644].

63646 to 63648. VIGNA CYLINDRICA (Stickm.) Skeels. Fabaceae. **Catjang.**

63646. No. 33. Pakmiu, Heungshan District, Kwangtung. *Hung tau.* This variety, which takes its name from the red color of the skin covering the seed, is harvested in June. The uses, which are not so varied as those of the others, are mostly in boiled dishes, alone with sugar, and for making soup.

63647. No. 34. Tsangshing, Kwangtung. *Hung kong tau.* Harvested in June and used in the same manner as No. 33 [S. P. I. No. 63646].

63648. No. 38. *Min tau.* This variety is characterized by a black "eye" around the hilum. Harvested during June or July and used in the same way as No. 33 [S. P. I. No. 63646]. It is considered by some to be useful in the treatment of rheumatism, and rice wine in which this bean has been boiled is used as a general tonic.

63649. VITEX NEGUNDO INCISA (Lam.) C. B. Clarke. Verbenaceae.

No. 47. Honam Island. December, 1924. *Hut kin shau.* This half-woody wild shrub is used by the Chinese as an astringent in the case of an open wound. The leaves are fragrant when crushed, and the pale-blue flowers are produced in terminal spikes.

63650. VITEX TRIFOLIA L. Verbenaceae.

No. 58. *Pak muk ying.* A shrub 2 to 3 meters high cultivated for drug purposes in a garden on Honam Island. The leaves have a dense white pubescence which gives the plant a grayish appearance; the flowers are light blue.

63651 to 63661. FRAGARIA spp. Rosaceae. **Strawberry.**

From Orleans, France. Plants purchased from Léon Chénault & Fils. Received April 16, 1925.

European varieties not known in the American trade.

63651. FRAGARIA sp.

Lucida Californica.

63652. FRAGARIA sp.

Chanteclair.

63653. FRAGARIA sp.

Gemma. Very vigorous, everbearing; fruits large and white, with little fiber. (*Catalogue of Millet & Fils.*)

63654. FRAGARIA sp.

Général de Castelnau. An everbearing very productive variety. Fruit larger than that of La Perle, dark red, very juicy, sweet, and firm. (*Grandes Roseraises du Val de la Loire Catalogue.*)

For previous introduction see S. P. I. No. 59798.

63655. FRAGARIA sp.

63651 to 63661—Continued.

Madame Meslé. A very vigorous giant variety with enormous brilliant vermilion red fruits with pink flesh; a good commercial variety of large yield. Season medium. (*Catalogue of Millet & Fils.*)

For previous introduction see S. P. I. No. 56155.

63656. FRAGARIA **sp.**

Madame Moutot. A giant variety with enormous spherical red fruits; flesh light salmon. Quality excellent. (*Catalogue of Millet & Fils.*)

63657. FRAGARIA sp.

Marguerite Chabert. Fruit conical, very large, dark red; flesh pink. (*Catalogue of Rivoire Père & Fils.*)

63658. FRAGARIA sp.

Marguerite Lebreton. A very early variety with abundant elongated fruits. One of the best forcing varieties. (*Catalogue of Millet & Fils.*)

For previous introduction see S. P. I. No. 56157.

63659. FRAGARIA sp.

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

For previous introduction see S. P. I. No. 62521.

63660. FRAGARIA sp.

White Pineapple. Fruits white, very large. (*Catalogue of Millet & Fils.*)

63661. FRAGARIA sp.

Zoulon.

63662. SAXIFRAGA PURPURASCENS Hook. f. and Thoms. Saxifragaceae.

From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. Received August 2, 1922. Numbered April, 1925.

This beautiful species comes from the temperate regions of the Sikkim Himalaya, where it was discovered growing in wet places at an altitude of from 10,000 to 14,000 feet. Though closely allied to the Himalayan *Saxifraga ligulata* and the Siberian *S. crassifolia*, it is quite different from, and far more beautiful than, either of those species. Nothing indeed can exceed the bright glossy green of the leaves, which are elegantly margined with red, or the deep, bright, vinous red-purple of its scape and inflorescence. (*Curtis's Botanical Magazine, pl. 5066.*)

For previous introduction see S. P. I. No. 39074.

63663 to 63667.

From Vineland Station, Ontario, Canada. Plants presented by F. E. Palmer, director, Horticultural Experiment Station. Received April 13, 1925. Notes from The Canadian Horticulturist, vol. 47, no. 4, unless otherwise stated.

63663 to 63667—Continued.

63663. FRAGARIA sp. Rosaceae. **Strawberry.**

Valonia. A cross between Dunlap and Early Ozark. It is a vigorous grower, with perfect flowers, and is productive. In season it is two or three days earlier than Dunlap. The fruits are of medium size, bright red, moderately firm, and fair to good in quality.

63664. FRAGARIA sp. Rosaceae. **Strawberry.**

Vanguard. A cross between Pocomoke and Early Ozark. The plants are vigorous, healthy, and productive, with perfect flowers. The ripening season is about a week before Dunlap. The fruits are of medium size, round-conic, regular in shape, bright red, firm, and of good quality, being sweeter than most early varieties.

63665. FRAGARIA sp. Rosaceae. **Strawberry.**

Vantage. A cross between Williams and Early Ozark. Described (Report of the Vineland Station to the Ontario Department of Agriculture for 1919) as a vigorous grower, with early-maturing bright-pink fruits which retain their color in storage. Quality fair.

63666. RUBUS sp. Rosaceae. **Raspberry.**

Viking. A red raspberry (No. 14038), the result of a cross between Cuthbert and Marlboro. It is intermediate in character between the two parents. It is very vigorous, the canes being both stouter and taller than Cuthbert. There is very little tendency to droop over and hide the fruits, as does the Cuthbert, picking thus being an easier operation. The canes are almost entirely free of spines. In hardiness, from present observation, it is about the same as Cuthbert, or a little better. The fruit is as large as or larger than Cuthbert, firm, and should be good for shipping. In color the fruit more or less resembles Marlboro, being lighter than Cuthbert.

63667. FRAGARIA sp. Rosaceae. **Strawberry.**

No. 19322. This variety has not been sufficiently tested to decide definitely as to its value, but it looks promising as an early berry for local markets. It is vigorous, productive, and a good plant maker. The fruit is of good quality and appearance, though possibly lacking in firmness for distant shipping.

63668 and 63669.

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

63668. CASUARINA sp. Casuarinaceae.

Near Maison Carree, March 13, 1925. Related to *Casuarina suberosa,* but distinct in having shorter cones. This attractive spreading tree was growing in the grounds of a famous French botanist who was the first president of the Société Botanique de France.

63669. TRIFOLIUM ALEXANDRINUM L. Fabaceae. **Berseem.**

From Boufarik. Doctor Trabut has made a real success of the berseem even though it has been subjected to temperatures much below freezing. This seed

63668 and 63669—Continued.

was presented by J. Paulian, manager of the Domaine Ste. Marguerite, who is delighted with it as a green feed for cattle.

63670 to 63672.

From Algeria. Collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received April 6, 1925. Notes by Doctor Fairchild.

63670. COTULA CINEREA Delile. Asteraceae.

In France and Algeria it is the custom to take various kinds of so-called "tisanes," herb teas made of infusions of aromatic herbs. Doctor Trabut has presented these seeds with the recommendation of his own experience.

63671. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. **Cushaw.**

Seeds of the *Courge Bedouin* or "Bedouin squash," purchased in a market in Algiers. The seeds of this variety are confined to one end of the elongated fruit, the other end being solid flesh. In shape it resembles a short club.

63672. KOELERIA SETACEA (Pers.) DC. Poaceae. **Grass.**

These roots are from the driest rocky clay soils of the mountains near Bou Saada, where this grass forms small patches of compact tufts, dark green in color. During the summer the plants must have been subjected to an intense heat and completely dried out.

63673 to 63675. TRIFOLIUM spp. Fabaceae.

From Ayr, Scotland. Seeds purchased from McGill & Smith. Received April 9, 1925.

Locally grown seeds.

63673 and 63674. TRIFOLIUM PRATENSE L. **Red clover.**

63673. *Montgomery.*

63674. *Vale of Clwyd.*

63675. TRIFOLIUM REPENS L. **White clover.**

Danish Morso.

63676 to 63688.

From Paris, France. Plants purchased from Vilmorin-Andrieux & Co., through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received April 16, 1925.

63676. ABIES KOREANA Wilson. Pinaceae.

A newly discovered fir from Chosen, which is described by E. H. Wilson (Journal of the Arnold Arboretum, vol. 1, p. 188) as a tree 30 to 50 feet high, with a trunk 4 to 10 feet in circumference, and characterized by its pyramidal habit and deeply fissured rough bark. It is an alpine species, growing abundantly above 3,000 feet in Chosen. It is densely branched, and the lustrous-green leaves with white undersurfaces make the tree very striking.

For previous introduction see S. P. I. No. 63328.

63677. BUDDLEIA ALTERNIFOLIA Maxim. Loganiaceae.

According to Mottet (Arbres et Arbustes d'Ornament de Pleine Terre, p. 359), this was introduced from China in 1920. It is distinguished by its lilac flowers, which are very small and arranged in many-flowered sessile masses along the flowering branches. It flowers in June and July and has an elegant habit.

For previous introduction see S. P. I. No. 62283.

63678. CALLICARPA GIRALDIANA Hesse. Verbenaceae.

The dense clusters of round, berry-like violet fruits produced by this Chinese shrub in late autumn make it of great ornamental value. It has membranous light-green leaves and many-flowered cymes of pink flowers, and has proved hardy in southern Massachusetts, although little known elsewhere in the United States.

63679. CARPINUS TURCZANINOVII Hance. Betulaceae.

A hardy, shrubby Chinese hornbeam 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 plant.

For previous introduction see S. P. I. No. 63346.

63680. CORYLUS CHINENSIS Franch. Betulaceae.

The Chinese hazelnut is closely allied to the tree hazelnut (*Corylus colurna*), differing in leaf and stem characters. It becomes a tall tree, sometimes over 100 feet high, with heart-shaped leaves about 7 inches long. The nuts are borne in clusters of four to six. Native to western China.

63681. HEMIPTELEA DAVIDII (Hance) Planch. (*Zelkova davidii* Hemsl.). Ulmaceae.

A shrubby, spiny, elmlike tree, native to Chosen and northern China, which has merit as an ornamental tree because of its handsome dark-green foliage; the leaves are oval or oblong, deeply toothed, and about 2 inches long. Because of its spines, the tree may be useful for tall hedges.

63682. LARIX DAHURICA PRINCIPIS-RUPPRECHTII (Mayr) Rehd. and Wils. Pinaceae.

A hardy Chinese larch which makes a handsome tree, sometimes as much as 70 feet in height, with attractive bright-green foliage and shiny cones over an inch long.

63683. LARIX EUROLEPIS Henry. Pinaceae.

A hybrid between *Larix decidua* (*L. europaea*) and *L. leptolepis;* it is said to be a tree of vigorous growth.

63684. PAEONIA MLOKOSEWITSCHI Lomakin. Ranunculaceae.

This is the most handsome of the yellow-flowered peonies, according to Curtis's Botanical Magazine (pl. 8173). It is a herbaceous perennial with stout stems, blue-green biternate leaves with red nerves and margins, and sulphur-yellow flowers. It appears to be as hardy as the other herbaceous peonies and as easily cultivated. It is native to the western part of the central Caucasus.

63676 to 63688—Continued.

63685. ROSA FOLIOLOSA × RUGOSA Rosaceae.

One of Vilmorin's hybrids.

63686. VIBURNUM HENRYI Hemsl. Caprifoliaceae.

An evergreen shrubby viburnum 10 feet or more in height, with dark shining green oblong leaves and stiff pyramidal panicles of white flowers. The oval fruits, a third of an inch long, are at first red, becoming black, and give the shrub a decidedly ornamental appearance in autumn. Native to central China, and hardy as far north as Massachusetts.

63687. VIBURNUM HUPEHENSE Rehder. Caprifoliaceae.

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

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

63688. VIBURNUM UTILE Hemsl. Caprifoliaceae.

A handsome, hardy, evergreen shrub of rather open habit, with dark, glossy green, leathery leaves and pure white flowers produced in dense, terminal, rounded trusses in May. These are succeeded by oval blue-black berries. The shrub is native to western China, where it is said to grow on limestone soils.

63689. PIROCYDONIA WINKLERI Daniel. Malaceae.

From Paris, France. Plants purchased from Vilmorin-Andrieux & Co., through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received April 20, 1925.

One of the pear grafts on the old quinces in the garden of St. Vincent College gave rise to a sucker of distinct character; this was called *Pirocydonia winkleri* by Lucien Daniel, Ille et Vilaine, France. The shoots and leaves are pubescent, unlike those of the pear. The leaves are short stemmed like the quince, but are lanceolate like the pear. A very peculiar thing about this hybrid is that it had its origin below the point of union of the graft and stock.

For previous introduction see S. P. I. No. 62016.

63690. ANDROPOGON SERRATUS Thunb. Poaceae. **Grass.**

From Mandalay, Burma, India. Seeds presented by the economic botanist, through C. V. Piper, Bureau of Plant Industry. Received April 16, 1925.

This grass is common throughout tropical Asia, including the Philippines. It has also been reported from Southern Rhodesia and is said to have some value as a forage grass. (*Piper.*)

63691 to 63699.

From Kwangtung Province, China. Rhizomes collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received April 20, 1925. Notes by Mr. McClure.

63691 to 63699—Continued.

63691. ALPINIA sp. Zinziberaceae.

No. 85. *Wong keung.* Obtained at the village of Taichong.

For previous introduction and description see S. P. I. No. 63551.

63692. (Undetermined.)

No. 88. February 20, 1925. *Sha keung.* This plant is commonly cultivated in sandy regions in Kwangtung and is claimed by the Chinese to have drug value. It is used as a condiment (the fresh rhizomes being crushed with a little peanut oil and soy sauce and eaten with meat), as an ingredient in curry powder, and is also prepared for the market by drying.

63693. (Undetermined.)

No. 93. February 3, 1925. *P'o chuk.* This is a medium-sized bamboo whose stems attain a diameter of about 1½ to 2 centimeters and a height of about 3 meters. The shoots or sprouts are naturally slender, but are longer proportionally than the average variety. They are the first to appear on the market in the spring, coming usually before the end of February. This is a very popular variety with the Chinese. The rhizomes are flat as distinguished from those of No. 100 [S. P. I. No. 63699] which are round.

63694. (Undetermined.)

No. 94. February 3, 1925. *Lei chuk.* This is a very small bamboo with stems scarcely more than 1 centimeter in diameter and 1 meter in height and sprouts which are proportionally small. It is not a commercial variety, but is gathered by the Chinese from the wild. The season is slightly later than that of No. 93 [S. P. I. No. 63693], coming in March.

63695. (Undetermined.)

No. 95. Sheungtip. February 3, 1925. *Kan chuk.* This is another dwarf variety of the edible bamboo and is about the size of Lei chuk [S. P. I. No. 63694]. It is cultivated, or rather allowed to grow around the villages, and the sprouts come on the market in April.

63696. (Undetermined.)

No. 96. Tangwanfoh, near Takhing. February 4, 1925. *Tai Ngaan chuk.* A large-noded, medium-sized bamboo whose shoots come to the market in April.

63697. (Undetermined.)

No. 97. Tangwanfoh, near Takhing. February 4, 1925. *Fa Hok chuk.* A straight, smooth-stemmed bamboo of medium size, although somewhat larger than Tai Ngaan chuk [S. P. I. No. 63696]. The Chinese prefer the sprouts of this variety to those of the Tai Ngaan variety.

63698. (Undetermined.)

No. 98. February 16, 1925. *Mau chuk.* Obtained in Kaakmukhaang, near Szchim. This is a very interesting bamboo and is much spoken of though not commonly seen, the culture appearing to be carried on mostly in very out-of-the-way mountain ravines. The plant is unusual among bamboos, being covered with a fine velvety pubescence. The leaves are unusually small in proportion to the large size of the plant. So far as I

63691 to 63699—Continued.

know, it is the only large bamboo here which spreads and propagates itself by means of underground stems. The sprouts are among the largest and are highly esteemed by the Chinese, being eaten fresh, dried, and pickled. The soil in which this bamboo was growing is reddish brown loam underlain with limestone, and no fertilizer is used.

63699. (Undetermined.)

No. 100. Shekkonghaang. February 3, 1925. *P'o chuk.* It differs from No. 93 [S. P. I. No. 63693] by having round rhizomes.

63700 to 63726.

From Chihli Province, China. Seeds collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received April 9, 1925. Notes by Mr. Dorsett.

Numbers 63700 to 63715 were obtained at Loutai, February 15, 1925.

63700. CHAETOCHLOA ITALICA (L.) Scribn. (*Setaria italica* Beauv.). Poaceae. **Millet.**

No. 2173. *Huang nien ku* (yellow sticky millet). A variety which ripens in August. It is ground into flour and used for cakes. The Chinese do not feed it to their stock.

63701. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

No. 2164. *San pai hsi kua* (white watermelon). The true white watermelon, having white skin, flesh, and seeds. It has a diameter of 6 to 10 inches, a length of 18 inches, ripens in August, and is said to be of good quality.

63702 to 63713. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

63702. No. 2156. *Hsiao hua pi tien kua* (small striped-skin sweet melon). A green and white striped, sweet-scented melon which ripens about the end of June. It is normally about 3 inches in diameter and 6 inches in length.

63703. No. 2157. *Ta hua pi tien kua* (large striped-skin sweet melon). This variety is green and white striped, sweet scented, and about 4 or 5 inches in diameter and 8 to 9 inches in length.

63704. No. 2158. *Pai tien kua* (white sweet melon). A sweet-scented melon, about 4 inches in diameter and 8 inches in length, which ripens in July. It is of very good quality.

63705. No. 2159. *Huang hsiang kua* (yellow fragrant melon). A small melon, almost round and about 2 to 3 inches in diameter, which ripens in July. It is used when ripe for scenting rooms, but is not edible.

63706. No. 2160. *Kuai pai pa tien kua* (early white-handled sweet melon). A melon about 3 inches in diameter and 6 inches in length, which ripens in June or July. It is said to be of very good quality.

63707. No. 2163. *Ching pi tien kua* (green-skinned sweet melon). This variety, which is 3 to 4 inches by 6 to 8 inches, ripens in July and is considered to be of very good quality.

63700 to 63726—Continued.

63708. No. 2165. *Hei ke ta tsui* (black-knotted fragile melon). A white-fleshed melon, about 3 inches in diameter and 8 or more inches long, which is considered to be of very good quality.

63709. No. 2167. *Hua pi tsui kua* (striped-skin fragile melon). A green and white striped melon, 4 by 8 inches, which ripens in July. It is said to be of good quality.

63710. No. 2169. *Hua pi tien kua* (flower-skinned sweet melon). A small melon, said to have light-green flesh, about 3 by 6 inches, which ripens in July. It is considered to be of good quality.

63711. No. 2170. *Hua pi tung kua* (flower-skinned eastern melon). This variety, about 8 by 10 inches, ripens in October and is said to be of very good quality.

63712. No. 2171. *Huang tung kua* (yellow eastern melon). A melon 6 by 8 or 10 inches, which ripens in October; it is of very good quality.

63713. No. 2172. *Huang chiu tsui* (golden-yellow fragile melon). A white-fleshed variety, 4 by 10 or more inches, which ripens in August.

63714. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. **Cushaw.**

No. 2168. *Huang bun wo kua* (yellow flat pumpkin). This variety, about 6 to 8 inches in diameter and 12 to 18 inches in length, is said to be harvested through the season. It is cut into small pieces and boiled.

63715 to 63717. HOLCUS SORGHUM L. (*Sorghum vulgare* Pers.). Poaceae. **Sorghum.**

63715. No. 2161. A variety, resembling kaoliang, which produces canes about 6 feet in height. It is not planted very extensively.

63716. No. 2186. Obtained at the Peking University, February 18, 1925, and originally collected at Liaoyang, Manchuria. *Huang ke nieu* kaoliang (yellow-husked sticky kaoliang). It is sown in early spring and harvested in early September. The brush is about 19 inches long. This variety is used for grain and broom stock.

63717. No. 2187. This variety was also obtained at the Peking University, February 18, 1925, and was originally from Liaoyang. *Hung ke nieu* kaoliang (red-husked sticky kaoliang). The brush is about 22 inches or more long. Used for grain and broom stock.

63718. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

No. 2175. Loutai. February 15, 1925. *Lu tou* (green mung bean).

63719 to 63721. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soy bean.**

Loutai. February 15, 1925.

63719. No. 2155. *Huang tou* (yellow soy bean).

63700 to 63726—Continued.

63720. No. 2176. *Hei tou* (black soy bean).

63721. No. 2180. *Ching tou* (green soy bean).

63722. TRIGONELLA FOENUM-GRAECUM L. Fabaceae. **Fenugreek.**

No. 2102. Peking. February 12, 1925. *Hsiang tsao* (fragrant grass). Obtained at the market and said to have originally come from one of the southern provinces. The Chinese use it in their rooms and sometimes put it in their pillows.

63723. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

No. 2178. Loutai. February 15, 1925. *Chiu mai* (winter wheat).

63724 and 63725. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

63724. No. 2174. Loutai. February 15, 1925. *Hung yeu pai chiang tou* (brown-eyed white cowpea).

63725. No. 2179. Loutai. February 15, 1925. *Tai li pang tsai tou* (fat-in-the-pod vegetable bean). These may be a pink-striped cowpea.

63726. ZEA MAYS L. Poaceae. **Corn.**

No. 2177. Loutai. February 15, 1925. *Pai yu mi* (white corn).

63727 to 63731.

From French West Africa. Seeds presented by Prof. R. H. Forbes. Received April 9, 1925. Notes by Professor Forbes.

63727 and 63728. GOSSYPIUM ORTUSIFOLIUM AFRICANUM Watt. Malvaceae. **Cotton.**

63727. From the vicinity of Bobodioulasso, in the Haute Volta. This is a perennial tree cotton considerably grown in the rainy regions south of the Niger. The fiber is strong and very short. The yield is low.

63728. From the Sudan, north of the Niger. This is probably the same as the above [S. P. I. No. 63727].

63729. GOSSYPIUM PUNCTATUM Schum. and Thonn. Malvaceae. **Cotton.**

From Segou, French Sudan. This is the species cultivated by the natives throughout the Sudan proper. It yields a strong but short fiber, 20 to 22 millimeters. It is mostly used by the natives, only small quantities being exported to France.

63730. SYNTHERISMA sp. Poaceae. **Grass.**

From Segou, French Sudan. This is the "fonio" of the natives, a "famine crop." Matures quickly during a scant rainfall, while all other crops fail.

63731. VOANDZEIA SUBTERRANEA (L.) Thouars. Fabaceae.

From Segou, French Sudan. There are two varieties, red and white, which mature quickly on scant rainfall. A "famine crop."

63732. SACCHARUM OFFICINARUM L. Poaceae. **Sugar cane.**

From Haiti. Cuttings presented through John A. Stevenson, Bureau of Plant Industry. Received April 20, 1925.

A locally developed strain.

63733. SACCHARUM OFFICINARUM L. Poaceae. **Sugar cane.**

From Santiago de las Vegas, Cuba. Cuttings presented by Gonzalo M. Fortun, director, Estación Experimental Agronomica, through E. W. Brandes, Bureau of Plant Industry. Received April 20, 1925.

H 109.

A locally developed strain.

63734 to 63736.

From Valley River, Manitoba, Canada. Plants presented by W. J. Boughen, Valley River Nurseries. Received April 21, 1925. Notes by Mr. Boughen.

63734. VIBURNUM AMERICANUM Mill. Caprifoliaceae.

Highbush cranberry from banks of the Skeena River, about 53° N. Lat.

63735. PRUNUS PENNSYLVANICA L. f. Amygdalaceae. **Pin cherry.**

Selected pin cherry, from 51.5° N. Lat.

63736. RIBES sp. Grossulariaceae. **Gooseberry.**

Thornless gooseberry from Fort La Corne, about 53° N. Lat.

