

Key 2787

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# UNITED STATES DEPARTMENT OF AGRICULTURE



## INVENTORY No. 121



Washington, D. C.



Issued July 1938

### PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, OCTOBER 1 TO DECEMBER 31, 1934 (Nos. 106561-107747)

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#### INTRODUCTORY STATEMENT

This inventory, No. 121, records the plant material (Nos. 106561-107747) received by the Division of Plant Exploration and Introduction during the period from October 1 to December 31, 1934. Much of this material may be credited to the agricultural exploring expeditions that were in the field, all of which were engaged in special projects for the Department.

Of the nearly 2,000 lots of seeds collected by Messrs. Westover and Enlow, a large proportion are from regions in Turkistan and Turkey where the low winter temperatures and scanty rainfall make it appear probable that plants growing under those conditions would be able to withstand the similar climatic conditions in many parts of our Western and Southwestern States. The plant material collected, which consists largely of grasses, leguminous plants, and local strains of vegetables, will also be useful, in large part, for the replanting of areas denuded by erosion.

Similar comments may be made on the results of the Asiatic expedition conducted by H. G. MacMillan and J. L. Stephens, as the result of which about 60 lots of seeds and plants of grasses and other forage plants were introduced.

Through the courtesy of the Botanical Institute at Ashkhabad, Turkmenistan, Union of Soviet Socialist Republics, the Bureau received 83 lots of seeds, mostly grasses and leguminous perennials and shrubs, and including several species never before introduced (Nos. 106828-106838, 106842-106913). Judging from their native habitat, many of these should be of use in the western and southwestern sections of the United States.

An expedition to the Balkan countries, made by Dr. Edgar Anderson, of the Arnold Arboretum, Jamaica Plain, Mass., resulted in the introduction of 33 lots of seeds of ornamental trees and shrubs (Nos. 107622-107644, 107720-107729). While many of these already are known in cultivation, the fact that the seeds were taken from plants growing in unusually cold, dry situations will, it is believed, extend northward their possible growing range in this country.

Many Australian plants have become acclimated to southern California and other parts of the Southwest. That part of the United States should benefit,

ultimately, through the introduction of 51 lots of seeds from New South Wales (Nos. 106673-106723), presented by Albert Morris, of Broken Hill. These include browsing plants of the genera *Acacia* and *Atriplex*, and several new or little-known shade trees and ornamental shrubs.

The botanical determinations of seeds have been made and the nomenclature determined by Paul Russell, who has had general supervision of this inventory.

B. Y. MORRISON,  
*Principal Horticulturist, in Charge.*

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,  
*Washington, D. C., December 28, 1937.*

## INVENTORY<sup>1</sup>

**106561 and 106562. MUSA PARADISIACA SAPIENTUM (L.) Kuntze. Musaceae. Banana.**

From the Philippine Islands. Plants presented by the College of Agriculture, Los Banos, Laguna, through the Bureau of Agriculture, Manila. Received October 11, 1934.

**106561. Kanabanse. C. A. No. 5667.**

**106562. Martaban. C. A. No. 4971.**

**106563. HEVEA BRASILIENSIS (H. B. K.) Muell. Arg. Euphorbiaceae.**

**Para rubber-tree.**

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received October 9, 1934.

A tropical tree, native to Brazil, extensively cultivated for rubber.

For previous introduction see 89078.

**106564 to 106581.**

From British Guiana. Material collected by W. A. Archer, Bureau of Plant Industry. Received October 1, 1934.

Introduced for the use of Department specialists; unless otherwise mentioned, the following were introduced as seeds.

**106564. BAUHINIA sp. Caesalpinaceae.**

No. 2515. *Guayamupati*. Red Hill, Barima River, September 10, 1934. (Plants.)

**106565. CAPSICUM ANNUUM L. Solanaceae. Common redpepper.**

No. 2511. *Weri weri*. Red Hill, Barima River, September 10, 1934. A small, round, cultivated redpepper, one-fourth inch in diameter.

**106566. CASSIA OCCIDENTALIS L. Caesalpinaceae.**

**106564 to 106581—Continued.**

No. 2528. *Algaria*. Above Koriabo, Barima River, September 11, 1934. A shrub 2 feet high, with yellow flowers. It is cultivated by the Warrau Indians for the seeds, which are used to make necklaces for the children.