63737 and 63738. LANDOLPHIA spp. Apocynaceae.

From Loanda, Angola, Africa. Seeds presented by John Gossweiler, Servicos de Agricultura. Received April 24, 1925.

Rubber-yielding shrubs.

63737. LANDOLPHIA KLAINII Pierre.

A tropical African climbing shrub which is said (Flora of Tropical Africa, vol. 4, sec. 1) to be the principal rubber-producing plant in the Gabon district, French Equatorial Africa. The oblong leathery leaves are glossy green, and the hard globose fruits are 6 to 10 inches in diameter.

63738. LANDOLPHIA PARVIFOLIA Schum.

This is described by Otto Stapf (Thiselton-Dyer, Flora of Tropical Africa) as a much-branched, climbing shrub with small oblong leaves and pale-yellow or white flowers in small dense clusters. The greenish purple fruits, about 2 inches in diameter, have a smooth thick rind.

For previous introduction see S. P. I. No. 61015.

63739 and 63740. HELIANTHUS TUBEROSUS L. Asteraceae. **Jerusalem artichoke.**

From Erfurt, Germany. Tubers purchased from Haage & Schmidt. Received April 22, 1925.

Locally grown tubers.

63739. *Erdbirne.*

63740. Received as *Helianthus doronicoides,* now referred to *H. tuberosus.*

63741 to 63750.

From Ottawa, Canada. Presented by W. T. Macoun, Dominion horticulturist, Central Experimental Farm. Received April 23, 1925.

63741 to 63750—Continued.

63741 to 63749. MALUS SYLVESTRIS Mill. Malaceae. **Apple.**

A collection of seedlings of the McIntosh apple.

63741. *Joyce.* **63746.** *Newtosh.*
63742. *Labo.* **63747.** *Patricia.*
63743. *Lawfam.* **63748.** *Pedro.*
63744. *Melba.* **63749.** *Stonetosh.*
63745. *Miltosh.*

63750. PRUNUS TOMENTOSA Thunb. Amygdalaceae. **Manchu cherry.**

Scions of a locally developed strain.

63751. COFFEA EXCELSA Cheval. Rubiaceae. **Coffee.**

From Lamao, Bataan, Philippine Islands. Seeds presented by S. Youngberg, acting Director of Agriculture, Bureau of Agriculture, Manila, at the request of P. J. Wester. Received April 9, 1925.

According to the Philippine Review (vol. 9, p. 121), this coffee thrives from sea level to 700 meters, succeeds well on rather stiff clayey soils, and is quite drought resistant. It might be grown with an annual rainfall of 48 inches. It is the most resistant to blight and drought of any coffee, is of strong vigorous growth, and produces 1 kilogram of dry coffee from 7 to 8 kilograms of fresh berries. *Coffea excelsa* makes an excellent stock for other coffees. The first crop is obtained at the age of 4 to 5 years and a full crop at the age of 7 to 8 years.

For previous introduction see S. P. I. No. 63602.

63752. LACTUCA SATIVA L. Cichoriaceae. **Lettuce.**

From Nanking, China. Seeds presented by M. Leslie Hancock, University of Nanking. Received April 14, 1925.

Grown by the Chinese for its stem, which is very fleshy. (*Hancock.*)

63753. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

From Scheemda, Netherlands. Seeds presented by the Hommo Ten Have's Seed Co. Received April 17, 1925.

Remontant. A European variety of red clover.

For previous introduction see S. P. I. No. 62309.

63754. HELIANTHUS TUBEROSUS L. Asteraceae. **Jerusalem artichoke.**

From Toronto, Canada. Tubers purchased from William Rennie Co. Received May 6, 1925.

Locally grown tubers.

63755 to 63757.

From Kwangtung Province, China. Collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received April 24, 1925. Notes by Mr. McClure.

63755 to 63757—Continued.

63755. ALPINIA sp. Zinziberaceae.

No. 104. March 6, 1925. *Yik tsz, Ye keung fa.* Rhizomes obtained at the Canton Christian College. This is a beautiful ornamental forming a dense growth of tough herbaceous stems which are set with fine dark-green foliage terminating in the summer in large racemes of fragrant white blossoms with red and golden lips. In addition to its value as an ornamental, the seeds, according to the Chinese, have a drug value. In fact, they are said to bring a wholesale prices of $50 to $100 per 100 catties [133⅓ pounds].

63756. POTHOS SEEMANNI Schott. Araceae.

No. 106. Cuttings from a vine growing on a tree trunk on the Tengoo Mountain. A herbaceous climbing plant which adheres closely to the bark of trees by means of woolly adventitious roots. After attaining sufficient length to reach the lower branches of the tallest trees, it hangs in beautiful long festoons. It is a fine ornamental, chiefly on account of its splendid foliage; the flowers, in keeping with those of its kind, are rather inconspicuous.

63757. (Undetermined.) Poaceae. **Bamboo.**

No. 102. March 5, 1925. *Lak cha chuk.* Rhizomes of an edible bamboo, which is of considerable merit, collected on Honam Island, east of Tait'ong. It is of medium size, and when grown on fertile soil the culms reach a diameter of about 2.5 to 3 centimeters and a height of 3 to 4 meters. The nodes or joints are rather prominent, being larger in proportion to the stem than is usually the case. The sprouts, which are ready to harvest about the first of April, are very popular, bringing 50 to 60 cents a catty [1⅓ pounds]. As grown here this bamboo is not fertilized and is allowed to shift for itself.

63758 to 63783.

From Amani, Tanganyika Territory, Africa. Seeds presented by A. H. Kirby, Director of Agriculture. Received April 9, 1925.

63758. ADENANTHERA MICROSPERMA Teijsm. and Binn. Mimosaceae.

No. 12. A handsome tropical tree, closely related to the mimosas, with attractive clean-cut foliage and twisted pods bearing bright-red beans. It is native to the East Indies and is considered a valuable timber tree because of its strong dark-brown wood, which is very hard, in spite of the rapid growth of the tree.

For previous introduction see S. P. I. No. 61478.

63759. ALBIZZIA ADIANTHIFOLIA (Schum.) W. F. Wight (*A. fastigiata* E. Mey.). Mimosaceae.

No. 16. A tropical African tree, of fastigiate habit, with finely divided foliage. According to Holland (Useful Plants of Nigeria, pt. 2), this tree yields a gum somewhat similar to gum arabic. The seeds, after maceration, are eaten as a sauce by the natives of West Africa.

For previous introduction see S. P. I. No. 62897.

63758 to 63783—Continued.

63760. BARYXYLUM DASYRACHIS (Miquel) Pierre (*Peltophorum dasyrachis* Kurz.). Caesalpiniaceae.

No. 237. A tall unarmed East Indian tree, described by Hooker (Flora of British India, vol. 2, p. 257) as having rigid pinnate leaves up to a foot in length and showy yellow flowers produced in terminal and axillary clusters 6 to 9 inches long.

63761. BERRIA AMMONILLA Roxb. Tiliaceae.

No. 47. "Trincomali wood" is the name under which the very hard, durable, dark-red wood of this Indian tree is exported, according to Watt (Dictionary of the Economic Products of India). The wood is used for making agricultural implements and for other purposes where toughness and hardness are desired. The tree is large, with long-stemmed, heart-shaped leaves and dense racemes of small white flowers. Its distribution includes the Malay Archipelago and the Philippines.

For previous introduction see S. P. I. No. 61482.

63762. BERSAMA USAMBARICA Guerke. Bersamaceae.

No. 48. A tropical African tree about 50 feet tall, with pinnate leaves 2 feet or more long and silky white flowers. It should be tried as a shade tree for extreme southern Florida.

63763. BRIDELIA MICRANTHA (Hochst.) Baill. Euphorbiaceae.

No. 52. According to J. H. Holland (Useful Plants of Nigeria, pt. 4), this is a thorny widespreading tree 20 to 40 feet high, which varies considerably in its height and degree of thorniness. The small black berries are edible, and the white timber is exceedingly durable and resistant to termites. Native to tropical Africa.

63764. CANARIUM POLYPHYLLUM Schum. Balsameaceae.

No. 63. The edible fruits of this Malaysian tree, according to Der Tropenpflanzer (vol. 17, p. 147) resemble walnuts and yield an oil which can be used in making margarine and similar products.

63765. CASUARINA DISTYLA Vent. Casuarinaceae.

No. 76. Unlike many of the better known casuarinas, this species is usually a small shrub 2 to 3 feet high. It is common in Tasmania and in parts of southern Australia.

For previous introduction see S. P. I. No. 61484.

63766. COFFEA BUKOBENSIS Zimmerm. Rubiaceae. **Coffee.**

No. 104. The coffee grown in the vicinity of Bukoba, Tanganyika Territory, was formerly supposed to be a variety of *Coffea arabica*, but Zimmermann (Der Pflanzer, vol. 4) maintains that it is a separate species and has named it *C. bukobensis*. The differences are in the venation of the leaves and flower structure. Culturally this species is very similar to *C. arabica*.

For previous introduction see S. P. I. No. 61485.

63758 to 63783—Continued.

63767. COFFEA sp. Rubiaceae. **Coffee.**

No. 108. Received as *Coffea quilloa*, for which a place of publication has not been found.

Introduced for cultural and comparison tests in tropical America.

For previous introduction see S. P. I. No. 61486.

63768. DEGUELIA DALBERGIOIDES (Baker) Taub. (*Derris dalbergioides* Baker). Fabaceae.

No. 132. A small spreading tree, described by Hooker (Flora of British India, vol. 2, p. 241) as being about 20 feet high, with rigid dark-green compound leaves and copious racemes of pink flowers. Native to eastern India and Java.

63769. DIPTEROCARPUS TRINERVIS Blume. Dipterocarpaceae.

No. 136. An East Indian tree described by Baker (Schoolflora voor Java, p. 108) as being 100 feet or more tall, with elliptical leaves about a foot long and clusters of large red flowers.

63770. FICUS CHLAMYDODORA Warb. Moraceae.

No. 171. A stately tree grown largely as a shade tree in parts of tropical Africa because of the handsome foliage and brick-red branches. According to Holland (Useful Plants of Nigeria), it bears twice a year abundant crops of peach-colored figs, which are fairly sweet and juicy.

For previous introduction see S. P. I. No. 61490.

63771. FLACOURTIA RUKAM Zoll. and Mor. Flacourtiaceae.

No. 176. A handsome unarmed Malayan tree with leathery leaves and edible berries, about the size of cherries, which are said to make excellent preserves.

63772. INTSIA BIJUGA (Colebr.) Kuntze (*Afzelia bijuga* Gray). Caesalpiniaceae.

No. 15. The ipil, as this is known in the Philippines, is described (W. H. Brown, Minor Products of Philippine Forests, vol. 2) as a tall tree, 100 feet or more in height, with fragrant white and reddish flowers borne in large conspicuous clusters. The wood is valued as building material.

63773. LANDOLPHIA STOLZII Busse. Apocynaceae.

No. 206. A number of Landolphias are being introduced from tropical Africa for testing by department rubber specialists. This one is described by Thiselton-Dyer (Flora of Tropical Africa) as a climbing shrub with small oval leaves, dense clusters of white sweet-scented flowers, and fruits resembling small oranges.

For previous introduction see S. P. I. No. 61493.

63774. LANDOLPHIA sp. Apocynaceae.

No. 207. The Landolphias are tropical African climbers, many of which yield rubber. This unidentified species will be tested in southern Florida for its rubber-yielding value.

63758 to 63783—Continued.

63775. LILIUM REGALE Wilson. Liliaceae. **Regal lily.**

No. 210. Seeds of the Regal (Royal) lily as grown in Africa, introduced for department horticulturists.

For previous introduction see S. P. I. No. 61494.

63776 and 63777. MANIHOT GLAZIOVII Muell. Arg. Euphorbiaceae. **Ceara rubber.**

Ceara rubber, obtained from this tree, is one of the important rubbers of commerce.

For previous introduction see S. P. I. Nos. 61496 and 61497.

63776. No. 216. Received as *Manihot dichtoma,* but the seeds do not agree with that species.

63777. No. 217.

63778. MUSA TEXTILIS Nee. Musaceae.

No. 227.

Abacá seeds to be grown for testing as fiber.

For previous introduction see S. P. I. No. 61500.

63779. PACHIRA FASTUOSA (DC.) Decaisne. Bombacaceae.

No. 51. A handsome tropical tree native to Mexico, according to the Gardeners' Chronicle, vol. 54, p. 325. The flowers in their size and color are both exceptional and attractive, as they measure about a foot in diameter; the strap-shaped petals are white, and the large brushlike clusters of stamens are crimson and yellow. The foliage is not unlike that of the horse-chestnut, but it is more leathery in texture.

63780. PENTAS sp. Rubiaceae.

No. 238. A shrubby tropical plant, native to West Africa, which may have value as a greenhouse ornamental.

63781. PTYCHOCOCCUS PARADOXUS (Scheff.) Beccari. Phoenicaceae. **Palm.**

No. 262. A small palm, 9 to 12 feet high, native to New Guinea. The slender trunk is covered with white hairs, and the feathery leaves are borne at the summit of the trunk.

63782. RANDIA sp. Rubiaceae.

No. 263. The Randias are tropical shrubs or trees, often with showy white or yellowish flowers. The round berries of some species are edible.

Received as *Randia sericantha.*

63783. SCHEFFLERODENDRON USAMBARENSE Harms. Fabaceae.

No. 274. A handsome tropical African leguminous tree, described by Harms (Engler's Botanische Jahrbücher, vol. 30, p. 88) as having dense compound foliage and axillary racemes of reddish brown flowers.

63784. MUSA PARADISIACA SAPIENTUM (L.) Kuntze. Musaceae. **Banana.**

From San Juan, Porto Rico. Suckers presented by O. W. Barrett, agricultural adviser, Department of Agriculture and Labor. Received April 9, 1925.

Colorado Blanco. A Porto Rican variety.

63785. CHRYSOPHYLLUM MONOPYRENUM Swartz (*C. oliviforme* Lam., not L.). Sapotaceae. **Satin leaf.**

From Manila, Philippine Islands. Seeds presented by P. J. Wester. Received April 13, 1925.

While the fruits of this tree are usually poor for eating purposes, I had brought to me recently a bag of fruits of remarkably good quality. These are distinctly superior to many native edible fruits. (*Wester.*)

A tropical American tree of attractive appearance; the oval or oblong leaves are silky golden beneath, the flowers are white, and the blue-black fruits are over an inch long.

63786. FUNTUMIA ELASTICA (Preuss) Stapf. Apocynaceae. **Lagos rubber tree.**

From Accra, Gold Coast Colony, Africa. Seeds presented by W. S. D. Tudhope, Director, Department of Agriculture. Received April 16, 1925.

A large forest tree which is very widely distributed throughout central Africa and is the source of Lagos rubber which is of excellent quality.

For previous introduction see S. P. I. No. 61086.

63787 to 63797.

From Kwangtung Province, China. Seeds collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received April 21, 1925. Notes by Mr. McClure.

63787 and 63788. ADENANTHERA MICROSPERMA Teijsm. and Binn. Mimosaceae.

63787. No. 89. February 5, 1925. *Sai sz kak.* From trees growing in the mission compound at Tukhing. This is an excellent lumber tree with rich-brown wood which is very strong and hard in spite of its comparatively rapid growth. As an ornamental it is also desirable, with its splendid clean-cut leaves and corkscrew pods bearing bright-red beans. It reaches a considerable size, the largest specimen in the compound being 40 centimeters in diameter and 15 meters high.

63788. No. 90. February 10, 1925. *Seung sz kak.* From Tenguhauen, near Haulik, on the West River. Similar to No. 89 [S. P. I. No. 63787] except that the seeds seem slightly smaller and darker.

63789. BISCHOFIA sp. Euphorbiaceae.

No. 83. February 10, 1925. *Kat long, Chau fung.* Found near Haulik, West River. This tree, like *Bischofia javanica,* to which it seems closely related but from which it may be distinguished by its smaller leaves and berries, is valued as a source of lumber. It is a deciduous tree bearing profusely large dense pendulous panicles of small, brown, dry fruits.

63790. BOEHMERIA NIVEA (L.) Gaud. Urticaceae. **Ramie.**

No. 92. February 17, 1925. *Pak chue ma.* From plants cultivated near Lintan. Ramie, the material used to make the very useful summer fabric called grass cloth, is obtained from this plant.

63787 to 63797—Continued.

63791. BRIDELIA MONOICA (Lour.) Merr. Euphorbiaceae.

No. 80. Sheungtip. February 3, 1925. *Pik pok tsai.* An attractive small, native tree whose slender drooping branches are slightly suggestive of the weeping willow, although the sessile leaves are elliptic ovate and obtuse. This plant, widely distributed throughout Kwangtung, is a fair ornamental, although neither its flowers nor its fruits are conspicuous.

63792. FRAXINUS CHINENSIS Roxb. Oleaceae. **Ash.**

No. 84. February 10, 1925. *Shui lau, Ch'aak paan lau.* From two trees growing near a pond on the road to the Tengu Mountain, near Haulik. The lumber, not abundant here, is used by the Chinese to make implements, oars, etc.

63793. ILEX sp. Aquifoliaceae.

No. 79. *Chue t'in shue, Tsau peng shue, Pak lan heung.* From an isolated tree growing wild along the road near Samshui, on the flood plain of the West River. This is a beautiful spreading tree with smooth light-gray bark and glossy dark-green persistent foliage. The thick clusters of red berries are slightly flattened in shape and considerably smaller than a garden pea.

63794. ILEX sp. Aquifoliaceae.

No. 81. February 16, 1925. *Pak lan heung.* Along the road from Lintan to Szchim. This tree, leafless, but with every branch literally hidden in a profusion of brilliant red berries, was a most strikingly beautiful object. It stood out very conspicuously in quite a group of its species as being leafless but heavily loaded with fruits while the others still clung to half their foliage but bearing much less abundantly.

63795. ORMOSIA CALAVENSIS Azaola. Fabaceae.

No. 91. February 9, 1925. *Kai Ngaan shui.* A striking ornamental from a ravine on Tengu Mountain. This is a large tree with black bark, splendid foliage, and bearing bright-red seeds.

63796. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soy bean.**

No. 78. February 16, 1925. A light-green variety from a shop in Lintan and said to have originally come from Tungkoon, on the East River.

63797. VITEX QUINATA (Lour.) F. N. Williams. Verbenaceae.

No. 99. Kochanghui, on the Little North River. January 18, 1925. *Po keng, Fooi shue.* This large tree, 10 meters high and 50 centimeters in diameter, bears small fragrant purple or lavender flowers in large upright panicles. It yields a hard wood useful in making furniture and boats.

63798. MANIHOT GLAZIOVII Muell. Arg. Euphorbiaceae. **Ceara rubber.**

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received April 23, 1925.

An important rubber-producing plant, native to Brazil.

63799. NEYRAUDIA MADAGASCARIENSIS (Kunth) Hook. f. Poaceae. **Grass.**

From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. Received April 20, 1925.

A large coarse grass, described by J. D. Hooker (Flora of British India, vol. 7) as having a solid stem 6 to 8 feet or more in height, with smooth soft leaves 1 or 2 feet long and panicles 1 to 3 feet long. Although native to Madagascar, this grass is distributed throughout tropical Asia. In its native home the leaves are used for making hats.

63800 to 63820.

From Leningrad, Russia. Seeds presented by Dr. Wl. Kousnetzoff, botanist in charge of forage and pasture plants, Bureau of Applied Botany and Plant Breeding. Received April 13, 1925. Notes by Doctor Kousnetzoff.

63800 and 63801. AGROPYRON CRISTATUM (L.) Gaertn. Poaceae. **Grass.**

A perennial, thickly cespitose grass, upright or ascending, native to southern Europe and Asia.

63800. No. 1338. Province of Omsk.

63801. No. 2113. Minusinsk. Province of Yeniseisk, District of Siberia.

63802. AGROPYRON SIBIRICUM (Willd.) Beauv. Poaceae. **Grass.**

No. 1340. Province of Omsk.

An upright cespitose perennial grass, up to 16 inches high, with linear leaves. Native to southern Russia and the Caucasus.

63803 to 63805. BROMUS INERMIS Leyss. Poaceae. **Grass.**

A perennial upright European grass, which forms a thick mat, with creeping rhizomes. The stems are 1 to 3 feet high.

63803. No. 1612. Djirgalantou. Mongolia. From the basin of a river.

63804. No. 1613. Adjin, Mongolia. From the basin of the Kossogol River.

63805. No. 1342. Province of Omsk.

63806. ELYMUS DAHURICUS Turcz. Poaceae. **Grass.**

No. 1346. Province of Omsk.

A tall perennial grass with stout erect stems, native to mountainous regions in central and eastern Asia.

63807 and 63808. ELYMUS SIBIRICUS L. Poaceae. **Grass.**

A tall perennial grass with heavy pendulous panicles; native to Siberia.

63807. No. 1347. Province of Omsk.

63808. No. 2273. Nikoljsko-Ussurijsk, Province of Primorskaya.

63809 and 63810. HEDYSARUM GMELINI Ledeb. Fabaceae.

In localities where this is native it is popular as a forage plant.

63809. No. 2285. District of Minusinsk, Province of Yeniseisk.

63810. No. 2286. District of Minusinsk, Province of Yeniseisk.

63800 to 63820—Continued.

63811. LESPEDEZA STRIATA (Thunb.) Hook. and Arn. Fabaceae.

No. 2270. Nikoljsko-Ussurijsk, Province of Primorskaya.

63812 and 63813. MEDICAGO FALCATA L. Fabaceae.

63812. No. 1327. Province of Omsk.

63813. No. 2111. District of Minusinsk, Province of Yeniseisk.

63814. MEDICAGO PLATYCARPA (L.) Trautv. Fabaceae.

No. 1311. Province of Irkutsk, eastern Siberia.

A Siberian alfalfa of erect habit, with yellow flowers and large, flat, black pods.

63815 and 63816. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

63815. No. 1783. District of Slavgorodsk, Province of Omsk.

63816. No. 1784. District of Tatarsk, Province of Omsk.

63817. ONOBRYCHIS VULGARIS Hill (*O. viciaefolia* Scop.). Fabaceae.

No. 2110. District of Minusinsk, Province of Yeniseisk.

63818. PHLEUM PHLEOIDES (L.) Karst. (*P. bochmeri* Wibel.). Poaceae. **Grass.**

No. 2115. District of Minusinsk, Province of Yeniseisk.

A perennial, thickly matted grass, native to Europe and western Asia, with stems 1 to 2 feet high and gray-green leaves up to 8 inches long.

63819. TRIFOLIUM REPENS L. Fabaceae. **White clover.**

No. 1842. Harbin, Manchuria.

63820. VICIA AMOENA Fisch. Fabaceae. **Vetch.**

No. 2109. District of Minusinsk, Province of Yeniseisk.

A perennial, hairy Siberian vetch, with erect stems up to 2 feet high and purplish flowers.

63821. MUSA URANOSCOPOS Lour. Musaceae. **Banana.**

From China. Offshoots collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received April 27, 1925.

No. 107. March 10, 1925. *Shaan pa tsiu, Shui tsiu.* From plants growing on a trash pile near the Hengwan monastery on the Tengoou Mountain, Kwangtung. The plants are 1½ to 2 meters high, with leaves one-half to 1 meter long, bright-red flowers blooming in the summer, and fruits said to be very seedy and not edible. The plants do not appear to be cultivated by the Chinese around Canton, nor used by them for any purpose. (*McClure.*)

63822. BERBERIS REPLICATA W. W. Smith. Berberidaceae. **Barberry.**

From Wisley, Ripley, Surrey, England. Seeds presented by Fred J. Chittenden, director, Royal Horticultural Society Gardens. Received April 24, 1925.

An evergreen barberry originally collected by George Forrest in thickets on the Shweli-Salwin Divide, southwestern China, at an altitude of 11,000 feet. The rather small leaves have recurved margins and are gray beneath. It is an early and profusely flowering species, bearing its blossoms all along the branches in a very attractive fashion, and the deep-crimson berries make it handsome in the fruiting stage. It appears to be very hardy in England.