**106567. CLATHROTROPIS BRACHYPETALA (Tul.) Kleinb. (*Diptotropis brachypetalum* Tul.). Fabaceae.**

No. 2548. Mabaruma Compound, Northwest District, September 8, 1934. A large tree with unequally pinnate leaves, the leaflets leathery, broadly elliptic oblong, 3 to 7 inches long; and small white or pinkish flowers in spreading racemes. Native to Surinam and British Guiana.

For previous introduction see 106488.

**106568. CLEOME MICRANTHA Desv. Caprifoliaceae.**

No. 2525. Barima River below Koriabo, September 12, 1934. An erect spiny herb with white flowers. Native to British Guiana.

**106569. CLIBADIUM sp. Asteraceae.**

No. 2533. Above Koriabo on the Barima River, September 11, 1934. A shrub cultivated by the Warrau Indians of British Guiana.

**106570. CLITORIA ARBORESCENS Ait. Fabaceae.**

No. 2547. Mabaruma Hill, Northwest District, September 13, 1934. Cuttings of plant with purple and white flowers.

**106571. CRINUM GIGANTEUM Andr. Amaryllidaceae.**

No. 2532. Mabaruma Compound, Northwest District, September 8, 1934. A tropical African crinum with 12 or more membranous lanceolate leaves over 2 feet long and an umbel of about six large white fragrant flowers.

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

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

## 106564 to 106581—Continued.

## 106572. CROTALARIA INCANA L. Fabaceae.

No. 2536. *Wurimarak*. Wauna Sub-Experiment Station, Koriabo River, September 16, 1934. A tall shrub 15 to 20 feet high, with yellow flowers and red-woolly trifoliate leaves. Native to the West Indies.

For previous introduction see 98836.

## 106573. CUPANIA SCROBICULATA L. C. Rich. Sapindaceae.

No. 2538. *Kuleshtri*. Wauna Sub-Experiment Station, Koriabo River, September 16, 1934. A tree about 25 feet high, with alternate pinnate leaves and small white flowers in large panicles followed by reddish fruits. Native to French Guiana.

## 106574. MIMOSA POLYDACTYLA H. B. K. Mimosaceae.

No. 2546. *Shame bush*. Mabaruma Compound, Northwest District, September 18, 1934. A tropical shrub up to 2 feet high, with spiny branches, drooping, sensitive bipinnate leaves, and small pinkish flowers in ovoid heads. Native to tropical South America.

## 106575. BELLUCIA GROSSULARIODES (L.) Tr. Melastomaceae.

No. 2539. *Itara*. Wauna Sub-Experiment Station, Koriabo River, September 16, 1934. A tender evergreen tree with ovate-acuminate, denticulate, three-nerved leaves, and small axillary clusters of pinkish flowers. The bark is scraped and rubbed on paddles and wooden vessels to render the surface waterproof. Wood treated in this way appears to have been varnished.

## 106576. NICOTIANA TABACUM L. Solanaceae. Tobacco.

No. 2507. *Yure*. Arawak Indian name. "Buck tobacco." Dove's farm above Arakaka, on the Barima River, Northwest District, September 9, 1934. This pink-flowered tobacco, from 2 to 5 feet high, is cultivated by the Indians and gives a better crop than the American varieties.

## 106577 to 106579. PIPER spp. Piperaceae.

## 106577. PIPER sp.

No. 2540. Wauna Sub-Experiment Station, Koriabo River, September 16, 1934.

## 106578. PIPER sp.

No. 2541. Wauna Sub-Experiment Station, Koriabo River, September 16, 1934. A climbing shrub.

## 106579. PIPER sp.

No. 2535. Wauna Sub-Experiment Station, Koriabo River, September 16, 1934. A shrub 2 to 3 feet high or sometimes a small tree, native to tropical South America and the West Indies. The large, elliptical, somewhat leathery leaves are 6 to 16 inches long, and the flower spikes are obtuse, shorter than the leaves.

## 106580. POLYGONUM PUNCTATUM Elliott. Polygonaceae.

No. 2529. Barima River below Koriabo, September 12, 1934. A slender shrub, 2 to 3 feet high, with white flowers; growing on the moist river bank.