For previous introduction see S. P. I. No. 58463.

63823 to 63826.

rom Kwangtung Province, China. Collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received April 24, 1925. Notes by Mr. McClure.

63823. EURYALE FEROX Salisb. Nymphaeaceae.

No. 103. Shiuhing, on the West River. *Chi sat.* Seeds of a hydrophytic plant said to resemble the lotus somewhat. It is covered with short spines, however, and has very large, floating leaves. The seeds must be kept moist from maturity (September) until planting time (April), or they will not grow. They are stored wet in large earthen jars. If used for food, however, they are immediately dried, the shell removed, and the starchy kernels placed on the market. The most notable use to which the seeds of this plant are put is the feeding of a famous variety of cultivated fish known as man ling long lei ue. These fish are said to be characterized by very soft bones, fins, and scales, the latter being eaten with the flesh. The Chinese attribute these peculiar qualities of this fish to the fact that they are fed on the seeds of chi sat. These seeds are also used for human consumption and are considered to be a particularly beneficial food.

63824. STIZOLOBIUM PACHYLOBIUM Piper and Tracy. Fabaceae.

No. 101. March 2, 1925. *Tai kau tsau tsu.* Seeds obtained at the Canton Christian College. This plant is a luxuriant vine and is used in parts of China as green manure. It makes a prodigious growth.

63825. POTHOS sp. Araceae.

No. 120. March 14, 1925. *Shek p'o t'ang.* Cuttings obtained from the wilds near the village of Heunglokauk. This is a pretty creeping plant which covers the granite rocks in moist, shady situations.

63826. (Undetermined.) Poaceae. **Bamboo.**

No. 105. March 6, 1925. *Wack chuk.* Cuttings obtained at the Canton Christian College. This is a very striking ornamental bamboo with golden-yellow culms, marked vertically with random narrow stripes of bright green. It reaches a diameter of 9 or 10 centimeters and a height of 10 meters when well established. This bamboo is not common, but is seen here and there as an ornamental in the Chinese gardens and monasteries.

63827 and 63828. LILIUM spp. Liliaceae. **Lily.**

From Harbin, Manchuria. Seeds presented by P. Pavlov, president of the natural history section, Manchuria Research Society. Received April 28, 1925.

63827 and 63828—Continued.

63827. LILIUM DAURICUM Ker.

A plant about 3 feet in height, with a smooth or slightly furrowed stem which is green or tinged with brown or purple. The 20 to 50 horizontal leaves are 3 to 5 inches long, and the flowers, one to five in a cluster and 3 to 5 inches across, are orange-red, slightly spotted with purplish black, and tinged with yellow in the center. The anthers are red.

For previous introduction see S. P. I. No. 58553.

63828. LILIUM MARTAGON L.

The Martagon lily grows wild from central and southern Europe to southwestern Siberia. The stem is 3 to 6 feet high, often purple spotted, with horizontal deep-green leaves 3 to 6 inches long and dull claret-purple flowers, spotted purplish black, with red anthers. From 3 to 20 flowers are produced at one time, usually in late June and July.

63829. COIX LACRYMA-JOBI MA-YUEN (Rom.) Stapf. Poaceae. Adlay.

From Lamao, Bataan, Philippine Islands. Seeds presented by S. Youngberg, acting director, Bureau of Agriculture, Manila. Received June 11, 1925.

La Union.

The ma-yuen, or adlay, has attracted considerable attention as a cereal for tropical regions. According to P. J. Wester, it is better than upland rice for tropical agriculture in being more drought resistant, a heavier yielder, and much less expensive to cultivate. The seeds can be used largely in the same manner as corn.

63830 to 63836.

From Tibet, China. Seeds collected by Capt. F. Kingdon Ward and presented by Maj. Lionel de Rothschild, London, England. Received April 23, 1925. Notes by Captain Ward.

Collected in the Tsangpo Valley during April and May, 1924.

63830. IRIS sp. Iridaceae.

No. 5719. A purple-flowered plant, 9 inches in height, which grows in sandy soil in open alpine pastures at an altitude of 13,000 feet.

63831. LILIUM sp. Liliaceae.

No. 6428. A plant, 2 to 3 feet high, which grows on very steep, well-drained, grass-clad slopes in fine sandy soil, under pine trees, etc. It bears a single terminal flower.

63832. LONICERA sp. Caprifoliaceae.

No. 5688. A shrub, 6 feet high, which grows in thick spruce forests and which requires ample water and deep shade. The foliage and fruit are ornamental. The flowers were not seen.

63833. LONICERA sp. Caprifoliaceae.

No. 5753. A dwarf twiggy shrub, 1 to 1½ feet in height, growing in peaty soil on open slopes among dwarf rhododendrons. The flowers are small and yellow, and the berries large, scarlet, and translucent.

63830 to 63836—Continued.

63834. LONICERA sp. Caprifoliaceae.

No. 5776. A shrub, 6 to 8 feet high, requiring shade and ample water, found along streams in the forests. The leaves are dark green, the flowers yellow with large papery bracts, and the fruits are scarlet. It is very floriferous and particularly striking when in fruit.

63835. LONICERA sp. Caprifoliaceae.

No. 5872. A shrub, 2 to 3 feet high, bearing flowers of a purple-plum color and large blue-black berries. It grows on steep, sheltered, rocky slopes, in peaty soil with rhododendrons, etc.

63836. LONICERA sp. Caprifoliaceae.

No. 6106. A pale-yellow flowered bush or tree, 15 to 20 feet high, with orange-scarlet berries. The foliage is pale sea-green, almost glaucous. This species is found in fairly dry regions, in sandy soil, and in open meadows or thickets.

63837 to 63839.

From Kwangtung Province, China. Purchased by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received May 7, 1925. Notes by Mr. McClure.

63837. COLOCASIA sp. Araceae.

No. 113. Village of Heunglokeuk. March 14, 1925. *Fa t'au oo.* This variety, of moderate size and oblong in shape, is considered by the Chinese to be of excellent quality and flavor. Tubers.

63838. DIOSCOREA ALATA L. Dioscoreaceae. Yam.

No. 116. Village of Heunglokeuk. March 13, 1925. *Taai hung shue.* A red-fleshed yam of good quality and flavor. Tubers.

63839. ZINZIBER sp. Zinziberaceae.

No. 114. Village of Heunglokeuk. March 13, 1925. *Shaan keung.* Cultivated and used in the village of Heunglokeuk as a condiment, as is the ginger commonly grown around Canton. Rhizomes.

63840. RUBUS sp. Rosaceae.

From Stavanger, Norway. Plants presented by Thoralf Bryne. Received May 7, 1925.

Paradise berry. A large red raspberry, almost as large as the largest variety known in cultivation, which is the English variety, the Royal. (*Bryne.*)

For previous introduction see S. P. I. No. 56145.

63841 to 63845. GOSSYPIUM spp. Malvaceae. Cotton.

From Nanking, China. Seeds presented by the University of Nanking, through T. H. Kearney, Bureau of Plant Industry. Received May 2, 1925.

63841 to 63843. GOSSYPIUM NANKING Meyen.

The "Chinese" cotton of commerce is, according to Watt (Wild and Cultivated Cottons of the World) an annual or perennial bush, with delicate, sparsely branched stems and imperfectly cordate leaves. The irregular-shaped seeds are densely coated with rufous velvet and

63841 to 63845—Continued.

bear a silky fiber, which in all the better varieties is white but often shows a tendency to become reddish or khaki. This cotton is cultivated throughout tropical Asia.

For previous introduction see S. P. I. No. 62595.

63841. Greenish yellow flowers.

63842. *Hsiao kan kwan.*

63843. Flowers small and white.

63844. GOSSYPIUM sp.

Million Dollar.

63845. GOSSYPIUM sp.

F 5.

63846 to 63849. ORNITHOGALUM spp. Liliaceae.

From Bonnie Vale, Cape Province, South Africa. Seeds purchased from the Winton Nurseries. Received April 30, 1925.

In South Africa these liliaceous plants are known as "chinkerichees." They have become popular in that country as ornamentals. When dried the flowers retain their form and color admirably and for this reason can be used as "everlastings."

63846. ORNITHOGALUM sp.

Cream colored.

63847. ORNITHOGALUM sp.

Double white.

63848. ORNITHOGALUM sp.

Orange colored.

63849. ORNITHOGALUM sp.

White.

63850 to 63852. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

In 1913 seeds of the *Shalil* peach were introduced from the Kurram Valley, Northwest Provinces, India. The following seedlings, grown at the Plant Introduction Garden, Chico, Calif., appear worthy of propagation and are therefore assigned numbers, April, 1925, for convenience in distribution.

63850. Fruit round to oval, small, 2 inches in diameter; cavity of medium depth, rather broad; suture shallow; skin light yellow, thin, tender, heavily pubescent, separating easily from the flesh; flesh golden yellow, medium juicy, little fiber, slightly lacking in sugar, fair quality, not stained around the pit; pit 1¼ inches by 1 inch, brown, sharply pointed. A freestone. The tree is large and vigorous and has proved very satisfactory at Chico as stock. The fruits are good for drying and also for canning. Ripens at Chico, Calif., about the third week in August. (Row 18, tree 1, old test nursery.)

63851. Fruit nearly round or oval, 2¼ by 2 inches; cavity of medium depth, fairly abrupt, slightly elongated along suture; suture distinct, very shallow; apex with very small point; skin golden yellow, rather thick but tender, heavily pubescent, separating easily from the flesh; flesh golden yellow, tending soft, juicy, little fiber, slightly lacking in sugar, only slightly stained around pit; pit 1½ inches by 1 inch, pinkish, very sharply pointed. A freestone. The tree is fast growing, vigorous, and prolific, and the fruits are excellent for table use and could also be used for canning and drying. Ripens at Chico, Calif., about the third week in August. (Row 18, tree 2, old test nursery.)

63852. Fruits medium sized, 2½ by 2¼ inches, oval or nearly so, slightly oblique at base; cavity broad, fairly deep; suture medium apex with small point; skin golden yellow, thick, tough, adhering to flesh, pubescence very heavy; flesh golden yellow, tending juicy, firm, tough, rather flat, lacking in sugar, not stained near pit; pit 1 by 1¾ inches extended into a sharp point. This attractive clingstone peach, which appears to have promise for canning, ripens at Chico, Calif., about the third week in August. (Row 18, tree 4, old test nursery.)

63853 and 63854. GARCINIA spp. Clusiaceae.

From Manila, Philippine Islands. Seeds presented by the acting Director of Agriculture, Bureau of Agriculture. Received May 6, 1925.

63853. GARCINIA BINUCAO (Blanco) Choisy. **Binukao.**

The binukao, a relative of the mangosteen, is a handsome tree which is very common in certain parts of the Philippine Islands, notably in Luzon and the Visayan Islands. W. H. Brown, in Wild Food Plants of the Philippines, states that the yellowish rounded fruits, nearly 2 inches in diameter, with a very acid pulp and numerous seeds, are eaten with fish by the Filipinos. The small red flowers are borne in dense clusters. The binukao will probably not endure low temperatures, since it comes from a tropical region.

For previous introduction see S. P. I. No. 59376.

63854. GARCINIA VENULOSA (Blanco) Choisy.

Like the preceding [S. P. I. No. 63853], the katuri is also a wild Philippine relative of the mangosteen. It is described by P. J. Wester (Food Plants of the Philippines, p. 105) as a tree about 40 feet high, with large oblong leathery leaves, which is widely distributed throughout the Philippines, but not cultivated. The round fruits, about 2 inches in diameter, have an acid pulp containing several flat seeds. The natives eat this fruit with fish, and it would probably make good preserves.

63855. CAREX PUMILA Thunb. Cyperaceae. **Sedge.**

From New Zealand. Seeds presented by W. C. Coker, University of North Carolina, through A. S. Hitchcock, Bureau of Plant Industry. Received May 9, 1925.

Sent by Captain Ellis, State forester of New Zealand, who says this is the best sand binder of that country. (*Coker.*)

63856 to 63866. OLEA EUROPAEA L. Oleaceae. **Olive.**

From Pescia, Province of Lucca, Italy. Plants purchased from E. d'Uliva & Fratelli. Received May 11, 1925. Notes taken from the catalogue of d'Uliva & Fratelli.

A collection of Italian varieties, not known in the American trade, introduced for trial in the olive-growing sections of the United States.

63856. *Ascolana.* A canning variety cultivated from time immemorial in Ascoli. It is a constant and abundant fruiter, with large, dark-green, lightly undulate leaves. The large fruits are almost spherical, with rich, delicate flesh of pleasant flavor; the seed is small.

63857. *Asiolani.*

63858. *Dolce del Marocco.* A variety with fruits larger than those grown for oil, especially adapted for drying.

63859. *Enijuiolo.*

63860. *Frantoi.* Cultivated for oil.

63861. *Grappolo.* Rather large olives, produced in clusters. The fruits are rich in oil.

63862. *Lecci.* A vigorous variety cultivated for oil.

63863. *Maurini.* An excellent new variety, producing oil of good quality.

63864. *Racemo.* A prolific variety, disease resistant, with ashy green leaves; the ovoid fruits are rich in oil.

63865. *Moraioli.* A vigorous drought-resistant and disease-resistant variety which yields an abundance of oil of good quality.

63866. *Zantis.*

63867. BRASSICA sp. Brassicaceae.

From Kwangtung Province, China. Seeds collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received May 7, 1925.

No. 118. March 9, 1925. *Yau tsoi.* Seeds collected from plants which had escaped from cultivation, growing along the bank of the West River near Lohyanchung. (*McClure.*)

63868. NEOGLAZIOVIA VARIEGATA (Arruda) Mez (*Billbergia variegata* Schult.). Bromeliaceae.

From Bahia, Brazil. Plants obtained from Dr. H. H. Brown, St. Albans, Vt., through L. H. Dewey, Bureau of Plant Industry. Received May 6, 1925.

The caroá is a plant 4 or 5 feet high, of the same family as the pineapple, and is found wild in the caatingas or dry regions of eastern Brazil. The natives extract the fiber for the purpose of making baskets, ropes, and hammocks, but the quantity obtained is not sufficient for export. It is now introduced for trial in the southern United States by fiber-plant specialists. It is also being tested as a possible paper material.

63869 to 63875.

From Kwangtung Province, China. Seeds and rhizomes collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received May 7, 1925. Notes by Mr. McClure.

63869. PISUM SATIVUM L. Fabaceae. **Pea.**

No. 119. Village of Heunglokeuk, March 13, 1925. *Mauk tau, Suet tau, Chun tau.* Seeds of a sturdy, low-growing, self-supporting vine which produces, in fair abundance, rather large peas of good flavor and quality. The flowers are very ornamental, the lower petal being pale lavender, the next pair wine red, and the inner pair pink. This variety, planted here in November, begins to bear in December or January and continues until March.

63870 to 63875. (Undetermined.) Poaceae. **Bamboo.**

63870. (Undetermined.)

No. 108. March 14, 1925. *Kom chuk.* A variety growing wild along a small stream in the Chunwong Mountains, near the village of Heunglokeuk, at an altitude of 300 meters. The young shoots of this bamboo are highly esteemed by the Chinese of this neighborhood. This bamboo, as seen in its native habitat, is rather small in stature, being only 2 to 2.5 meters in height and 1 to 1.5 centimeters in diameter between the lower nodes. Its best shoots are produced on the loose silt loam banks of the stream, but it can not hold its own here so well as on the wet sand and gravel at the edge of the water, where it produces an impenetrable network of rhizomes. It might be used to excellent advantage for preventing erosion in such situations.

63871. (Undetermined.)

No. 109, March 14, 1925. *Wong kom chuk.* Obtained from the wild, at an altitude of 300 meters, in the Chunwong Mountains, near Heunglokeuk. A dense grove of this bamboo, whose canes are about 3 meters in height and 1.5 to 2 centimeters in diameter between the lower nodes, completely conceals the tiny stream, along which these rhizomes were growing, for a considerable distance. This variety, like No. 108 [S. P. I. No. 63870], forms its toughest and most impregnable network of rhizomes in the wet sand immediately at the edge of the water, but its finest shoots are produced in the rich-brown loose soil of the bank near by. The shoots are edible, but the Chinese say that it is necessary to parboil them in order to remove the slightly bitter taste. The canes are put to a number of uses, particularly to the weaving of garden fences. The upper portions of the canes, with their numerous, slender side branches, are bound into brooms which are widely used locally and are shipped even as far as Canton.

63872. (Undetermined.)

No. 110. March 14, 1925. *Fat t'o chuk, Fat chuk.* These rhizomes are from the native vegetation in a ravine near Heunglokeuk, in the Chunwong Mountains, where this variety had been planted. This is another relatively small bamboo (2 to 2.5 meters high

63869 to 63875—Continued.

and 2 centimeters in diameter), whose edible shoots are considered a close second in quality to those of No. 108 [S. P. I. No. 63870]. This variety begins to sprout in early April, and here again, as elsewhere observed, I found the best shoots growing in damp loose loam. A peculiar characteristic of the canes is that prominent swellings occur just below the lower nodes, which are quite close together. The name Fat t'o probably refers to this peculiarity. In earlier days the lower sections of these canes brought a good price for handles of fans, but in recent years they are more in demand as pipe stems.

63873. (Undetermined.)

No. 111. Near the village of Heunglokeuk, March 14, 1925. *Kan chuk.* This bamboo is commonly planted on the mountain sides and allowed to shift for itself among the native vegetation. Under these conditions the plant attains a height of 2 to 3 meters and a diameter of 1.5 to 2 centimeters. The coarse red soil in which these plants were growing is formed from granite. A thin layer of dark soil accumulates where the natural vegetation is permanent. The bamboo flourishes best, of course, where this layer is thickest. The young shoots are eaten, being taken just as they appear at the top of the ground. Its season begins about the middle of April.

63874. (Undetermined.)

No. 112. March 13, 1925. This bamboo was growing near the village of Heunglokeuk, where it is allowed to shift for itself among the native vegetation on the steep banks of a ravine. The canes reach a height of 4 meters and a diameter of 2 to 2.5 centimeters between the nodes in the habitat described, but the variety is said to become much larger under more favorable cultural conditions. The young shoots are of excellent quality and fair size. Their season begins in April.

63875. (Undetermined.)

[Sent in without notes.]

63876 to 63879. PISUM SATIVUM L. Fabaceae. **Pea.**

From Wellington, New Zealand. Seeds obtained from F. Cooper, through D. N. Shoemaker, Bureau of Plant Industry. Received May 8, 1925.

Locally developed strains.

63876. *Austral.*

63877. *Richard Seddon.*

63878. *Te Aroha.*

63879. *Wellington.*

63880 to 63889. PISUM SATIVUM L. Fabaceae. **Pea.**

From Bretigny sur Orge, France. Seeds obtained from L. Clause, through D. N. Shoemaker, Bureau of Plant Industry. Received May 8, 1925.

Locally developed strains.

63880 to 63889—Continued.

63880. *Duc de Manchester.*

63881. *Gris de Printemps.*

63882. *Gris d'Hiver.*

63883. *Gros blanc géant Victoria.*

63884. *Gros vert pour grande culture.*

63885. *Mangetout Nain Debere.*

63886. *Sabre, race de Paris.*

63887. *Serpette améliorée, race de Paris.*

63888. *Trophy, très tardif.*

63889. *Union Jack.*

63890 to 63894. GOSSYPIUM BARBADENSE L. Malvaceae. **Cotton.**

From Egypt. Seeds presented by R. H. Forbes, Compagnie Générale des Colonies, Kulikoro, French Sudan, French West Africa. Received May 6, 1925. Notes by Mr. Forbes.

The following seeds are from the Bahtien Farm.

63890. No. 46a. Saka. *Fathi.*

63891. No. 46b. Upper Egypt.

63892. No. 46c. Saka. *Pilion.*

63893. No. 46d. Saka. *Ashmouni.*

63894. No. 46e. Saka. *Cazzouli.*

63895 to 63900.

From Tammisto, Malm, Finland. Seeds presented by J. O. Saulis, manager of the plant-breeding station, through C. R. Ball, Bureau of Plant Industry. Received May 12, 1925.

A collection of local varieties originated at Tammisto.

63895 to 63897. AVENA SATIVA L. Poaceae. **Oats.**

63895. *Esa.*

63896. *Pelso.*

63897. *Vyto.*

63898 and 63899. HORDEUM DISTICHON PALMELLA Harlan. Poaceae. **Two-rowed barley.**

63898. *Hailikko No. 2.*

63899. *Uurainen.*

63900. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

Early 0283.

63901 to 63904. ORYZA SATIVA L. Poaceae. **Rice.**

From Jorhat, India. Seeds presented by Dr. S. K. Mitra, Economic botanist to the Government of Assam. Received May 8, 1925.

The following varieties are from the Karimganj Farm.

63901. No. S–149. *Indra Sail.*

63902. No. S–156. *Nagra Sail.*

63903. No. S–159. *Dudshar.*

63904. No. S–232. *King's Own.*

63905 and 63906. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Tammisto, Malm, Finland. Seeds presented by J. O. Saulis, manager of the plant-breeding station, through C. R. Ball, Bureau of Plant Industry. Received May 12, 1925.

Local varieties originated at Tammisto.

63905. *Winter Sukkula.*

63906. *Spring Tammi.*

63907. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

From Bordeaux, France. Seeds presented by Prof. L. Beille, director, Jardin Botanique de Talence. Received May 7, 1925.

Var. *cerasiforme.* A yellow-fruited form of the cherry tomato.

63908 to 63967.

From Chihli Province, China. Seeds obtained by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received May 5, 1925. Notes by Mr. Dorsett.

63908. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

No. 2393. March 14, 1925. *T'u t'ao* (wild peach) from Lijeutsu, which is a big deciduous fruit-growing section in an immense broad level valley near Paotingfu. This variety is also called "earth peach" by the natives. It is used for stock upon which to graft or bud the commercial varieties.

63909. BENINCASA HISPIDA (Thunb.) Cogn. Cucurbitaceae. **Wax gourd.**

No. 2408. Loutai, near Peking. March 17, 1925. A winter variety.

63910 to 63915. BRASSICA spp. Brassicaceae.

Paotingfu. March 10, 1925.

63910. BRASSICA sp.

No. 2327. *Anhsu ta pai ts'ai* (large Anhsu cabbage). This variety is planted the latter part of July, later transplanted, and during October it is cut and stored in the cellar. The average weight is 15 to 16 pounds.

63911. BRASSICA sp.

No. 2328. *Pao tou pai ts'ai* (folding head cabbage), planted in July and later transplanted. This variety, the leaves of which fold in, grows to a height of about 14 inches and weighs 12 to 13 pounds.

63912. BRASSICA sp.

No. 2329. *Hsiao pai k'ou pai ts'ai* (small white mouth cabbage). A variety, about 12 to 13 inches high and with the leaves spreading out, which is planted in July or earlier. It is not commonly planted, but is said to be of very good quality.

63913. BRASSICA sp.

No. 2330. *Ho t'ao wen pai ts'ai* (walnut-hulled cabbage), commonly planted here. This variety, the head resembling a walnut hull, grows 13 to 14 inches in height and weighs about 8 to 10 pounds.

63914. BRASSICA sp.

No. 2331. A variety which is said to have a diameter of 4 to 6 inches.

63915. BRASSICA sp.

No. 2332. *Shansi pe'i lan* (kohlrabi of Shansi). This seed came from Shansi Province and is said to grow to 8 or more inches in diameter.

63916. CANNABIS SATIVA L. Moraceae. **Hemp.**

No. 2335. Paotingfu. March 10, 1925.

63917 and 63918. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

63917. No. 2333. Paotingfu. March 10, 1925. *Ta hei kuan hsi kua* (large black-vase watermelon), said to have originally come from Shantung Province. This variety grows from 10 to 15 inches in diameter and 16 to 18 inches in length; the skin is black and the flesh yellow.

63918. No. 2334. Paotingfu. March 10, 1925. A small red-seeded watermelon also said to have originally come from Shantung Province. It is a red-fleshed, yellow-skinned variety about 8 inches in diameter and 16 to 20 inches in length.

63919. EUONYMUS sp. Celastraceae.

No. 2318. En route from Mentoukou to Toli. *Niang niang ch'uan* (empress hand). Obtained from a shrub growing out of the top of a monk's tomb or monument in what is known as Tartar Cemetery.

63920 and 63921. FAGOPYRUM VULGARE Hill (*F. esculentum* Moench). Polygonaceae. **Buckwheat.**

63920. No. 2355. Poyi. March 11, 1925. A locally grown variety.

63921. No. 2386. Shenchou. March 14, 1925. A locally grown variety.

63922. HIBISCUS CANNABINUS L. Malvaceae. **Ambari hemp.**

No. 2338. Paotingfu. March 10, 1925. *Ching ma* (green hemp). A locally grown variety.

63923. HOLCUS SORGHUM L. (*Sorghum vulgare* Pers.) Poaceae. **Sorghum.**

No. 2413. Loutai. March 17, 1925. A sticky white variety.

63924. HORDEUM sp. Poaceae. **Barley.**

No. 2341. Paotingfu. March 10, 1925. Called "king barley" or "awn barley."

63925. HORDEUM sp. Poaceae. **Barley.**

No. 2397. Tunkechuang. March 15, 1925. Called by the Chinese "rice barley."

63926. HORDEUM sp. Poaceae. **Barley.**

No. 2411. Loutai. March 17, 1925. These seeds are also called "rice barley" by the Chinese.

63927 and 63928. PANICUM MILIACEUM L. Poaceae. **Proso.**

63927. No. 2400. Loutai. March 17, 1925. An early variety which is used mostly for food during the New Year season.

63908 to 63967—Continued.

63928. No. 2409. Loutai. March 17, 1925. Seeds of a sticky variety of millet.

63929 to 63934. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Fabaceae. **Adsuki bean.**

63929. No. 2348. Paotingfu. March 10, 1925. A small black variety.

63930. No. 2352. Poyi. March 11, 1925. Small white beans.

63931. No. 2404. Loutai. March 17, 1925. A small bean mottled gray and black.

63932. No. 2405. Loutai. March 17, 1925. A variety having small red beans.

63933 and 63934. No. 2412. Peking. March 17, 1925. A small variety which appears to be a mixture.

63933. A. Light-brown variety.

63934. B. Dirty straw-colored variety.

63935 to 63938. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

63935. No. 2351. Paotingfu. March 10, 1925. A locally grown green variety.

63936. No. 2354. Poyi. March 11, 1925. A locally grown green variety.

63937. No. 2383. Shenchou. March 14, 1925. This is another locally grown green variety.

63938. No. 2398. Loutai. March 17, 1925. A yellow variety.

63939. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

No. 2336. Paotingfu. March 10, 1925. A large red garden bean imported from northwestern China.

63940 to 63951. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soy bean.**

63940 to 63950. Locally grown varieties.

63940. No. 2344. Paotingfu. March 10, 1925. A black variety.

63941. No. 2345. Paotingfu. March 10, 1925. *Ch'a tou* (tea soy bean). A large dark-brown variety.

63942. No. 2346. Paotingfu. March 10, 1925. This is a large green soy bean.

63943. No. 2347. Paotingfu. March 10, 1925. Small yellow variety.

63944. No. 2349. Paotingfu. March 10, 1925. Small green soy bean.

63945. No. 2353. Poyi. March 11, 1925. Green variety.

63946. No. 2357. Poyi. March 11, 1925. A large green soy bean.

63947. No. 2359. Poyi. March 11, 1925. This is a rather small black variety.

63948. No. 2381. Shenchou. March 14, 1925. A small black soy bean.

63949. No. 2382. Shenchou. March 14, 1924. A large deep-green variety.

63908 to 63967—Continued.

63950. No. 2384. Shenchou. March 14, 1925. This variety is small and light green.

63951. No. 2406. Loutai. March 17, 1925. *Ch'a tou* (tea soy bean). A variety having large mahogany-brown seeds.

63952. SPINACIA OLERACEA L. Chenopodiaceae. **Spinach.**

No. 2337. Paotingfu. March 10, 1925. *Paoting po ts'ai* (spinach of Paotingfu). A locally grown variety.

63953 to 63957. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

63953. No. 2350. Paotingfu. March 10, 1925. A locally grown winter wheat.

63954. No. 2356. Poyi. March 11, 1925. Locally grown winter variety.

63955. No. 2387. Shenchou. March 14, 1925. Winter wheat which is locally grown.

63956. No. 2402. Loutai. March 17, 1925. White wheat, which is said to make the best flour.

63957. No. 2410. Loutai. March 17, 1925. Spring wheat.

63958 and 63959. VIGNA SESQUIPEDALIS (L.) Fruwirth. Fabaceae. **Yard Long bean.**

63958. No. 2339. Paotingfu. March 10, 1925. A rather small, reddish, locally grown bean called by the Chinese "vegetable bean."

63959. No. 2401. Loutai. March 17, 1925. A terra-cotta colored variety also called "vegetable bean."

63960 to 63965. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

63960. No. 2342. Paotingfu. March 10, 1925. A locally grown brown-eyed cowpea.

63961. No. 2343. Paotingfu. March 10. 1925. A pink cowpea mottled pink and white which is said to be locally grown.

63962. No. 2358. Poyi. March 11, 1925. A locally grown brown-eyed cowpea.

63963. No. 2385. Shenchou. March 14, 1925. A locally grown variety mottled brown.

63964. No. 2388. Shenchou. March 14, 1925. This is a brown-eyed variety which is locally grown.

63965. No. 2403. Loutai. March 17, 1925. A brown mottled cowpea.

63966 and 63967. ZEA MAYS L. Poaceae. **Corn.**

63966. No. 2399. Loutai. March 17, 1925. An early yellow flint corn.

63967. No. 2407. Loutai. March 17, 1925. A late yellow flint variety.

63968. BAUHINIA BLAKEANA Dunn. Caesalpiniaceae.

From China. Cuttings collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received May 20, 1925.

No. 122. Hong Kong Botanic Gardens. April 4, 1925. *Tez king, Hung fa tsz king.* A beautiful tree 10 meters high, with gray to buff-colored bark and large deep-green 2-lobed leaves whose shape suggests the common English name, "camel's foot." The deep-red flowers of this species are enormous compared with those of the other species known here (being as much as 7 centimeters in diameter), and are borne abundantly. They occur in long spikes, opening one floret at a time progressively from the bottom. The species is not known to have produced fruits here, the pistil dropping from the receptacle with the rest of the flower. Mr. Green, the superintendent of the gardens, says he has tried hand pollinating without success. The advantage of this species as far as the conditions here are concerned is that it is evergreen, its foliage being very healthy and verdant throughout the year, and that its flowers open during the winter months before the advent of the June bugs (usually in March or April), from whose voracious appetites no ornamental is immune. (*McClure.*)

63969. ORYZA SATIVA L. Poaceae. **Rice.**

From Bangkok, Siam. Seeds presented by Phya Sihasakti Snidvongs, Director of Agriculture, through Dr. H. M. Smith, director Siamese Bureau of Fisheries. Received June 15, 1925.

A locally grown strain.

63970 and 63971. SESBAN spp. Fabaceae.

From Pretoria, Union of South Africa. Seeds presented by I. B. Pole Evans, chief, division of botany. Received June 18, 1925.

63970. SESBAN AEGYPTIACUM Poir.

A stout shrubby plant, 6 to 10 feet in height, which, according to J. F. Rock (The Leguminous Plants of Hawaii, p. 154), is native in tropical Asia and northern Australia. The yellow flowers, spotted with purple, are borne in axillary clusters about 4 inches long. In Australia the leaves are much relished by livestock, and the wood is used in making charcoal for gunpowder.

63971. SESBAN CINERASCENS Welw.

Like the preceding, this tropical African shrub, according to Oliver (Flora of Tropical Africa, vol. 2), has yellow flowers spotted with purple. It has a graceful habit, with slender branches and compound leaves composed of 15 to 20 pairs of leaflets. The flowers are in lax clusters, and the pods are up to a foot in length.

63972. POA FLABELLATA (Lam.) Hook. f. Poaceae. **Tussock grass.**

From Kew, Surrey, England. Seeds presented by Dr. Thomas V. Chipp, Royal Botanic Gardens. Received June 18, 1925.

These seeds originally came from the Falkland Islands. (*Chipp.*)

According to Hogg (Vegetable Kingdom, p. 823), this is a coarse grass which grows on peaty soil near the sea in the Falkland Islands. It forms dense masses of stems which frequently rise to the height of from 4 to 6 feet, and the long tapering leaves hang over gracefully in curves, from 5 to 8 feet long and an inch wide at the base. The plant is much relished by cattle, being very nutritious and containing saccharin. The inner portion of the stem a little way above the root is soft and crisp and flavored like a hazelnut; the inhabitants of the Falkland Islands are very fond of it. They also boil the young shoots and eat them like asparagus.

63973 and 63974. PHALARIS BULBOSA Jusl. Poaceae.

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received June 22, 1925.

A perennial, tufted grass, 2 to 3 feet high, with shiny leaves about two-fifths of an inch wide, native to the Mediterranean countries. It is now cultivated in New South Wales, where it appears to be an excellent permanent winter grass for coastal and table-land districts. It is drought resistant. Seed is difficult to save on account of shattering.

63973. No. 1. Received as *Phalaris coerulescens,* but sample has been identified as *P. bulbosa.*

63974. No. 2.

63975. PHOENIX DACTYLIFERA L. Phoenicaceae. **Date palm.**

From Cairo, Egypt. Offshoots purchased through Ernest Wright and Mahmoud Bey Abaza, director of the horticultural section of the Egyptian Ministry of Agriculture, at the request of S. C. Mason, Bureau of Plant Industry. Received June 27, 1925.

The Samany date is one of the most striking and characteristic varieties of Lower Egypt, and by the natives it is counted one of the best. The trees are very heavy bodied and have longer leaves than any other variety I have measured. In fruit the Samany is easily the most striking and peculiar of all the delta varieties. The heavy, compact bunches are borne unevenly on coarse, strong strands, the fruits being about 2½ inches long and 1½ inches broad and rather oblique. The Samany never becomes a packing date, but is gathered hard ripe and used in confections or is eaten in the rutab stage. The offshoots command the highest prices of any variety in Egypt, for the reason that they are in great demand for planting in the gardens of the new country and suburban places around Alexandria. The feature that makes the Samany of especial promise is its ability to succeed in the cool, humid climate of the coastal region. (*Mason.*)

63976. BAMBOS sp. Poaceae. **Bamboo.**

From Algiers, Algeria. Plant collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received April 6, 1925.

Jardin d'Essais. A beautiful blue-stemmed species which is distinguished by the culm sheaths either being entirely devoid of ligules or else the ligules are very evanescent. (*Fairchild.*)

63977. GENISTA SPHAEROCARPA Lam. Fabaceae.

From Morocco. Cuttings collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received June 24, 1925.

From near Demnat. May 31, 1925. A charming drooping desert shrub covered with delicate brilliant yellow flowers somewhat resembling small orchids. (*Fairchild.*)

63978 to 63997.

From Paris, France. Seeds presented by Prof. D. Bois, Paris Museum of Natural History. Received June 5, 1925.

A collection introduced chiefly for testing as forage plants.

63978 to 63983. ASTRAGALUS spp. Fabaceae.

63978. ASTRAGALUS BUBALOCERAS Maire.

63979. ASTRAGALUS FRIGIDUS A. Gray.

A perennial upright or ascending, entirely unbranched or with very few branches. Native to alpine slopes throughout northern Europe and Asia.

63980. ASTRAGALUS GALEGIFORMIS L.

A perennial upright, slightly hairy plant 1 to 3 feet high, native to southeastern Europe and Asia Minor.

63981. ASTRAGALUS GLYCYPHYLLOIDES DC.

A perennial plant with ascending stems and rather large oval leaflets. Native to eastern Europe and Asia Minor.

63982. ASTRAGALUS HAMOSUS L.

An annual gray-green hairy plant with prostrate or ascending stems 8 inches to a foot in length. Native to sunny places in the Mediterranean countries.

63983. ASTRAGALUS PONTICUS Pall.

A hairy-stemmed species with dense axillary flower heads. Native to southern Russia.

63984. ERODIUM CICONIUM (Jusl.) Willd. Geraniaceae.

An annual hairy plant, belonging to the geranium family, with stout ascending branches, oval leaves, and purple flowers. Native to southern Europe and Asia Minor.

63985. ERODIUM MANESCAVI Coss. Geraniaceae.

A perennial plant, belonging to the geranium family, about a foot and a half high, with narrow leaves 6 inches or more in length and rosy purple flowers about 2 inches across. It grows wild in the Pyrenees Mountains.

63986. GAUDINIA FRAGILIS (L.) Beauv. Poaceae. **Grass.**

An annual ascending grass, 8 inches to 2 feet high, with thick, roughly hairy leaves, confined almost entirely to the Mediterranean countries.

63987. JACARANDA CHELONIA Griseb. Bignoniaceae.

63978 to 63997—Continued.

An Argentinian tree, sometimes as much as 90 feet tall, with a rounded habit and attractive fernlike foliage. The large blue flowers are in terminal panicles a foot long. The wood is valued in Argentina for cabinetwork.

63988 to 63990. MELICA spp. Poaceae. **Grass.**

63988. MELICA ALTISSIMA L.

A rather tall perennial European grass, 3 to 4 feet in height, with creeping rhizomes, which forms a loose turf. The leaf sheaths and the backs of the leaves are very rough.

63989. MELICA CILIATA L.

A gray-green perennial grass, with stolons 4 inches or more long and stems up to 3 feet in height. The leaf blades are narrow, with rough, bristly margins. Native to rocky places in eastern Europe.

63990. MELICA UNIFLORA Retz.

A bright-green perennial grass, native to shady humid places in eastern Europe. The creeping rhizome is about 4 inches long, and the thick lax stems bear three or four narrow leaves.

63991. PASPALUM RACEMOSUM Lam. Poaceae.

A tropical American grass which is best adapted to the moist or alluvial soils of the Southern States. It grows from a rootstock, with rather coarse tender stems and leaves, reaching a height of about 2 feet. It has promise as a hay or pasture grass. (*C. V. Piper, Bureau of Plant Industry.*)

63992. PHLEUM PHLEOIDES (L.) Karst. (*P. boehmeri* Wibel.). Poaceae. **Grass.**

A perennial, gray-green, loosely cespitose grass, with a short creeping rhizome and stems 1 to 2 feet high. Native to dry stony places throughout central Europe.

63993. POECILANTHE PARVIFLORA Benth. Fabaceae.

The *lapachillo*, as it is called in its native home on the Uruguay River, is a tree of great beauty, with its finely divided leaves and small but dense clusters of pink flowers. The heartwood is dark brown, very hardy, heavy, and durable.

63994. TRIFOLIUM RUBENS L. Fabaceae.

A perennial clover with a widely creeping rhizome and upright glabrous stems 1 to 2 feet high. Native to rocky places and thickets in the Mediterranean region.

63995. TRIFOLIUM SQUARROSUM L. Fabaceae.

An upright or ascending robust annual, with branches up to 30 inches in length, native to the Mediterranean countries. The pink or white flower heads are oval when young, becoming more elongated later.

63996. TRIGONELLA ENSIFERA Trautv. Fabaceae.

An annual leguminous plant, very closely allied to the fenugreek (*Trigonella foenum-graecum*), from which it differs chiefly in having hairy pods and the lack of odor in its seeds. Its native country is unknown.

63978 to 63997—Continued.

63997. TRIGONELLA HAMOSA L. Fabaceae.

An annual leguminous plant, native to northern Africa and Asia Minor, with elongated prostrate stems up to 2 inches long.

63998 to 64001.

From Sydney, New South Wales. Seeds presented by J. A. Whittet, agrostologist, New South Wales Department of Agriculture. Received June 22, 1925.

63998. ACACIA ANEURA F. Muell. Mimosaceae.

In New South Wales, where this tall shrub is native, it is known as the mulga, or yarren, and in times of severe drought it is considered a good source of forage for livestock. The wood is very hard and is valued as timber.

63999. ACACIA PENDULA A. Cunn. Mimosaceae.

A handsome evergreen tree, native to Australia, where the leaves and young branches are eagerly eaten by cattle and sheep. In times of drought the myall, as the tree is called in Australia, is frequently cut down and fed to stock, which seem to thrive on this fodder. Horses do not care for it.

For previous introduction see S. P. I. No. 62867.

64000. GELJERA PARVIFLORA Lindl. Rutaceae.

The wilga is a tall shrub or a tree, native to the interior of New South Wales, where it reaches a height of about 30 feet. It has slender pendulous branches, narrow leaves 3 to 6 inches long, and when well developed has a highly ornamental appearance with something of the aspect of a weeping willow. It has remarkable drought-enduring qualities, and the leaves are often fed to sheep, which are very fond of them.

For previous introduction see S. P. I. No. 62865.

64001. STERCULIA DIVERSIFOLIA Don. Sterculiaceae.

A tall evergreen Australian tree with shining green foliage. In New South Wales it is called the "kurrajong." The leaves are fed to cattle in the arid interior lands. This may be the same as the tree now grown in California under the same name.

For previous introduction see S. P. I. No. 49002.

64002 and 64003. GOSSYPIUM spp. Malvaceae. **Cotton.**

From Rabat, Morocco. Seeds presented by Em. Miége, chief, Service de l'Expérimentation Agricole au Maroc. Received June 23, 1925.

Sar-sar cotton. According to its discoverer, Mr. Miége, this cotton has been given the name of the native tribe which has been growing it from time immemorial. In all probability it is a hybrid between *Gossypium peruvianum* and *G. punctatum*. As described by Mr. Miége, in his Note sur un Cotonnier Marocain, published in the Annales du Musée Colonial de Marseille, series 4, vol. 2, 1924, this is a variety which in actual tests in Rabat and Casa Blanca has proved to possess an unusual degree of precocity, resistance to drought, and length of fiber and strength which classes it with the Yuma in value to the spinners. While still unimproved sufficiently to be called a pure cotton, its behavior under the dry-land conditions of Morocco on laterite silicious soils where the rainfall is only 800 millimeters per year warrants its being thoroughly studied by American cotton breeders. (*David Fairchild, Bureau of Plant Industry.*)

64002. GOSSYPIUM sp.

Seeds from the 1923 crop.

64003. GOSSYPIUM sp.

Seeds from the 1924 crop.

64004. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

From Algiers, Algeria. Seeds presented by Dr. L. Trabut. Received June 23, 1925.

Orge Chedret. Collected in the Sahara Desert, April, 1925. (*Trabut.*)

64005. IRIS PUMILA L. Iridaceae.

From Tiflis, Georgia, Caucasus. Seeds presented by the director of the botanic garden. Received June 30, 1925.

Var. *violacea.*

A dwarf hardy iris with linear leaves 2 to 4 inches long, stemless or nearly so, with bright-blue flowers. It is native to southeastern Europe and Asia Minor, and under cultivation spreads rapidly.

64006 to 64013. MUSA PARADISIACA SAPIENTUM (L.) Kuntze. Musaceae. **Banana.**

From Honolulu, Hawaii. Suckers presented by Willis T. Pope, horticulturist, Hawaii Agricultural Experiment Station. Received May, 1925.

64006. The *Brazilian*, as it is known locally, is considered by some authorities as the finest variety in the Hawaiian Islands for eating raw. According to Bulletin 7 of the Hawaii Agricultural Experiment Station, page 45, it was introduced into Hawaii from Tahiti about 1855 and probably is the same as the variety known in Java as pisang rajah or pisang medji, the "dessert banana." The plant is a vigorous grower, 25 to 35 feet high, roots firmly and withstands winds, ratoons freely and serves as a windbreak for more delicate varieties. The flower end of the fruit is drawn out into a kind of beak. The skin is yellow, easily separating from the fruit. The variety is not satisfactory for shipping, because the fruit falls from the stem.

For previous introduction see S. P. I. No. 58447.

64007. *Chamaluco.* This variety is described as follows in Bulletin 25, Departamento de Agricultura y Trabajo, Porto Rico, page 19: The plant is from 10 to 15 feet in height, with medium-sized leaves, and, when grown in fertile soil, the bunches of fruit are rather large. There are two types, one with green and the other with gray fruits. The greater part of these fruits are eaten cooked at the time when other varieties are ripe.

64006 to 64013—Continued.

For previous introduction see S. P. I. No. 58448.

64008. *Chinese.* A variety introduced from Tahiti into the Hawaiian Islands about 1855 and described in Bulletin 7 of the Hawaii Agricultural Experiment Station, page 44, as follows: The plant is of very low growth, the fruit of good flavor, and the bunch of large size. It is an excellent variety for shipping.

For previous introduction see S. P. I. No. 58449.

64009. *Largo.* According to J. E. Higgins (Bulletin 7, Hawaii Agricultural Experiment Station), this variety was introduced into Hawaii from Mexico. The plant is of medium height, and the fruits, borne in long-stemmed bunches, have buttery pink flesh of fair flavor.

For previous introduction see S. P. I. No. 55250.

64010. *Porto Rico.*

64011. *Red Spanish.* This variety, also known as Red Jamaica, has red-skinned fruits which are shorter and thicker than those of the Gros Michel, and the bunches are smaller. It is found in the West Indies and Central America. Although the fruits have a pleasant flavor, there is a very limited demand for this variety.

64012. *Ice Cream.*

64013. *Iholena.* In Bulletin No. 7 of the Hawaii Agricultural Experiment Station this is described as a low plant, usually about 9 feet high. The rather stout petioles are light green with pink margins, and the young leaves are slightly bronzed on the lower surfaces. The fruits are loosely arranged, in small bunches, and stand out almost at right angles. The mature fruits are angular, and black areas appear on the yellow skin when thoroughly ripe. The flesh is pink. This is regarded as one of the best native bananas for eating raw or cooked.

64014 and 64015.

From Kwangtung Province, China. Collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received April 20, 1925. Notes by Mr. McClure.

64014. COLOCASIA ESCULENTA (L.) Schott. Araceae. **Taro.**

No. 86. Lintan. February 18, 1925. *Tsat tsuen u.* Tubers of a cylindrical variety whose possibilities as to size are expressed in its name, the "seven-inch taro." It is said to be a good yielder and keeps well, and the flavor is excellent. The Chinese use it in making a delicious dish called U Ha, which is prepared by shredding the taro and frying it in deep fat.

64015. MARANTA ARUNDINACEA L. Marantaceae. **Arrowroot.**

No. 87. Takhing. February 19, 1925. *Shek chuk u.* These rhizomes were purchased under the name Kaau sun. This variety is eaten to a certain extent by the Chinese, but is quite fibrous and to me not very palatable.

64016 to 64021. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

From Giza, Egypt. Seeds presented by Dr. Tewfik Fahmy, Ministry of Agriculture. Received May 16, 1925.

Locally developed strains.

64016. *Dirry No. 2.*

64017. *Rust Immune.*

64018. *Baladi.*

64019. *Dirry No. 4.*

64020. *Asmerli.*

64021. *Dirry Nos. 3 and 5.*

64022 to 64029.

From Tashkent, Russia. Seeds presented by the Tashkent Experiment Station. Received May 16, 1925.

Locally grown seeds.

64022. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

64023 to 64026. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

64023. No. 1. **64025.** No. 3.

64024. No. 2. **64026.** No. 4.

64027 to 64029. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

64027. No. 1. **64029.** No. 3.

64028. No. 2.

64030 to 64044.

From Rio de Janeiro, Brazil. Seeds presented by Dr. Pacheco Leão, director, Botanic Garden. Received May 18, 1925.

64030. ABUTILON RAMIFLORUM St. Hil. Malvaceae.

This is described by St. Hilaire (Flora Brasiliae Meridionalis, vol. 1, p. 199) as a shrubby, densely hairy plant with stems up to 6 feet in height, heart-shaped leaves, and panicles of yellow flowers.