## 106564 to 106581—Continued.

## 106581. TRIPLARIS SURINAMENSIS Cham. Polygonaceae.

No. 2510. *Long John*. Near the Eclipse Falls, Barima River, September 9, 1934. A tree with pinkish flowers.

## 106582 to 106589.

From France. Plants purchased from V. Lemoine & Son, Nancy. Received October 12, 1934.

## 106582 to 106585. BUGINVILLEA spp. Nyctaginaceae.

## 106582. BUGINVILLEA GLABRA Choisy.

*Formosa*. A semiscandent, free-flowering variety with purplish-mauve bracts. Native to Brazil.

## 106583. BUGINVILLEA GLABRA Choisy.

*Cypheri*. Larger than the type with freely produced, large, deep-rose bracts.

## 106584. BUGINVILLEA sp.

*Maud Chettleburg*. Large, bright-rose bracts.

## 106585. BUGINVILLEA SPECTABILIS Willd.

A large strong-growing climber, rising by means of numerous stout hooked spines, with thick ovate, hairy leaves and large panicles of flowers with large bracts. This species is quite variable in the color of the bracts. Native to Brazil.

*Mrs. Butt*. A variety with delicate brick-red bracts.

For previous introduction see 99525.

## 106586 to 106589. HOYA spp. Asclepiadaceae.

## 106586. HOYA DALRYMPLIANA F. Muell.

A tropical evergreen twiner, with fleshy opposite leaves and umbels of showy flowers. Native to Australia.

## 106587. HOYA GLOBULOSA Hook. f.

Waxplant.

A stout climber with orbicular leaves and dense globular umbels of cream-colored flowers. Native to the Sikkim Himalayas.

For previous introduction see 39687.

## 106588. HOYA LASIANTHA Korth.

A shrubby evergreen climber from the East Indies, with leathery, oblong-lanceolate leaves and small yellowish-green flowers in dense, long-stalked umbels. Native to the East Indies.

## 106589. HOYA MOTOSKEI Teijsm. and Binn.

An evergreen climber with fleshy opposite, ovate-orbicular leaves and globular, long-stalked umbels of flesh-colored flowers. Native to Japan.

## 106590 to 106597.

From British Guiana. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received October 5, 1934.

Nos. 106590 to 106595 were collected in the Botanic Garden, Georgetown, September 27, 1934.

## 106590 to 106597—Continued.

**106590 and 106591.** *CENTROSEMA PLUMIERI* (Turp.) Benth. Fabaceae.

A tropical ornamental vine, native to Brazil, with white and red flowers. It is of value as a green manure.

For previous introduction see 99807.

**106590.** No. 2552.

**106591.** No. 2565.

**106592.** *CASSIA MULTIJUGA* L. Rich. Caesalpiniaceae.

No. 2553. A small tree 15 to 20 feet high, with compound leaves made up of linear leaflets about half an inch long and large yellow flowers followed by flat, glabrous pods 6 inches long and less than 1 inch wide. It is native to Mexico, South America, and the West Indies.

For previous introduction see 92195.

**106593.** *CLEOME GLABRA* Taub. Capparidaceae.

No. 2556. Collected in the Botanic Garden, Georgetown, September 27, 1934.

Introduced for Department specialists.

**106594.** *TEPHROSIA NOCTIFLORA* Bojer. Fabaceae.

No. 2557. A bushy, brown-hairy plant with compound leaves about 4 inches long and lax, terminal racemes of reddish flowers which open late in the afternoon. Native to tropical Africa.

For previous introduction see 67841.

**106595.** *LONCHOCARPUS SERICEUS* (Poir.) H. B. K. Fabaceae.

No. 2564. A large tropical American tree, sometimes 70 feet tall, with odd-pinnate leaves and racemes of purple flowers.

**106596.** *PHYLLANTHUS NIRURI* L. Euphorbiaceae.

No. 2531. Collected along the Barima River, Northwest District, September 12, 1934. A glabrous annual about a foot high, native to tropical Asia. Introduced for testing by Department specialists.

**106597.** *RANDIA FORMOSA* (Jacq.) Schum. Rubiaceae.

No. 2567. Collected September 27, 1934. An attractive flowering shrub with long white fragrant flowers. Each flower has a long slender tube and flat salver-shaped corolla. The small edible fruits are striped different tints of greenish yellow and are about the size of a gooseberry.

For previous introduction see 97940.