64031. AESCHYNOMENE ELAPHROXYLON (Guill. and Perr.) Taub. Fabaceae.

The ambash has light foliage similar to that of the ordinary acacia, but differs in having very large pealike orange-yellow flowers. It forms at times a trunk 10 inches in diameter, and the wood is exceedingly light, a log 10 feet long weighing only a few pounds. Along the upper Nile it is much used in making rafts and huts. It should be valuable in a great many ways. (*Note by H. L. Shantz under S. P. I. No. 61634.*)

64032. WENDEROTHIA MATTOGROSSENSIS (Barb. Rodr.) Piper (*Canavalia mattogrossensis* Malme.). Fabaceae.

A Brazilian vine, described by C. V. Piper (Contributions from the United States National Herbarium, vol. 20, pt. 14) as a slender-stemmed herbaceous plant, with oval membranous leaflets, lilac flowers, and densely hairy pods.

64033. CRACCA ADUNCA (Benth.) Kuntze (*Tephrosia adunca* Benth.). Fabaceae.

A herbaceous perennial leguminous plant, with a decumbent hairy stem, which grows wild in the dry pastures of Minas Geraes, Brazil.

64030 to 64044—Continued.

64034. DYSOLOBIUM GRANDE (Kurz) Prain. Fabaceae.

A woody climbing plant from the mountains of northeastern India, with bright-green hairy leaves and reddish flowers about an inch broad in racemes 6 to 9 inches long. Probably suited best for growing in southern Florida.

64035. FLEMINGIA STROBILIFERA (L.) Ait. Fabaceae.

An erect purple-flowered shrub, 8 to 10 feet high, with slender velvety branches and oblong leaves with silky lower surfaces. It is native to India. The flowers are in zigzag racemes 3 to 6 inches long, with large bracts which nearly hide the flowers. It is tropical in its requirements and is adapted for growing only in the warmest parts of the United States.

64036. INDIGOFERA SUFFRUTICOSA Mill. (*I. anil* L.). Fabaceae.

A bushy shrub, 3 to 5 feet high, with hairy pinnate leaves and yellow pealike flowers. It is commonly cultivated throughout the Tropics as a dye plant and is said to be native to tropical America.

64037. MANIHOT GLAZIOVII Muell. Arg. Euphorbiaceae. **Ceara rubber.**

Ceara rubber, obtained from this tree, is one of the important rubbers of commerce.

For previous introduction see S. P. I. No. 61497.

64038 to 64040. MEIBOMIA spp. Fabaceae.

64038. MEIBOMIA GYRANS (L. f.) Kuntze (*Desmodium gyrans* DC.). **Telegraph plant.**

An erect perennial plant, 2 feet or less high, which is said to be useful as fodder. It is native to moist situations in southern and eastern India.

64039. MEIBOMIA LABURNIFOLIA (Poir.) Kuntze (*Desmodium laburnifolium* DC.).

A white-flowered shrub from the mountainous districts of the tropical Himalayas. The shining green rigid leaflets and white flowers may render the shrub of ornamental value for the Southern States.

64040. MEIBOMIA PULCHELLA (L.) Kuntze (*Desmodium pulchellum* Benth.).

A red-flowered leguminous shrub with hairy trifoliolate leaves, which is native to southern India. The flowers are in spikelike racemes. The plant may have merit as an ornamental shrub for the Southern States, and possibly also as forage.

64041. ORMOSIA ARBOREA (Vell.) Harms. Fabaceae.

According to Vellozo (Flora Flumin-ensis, p. 303), this tree has arborescent stems, little-branched pinnate leaves, and terminal compound racemes of violet flowers. The oblong pods inclose round red seeds marked with black spots. Native to southern Brazil.

64042 to 64044. PAVONIA spp. Malvaceae.

64030 to 64044—Continued.

64042. PAVONIA PANICULATA Cav.

A shrub, described (Cavanilles, Dissertationes, vol. 1, p. 135) as about 4 feet high, having white hairs, heart-shaped leaves, and yellow flowers about an inch across. Native to Peru.

64043. PAVONIA SEPIUM St. Hill.

A Brazilian shrub described by St. Hilaire (Flora Brasiliae Meridienalis, vol. 1, p. 225) as 2 to 6 feet high, with slender terete branches and oval-oblong leaves 3 to 4 inches in length. The solitary golden-yellow flowers are about an inch wide.

64044. PAVONIA SPINIFEX (L.) Cav.

A slender shrub, sometimes 20 feet high, with hairy oval heart-shaped leaves and handsome large yellow flowers. It is native to southern South America and yields a fiber said to be of fine texture and excellent quality.

64045 to 64047. PISUM SATIVUM L. Fabaceae. **Pea.**

From Sydney, New South Wales. Seeds obtained from Anderson & Co., through D. N. Shoemaker, Bureau of Plant Industry. Received May 25, 1925.

Locally developed strains.

64045. *Greenfeast.* A very prolific early dwarf variety grown extensively for market purposes. (*Catalogue of Anderson & Co.*)

64046. *Home Delight.* A second early variety, 18 inches to 2 feet in height, which is strong and vigorous. The foliage and pods are pale green; each pod bears five to six large peas with a fine marrowfat flavor. In a test this variety produced 30½ bushels of peas from a quarter of an acre.

64047. *Richard Seddon.* One of the finest of the early dwarf varieties, having a height of 20 inches. The pods are large and well filled. (*Catalogue of Anderson & Co.*)

64048 to 64051.

From Dundas, New South Wales. Seeds obtained from H. J. Rumsey, through D. N. Shoemaker, Bureau of Plant Industry. Received May 25, 1925.

Locally developed strains.

64048 to 64050. PISUM SATIVUM L. Fabaceae. **Pea.**

64048. *Greenfeast.*

For previous introduction and description see S. P. I. No. 64045.

64049. *Richard Seddon.*

For previous introduction and description see S. P. I. No. 64047.

64050. *Te Aroha.* Large dark-green pods. (*Rumsey.*)

64051. LOTUS TETRAGONOLOBUS L. Fabaceae.

A purple-flowered annual from the eastern Mediterranean countries, where, according to Bonnier (Flore Complète de France, Suisse, et Belgique, vol. 3, p. 43),

64048 to 64051—Continued.

it frequents the edges of cultivated fields, roadsides, etc. It is more or less hairy with obovate leaflets. The edible seeds are sometimes used as a substitute for coffee, and the plant is often cultivated as an ornamental.

For previous introduction see S. P. I. No. 56670.

64052 and 64053. HIPPEASTRUM spp. Amaryllidaceae. **Amaryllis.**

From Brazil. Bulbs collected by Agnes Chase, Bureau of Plant Industry. Received May 28, 1925. Notes by Mrs. Chase.

64052. HIPPEASTRUM sp.

May 3, 1925. An amaryllis found below the summit of Pontao Crystal, Serra do Caparao, Minas Geraes, at an altitude of about 8,000 feet.

64053. HIPPEASTRUM sp.

A crimson-flowered amaryllis, about 6 inches long, from the summit of Serra da Gramma, Minas Geraes, at an altitude of about 6,000 feet.

64054 to 64056. BAMBOS spp. Poaceae. **Bamboo.**

From Kwangtung Province, China. Offshoots collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received June 3, 1925. Notes by Mr. McClure.

64054. BAMBOS sp.

No. 123. Canton Christian College. January 28, 1925. *Taai t'au tim chuk.* A large bamboo, 6 to 10 meters high and 6 to 10 centimeters in diameter, which is the most commonly and extensively cultivated variety around Canton. When the plants become established and the canes reach mature size, they are fertilized during January or February with liquid or well-rotted manure. The earth is then banked up around the base of the clump to a height of about 4 to 6 decimeters, and when the young sprouts appear above this they are unearthed by means of a hoe. This bamboo is a gross feeder and requires much fertilizer in order to make its best growth. It seems to be particular as to the soil.

64055. BAMBOS sp.

No. 124. Canton Christian College. January 28, 1925. *Tiu shi k'au chuk.* A medium-sized bamboo 6 to 8 meters high and 3 to 5 centimeters in diameter, whose young shoots are edible.

64056. BAMBOS sp.

No. 125. Canton Christian College. January 28, 1925. A very large bamboo, attaining in fertile, moist soil a height of 15 meters and a diameter of 12 centimeters. The young shoots are edible and very sweet, hence the name *T'im chuk.*

64057. GLADIOLUS BYZANTINUS Mill. Iridaceae.

From Morocco. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received June 4, 1925.

From the cork-oak forest of Mamora, near Rabat. April 27, 1925. A slender, delicate species with purple-red flowers and much more grasslike in habit than the cultivated forms generally. It might give delicacy of form to hybrids. (*Fairchild.*)

64058 to 64065. CROTALARIA spp. Fabaceae.

From Kirstenbosch, Cape Province, Union of South Africa. Seeds presented by Prof. R. H. Compton, director, National Botanic Gardens. Received June 26, 1925.

A collection of crotalarias, introduced for testing as cover crops.

64058. CROTALARIA CAPENSIS Jacq.

A stout, much-branched South African shrub about 4 feet in height, with broadly oval leaves and pure-yellow flowers in many-flowered racemes.

For previous introduction see S. P. I. No. 59319.

64059. CROTALARIA INCANA L.

A tropical American plant about 3 feet high, erect, branched, and somewhat shrubby, and softly gray pubescent. The yellow flowers are crowded in 12 to 20 flowered elongated racemes 2 to 8 inches long. This plant occurs in waste places throughout the Tropics and is in flower all the year.

For previous introduction see S. P. I. No. 51834.

64060. CROTALARIA LEIOLOBA Bartling.

A species from the mountainous districts of northeastern India, and also distributed throughout the East Indies. It is one of the more robust of the herbaceous species, with fine-silky branches and leaves, the latter being oblong and about 2 inches in length.

For previous introduction see S. P. I. No. 59320.

64061. CROTALARIA RETUSA L.

An annual plant, a foot or more high, distributed throughout the Tropics of both hemispheres. The flowers, which are yellow streaked with purple, are in terminal racemes.

For previous introduction see S. P. I. No. 51842.

64062. CROTALARIA SPECTABILIS Roth.

A stout shrub, 3 to 5 feet high, native to India and sometimes cultivated in the Punjab for the sake of its yellowish purple flowers produced in dense lax racemes often 20 inches in length.

For previous introduction see S. P. I. No. 51839.

64063. CROTALARIA STRIATA DC.

A handsome perennial tropical plant, ultimately about 6 feet high, with spikes of yellow flowers. In Guatemala the young leaves are eaten boiled with rice or meat, and the plant is considered good forage.

For previous introduction see S. P. I. No. 52531.

64064. CROTALARIA USARAMOENSIS Baker f.

This East African crotalaria has been tested in Java as a green manure, according to P. J. S. Cramer, director of the Department of Agriculture, Buiten-

64058 to 64065—Continued.

zorg. Doctor Cramer states that it has proved very successful as a green manure when grown in alternation with corn, producing large quantities of vegetation rich in nitrogen. In the cinchona plantations it is very satisfactory, as it endures partial shade and forms a dense low growth which keeps the edges of the terraces together.

For previous introduction see S. P. I. No. 57831.

64065. CROTALARIA VERRUCOSA L.

An annual leguminous plant, cosmopolitan in the Tropics, which reaches a height of a foot and a half, with simple oval leaves, and racemes of showy white and blue flowers

For previous introduction see S. P. I. No. 51119.

64066 to 64070.

From Giza, Egypt. Seeds presented by Mah. Abaza, director, horticultural section, Ministry of Agriculture. Received June 27, 1925.

To be tested as green-manure and cover-crop plants.

64066 to 64068. CROTALARIA spp. Fabaceae.

64066. CROTALARIA CANDICANS Wight and Arnott.

A stiffly erect, much-branched, shrubby species, with hairy and somewhat leathery, broadly rounded leaves, and panicles of small silky yellow flowers. Native to southwestern India.

For previous introduction see S. P. I. No. 59318.

64067. CROTALARIA LEIOLOBA Bartling.

A species from the mountainous districts of northeastern India and also distributed throughout the East Indies. It is one of the more robust of the herbaceous species, with fine silky branches and leaves, the latter being oblong and about 2 inches in length.

For previous introduction see S. P. I. No. 59320.

64068. CROTALARIA TETRAGONA Roxb.

An erect stiff shrub, often 6 feet in height, which grows wild in the Himalayas of northeastern India, ascending to an altitude of 3,500 feet. The silky membranous narrow leaves are sometimes a foot long, and the lemon-yellow flowers are produced in lax racemes 6 inches or more in length.

For previous introduction see S. P. I. No. 59321.

64069. SESBAN ACULEATUM (Schreb.) Poir. Fabaceae.

A tall-growing annual plant from tropical and subtropical Asia, which is used there as green manure and also for fodder. It is a vigorous grower and is said to thrive in semiarid regions.

For previous introduction see S. P. I. No. 58978.

64070. SESBAN SERICEUM (Willd.) DC. Fabaceae.

An unarmed shrubby annual, often several feet in height, native to the plains

64066 to 64070—Continued.

of Ceylon. The silky pinnate leaves are about a foot in length, and the flowers, pale yellow dotted with red, are in lax racemes.

For previous introduction see S. P. I. No. 59322.

64071 to 64074.

From Kwangtung Province, China. Seeds collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received June 30, 1925. Notes by Mr. McClure.

64071. PISUM SATIVUM L. Fabaceae. **Pea.**

No. 147. Ahliuwat, near Taip'ingshi. April 20, 1925. *Suet tau, Chun tzu.* A pea grown rather extensively in this region and promising for two reasons: The vines are self-supporting, and the young pods are tender enough to be eaten. I have eaten them and find them deliciously tender and sweet.

64072. RUBUS sp. Rosaceae.

No. 144. En route from Want'ong to Kongt'uen. April 23, 1925. *P'o tsai lak, Tam p'o tsai.* A wild red berry with a flavor somewhat resembling that of a blackberry. The fruits do not separate readily from the receptacle. The brambles are low, being 1½ to 3 feet in height, and very spiny. They seem to be growing well on a red subsoil laid bare by erosion.

64073. RUBUS sp. Rosaceae.

No. 145. Near Kongtuen. *She p'aau lak.* A large, globular, loosely organized wild raspberry which bears white flowers. The fruits separate freely from the receptacle. The low herbaceous brambles appear to thrive well on the sandy soil near streams, where they grow in profusion.

64074. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

No. 148. Ahliuwat, near T'aip'ingshi. April 20, 1925. *Min nak.* A locally grown wheat sown broadcast in September or October, after the last rice crop is harvested (usually during the month of March), or in time for the first crop of rice. It is sown at about the rate of 24 pounds per acre, and soy-bean cake, peanut cake, or animal excreta are applied as fertilizer.

64075 to 64083.

From Lamao, Bataan, Philippine Islands. Seeds presented by S. Youngberg, acting director, Bureau of Agriculture. Received June 18, 1925.

64075 to 64081. COIX LACRYMA-JOBI MAYUEN (Rom.) Stapf. Poaceae. **Adlay.**

The ma-yuen, or adlay, has attracted considerable attention as a cereal for tropical regions. According to P. J. Wester, it is better than upland rice for tropical agriculture in being more drought resistant, a heavier yielder, and much less expensive to cultivate. The seeds can be used largely in the same manner as corn.

64075. *Cebu.*

64076. *Cotabato.*

64077. *Lamao.*

64078. *La Union Red.*

64075 to 64083—Continued.

64079. *La Union White.*

64080. *Momungan.*

64081. *Mount Province.*

64082 and 64083. HOLCUS SORGHUM L. (*Sorghum vulgare* Pers.). Poaceae. **Sorghum.**

64082. *Basso.* **64083.** *Basso Red.*

64084. COSMOS sp. Asteraceae. **Cosmos.**

From Reading, England. Seeds purchased from Sutton & Sons. Received February 25, 1925. Numbered April, 1925.

Miniature Yellow. A variety with rich-yellow starlike flowers produced in great abundance; the plants form compact bushes about 18 inches high. (*Sutton's Catalogue, 1924.*)

64085. HIPPEASTRUM sp. Amaryllidaceae.

From Brazil. Bulbs collected by Agnes Chase, Bureau of Plant Industry. Received June 19, 1925.

Serra do Caparao, Minas Geraes. This I believe to be the same as the plant seen at Serra da Gramma [S. P. I. No. 64053], which had red lilylike flowers 5 to 6 inches long, borne in twos or threes at the apex of the scape. The leaves are about 2 inches wide and a foot long, and fleshy, like hyacinth leaves. (*Mrs. Chase.*)

64086 and 64087.

From Rabat, Morocco. Bulbs collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received June 29, 1925. Notes by Doctor Fairchild.

64086. DIPCADI SEROTINUM Medic. Liliaceae.

A bulbous plant growing about a foot high and producing a slender spike of salmon-colored flowers shaped much like those of a hyacinth. It forms patches in the deep sandy soil of the forest of Mamora.

64087. LEUCOJUM TRICHOPHYLLUM Schousb. Amaryllidaceae.

A graceful bulbous plant, 2 feet high, found in the sandy soil in the forest of Mamora. This plant, with its white hanging flowers, three or four on each stem, gives a delicate touch to the border.

64088 and 64089. SACCHARUM OFFICINARUM L. Poaceae. **Sugar cane.**

From Santiago de las Vegas, Cuba. Cuttings presented by Gonzalo M. Fortun, director, Estación Experimental Agronomica, through E. W. Brandes, Bureau of Plant Industry. Received June 8, 1925.

Locally developed strains.

64088. *C. O. 210.* **64089.** *C. O. 213.*

64090 to 64099.

From Tiflis, Caucasus. Seeds presented by the director of the Botanic Garden. Received May 18, 1925.

64090 to 64099—Continued.

64090 to 64092. AGROPYRON spp. Poaceae. **Grass.**

64090. AGROPYRON CRISTATUM (L.) Gaertn.

A perennial thickly cespitose grass, with stout rhizomes, native to southeastern Europe.

64091. AGROPYRON ORIENTALE (L.) Roem. and Schult.

An annual much-branched grass, prostrate-ascending in habit, native to sandy places in Asia Minor and Turkestan.

For previous introduction see S. P. I. No. 61389.

64092. AGROPYRON ORIENTALE LASIANTHUM Boiss.

An annual grass, thickly branched at the base, with numerous mostly prostrate stems scarcely 8 inches high. Native to Asia Minor and North Africa.

64093. AVENA BARBATA Brot. Poaceae. **Grass.**

An annual or biennial grass, up to 30 inches in height. Native to southern Europe.

64094. AVENA LUDOVICIANA Durieu. Poaceae. **Grass.**

An annual or biennial grass, very similar to *Avena sterilis*, but smaller. Native to southern Europe.

64095. ORYZOPSIS HOLCIFORMIS (Bieb.) Hack. Poaceae. **Grass.**

A perennial grass, with a thick short rhizome and stems 3 feet or more in height. The panicles are a foot or more long. Native to southern and southeastern Europe.

64096. ORYZOPSIS PARADOXA VIRESCENS (Trin.) Richter. Poaceae. **Grass.**

A perennial densely cespitose grass, with rough stems up to 4 feet in height. The spreading panicles are about 8 inches long. Native to southern Europe and Asia Minor.

64097 to 64099. TRITICUM spp. Poaceae. **Grass.**

64097. TRITICUM CYLINDRICUM (Host) Ces. Pass. and Gib.

An ornamental annual grass with stiff, upright stems and narrow leaves. Native to dry sandy places in southern and southeastern Europe.

64098. TRITICUM SPELTOIDES (Tausch) Grenier.

A bushy grass, branching from the base, with slender erect stems bearing rough narrow leaves and stiff rather loose spikes of long-awned flowers. It is a native of western Asia, found especially in Syria, and is considered to have been one of the species from which the cultivated wheats were derived.

64099. TRITICUM TRIUNCIALE (L.) Gren. and Godr.

A thickly branched annual grass, with ascending stems and flat rough leaves. Native to dry places in the Mediterranean region.

64100. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Santiago, Chile. Seeds presented through H. L. Westover, Bureau of Plant Industry. Received May 23, 1925.

Alfalfa seeds received from the Ministerio de Industria y Obras Publicas, Estación Enologica de Chile. (*Westover.*)

64101. CROTON FLORIBUNDUS Spreng. Euphorbiaceae.

From Sao Paulo, Brazil. Seeds presented by Amandeu Barbiellini. Received May 28, 1925.

Velame or *Capixingui.* A wild tree which produces an abundance of seeds. These constitute an ideal cheap food for domestic fowls, especially chickens. (*Barbiellini.*)

64102. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Svalof, Sweden. Seeds presented by Dr. A. Akerman, Sveriges Utsädesforening. Received May 28, 1925.

Sammetsvate. An old unimproved "land" wheat which is still cultivated here and there in central Sweden. It is exceedingly winterhardy and of excellent quality, but has no lodging resistance, is susceptible to rust, and is of relatively low production. (*Akerman.*)

64103 to 64108. ORYZA SATIVA L. Poaceae. **Rice.**

From Nokkeushimachi, Hokkaido, Japan. Seeds presented by Dr. T. Watanabe, director, Kitami branch, Hokkaido Agricultural Experiment Station. Received May 28, 1925. Notes by Doctor Watanabe.

64103. No. 1. *Kitamiakake.* A mass variety with awned ears.

64104. No. 2. *Bozugogo No. 5.* A pure line selected in our station, with awnless ears. This variety is rather late in maturing.

64105. No. 3. *Bozurokugo No. 6.* A pure line selected in our station.

64106. No. 4. *Hashiribozu.* A fixed hybrid selected in our station. This is our earliest awnless variety.

64107. No. 5. *Wasebozu.* A mass variety with awnless ears, which is fragrant when cooked. An early ripening variety.

64108. No. 6. *Sakigake.* A mass variety with red awns and brown hulls.

64109 to 64113. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Kharkof, Russia. Seeds obtained from the All-Ukrainian Seed-Producing Association, through J. A. Clark, Bureau of Plant Industry. Received June 1, 1925.

Locally developed strains.

64109. *Koopcratorka.* From the Odessa Experiment Station.

64110. *N. 351.* From the Udichskaia Experiment Station.

64111. *Semka.*

64109 to 64113—Continued.

64112. The "*Our-Concur.*" From the Ivanovskaia Experiment Station.

64113. *N. 491.* From the Verchnichscala Experiment Station.

64114 to 64116.

From Cape Town, Cape Province, Union of South Africa. Seeds presented by Dr. Rudolph Marloth, through H. L. Shantz, Bureau of Plant Industry. Received June 3, 1925. Notes by Doctor Shantz.

64114. CYANELLA CAPENSIS L. Amaryllidaceae.

No. 495. This plant, known in South Africa as "Raap unitje" or "Raaptol," has lilac flowers with yellow anthers; these flowers appear in summer when the leaves are mostly withered. The corms form an article of food for the natives.

64115. ERICA NANA Salisb. Ericaceae.

No. 497. A very small shrubby plant, with procumbent stems and relatively large yellowish flowers. This was probably grown by Doctor Marloth in his gardens at Cape Town.

64116. PSEUDOGALTONIA PECHUELLI Kuntze. Liliaceae.

No. 496. A bulbous plant, native to Great Namaqualand and Hereroland. The flowers are green and white, and under normal conditions the plant flowers in a leafless condition just before the rainy season; under cultivation the leaves often come first, before the flowers. The plant is very poisonous.

64117 to 64122.

From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. Received May 19, 1925.

64117 to 64119. BOEHMERIA spp. Urticaceae.

64117. BOEHMERIA PLATYPHYLLA D. Don.

A large shrub or small tree, native to eastern and southern India, which, according to Watt (Dictionary of the Economic Products of India, vol. 1, p. 481) is said to yield good fiber. The reddish brown wood is moderately hard.

64118. BOEHMERIA RUGULOSA Wedd.

A small tree with gray-brown branches, which is native in the mountainous districts of northeastern India. The moderately hard durable reddish wood is used in the manufacture of buckets, boxes, etc.

64119. BOEHMERIA SIDAEFOLIA Wedd.

A slender shrubby plant, erect or bushy, with oval hairy leaves; it is native to subtropical regions of northeastern India. Several species of this genus are valued in India as fiber-producing plants.

64120. CROTALARIA TETRAGONA Roxb. Fabaceae.

An erect stiff shrub, often 6 feet in height, which grows wild in the Himalayas of northeastern India, ascending to an altitude of 3,500 feet. The thin silky membranous narrow leaves are

64117 to 64122—Continued.

sometimes a foot long, and the lemon-yellow flowers are produced in lax racemes 6 inches or more in length.

For previous introduction see S. P. I. No. 59321.

64121. PIERIS OVALIFOLIA (Wall.) D. Don (*Andromeda ovalifolia* Wall.). Ericaceae.

Although this shrub or small tree may prove of value as a semihardy ornamental because of its racemes of bluish or white flowers, it is used as an insecticide in its native country, India, because of the presence of a poisonous principle in the young leaves and buds. The oblong leathery leaves are 3 to 6 inches long.

For previous introduction see S. P. I. No. 60653.

64122. THEMEDA GIGANTEA (Cav.) Hack. Poaceae.

A tall erect stout grass, 8 to 16 feet high, with very narrow leaves 4 to 8 feet long and oblong panicles 1 to 3 feet in length. It is native to eastern Asia and is closely related to the kangaroo grass of Australia, which is considered a valuable fodder.

64123 to 64125. GOSSYPIUM spp. Malvaceae.

From Natal, Brazil. Seeds presented by E. C. Green. Received May 19, 1925.

Selections of Brazilian cotton, probably hybrids of *Gossypium peruvianum* and *G. vitifolium*.

64123. GOSSYPIUM sp.

A.

64124. GOSSYPIUM sp.

B.

64125. GOSSYPIUM sp.

C.

64126 to 64152.

From Chihli, China. Seeds obtained by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received May, 1925. Notes by Mr. Dorsett.

64126 and 64127. FAGOPYRUM VULGARE Hill (*F. esculentum* Moench). Polygonaceae. **Buckwheat.**

64126. No. 2552. Miyunhsien. March 26, 1925.

64127. No. 2567. Kaoliying. March 27, 1925.

64128. HORDEUM sp. Poaceae. **Barley.**

No. 2547. Niulan Mountain. March 26, 1925. *Wang ta mai* (king barley).

64129. HORDEUM sp. Poaceae. **Barley.**

No. 2561. Kaoliying. March 27, 1925. *Wang ta mai* (king barley).

64130 to 64133. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Fabaceae. **Adsuki bean.**

64130. No. 2545. Niulan Mountain. March 26, 1925. A small black bean.

64126 to 64152—Continued.

64131. No. 2559. Miuyunhsien. March 26, 1925. A small gray variety.

64132. No. 2563. Kaoliying. March 27, 1925. A small white bean.

64133. No. 2564. Kaoliying. March 27, 1925. A small red variety.

64134 to 64137. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

64134. No. 2543. Niulan Mountain. March 26, 1925. This is a green variety.

64135. No. 2557. Miyunhsien. March 26, 1925. A green bean.

64136. No. 2565. Kaoliying. March 27, 1925. A hairy variety.

64137. No. 2571. Niulan Mountain. March 31, 1925. These beans are of a dull grayish brown and were separated from the green mung beans sent in under No. 2543 [S. P. I. No. 64134].

64138. PISUM SATIVUM L. Fabaceae. **Pea.**

No. 2340. Paotingfu. March 10, 1925. A white field pea.

64139 to 64145. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soy bean.**

64139. No. 2544. Niulan Mountain. March 26, 1925. A black soy bean.

64140. No. 2546. Niulan Mountain. March 26, 1925. A green variety.

64141. No. 2548. Niulan Mountain. March 26, 1925. Yellow soy bean.

64142. No. 2549. Niulan Mountain. March 26, 1925. A small, green soy bean.

64143. No. 2556. Miyunhsien. March 26, 1925. Yellow soy bean.

64144. No. 2560. Miyunhsien. March 26, 1925. Black variety.

64145. No. 2566. Kaoliying. March 27, 1925. Yellow soy bean.

64146 to 64149. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

64146. No. 2542. Niulan Mountain. March 26, 1925. A spring wheat.

64147. No. 2550. Niulan Mountain. March 26, 1925. Winter wheat.

64148. No. 2553. Miyunhsien. March 26, 1925. Winter wheat.

64149. No. 2554. Miyunhsien. March 26, 1925. Spring wheat.

64150. VICIA FABA L. Fabaceae. **Broad bean.**

No. 2558. Miyunhsien. March 26, 1925. *Ts'an tou* (silkworm bean) or English horse bean.

64151. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

No. 2551. Miyunhsien. March 26, 1925. A mottled cowpea.

64152. ZEA MAYS L. Poaceae. **Corn.**

No. 2562. Kaoliying. March 27, 1925. Seeds of a white corn.

64153 and 64154.

From Satyagrahashram, Sabarmati, India. Seeds presented by Magaulal K. Gandhi, at the request of Richard B. Gregg, Ahmedabad, Sabarmati. Received June 3, 1925.

64153. CUCUMIS SATIVUS L. Cucurbitaceae. **Cucumber.**

A long bulky cucumber which has flesh and flavor resembling a muskmelon, though not so sweet. (*Gandhi.*)

64154. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. **Cushaw.**

Sugar pumpkin (Indian name "Sakkaccoda"). A prolific variety of small pumpkin, round in shape and of a beautiful reddish color, resembling a half-ripe tomato. As the name suggests, the flavor is sweet. It is an earlier bearer than any of the other varieties and is a good keeper if stored in a dry place. (*Gandhi.*)

64155 and 64156.

From Mexico. Seeds collected by C. R. Orcutt. Received May 21, 1925.

64155. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

From the market at San Luis Potosi. (*Orcutt.*)

64156. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

No. 1749. 1924. Alvarez. *Takil.* (*Orcutt.*)

64157. GOSSYPIUM sp. Malvaceae. **Cotton.**

From Rabat, Morocco. Seeds presented by Em. Miége, chief, Service de l'Expérimentation Agricole au Maroc, through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received May 29, 1925.

A seedling of the native cotton known as *Sar-sar;* the latter is described under S. P. I. Nos. 64002 and 64003.

64158 and 64159.

From China. Plants collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received May 20, 1925.

64158. LIRIOPE GRAMINIFOLIA (L.) Baker (*L. spicata* Lour.). Liliaceae.

No. 121. Hong Kong Botanic Gardens. March 4, 1925. *Kuai t'sin t'so.* A dark-green variety which is of low habit and spreads rapidly by rhizomes. It is said to produce fruits only very sparingly. Used extensively in the place of grass in situations where the dense shade, shallow rooting of some trees, or other conditions prevent the growth of a satisfactory grass sod. (*McClure.*)

64159. OPHIOPOGON sp. Liliaceae.

A tropical, grasslike plant with small white or bluish flowers; collected in southeastern China.

64160 and 64161. LOLIUM TEMULENTUM L. Poaceae. **Darnel.**

From Ariana, near Tunis, Tunisia, Africa. Seeds presented by the chief of the Botanical Service. Received March 9, 1925. An annual European grass.

64160 and 64161—Continued.

64160. Received as *Lolium canadense.*

64161. Received as *Lolium brevicaulis.*

64162 and 64163. MUSA PARADISIACA SAPIENTUM (L.) Kuntze. Musaceae. **Banana.**

From Santiago de las Vegas, Cuba. Suckers presented by Gonzalo Fortun, director, Estación Experimental Agronomica. Received June 3, 1925.

64162. *Enano.* A dwarf banana which may be different from the Cavendish variety now being grown in Florida.

64163. *Congo.* This is similar to the Enano variety, but it appears to be immune to the Panama disease. It bears enormous bunches of fruits which sometimes weigh more than 100 pounds. (*Fortun.*)

64164 and 64165. LANDOLPHIA spp. Apocynaceae.

From Kisantu, Belgian Congo, Africa. Seeds presented by Frère J. Gillet. Received June 5, 1925.

64164. LANDOLPHIA KLAINII Pierre.

A tropical African climbing shrub which is said (Flora of Tropical Africa, vol. 4, sect. 1) to be the principal rubber-producing plant in the Gabon district, French Equatorial Africa. The oblong leathery leaves are glossy green, and the hard globose fruits are 6 to 10 inches in diameter.

For previous introduction see S. P. I. No. 63737.

64165. LANDOLPHIA OWARIENSIS Beauv.

This is described (Wildeman and Gentil, Lianes Caoutchoutifères du Congo, p. 53) as an enormous tropical creeper, found throughout the Belgian Congo, which attains a length of over 300 feet and a stem diameter of about 15 inches. The wedge-shaped elliptic leaves are 2 to 4 inches long. While the rubber-producing latex obtained from this species is often of good quality, frequently individual specimens yield latex which is practically useless.

For previous introduction see S. P. I. No. 58517.

64166 to 64183.

From Nice, France. Seeds presented by Dr. A. Robertson Proschowsky. Received June 3, 1925.

64166. ABROMA AUGUSTA L. f. Sterculiaceae.

A large spreading shrub, native to tropical Asia, with heart-shaped soft-hairy leaves and dingy-purple flowers. In India a fiber is extracted from the twigs which is valued for its beauty, softness, and durability.

64167. ACER OSMASTONI Gamble. Aceraceae. **Maple.**

A large Himalayan maple, described (Kew, Bulletin of Miscellaneous Information, 1908, p. 446) as a tree up to 100 feet tall, growing wild in Sikkim, India, at an altitude of about 7,000 feet. The leaves, 1 to 3 lobed, are papery and about 5 inches long.

For previous introduction see S. P. I. No. 61742.

64166 to 64183—Continued.

64168. ARAUJIA MEGAPOTAMICA Don. Asclepiadaceae.

A shrubby evergreen climbing plant, with opposite leaves and whitish or rosy bell-shaped flowers. It is native to Brazil and can be grown under glass or in the open in summer.

64169. ARCTOTIS STOECHADIFOLIA Bergius. Asteraceae.

A bushy composite from the Cape of Good Hope, which according to Harvey and Sonder (Flora Capensis, vol. 3, p. 454) has long hairy branches with whitish hairy leaves and large showy orange-colored flower heads.

64170. ARGYROLOBIUM LINNAEANUM Walp. Fabaceae.

A perennial cespitose half-woody leguminous plant, usually 4 to 8 inches high, with trifoliolate leaves and terminal yellow flowers. It is native to the Mediterranean regions.

64171 to 64173. CITRUS MEDICA L. Rutaceae. **Citron.**

64171. Received as *Citrus lumia*, which is now referred to as *C. medica*.

64172. *Lumus Valentina.*

64173. Var. *Perettone.*

64174. CROTALARIA TETRAGONA Roxb. Fabaceae.

An erect stiff shrub, often 6 feet in height, which grows wild in the Himalayas of northeastern India, ascending to an altitude of 3,500 feet. The thin silky membranous narrow leaves are sometimes a foot long, and the lemon-yellow flowers are produced in lax racemes 6 inches or more in length.

For previous introduction see S. P. I. No. 59321.

64175. ECCREMOCARPUS SCABER Ruiz and Pav. Bignoniaceae.

A Chilean relative of the Trumpet creeper, which is a shrubby vine with crimson and yellow flowers. It has bipinnate leaves and becomes 10 feet or more in length.

64176. EUCALYPTUS ALGERIENSIS Trabut. Myrtaceae.

A hybrid between *Eucalyptus rostrata* and *E. rudis* which has become naturalized in North Africa and now covers considerable areas of the hills around Algeria. It differs from *E. rudis* by its smooth trunk and its small flowers with the hemispherical operculum not beaked, and from *E. rostrata* by its buds, which are white like those of *E. rudis*. *Eucalyptus rudis* flowers in the spring, while *E. rostrata* flowers in July and August. (*Note by David Fairchild under S. P. I. No. 62666.*)

64177. MEIBOMIA GYROIDES (DC.) Kuntze (*Desmodium gyroides* DC.). Fabaceae.

A shrubby leguminous plant, 8 to 10 feet high, from the warmer parts of the central and eastern Himalayas. It has hairy leaves and terminal clusters of red flowers.

For previous introduction see S. P. I. No. 61613.

64166 to 64183—Continued.

64178. MEIBOMIA PULCHELLA (L.) Kuntze (*Desmodium pulchellum* Benth.). Fabaceae.

An erect hairy shrub with trifoliolate leaves and spikelike clusters of red flowers. It is native to southeastern Asia and is introduced chiefly for testing as a forage plant.

64179. NEPTUNIA OLERACEA Lour. Mimosaceae.

According to Ridley (Flora of the Malay Peninsula, vol. 1, p. 653), this floating leguminous plant, with white fleshy stems, is used as a potherb. The bipinnate leaves are 3 inches long, and the flower heads are yellow.

64180. ONCOCALAMUS sp. Phoenicaceae. **Palm.**

The members of this tropical African genus are climbing palms with long stems and pinnate leaves.

64181. PANCRATIUM COLLINUM Coss. and Dur. Amaryllidaceae.

A bulbous plant from Algeria, described by Baker (Handbook of Amaryllideae, p. 118) as having five or six linear leaves about 2 feet long and greenish white fragrant flowers in 5 to 10 flowered umbels.

64182. VERNONIA VOLKAMERIAEFOLIA DC. Asteraceae.

A small stout tree with large leaves, about a foot in length, and very numerous whitish flower heads in terminal panicles. The tree is native in the mountainous districts of northeastern India.

64183. ZANTHOXYLUM ALATUM PLANISPINUM (Sieb. and Zucc.) Rehd. and Wils. Rutaceae.

According to the Revue Horticole (vol. 85, p. 17), this Japanese shrub is 7 to 13 feet high, much branched at the base, sometimes with a short trunk. The dark-brown spreading branches, drooping a little at the tips, bear stout straight spines in pairs and evergreen pinnate leaves, dark green above and paler beneath. The small red fleshy fruits are persistent and emit a very agreeable aromatic odor when bruised. The shrub should be more extensively planted as an ornamental; in addition it makes a very formidable hedge. Propagation is by seeds or cuttings.

64184 to 64195.

From northern Africa. Collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received June 4, 1925. Notes by Doctor Fairchild.

64184. ANCHUSA UNDULATA L. Boraginaceae.

April 27, 1925. Var. *lamprocarpa.* Seeds of what appears to be one of R. Maire's new subspecies which is native to Morocco. As I saw it on the sand land, about 14 miles north of Kenitra, Morocco, it appeared to be a very attractive flowering perennial which should be introduced into our gardens and improved through selection. The dark-purple flowers contrast strikingly with the red-purple of the stiff inflorescence, which has a great deal of style to it.

64184 to 64195—Continued.

64185. CAPSICUM ANNUUM L. Solanaceae. **Red pepper.**

Sidi Bel Abbes, Algeria. March 12, 1925. Seeds purchased in the market. I have not seen this particular variety of the sweet red pepper of Spain since I was in Murcia, Spain, 25 years ago. The Spanish grind it up into a very fine powder and flavor their soups and other dishes. It is one of the finest flavored varieties and is not the least bit sharp; a large spoonful of the ground fruit can be put into a plate of soup or stewed with chicken. I believe it is also used fresh in the making of what we in America call "pimento."

64186. CERINTHE GYMNANDRA Gasp. Boraginaceae.

April 27, 1925. There are several species of Cerinthe scattered along the coast of northern Africa which differ in the size and color of the flowers and in the tint of black-purple which characterizes their large floral bracts. If used in a border properly it might be a most effective plant, furnishing a dark-purple background for all sorts of other flowering plants. These seeds were gathered in the valley back of the old town of Ouezzan, Morocco, which is about 30 miles from the Riff frontier.

64187. DIPCADI SEROTINUM Medic. Liliaceae.

Forest of Mamora, near Rabat, Morocco. April 23, 1925. Seeds of a bulbous plant growing about a foot high and producing a slender spike of salmon-colored flowers which are shaped like those of a hyacinth. It forms patches in the deep sandy soil of the forest of Mamora.

64188. ECBALLIUM ELATERIUM (L.) A. Rich. Cucurbitaceae.

From a roadside near Sidi Bel Abbes, Algeria. March 24, 1925.

Seeds of the "squirting cucumber," a perennial trailing vine, native to the Mediterranean countries. It is cultivated as an annual in gardens of the Temperate Zone and is a curiosity because of its peculiar habit of violently ejecting its seeds and juice. A drug, elaterium, is obtained from the juice. In flower and foliage characters the plant closely resembles the cucumber, and the fruit is like a small greenish elliptical gourd covered with soft greenish prickles.

64189. HELIANTHEMUM AEGYPTIACUM Mill. Cistaceae.

Forest of Boulhout, near Rabat, Morocco. April 23, 1925. The superb yellow color of this small species attracted my attention at once, and although the flowers last only a short time, they have so delicate a charm about them that I could not resist sending in seeds in order that an attempt should be made to naturalize the species in the oak forests and on the sandy soils of southern California. This variety appears to be common in Algeria and Tunisia, as well as here in Morocco.

64190. IRIS ALATA Poir. Iridaceae.

Seeds of a low-growing species which grows wild in the wet gumbo soils about 66 miles north of Kenitra, Morocco. It is a purple-flowered species, and R. Maire

64184 to 64195—Continued.

tells me it is well worth growing in our borders for its large flowers, which in Algiers appear during October and November. It produces numerous tubers on its roots.

64191. LEUCOJUM AUTUMNALE L. Amaryllidaceae.

April 17, 1925. Seeds collected in the forest of Mamora, about 9 miles from Rabat, Morocco.

An autumn-blooming bulbous plant, sometimes called the "autumn snowflake. The threadlike leaves usually appear after the flowers; these are white, tinged with red, and are borne on a slender scape 3 to 9 inches long. Native to the Mediterranean countries and best suited for growing in sandy soil in the southern half of the United States.

64192. MYOPORUM sp. Myoporaceae.

May 3, 1925. Seeds presented by the Jardin d'Essais, Rabat, Morocco, where there are many hundreds of yards of hedges of this variety. It was introduced into Morocco and has now become the principal hedge plant and windbreak of the whole coast. It is one of the best plants I have ever seen for hedges down near the sea, but not right on the very edge of the surf. It stands clipping admirably well and is an evergreen of a pleasing dark-green color. It grows with the greatest ease from cuttings, makes a very dense windbreak, and will stand several degrees of frost without injury. It is reported that grasshoppers do not care for this species.

64193. ORNITHOGALUM UNIFOLIUM (L.) Ker. Liliaceae.

Bulbs from the forest of Mamora, near Rabat, Morocco. April 21, 1925.

A Portuguese relative of the star of Bethlehem which is described (Curtis's Botanical Magazine, pl. 935) as a little bulbous plant a foot or less high, with but one leaf, which is narrow, concave, and terminated by a long recurved point. The three to five white flowers are borne on a scape shorter than the leaf.

64194. RHUS PENTAPHYLLA (Jacq.) Desf. Anacardiaceae.

Boulhout, Morocco. April 22, 1925. Seeds of a beautiful shrub at present covered with berries which are just beginning to ripen. The fruits become intense red later in the season, and the bark is a source of tannin.

64195. TRADESCANTIA sp. Commelinaceae.

The spiderworts are perennial herbs, all native to North America and cultivated in the greenhouse or out of doors, according to their hardiness, for the sake of their bright flowers, which are blue, red, or white, and attractive foliage. Cuttings of a North African species.

64196 to 64198.

From Avondale, Auckland, New Zealand. Seeds presented by H. R. Wright. Received June 5, 1925.

64196. MERYTA SINCLAIRII (Hook. f.) Seem. Araliaceae.

A small, very attractive New Zealand tree, described by Laing and Blackwell (Plants of New Zealand, p. 312) as about 20 feet high, with shining-green

64196 to 64198—Continued.

leaves 9 to 20 inches long, and erect panicles of greenish yellow flowers. It probably is adapted for growing only in Florida and California.

64197. PHORMIUM TENAX Forst. Liliaceae. **New Zealand flax.**

Var. *atropurpureum*. A horticultural variety with reddish purple foliage. The plant has rigid sword-shaped leaves 6 feet or more in length and a flower stalk sometimes 15 feet high, which bears numerous dull-red flowers. Adapted for growing outdoors in Florida and California and as a tub plant farther north.

64198. VITEX LUCENS Kirk. Verbenaceae. **Puriri.**

A handsome New Zealand evergreen tree, described by Laing and Blackwell (Plants of New Zealand, p. 350) as being about 60 feet in height, with bright glossy green leaves composed of three to five leaflets. The pink or red two-lipped flowers, produced more or less continuously throughout the year, are in axillary clusters. The wood is very strong and durable and is not injured by dampness. The roots do not penetrate deeply into the ground, so the tree is easily blown over by heavy winds. The tree will probably not endure much frost.

64199 to 64205. HOLCUS SORGHUM L. (*Sorghum vulgare* Pers.). Poaceae. **Sorghum.**

From Potchefstroom, Transvaal, Union of South Africa. Seeds presented by Jacq. P. F. Sellschop, School of Agriculture. Received June 11, 1925.

Locally grown strains.

64199. *Bird Proof.*

64200. *Brown Sudan Durra.*

64201. *Ordinary Red.*

64202. *Short Red.*

64203. *White Coligny.*

64204. *White Sudan Durra.*

64205. *Yanzu.*

64206. CARICA PAPAYA L. Papayaceae. **Papaya.**

From Santiago de las Vegas, Cuba. Seeds presented by Gonzalo M. Fortun, director, Estación Experimental Agronomica. Received June 10, 1925.

Mamey. This is a fine papaya of medium size, with red flesh of fine flavor. (*Fortun.*)

64207 to 64209. COIX LACRYMA-JOBI MAYUEN (Rom.) Stapf. Poaceae. **Adlay.**

From Lamao, Bataan, Philippine Islands. Seeds presented by S. Youngberg, acting Director, Bureau of Agriculture, Manila. Received June 23, 1925.

The ma-yuen, or adlay, has attracted considerable attention as a cereal for tropical regions. According to P. J. Wester, it is better than upland rice for tropical agriculture in being more drought resistant, a heavier yielder, and much less expensive to cultivate. The seeds can be used largely in the same manner as corn.

64207 to 64209—Continued.

64207. *Batangas.*

64208. *Bukidnon.*

64209. *Lamao White.*

64210. POA FLABELLATA (Lam.) Hook. f. Poaceae. **Tussock grass.**

From Stanley, Falkland Islands. Seeds presented by James Reid, forest officer. Received June 12, 1925.

For previous introduction and description see S. P. I. No. 63972.

64211 to 64214. RUBUS spp. Rosaceae.

From the Philippine Islands. Seeds presented by P. J. Wester. Received June 12, 1925. Notes by Mr. Wester unless otherwise stated.

Collected February 24 to 27, 1925, in the vicinity of Mount Pulog, Benguet Province, Luzon.

64211. RUBUS ELLIPTICUS J. E. Smith. **Raspberry.**

Adouay. February 27. A very stout shrub which, especially when young, is densely covered with long red hairlike spines. The flowers are white, and the deep-yellow, almost orange, very juicy, acid fruits, which ripen earlier on the mountains than in the valley, are collected by the hill tribes and brought to the markets. (*J. F. Rock.*)

64212. RUBUS FRAXINIFOLIUS Poir. **Raspberry.**

Palanau. A tropical raspberry, described (Brown, Wild Food Plants of the Philippines, p. 63) as a scrambling shrub, with branches 2 to 4 meters long, which is very common in the mountains from Luzon to Mindanao, Philippine Islands. The stems and leaves are armed with sharp spines, and the white flowers are about 2 centimeters across. The bright red berries, 10 to 15 millimeters in diameter, borne in clusters, are fairly juicy and edible, but rather tasteless.

64213. RUBUS PECTINELLUS Maxim.

Atibu. A trailing plant with small heart-shaped hairy leaves and weak spines on all parts of the plant. It grows at an altitude of 5,000 feet or more, from northern Luzon to Mindanao. The berries, three-fifths of an inch in diameter, are bright red, juicy, subacid, and of excellent flavor and quality. This is the choicest species of Rubus in the Philippines, but it is not in cultivation.