## 106598 and 106599.

From British Honduras. Seeds purchased from William A. Schipp, botanical collector. Received October 12, 1934.

**106598.** *ARECA* sp. Phoenicaceae. Palm.

Received as *Reinhardtia gracilior*, but the seeds do not agree with those of that genus.

**106599.** *SCHIPPPIA CONCOLOR* Burret. Phoenicaceae. Palm.

An unarmed fan-leaved palm which is sometimes 30 feet high, native to British Honduras. The leaves are about 2 feet across, pale green, and semicircular in outline. The small dry roundish fruits are about an inch in diameter.

106600. *CRINUM* sp. Amaryllidaceae.

From British Guiana. Bulbs collected by W. A. Archer, Bureau of Plant Industry. Received October 6, 1934.

No. 2550. Maharuma Compound, Northwest District, September 19, 1934. An ornamental with pink flowers, grown under the name "lily-of-the-valley."

106601. *ARUM PALAESTINUM* Boiss. Araceae.

From Palestine. Bulbs presented by Henry N. Sweet, Boston, Mass. Received September 24, 1930. Numbered in September 1934.

The black calla of Palestine has ovate to hastate-sagittate leaves about 6 inches wide at the base and a spathe about as long as the leaves, with a short green tube and an elongated narrow limb. This limb is greenish on the outside and black purple within.

106602. *TRECVLIA AFRICANA* Decaisne. Moraceae.

From Portuguese Guinea, Africa. Seeds presented by Dr. Leon Croizat, New York. Received October 9, 1934.

A tropical African tree related to the breadfruit, finally about 80 feet high, with coriaceous, ovate-elliptic leaves 8 inches long and 4 inches broad. The large yellowish fruit, a foot or more in diameter, is said to weigh up to 30 pounds. Each fruit contains more than a thousand seeds the size of kidney beans, which are ground and used as meal by the natives.

For previous introduction see 98902.

## 106603 to 106612.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received October 9, 1934.

106603. *ACACIA LAETA* R. Br. Mimosaceae.

Originally from the horticultural section, Giza, Egypt. A small tree armed with short, black, hooked prickles or sometimes unarmed. The small glaucous leaves, 2 to 3 inches long, consist of two to three pairs of oblique oblong leaflets, and the flowers are in small spikes. Native to Ethiopia.

For previous introduction see 105869.

106604. *BAUHINIA TOMENTOSA* L. Caesalpiniaceae.

An erect shrub or small tree which has obtusely lobed leathery leaves, broader than long, and few-flowered clusters of pale-yellow flowers with the upper petals maroon spotted. Native to India.

For previous introduction see 98802.

106605. *BOMBYCODENDRON VIDALIANUM* (Naves) Merr. and Rolfe. Malvaceae. **Lanutan.**

Originally from the Bureau of Forestry, Manila, Philippine Islands. A tropical tree valuable for its wood and also quite ornamental, with large white flowers with a red center, shaped like those of the tropical *Hibiscus rosa-sinensis*, and about 7 inches in diameter.

For previous introduction see 38486.

## 106603 to 106612—Continued.

**106606.** *DISTICTIS GNAPHALANTHA* (A. Rich.) Urban. Bignoniaceae.

A tropical woody vine with opposite trifoliate leaves and terminal panicles of white flowers. Native to Cuba.

**106607.** *INTSIA BIJUGA* (Colebr.) Kuntze. Caesalpinziaceae.

A tall tree 100 feet or more in height, with fragrant white and reddish flowers borne in large conspicuous clusters. The wood is valued as building material.

For previous introduction see 105711.

**106608.** *JACARANDA SAGRAEANA* DC. Bignoniaceae.

A tropical tree with bipinnate leaves, the leaflets oval-rhomboid, and lax terminal panicles of bluish flowers. Native to Cuba.

**106609.** *JUGLANS INSULARIS* Griseb. Juglandaceae. Cuban walnut.

A comparatively rare Cuban tree found in the mountainous sections of the island up to 2,000 feet altitude, growing along small streams. It is erect, slender, about 40 feet high, with foliage somewhat finer than that of *Juglans nigra*. The nuts resemble those of *J. nigra* in size and appearance, but the septae being very thick and woody, the kernels are removed with difficulty.

For previous introduction see 90884.