64214. RUBUS NIVEUS Thunb. **Raspberry.**

Below Camp 42, trail to Adouay. *Pilay.* A bramble found in northern Luzon at altitudes ranging from 4,000 to 7,000 feet, with spiny canes up to 7 feet in length. The five to nine foliolate leaves are white beneath. The hemispherical berries are bluish, subacid, and of good flavor. This plant is not cultivated, but is well worthy of domestication.

64215. ACACIA GIRAFFAE Willd. Mimosaceae.

From Kirstenbosch, Cape Province, Union of South Africa. Seeds presented by Prof. R. H. Compton, director, National Botanic Gardens. Received June 12, 1925.

The *kameel doorn* of the Transvaal is a valuable timber tree for arid regions in the warm Temperate Zone, according to J. Burtt Davy, formerly director of the Burtt-Davy seed farms at Burttholm, Vereeniging, Transvaal. The ripe pods are greedily eaten by stock. The tree thrives in sandy soil, attains a large size, and the dark reddish brown wood is used by the natives in making spoons, knife handles, etc.

64216. CARICA PAPAYA L. Papayaceae. **Papaya.**

From Santiago de las Vegas, Cuba. Seeds presented by Gonzalo M. Fortun, director, Estación Experimental Agronomica. Received June 13, 1925.

One of the larger papaya types, sent to me by Mario Escobar y Ferrer, of Colonia "Bellamar" Jagueyal. (*Fortun.*)

64217. MEIBOMIA LEIOCARPA (Spreng.) Kuntze (*Desmodium leiocarpum* Don.). Fabaceae.

From Buenos Aires, Argentina. Seeds presented by Carlos D. Girola, Museo Agricola de la Sociedad Rural Argentina. Received June 12, 1925.

In northern Argentina and southern Brazil this native leguminous plant is eaten readily by stock, according to Señor Girola (Boletin del Ministerio de Agricultura, Buenos Aires, vol. 25, p. 375). The plant becomes 6 feet or more in height, more or less branched, with trifoliolate leaves 2 inches or more long. For use as forage the plants are cut at the level of the ground, just before flowering; this practice causes the plants to renew their growth most rapidly.

64218. PANICUM LAEVIFOLIUM Hack. Poaceae. **Grass.**

From Pretoria, Transvaal, Union of South Africa. Seeds presented by H. A. Mellé, Department of Agriculture, through C. V. Piper, Bureau of Plant Industry. Received June 17, 1925.

Sweet grass is an annual, widely distributed over the Transvaal and the Orange Free State. Owing to its rapid growth in cultivated lands, it is regarded as a troublesome weed. It is a very rapid grower, heading within six weeks after the seed has germinated, and has a remarkably heavy yield. The mown grass, if properly cured, makes excellent hay of the best palatability, which during the winter months is eaten greedily by stock. (*Mellé.*)

64219 and 64220. SACCHARUM OFFICINARUM L. Poaceae. **Sugar cane.**

From Fortuna, Porto Rico. Cuttings presented by J. Matz, through E. W. Brandes, Bureau of Plant Industry. Received June 24, 1925.

64219. *B. 6032.* **64220.** *B. 6308.*

64221 and 64222.

From Chingkangsan, Hupeh, China. Seeds presented by Rev. A. S. Cooper. Received June 15, 1925.

64221. PYRACANTHA sp. Malaceae. **Firethorn.**

The firethorns are ornamental shrubs grown chiefly for their bright-red fruits. This Chinese species is as yet unidentified.

64221 and 64222—Continued.

64222. LILIUM LEUCANTHUM CHLORASTER (Baker) Wilson. Liliaceae. **Lily.**

An unidentified Chinese lily. To be grown to ascertain its horticultural value.

64223 to 64230. PYRUS spp. Malaceae. **Pear.**

The following seedlings, grown at the Plant Introduction Garden, Chico, Calif., are from hybrids between one of the *Pyrus communis* types and a Chinese pear, raised by the late Walter Van Fleet in 1907 and hitherto carried collectively at the Chico garden under the S. P. I. No. 28497. Numbered in April, 1925, for convenience in distribution.

64223. PYRUS sp.

A medium-sized pear, 3½ inches long and 2¾ inches wide, which is obovate-acute-pyriform, some specimens tending to oblong-pyriform. The thick, tough skin is light yellow overlain with bronze or light pink on the exposed surface and is slightly roughened by numerous large conspicuous russet dots. The flesh is white, fairly juicy and firm, sweet but insipid. The tree is very prolific and ripens its fruits at Chico from the middle of August to the middle of September. (Row 42, tree 3, and row 44, tree 3.)

64224. PYRUS sp.

Fruits medium to large, averaging 3 inches long and 2¾ inches wide; acute-obovate-pyriform in shape with unequal sides. When ripe the skin is lemon yellow with a smooth waxy surface and numerous russet dots. The flesh is quite firm and juicy, slightly sweet, but lacking in flavor. Possibly of use for canning purposes. The fruits ripen at Chico from late in September to late in October. Row 26, tree 4, old test orchard.)

64225. PYRUS sp.

A medium-sized pear, yellowish green and rather rough. The flesh is light colored, rather coarse in texture, but juicy, sweet, and of fair quality. The tree is small and rather slow growing, bearing an average crop and showing no evidence of disease. Evidently a fair winter pear. The fruits ripen at Chico about the middle of August. (Row 26, tree 8, old test orchard.)

64226. PYRUS sp.

A medium-sized drooping vigorous tree, bearing an average crop of medium-sized pears. The fruits are greenish yellow and smooth. The flesh is juicy and slightly acid with a trace of astringency. This has a possible value as a late winter pear. (Row 26, tree 11, old test orchard.)

64227. PYRUS sp.

Fruits large and coarse, averaging 12 to 16 ounces in weight, with greenish yellow skin, slightly colored where exposed to the sun. The flesh is juicy and fairly sweet, but lacking in flavor. The tree is vigorous, free from blight, and bears a heavy crop of fruit which ripens late in September or early in October at Chico, Calif. (Row 28, tree 8, old test orchard.)

64228. PYRUS sp.

A very vigorous tree showing as yet no evidence of blight and bearing a heavy

64223 to 64230—Continued.

crop of large obovate pears averaging 8 to 10 ounces in weight. The flesh is coarse, granular, juicy, and lacking in flavor. (Row 28, tree 10, old test orchard.)

64229. PYRUS sp.

Fruits medium sized, turbinate, averaging 2½ inches long and 2¼ inches wide, with a fairly smooth surface, slightly roughened in spots by russet patches. The flesh is white, fairly juicy and firm, sweet, with a pleasant flavor. A satisfactory dessert pear which ripens early in September. (Row 34, tree 4, old test orchard.)

64230. PYRUS sp.

A pear averaging 7 or 8 ounces in weight, obovate in form, greenish yellow, and heavily dotted. The flesh is very coarse and gritty and would probably be of value only for cooking purposes. The tree is spreading, open, and vigorous and as yet shows no evidence of disease. Fruits ripen in October at Chico, Calif. (Row 27, tree 9, old test orchard.)

64231 to 64243.

From Leningrad, Russia. Seeds presented by A. Kol, chief of information and introduction, Institute of Applied Botany. Received June 12, 1925.

64231. ABIES SIBIRICA NEPHROLEPIS Trautv. Pinaceae.

A tall Siberian fir with a trunk 2 to 4 feet in diameter, dark yellow-green crowded leaves, and slender brownish yellow cones. This is said to be a very hardy fir, although the young growth is often injured by late frosts.

64232. ACANTHOPANAX SENTICOSUM (Rupr.) Harms. Araliaceae.

A very spiny shrub bearing palmate-divided leaves and having at the end of its long shoots small umbels of black berries. Grows generally in dense shade, and may prove useful as a park or garden shrub or as an undergrowth beneath tall trees. (*Frank N. Meyer, note under S. P. I. No. 20309.*)

64233. ACER TEGMENTOSUM Maxim. Aceraceae. **Maple.**

A small hardy Manchurian maple, very similar to *Acer rufinerve*. The bright-green three-lobed leaves are about 3 inches long and slightly less in width.

64234. BETULA SCHMIDTII Regel. Betulaceae. **Birch.**

A Japanese birch, described by C. S. Sargent (Plantae Wilsonianae, vol. 2, pt. 3, pp. 475 and 476) as a large tree with thick branches, found only in the Province of Shimotsuke, Hondo, Japan. It grows to be 65 feet tall, with a trunk 3½ to 7½ feet thick, and black bark which falls off in thick, rather small plates. The finely serrate leaves are short stemmed, and the catkins are narrow, stiff, and erect.

64235. FRAXINUS MANDSHURICA Rupr. Oleaceae. **Ash.**

An Asiatic ash, described by Bean (Trees and Shrubs Hardy in the British Isles, vol. 1, p. 569) as a handsome tree

64231 to 64243—Continued.

often 100 feet in height, native to Japan and the adjacent parts of the Asiatic mainland. The leaves are up to 15 inches in length, with dull-green bristly leaflets. The tree is said to be susceptible to late spring frosts.

64236. LARIX DAHURICA Turcz. Pinaceae. **Larch.**

A larch from Manchuria and southeastern Siberia, sometimes as much as 70 feet in height. In many sections it is superior to the common European larch as a park tree. In the spring the young cones are very attractive because of their bright pink color.

64237. MAACKIA AMURENSIS Rupr. Fabaceae.

A small tree, native to eastern Asia, with orange-brown bark, dull-green compound leaves, and short erect clusters of small yellowish white flowers.

64238. PICEA JEZOENSIS (Sieb. and Zucc.) Carr. Pinaceae.

A handsome hardy spruce, native to eastern Asia, which becomes about 70 feet high, with low-spreading branches and a dense pyramidal habit. The leaves are silvery above and rich green beneath, and the staminate flowers are orange-crimson.

64239. PRUNUS MAACKII Rupr. Amygdalaceae. **Cherry.**

A Manchurian bird cherry, 40 feet or more in height, with very smooth brownish yellow bark which peels off like that of a birch. The leaves are pointed and very finely toothed, and the white flowers are in short racemes borne on the previous season's wood.

64240. PRUNUS SALICINA Lindl. Amygdalaceae. **Plum.**

Var. *koreana*. A horticultural form of the Japanese plum which will be grown to ascertain its horticultural value.

64241. PYRUS USSURIENSIS Maxim. Malaceae. **Pear.**

A hardy Chinese pear, some strains of which have shown unusual resistance to the pear blight. Introduced for horticulturists engaged in pear-breeding experiments.

64242. SCHIZANDRA CHINENSIS (Turcz.) Baill. Magnoliaceae.

A trailing vine of small growth, found among bowlders and rocks. The leaves are not unlike those of *Actinidia kolomikta*, and the sour red berries are in small clusters. Might be of use as a small porch and trellis vine for the colder sections of the United States. (*Frank N. Meyer, note under S. P. I. No. 36755.*)

64243. TILIA AMURENSIS Rupr. Tiliaceae.

A Manchurian linden which according to Schneider (Illustriertes Handbuch der Laubholzkunde, vol. 2, p. 374) has a habit similar to that of the small-leaved linden (*Tilia cordata* Mill.), with ovate papery long-pointed leaves which are dark green above and blue-green below. It is distinguished from the small-leaved linden by its coarser dentations.

64244. LEUCOJUM AUTUMNALE L. Amaryllidaceae.

From Morocco. Bulbs collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received June 4, 1925.

April 17, 1925. Collected in the forest of Mamora, about 9 miles from Rabat. (*Fairchild.*)

For introduction of seeds and description, see S. P. I. No. 64191.

64245 to 64272.

From Tibet, China. Seeds collected by F. Kingdon Ward and presented by Maj. Lionel de Rothschild, London, England. Received May 22, 1925. Notes by Captain Ward.

Collected in the Tsangpo Valley during the spring of 1924.

64245. ACER sp. Aceraceae. **Maple.**

No. 5832. A tree 20 to 30 feet high, growing in a mixed forest.

64246 to 64249. BERBERIS spp. Berberidaceae. **Barberry.**

64246. BERBERIS sp.

No. 5773. A bush, 6 feet in height, with glaucous foliage which turns purple in the autumn. The flowers are yellow and the berries coral red.

64247. BERBERIS sp.

No. 5936. This bush, 6 feet in height, has scarlet foliage during the autumn. The bright-yellow flowers are very numerous, and the berries are scarlet.

64248. BERBERIS sp.

No. 5962.

64249. BERBERIS sp.

No. 6233. A small shrub, 1 to 1½ feet in height, growing on sunny grassy slopes in peaty soil among dwarf rhododendrons. The pendent berries are coral red.

64250. CARAGANA sp. Fabaceae.

No. 6267. A bush, 2 to 3 feet high, growing in alpine regions on open slopes facing the south. The flowers are pink (?).

64251. CASSIOPE sp. Ericaceae.

Nos. 5663 and 5770. Grows in peaty soil on alpine meadows.

64252. CLEMATIS sp. Ranunculaceae.

No. 6290.

64253. COTONEASTER sp. Malaceae.

No. 6400.

64254. ENKIANTHUS sp. Ericaceae.

No. 6254. A shrub, 6 to 10 feet high, found in thickets and on the margins of forests. The leaves are scarlet and orange in the autumn; the flowers were not seen.

64255. ILEX sp. Aquifoliaceae. **Holly.**

No. 6249. An evergreen undershrub about 1 foot high, with scarlet berries resembling those of the holly. Grows among dense shrub growth and bowlders in peaty soil.

64245 to 64272—Continued.

64256. IRIS sp. Iridaceae.

No. 5783.

64257. IRIS sp. Iridaceae.

64258 to 64260. LILIUM spp. Liliaceae. **Lily.**

64258. LILIUM sp.

No. 5809. A lily, with maroon flowers, which grows 3 to 6 inches high, in peaty meadows, among dwarf rhododendrons.

64259. LILIUM sp.

No. 5893. Plant 3 feet high, found on sheltered banks among shrubs on granite rock and in loamy soil, at an altitude of 13,000 feet.

64260. LILIUM sp.

No. 6272.

64261 to 64263. LONICERA spp. Caprifoliaceae. **Honeysuckle.**

64261. LONICERA sp.

No. 5775. A bush 6 to 8 feet high found in forests. It bears white or pale-cream pendent flowers and handsome cherry-red translucent berries which are good to eat.

64262. LONICERA sp.

No. 5822. A shrub or small tree up to 20 feet high, found in heavily shaded forests. The leaves are glossy and the flowers maroon colored. The pendent fruits, scarlet and the size of small cherries, are produced on pedicels which are 2 inches in length.

64263. LONICERA sp.

No. 5918. A dwarf shrub, 1 foot high, with yellow flowers and blue-black stems and berries. It grows in peaty soil among dwarf rhododendrons on alpine meadows.

64264. NOMOCHARIS sp. Liliaceae.

No. 6232. A plant 8 to 12 inches high, found on alpine meadows in loam and sand. The flowers were not seen.

64265. ONOSMA sp. Boraginaceae.

No. 5965. A plant having decumbent stems and bright-blue flowers which appear from July to September. It grows in pure sand, gravel, or grit in open, dry, sunny situations and should make a good rock plant.

64266. POPULUS sp. Salicaceae. **Poplar.**

No. 5675. A golden poplar tree 100 feet high, found in villages by the river.

64267. RHEUM sp. Polygonaceae.

No. 5805. Plant 6 feet high growing among alpine granite bowlders at an altitude of 15,000 feet.

64268. ROSA sp. Rosaceae. **Rose.**

No. 5834. A bush, 6 to 12 feet high, or scrambling from 15 to 20 feet, found in thickets, forests, hedges, etc. The flowers are rose, hips scarlet and flask-shaped.

64269 to 64271. SALIX spp. Salicaceae. **Willow.**

64269. SALIX sp.

No. 5755. A shrub 10 to 15 feet high, with large bright-colored staminate and pistillate catkins. Grows in open situations.

64245 to 64272—Continued.

64270. SALIX sp.

No. 5870. This dwarf willow, bearing large leaves and erect spikes 3 inches in length, is creeping in habit.

64271. SALIX sp.

No. 6239. A shrub a foot or 2 high, with erect spikes about 3 inches long. Grows on sheltered gravelly slopes and in marshy places.

64272. THALICTRUM sp. Ranunculaceae.

No. 5899. A plant 6 to 10 feet high, with small leaves and large mauve flowers. Resembles *Thalictrum dipterocarpum*, but probably the leaves are smaller and the flowers larger. Grows in loamy soil in shady places.

64273 to 64285.

From Chihli Province, China. Seeds collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received May 27, 1925. Notes by Mr. Dorsett.

The following seeds were collected at the Botanical Garden, Peking, April 10, 1925.

64273. HORDEUM VULGARE NIGRUM (Willd.) Beaven. Poaceae. **Six-rowed barley.**

No. 2658. *Feng Tien hei ta mai* (black barley of Mukden). This variety is said to have originally come from Mukden, Manchuria.

64274 to 64276. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

64274. No. 2649. *Wang ta mai* (king barley). This variety appears to be the most commonly grown barley.

64275. No. 2650. *Honan wang ta mai* (king barley of Honan), said to have originally come from Honan Province.

64276. No. 2659. *Eo Kuo ta mai* (Russian barley), originally from Russia.

64277 and 64278. PHASEOLUS CALCARATUS Roxb. Fabaceae. **Rice bean.**

64277. No. 2652. *Pai ch'ang hsiao tou* (white long small bean). This variety is said to be a product of Chihli Province.

64278. No. 2660. *Tsung so ch'ang hsiao tou* (long brown small bean). These were selected from the small white bean, No. 2652 [S. P. I. No. 64277], and may prove to be a different strain.

64279 to 64283. PISUM SATIVUM L. Fabaceae. **Pea.**

64279. No. 2653. *Eo Kuo pai wan tou* (white field pea of Russia), said to have come originally from Russia.

64280. No. 2654. *Szechwan pai wan tou* (white field pea of Szechwan). A product of Szechwan.

64281. No. 2655. *Feng Tien pai wan tou* (white field pea of Mukden), said to have come originally from Mukden, Manchuria.

64282. No. 2656. *Te Kuo lu wan tou* (green field pea of Germany). Originally from Germany.

64273 to 64285—Continued.

64283. No. 2657. *Szechwan lu wan tou* (green field pea of Szechwan), originally from Szechwan Province.

64284. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soy bean.**

No. 2651. *Tsung se tou* (brown soy bean) said to be a product of Chihli Province.

64285. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

No. 2648. *Pai mai tze* (white winter wheat). Originally from Chinghsien.

64286. DAHLIA VARIABILIS (Willd.) Desf. Asteraceae.

From Lima, Peru. Tuber collected by Wilson Popenoe, agricultural explorer, Bureau of Plant Industry. Received February 28, 1925. Numbered April, 1925.

This is considered to be the parent of the great majority of cultivated dahlia varieties, and is, as the name indicates, very variable in both vegetative and floral characters.

64287 and 64288.

From Rio de Janeiro, Brazil. Seeds presented by Dr. Pacheco Leão, director, Botanic Garden. Received June 29, 1925.

64287. HOLCUS SORGHUM VERTICILLIFLORUS (Steud.) Hitchc. Poaceae. **Tabucki grass.**

Locally grown seeds.

For previous introduction see S. P. I. No. 61674.

64288. MEIBOMIA DISCOLOR (Vogel) Kuntze (*Desmodium discolor* Vogel). Fabaceae.

A shrubby erect hairy plant from southern Brazil, with oval membranous leaflets and large panicles of light-blue flowers.

64289 to 64309.

From Tiflis, Georgia, Caucasus. Seeds presented by the director of the Botanic Garden. Received June 30, 1925.

64289. ABIES SPECTABILIS Lambert (*A. webbiana* Lindl.). Pinaceae. **Fir.**

An Asiatic fir, which, in its native home in the Himalayas, becomes at times 150 feet in height, according to Bean (Trees and Shrubs Hardy in the British Isles, vol. 1, p. 128). The dark-green leaves are arranged in two opposite series so as to leave a V-shaped opening along the top; the individual leaves are 1 to 2 inches long. The cones, about 5 inches long, are violet-purple at first, becoming brown. It is probable that this fir will prove hardy only in the southern United States.

64290. ACER DIVERGENS Koch and Pax. Aceraceae. **Maple.**

According to Koch (Engler's Botanische Jahrbücher, vol. 7, p. 234), this maple, native to the Caucasus, is probably a tree; the bark is ash brown. The leathery dark-green leaves are pale beneath and five lobed.

64289 to 64309—Continued.

64291. ACER HYRCANUM Fisch. and Mey. Aceraceae. **Maple.**

A southern European maple of compact habit, about 25 feet high, with bright-green 5-lobed leaves, greenish yellow flowers, and samaras about an inch long.

64292 to 64294. CORNUS spp. Cornaceae. **Dogwood.**

64292. CORNUS AUSTRALIS Meyer.

A close relative of the common European dogwood (*Cornus sanguinea*). It differs in minor characters only, and is native to Asia Minor and the Caucasus. The European dogwood is a shrub 12 feet high, with dark-red branches, pale-green leaves, dense cymes of greenish white flowers, and black fruits.

64293. CORNUS IBERICA Hort.

A horticultural variety.

64294. CORNUS KOENIGI C. Schneid.

A dogwood native to Transcaucasia, described by Schneider (Illustriertes Handbuch der Laubholzkunde, vol. 2) as a shrub 10 feet or more in height, upright in habit and closely related to the common European dogwood (*Cornus sanguinea*). The branches are purple-brown, the leaves shining green, and the fruits are black.

64295. CUPRESSUS TORULOSA Don. Pinaceae.

Var. *corneyana.* A tall pyramidal cypress, 150 feet or less high, with pendulous branches and deep-green leaves arranged irregularly. It is indigenous to the Himalayas, and will probably be hardy only in the southern United States.

64296. FAGUS ORIENTALIS Lipsky. Fagaceae. **Beech.**

A tall handsome beech with a pyramidal habit, which is distributed throughout the Caucasus. The leaves are oblong to elliptic, with entire margins. The wood is considered excellent for making furniture, tools, barrels, etc. This beech should be tried in the Southwest as a timber and shade tree.

64297 to 64301. IRIS spp. Iridaceae.

64297. IRIS CARTHALINIAE Fomin.

A Caucasian iris, described (Moniteur du Jardin Botanique de Tiflis, 1909) as having a thick rhizome and four or five flowered stems nearly 3 feet high. The sword-shaped leaves are about two-thirds of an inch wide, and the flowers are light blue. In its native country the plant grows in damp places.

64298. IRIS CAUCASICA Hoffm.

A rather dwarf iris described by Baker (Irideae, p. 45) as having about six bright-green very narrow leaves 3 to 6 inches long, a short stem, and pale or bright-yellow flowers which appear in March or April. It is native from Asia Minor to Turkestan, ascending to 6,000 feet above sea level.

64299. IRIS MUSULMANICA Fomin.

An iris from the vicinity of Elisabethpol, Caucasus, which, according to the Moniteur du Jardin Botanique de Tiflis (vol. 14, 1909), inhabits brackish swamps. It is less than 2 feet tall, and the flowers are either sky-blue or yellowish.

64300. IRIS TASCHIA Hort.

A horticultural variety.

64301. IRIS WINOGRADOWI Fomin.

A Caucasian iris.

64302. JUNIPERUS ISOPHYLLOS Koch. Pinaceae. **Juniper.**

An oriental juniper described by Koch (Linnea, vol. 22, p. 304) as a shrubby tree, with light-brown bark and ovate leaves. It differs from *Juniperus pseudosabina* in being smaller and having keeled leaves.

64303 to 64306. PAEONIA spp. Ranunculaceae. **Peony.**

64303. PAEONIA ABCHASICA Hort.

A horticultural variety.

64304. PAEONIA MLOKOSEWITSCHI Lomakin.

According to Curtis's Botanical Magazine (pl. 8173), this is a herbaceous perennial peony, with dark bluish green biternate leaves with red nerves and margins. The yellow flowers are 4 to 5 inches across, with numerous stamens and purple stigmas. This peony, considered the handsomest of the yellow-flowered forms, is native to the central Caucasus.

64305. PAEONIA TRITERNATA Pall.

A tall herbaceous peony, with carrot-shaped roots, which resembles *Paeonia corallina*, but differs in having rounded leaves, green stems, and rose-colored or whitish flowers. It is native to southeastern Europe.

64306. PAEONIA WITTMANNIANA Hartwiss.

A herbaceous perennial peony 2 to 3 feet high, with biternate leaves 4 to 8 inches long and flowers about 4 inches across. The flowers are solitary, pale yellow, greenish or nearly white. Native to the Caucasus.

64307. PINUS ELDARICA Medw. Pinaceae. **Pine.**

An erect pine 40 to 50 feet high, native to southern Europe and western Asia, and closely related to the Aleppo pine (*Pinus halepensis*). It differs from the latter in having longer, more rigid leaves which are a deeper green.

64308. PTEROCARYA FRAXINIFOLIA (Lam.) Spach. (*P. caucasica* Meyer). Juglandaceae.

A handsome spreading tree 60 feet or less in height, with attractive dark-green pinnate leaves about a foot long. Its native land is the Caucasus, and it will probably not be hardy north of Massachusetts.

64309. REICHARDIA DICHOTOMA (Bieb.) Freyn. Cichoriaceae.

A perennial herbaceous composite, 2 to 3 feet high, native to Asia Minor, with a rosette of spatulate radical leaves and very small stem leaves. The white flowers are in rather large heads.

64310 to 64339.

From Harbin, Manchuria. Seeds collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received June 19, 1925. Notes by Mr. Dorsett.

64310. CANNABIS SATIVA L. Moraceae. **Hemp.**

No. 2802. Pniston, Harbin. May 5, 1925. From the market; said to be locally grown stock.

64311. FAGOPYRUM VULGARE Hill (*F. esculentum* Moench). **Polygonaceae. Buckwheat.**

No. 2865. May 12, 1925. Obtained from a grain dealer in the Chinese section.

64312. HELIANTHUS ANNUUS L. Asteraceae. **Sunflower.**

No. 2800. Pniston, Harbin. May 5, 1925. A large sunflower obtained in the market; said to be from stock growing near Harbin.

64313. LINUM USITATISSIMUM L. Linaceae. **Flax.**

No. 2803. May 5, 1925. Presented by A. Dmelrieff, flax expert of the Chinese Eastern Railroad.

64314 and 64315. NICOTIANA TABACUM L. Solanaceae. **Tobacco.**

64314. No. 2862. May 12, 1925. A round-leaved Russian tobacco obtained from a seed shop in the Chinese section.

64315. No. 2863½. May 12, 1925. A long-leaved Chinese variety grown in the vicinity of Harbin.

64316 to 64329. PHASEOLUS spp. Fabaceae.

64316 to 64319. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. **Adsuki bean.**

64316. No. 2794. May 5, 1925. A small red bean said to be from local stock.

64317. No. 2870 May 12, 1925. A small white bean obtained in the Chinese section in a grain shop; reported to have come from stock grown in the vicinity of Harbin.

64318. No. 2871. May 12, 1925. *Hua hsiao tou* (flowered small bean), obtained from a seed shop in the Chinese section; said to have come from stock grown in the vicinity of Harbin.

64319. No. 2873. May 12, 1925. A small bluish or black mottled bean obtained from a grain dealer in the Chinese section and said to be from stock grown in the vicinity of Harbin.

64320. PHASEOLUS AUREUS Roxb. **Mung bean.**

No. 2791. May 5, 1925. A green mung bean known as "lucky bean" and used for making vermicelli and for sprouts.

64321. PHASEOLUS COCCINEUS L. **Scarlet Runner bean.**

No. 2861. May 11, 1925. *Jih Pin ta pai tou* (large white bean from Japan), from locally grown stock.

64310 to 64339—Continued.

64322 to 64329. PHASEOLUS VULGARIS L. **Common bean.**

64322. No. 2790. May 5, 1925. A white garden bean with blotches of pink about the hilum, from Teyuanyung, Harbin. It is used as a vegetable cooked with kaoliang.

64323. No. 2793. May 5, 1925. A large mottled variety reported to be from locally grown stock.

64324. No. 2796. May 5, 1925. A white garden bean used largely by the Japanese.

64325. No. 2801. Pniston, Harbin. May 5, 1925. A deep-pink or red garden bean obtained in the market, reported to have come from locally grown stock.

64326. No. 2863. May 12, 1925. A purple-flowered garden bean obtained from a grain shop in the Chinese section; reported to have come from stock grown in the vicinity of Harbin.

64327. No. 2864. May 12, 1925. *Huang yun tou*, or *Wu yueh hsien yun tou* (yellow garden bean, or fifth month ripening bean). Obtained from a seed shop in the Chinese section.

64328. No. 2867. May 12, 1925. *Chiao tan yun tou*, or *Hua yun tou* (bird-egg bean, or flowered garden bean). Obtained from a seed shop in the Chinese section.

64329. No. 2872. May 12, 1925. A long brown bean known as "pole bean from Japan"; obtained from a grain dealer in the Chinese section of the town and said to have come from stock grown in the vicinity of Harbin.

64330 and 64331. PISUM SATIVUM L. Fabaceae. **Pea.**

64330. No. 2797. May 5, 1925. A white variety from locally grown stock.

64331. No. 2858. May 11, 1925. *Uo Kuo lu wan tou* (green field pea of Russia). This variety, said to have come from locally grown stock, originally came from Russia.

64332. RAPHANUS SATIVUS L. Brassicaceae. **Radish.**

No. 2866. May 12, 1925. A large round bright-red radish obtained from a seed man in the Chinese section. These radishes are sometimes as much as 8 to 10 inches in diameter.

64333 to 64336. SOJA MAX (L.) Piper (*Glycine hispida* Maxim). Fabaceae. **Soy bean.**

64333. No. 2792. May 5, 1925. Yellow soy beans called in the Harbin market "round bean." These are the ones principally used in the manufacture of oil.

64334. No. 2795. May 5, 1925. *Jih Pin ta hei tou* (large black soy bean of Japan), from stock grown in the vicinity of Harbin. This variety seems as large as or larger than any other soy bean we have seen. They are boiled with milk and sugar.

64310 to 64339—Continued.

64335. No. 2798. May 5, 1925. Green-seeded soy bean from locally grown stock.

64336. No. 2859. May 11, 1925. A black soy bean, green inside, supposed to be from locally grown stock.

64337. VICIA FABA L. Fabaceae. **Broad bean.**

No. 2860. May 11, 1925. A rather small brown broad bean obtained in the market in the Chinese section; reported to be from locally grown stock. Known as "silkworm bean."

64338 and 64339. VIGNA SESQUIPEDALIS (L.) Fruwirth. Fabaceae. **Yard Long bean.**

64338. No. 2868. May 12, 1925. *Hsien tou chiao* (long pod thread bean), obtained from a grain dealer in the Chinese section.

64339. No. 2869. May 12, 1925. A small black bean, used as a vegetable; from the Chinese section.

64340 to 64420.

From Manchuria. Seeds collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received June 25 and 26, 1925. Notes by Mr. Dorsett.

64340. ANETHUM GRAVEOLENS L. Apiaceae. **Dill.**

No. 2984. Harbin, May 14, 1925. *Eo Kuo huei hsiang* (Russian fennel). This variety, from locally grown stock, grows about 3 feet in height. Used for seasoning soups and meats.

64341. APIUM GRAVEOLENS L. Apiaceae. **Celery.**

No. 2908. May 14, 1925. Chinese celery from locally grown stock. These seeds were secured from a seed dealer in the Chinese section of Harbin. Used to fry with meat.

64342. AVENA NUDA Hoejer. Poaceae. **Naked oats.**

No. 2912. May 15, 1925. *Chiao mai* (bird wheat). Seeds received from R. C. Flory, Liaochou, Shansi, who says they are quite common on the hills around Liaochou.

64343. AVENA SATIVA L. Poaceae. **Oats.**

No. 2979. May 19, 1925. *Ling ta mia* (oats or ling barley). Manchurian oats procured in a grain shop in the Chinese section of Harbin, and said to have come from locally grown stock. This variety may be of Russian origin.

64344. BRASSICA JUNCEA (L.) Coss. Brassicaceae. **Chinese mustard.**

No. 2909. May 14, 1925. *Chieh ts'ai ke ta* (rooted mustard). Obtained from a seed dealer in the Chinese section of Harbin; from locally grown stock. Used mostly for making pickles.

64345. BRASSICA sp. Brassicaceae. **Mustard.**

No. 2910. May 14, 1925. A Chinese leafy mustard from locally grown stock, used as greens and in making salted vegetables. Obtained from a seed dealer in the Chinese section of Harbin.

64340 to 64420—Continued.

64346. BRASSICA sp. Brassicaceae. **Mustard.**

No. 2920. May 15, 1925. Received from R. C. Flory, Liaochou, Shansi. Mr. Flory reports this mustard as being very commonly used for seasoning and for making plasters, etc.

64347. CANNABIS SATIVA L. Moraceae. **Hemp.**

No. 2915. May 15, 1925. Received from R. C. Flory, Liaochou, Shansi, which he reports is a very common variety.

64348 to 64350. CAPSICUM ANNUUM L. Solanaceae. **Red pepper.**

64348. No. 2905. May 14, 1925. *Eo Kuo ta tien chin chiao* (large Russian sweet pepper), obtained from a seed dealer in the Chinese section of Harbin. When ripe the fruits are red and 3 to 3½ inches in diameter.

64349. No. 2906. May 14, 1925. *Hung chang chin chiao* (red long pepper), from locally grown stock. Obtained from a seed dealer in the Chinese section of Harbin. The fruit when ripe is red and about 4 inches long.

64350. No. 2907. May 14, 1925. *Yang chi chiao chin chiao* (goat horn pepper), from locally grown stock, obtained from a seed dealer in the Chinese section of Harbin.

64351. CHAETOCHLOA ITALICA (L.) Scribn. (*Setaria italica* Beauv.). Poaceae. **Millet.**

No. 2917. May 15, 1925. Yellow millet received from R. C. Flory, Liaochou, Shansi.

64352. CHRYSANTHEMUM CORONARIUM L. Asteraceae.

No. 2891. May 14, 1925. *Teng hao* (cone artemisia). Locally known as "chrysanthemum salad." The leaves and petals of some chrysanthemums are eaten in China as a vegetable.

64353. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

No. 2901. Harbin. May 14, 1925. *Tai li hung hsi kua* (red-fleshed watermelon). The skin is striped light and dark green; the fruit is round and 10 to 12 inches in diameter.

64354 and 64355. CORIANDRUM SATIVUM L. Apiaceae. **Coriander.**

64354. No. 2884. May 14, 1925. *Kao yen sui* (high coriander) obtained from a seed shop in the Chinese section of Harbin. The leaves and small leaf stems are chopped into fine pieces and used in seasoning soups and meats. This variety is said to grow like a shrub, being about 5 feet high, while the other variety, No. 2885 [S. P. I. No. 64355], said to have come originally from Shantung, grows only about a foot high.

64355. No. 2885. May 14, 1925. *Ai yen sui* (short coriander) obtained from a seed shop in the Chinese section of Harbin. This variety grows about 1 foot high.

64340 to 64420—Continued.

64356. CORYLUS sp. Betulaceae. **Hazel.**

No. 2934. May 15, 1925. Manchurian hazel obtained from the market in the Chinese section of Harbin, said to have come originally from Nientzeshan, about 75 miles north of Harbin. The shell is very thick, and the kernel is small but of very good quality.

64357 and 64358. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

64357. No. 2887. May 14, 1925. *Hu pi tsui kua* (tiger skin brittle melon) obtained in the Chinese section of Harbin. This melon, eaten mostly when boiled, is about 4 inches in diameter and 6 to 7 inches in length.

64358. No. 2893. Harbin. May 14, 1925. *Eo Kuo tien kua* (Russian melon). Mr. Skvortzow tells us that this is a hybrid between the Russian and Chinese varieties. The fruit, about 6 inches in diameter and 1 foot or more in length, is yellow and green.

64359 to 64361. CUCUMIS SATIVUS L. Cucurbitaceae. **Cucumber.**

64359. No. 2888. May 14, 1925. *Pai pi tsai kua* (white-skinned cucumber); a locally grown product. The fruit is 12 to 18 inches in length and is used as a vegetable boiled with meat.

64360. No. 2889. Harbin. May 14, 1925. *Kuai chang huang kua* (early ripening long cucumber), from locally grown stock. The fruit is a foot or more in length and is green inside.

64361. No. 2890. May 14, 1925. *Eo Kuo huang kua* (Russian common cucumber), grown generally about Harbin. It is from 5 to 6 inches long.

64362 and 64363. CUCURBITA MAXIMA Duchesne. Cucurbitaceae. **Squash.**

64362. No. 2896. Harbin. May 14, 1925. *Wo kua* (big pumpkin gourd). The yellow fruit is cut into small pieces, boiled, and eaten as a vegetable.

64363. No. 2921. May 15, 1925. *Nan kua* (white pumpkin), commonly grown by the farmers. Received from R. C. Flory, Liaochou, Shansi.

64364 and 64365. CUCURBITA PEPO L. Cucurbitaceae. **Pumpkin.**

64364. No. 2895. Harbin. May 14, 1925. *Eo Kuo hsi hulu* (Russian vegetable marrow). This pumpkin, of Russian origin, grows about 5 inches in diameter and 12 to 18 inches in length.

64365. These seeds, which are brown, were included in the lot sent in under Mr. Dorsett's No. 2921 [S. P. I. No. 64363].

64366. FAGOPYRUM TATARICUM (L.) Gaertn. Polygonaceae.

No. 2924. May 15, 1925. *K'u chiao mai* (bitter buckwheat), received from R. C. Flory, Liaochou, Shansi, which he reports as not being very common and which is made into cake flour.

64340 to 64420—Continued.

64367. FAGOPYRUM VULGARE Hill (*F. esculentum* Moench). Polygonaceae. **Buckwheat.**

No. 2923. May 15, 1925. R. C. Flory, of Liaochou, Shansi, who presented these seeds, says that they are common up on the hills. They are made into flour and used as food by the people.

64368. HOLCUS SORGHUM L. (*Sorghum vulgare* Pers.). Poaceae. **Sorghum.**

No. 2913. May 15, 1925. *Hung kaoliang* (red kaoliang). Received from R. C. Flory, Liaochou, Shansi. He reports that this material is commonly grown.

64369 and 64370. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

64369. No. 2931. May 15, 1925. R. C. Flory, Liaochou, Shansi, who presented this material, gives the following note: Not very common in this vicinity but seen frequently in the market.

64370. No. 2977. May 19, 1925. *Chi Lin ta mai* (barley of Kirin, Manchuria) obtained from a seed shop in the Chinese section of Harbin. Said to be from locally grown stock.

64371 to 64373. LAGENARIA LEUCANTHA (Duchesne) Rusby. Cucurbitaceae. **Gourd.**

64371. No. 2902. Harbin. May 14, 1925. *Hsiao ya hulu* (small ornamental gourd). The fruit is about 4 inches in length.

64372. No. 2903. Harbin. May 14, 1925. *Ta ya hulu* (large ornamental gourd), which grows 12 inches long. From locally grown seed.

64373. No. 2904. May 14, 1925. *Ta hulu* (big gourd), from locally grown stock. This variety, used for making dippers, was obtained from a seed dealer in the Chinese section of Harbin.

64374. LENTILLA LENS (L.) W. F. Wight (*Lens esculenta* Moench). Fabaceae. **Lentil.**

No. 2830. May 15, 1925. *Hsiao pien tou* (small flat bean). Received from R. C. Flory, Liaochou, Shansi.

64375 to 64377. PANICUM MILIACEUM L. Poaceae. **Proso.**

64375. No. 2897. Harbin. May 14, 1925. *Kuai mei tze* (sticky millet), from locally grown stock. The Chinese make flour for bread out of this variety.

64376. No. 2918. May 15, 1925. *Nien ku tze* (glutinous millet), received from R. C. Flory, Liaochou, Shansi. He reports that this material is commonly used for food.

64377. No. 2919. May 15, 1925. *Mei tze* (Tsa millet), received from R. C. Flory, Liaochou, Shansi, who gives the following report: This variety is not so common as the above [S. P. I. No. 64376]. If the rains come late in the summer this can be planted and it will mature, whereas the common millet would not.

64340 to 64420—Continued.

64378 to 64404. PHASEOLUS spp. Fabaceae.

64378. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. **Adsuki bean.**

No. 2929. May 15, 1925. *Hei hsiao tou* (black or mottled small bean), received from R. C. Flory, Liaochou, Shansi. He says this variety is used as food, and he thinks it is also made into bean curd.

64379. PHASEOLUS AUREUS Roxb. **Mung bean.**

No. 2914. May 15, 1925. According to R. C. Flory, of Liaochou, Shansi, who presented this variety, the name is *Lu tou* (green bean). It is commonly used as food and is especially used to produce sprouts.

64380. PHASEOLUS COCCINEUS L. **Scarlet Runner bean.**

No. 2899. Harbin. May 14, 1925. *K'an hua tou* (large-flowered bean). This variety produces large lavender and bluish black beans and large pink flowers.

64381 to 64404. PHASEOLUS VULGARIS L. **Common bean.**

64381. No. 2886. May 14, 1925. *Hsiao huang yun tou* (small yellow garden bean) obtained from a seed dealer in the Chinese section of Harbin. This is a rather small brownish yellow bean from stock said to be locally grown. We understand that this is not used very much as a green bean but is grown for the seed.

64382 to 64392. May 15, 1925. *P'a hsien tou* (string bean). These seeds, which were badly mixed, were received from R. C. Flory, Liaochou, Shansi. According to Mr. Flory, they are very common.

64382. No. 2916.

64383. No. 2916–A.

64384. No. 2916–B.

64385. No. 2916–C.

64386. No. 2916–D.

64387. No. 2916–E.

64388. No. 2916–F.

64389. No. 2916–G.

64390. No. 2916–H.

64391. No. 2916–I.

64392. No. 2916–J.

64393 to 64401. May 10, 1925. *Huang chiao tau ta tou* (yellow bird-egg bean), from locally grown stock, obtained in the Chinese section of Harbin. These seeds were very badly mixed.

64393. No. 2978. Creamy white streaked with brown.

64394. No. 2978–A.

64395. No. 2978–B.

64396. No. 2978–C.

64397. No. 2978–D.

64398. No. 2978–E.

64340 to 64420—Continued.

64399. No. 2978–F.

64400. No. 2978–G.

64401. No. 2978–H.

64402. No. 2980. May 19, 1925. *Pai yun tou* (white garden bean), said to be from locally grown stock. This variety, obtained in the Chinese section of Harbin, is a rather small white bean which somewhat resembles our navy bean.

64403. No. 2981. May 19, 1925. A yellowish brown mottled bean with a creamy base, obtained in the Chinese section of Harbin.

64404. No. 2985. Harbin. May 19, 1925. *Chiang mi tou* (white rice bean or small white bean), which is said to have come from locally grown stock. It is smaller than the one under No. 2980 [S. P. I. No. 64402].

64405 to 64407. PISUM SATIVUM L. Fabaceae. **Pea.**

64405. No. 2892. Harbin. May 14, 1925. *Eo Kuo wau tou* (Russian garden pea), said to be very good as a fresh vegetable. This variety, from locally grown stock, is said to be used also as a field pea.

64406. No. 2932. May 15, 1925. According to R. C. Flory, of Liaochou, Shansi, who sent this material to us, these field peas, or "round beans," as the Chinese call them, are not very common. They are sometimes grown on hills.

64407. No. 2982. May 19, 1925. A small variety, said to have come from locally grown stock, obtained from a grain dealer in the Chinese section of Harbin.

64408. RICINUS COMMUNIS L. Euphorbiaceae. **Castor bean.**

No. 2898. May 14, 1925. A small light and dark gray-brown mottled castor bean obtained from a shop in the Chinese section of Harbin. Said to be from locally grown stock.

64409 to 64414. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soy bean.**

64409. No. 2922. May 15, 1925. A small black bean, received from R. C. Flory, Liaochou, Shansi, who says that it is commonly grown and is used as an animal feed.

64410 to 64413. May 15, 1925. Received from R. C. Flory, and according to him they are common and very often used to make bean curd.

64410. No. 2925 Yellow soy beans.

64411. No. 2926. Soy beans of a rather dark-green color.

64412. No. 2927. A light-green variety.

64413. No. 2928. A brown soy bean which is nearly round.

64414. No. 2983. May 19, 1925. A small black soy bean, said to be from locally grown stock, obtained from a grain dealer in the Chinese section of Harbin.

64340 to 64420—Continued.

64415. SPINACIA OLERACEA L. Chenopodiaceae. **Spinach.**

No. 2900. May 14, 1925. Locally grown Chinese spinach, obtained from a shop in the Chinese section of Harbin.

64416. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

No. 2911. May 15, 1925. Received from R. C. Flory, Liaochou, Shansi.

64417 to 64419. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

64417. No. 2916–K. May 15, 1925. Received from R. C. Flory, of Liaochou, Shansi, and according to him they are very common.

64418. No. 2916–L. May 15, 1925. Received from R. C. Flory, Liaochou, Shansi, who says they are very common.

64419. No. 2984. May 19, 1925. *Ma chian tou* (mottled cowpea), from locally grown stock, obtained from a grain dealer in the Chinese section of Harbin. The cowpeas are creamy at the base and have brownish red markings.

64420. ZEA MAYS L. Poaceae. **Corn.**

No. 2933. May 15, 1925. A small-grained yellow corn received from R. C. Flory, Liaochou, Shansi. He says this is plentiful as food for both man and beast. The people use it as a cake flour.

64421. CITRUS sp. Rutaceae.

From Simla, India. Plants presented by H. E. J. Peake, Khaltoo Fruit Orchards, Solan Brewery. Received May 6, 1925.

A wild lemon, indigenous to the Simla Hills, which is ideal as a citrus stock. (*Peake.*)

64422 to 64428.

From Morocco. Bulbs and seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received June 29, 1925. Notes by Doctor Fairchild.

64422 and 64423. NARCISSUS spp. Amaryllidaceae.

A beautiful species accustomed to remain dormant as bulbs in the scorching soils of the near desert for six months at least, and then, in the early spring, when the rains come, to send up their slender leaves and delicate flower stalks with one to three white, almost translucent, nodding flowers. Found by Graham Fairchild on the outcropping of rocks called the Socrat en Nemra, near Boulhaut, northern Morocco.

64422. NARCISSUS sp.

Bulbs.

64423. NARCISSUS sp.

Seeds.

64424. NARCISSUS sp. Amaryllidaceae.

These bulbs were collected on the mountain near Ouezzan.

64425. ORNITHOGALUM UNIFOLIUM (L.) Ker. Liliaceae.

According to Prof. R. Maire, this is an attractive species and worthy a place in the amateur's collection. It occurs wild in the region around Marchang and near Rabat, Morocco.

A tender bulbous plant, native to the Mediterranean region, with greenish flowers. It is about 6 inches high.

64426. ROMULEA BULBOCODIUM (L.) Sebast. and Mauri. Iridaceae.

Bulbs from the plateau between Oujda and Taza, Morocco. The Arab boys and women dig the tiny corms, which are good to eat and rather sweet, and tie them into bundles. The baked clay soil in this region is peppered with little rosettes made by the slender grasslike leaves.

For previous introduction see S. P. I. No. 63482.

64427 and 64428. ROMULEA ENGLERI Bequinot. Iridaceae.

The Romulea is somewhat like a small-flowered crocus. Prof. R. Maire says that this is one of the best.

According to Engler's Botanische Jahrbücher (vol. 38, p. 324), the violet flowers of this bulbous plant are borne singly or in few-flowered clusters on scapes about 20 inches high. The leaves, which are longer than the scape, are flattened cylindrical.

64427. Bulbs. **64428.** Seeds.

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