**106610.** *PASSIFLORA MANICATA* Pers. Passifloraceae.

An ornamental vine, native to Colombia, with red flowers which are followed by green fruits about 3 inches long. The seeds are smaller, but the pulp is not so highly flavored as in some other varieties.

For previous introduction see 106451.

**106611.** *RUELLIA SPECTABILIS* (Nees) Britton. Acanthaceae.

A herbaceous perennial, native to southern South America, with opposite, linear-lanceolate leaves and beautiful deep-lavender flowers an inch across.

**16612.** *MAURANDYA ERUBESCENS* (D. Don) Gray. Scrophulariaceae.

Presented by M. J. Rivero, Colombia. A woody climber, with triangular serrate, alternate leaves and rosy pink trumpet-shaped flowers 3 inches long. Native to Mexico.

## 106613 to 106623.

From Algeria. Seeds presented by Frank A. Thacker, Bureau of Plant Industry, Indio, Calif. Received October 8, 1934.

Introduced for Department specialists.

**106613.** *ACACIA RADDIANA* Savi. Mimosaceae.

A tropical African tree, somewhat spiny, with bipinnate leaves and linear-oblong leaflets which are obtuse and one-fourth of an inch long.

**106614.** *ACACIA SEYAL* Delile. Mimosaceae.

A small and rather slender acacia with reddish-brown bark, ivory-white spines about 2 inches long, and heads of very fragrant flowers. The tree is common in tropical Africa north of the Equator and is one of the principal gum-yielding acacias of the Nile region.

For previous introduction see 59651.

## 106613 to 106623—Continued.

**106615.** *ATRIplex HALIMUS*. Chenopodiaceae.

A low-spreading north African shrub with gray foliage, used extensively in Morocco as a hedge plant close to the sea.

For previous introduction see 66773.

**106616.** *CALIGONUM COMOSUM* L'Her. Polygonoaceae.

A densely branched shrub 10 to 15 feet high, with minute subulate leaves and small ovate densely spiny nutlike fruits. Native to the eastern Mediterranean region.

For previous introduction see 105808.

**106617.** *CASSIA LANCEOLATA* Forsk. Caesalpinziaceae.

A shrub with pinnate leaves composed of lanceolate leaflets 1 inch long and pale yellow flowers in long terminal racemes. Native to Arabia.

**106618.** *EUPHORBIA CALYPTREATA* Boiss. Euphorbiaceae.

An annual, or sometimes a perennial, 6 to 10 inches high with sessile entire narrow-linear leaves. Native to northern Africa.

**106619.** *GREWIA POPULIFOLIA* Vahl. Tiliaceae.

A shrub about 6 feet high, with stiff rounded-oblong leaves 1 to 2 inches long, cymes of small yellow flowers, and red fruits the size of small peas. Native to tropical Africa.

For previous introduction see 75399.

**106620.** *MAERUA CRASSIFOLIA* Forsk. Caprifoliaceae.

A shrub or small tree with small fleshy oval leaves less than one-half inch long and small white flowers. Native to Egypt.

**106621.** *NITRARIA SCHOBBERI* L. Zygophyllaceae.

A hardy, densely branched shrub of spreading habit, with small bluish-green leaves and small berries which change from light green through red into a violet black. It is native to China, where it grows on strongly alkaline flats.

For previous introduction see 36800.

**106622.** *PULICARIA ALVEOLOSA* Batt. and Trab. Asteraceae.

A hairy, densely leafy herb with oblong irregularly dentate leaves and small yellow flower heads on slender stems. Native to Hoggar in the Sahara Desert.

**106623.** *STAFFIOLA BIPINNATA* (L.) Kuntze. Poaceae.

A perennial grass with a stout creeping rhizome, tufted erect stems 1 to 3 feet high, and long rigid leaves. Native to south-eastern Asia.

## 106624 to 106636.

From the Union of South Africa. Plants purchased from Dr. I. B. Pole Evans, Division of Plant Industry, Department of Agriculture, Pretoria. Received October 18, 1934.

Introduced for Department specialists.

**106624 to 106635.** *DIGITARIA* spp. Poaceae.

**106624.** *DIGITARIA DECUMBENS* Stent.

For previous introduction see 91767.

## 106624 to 106636—Continued.

106625. DIGITARIA sp.  
*Koster Strain.*
106626. DIGITARIA sp.  
*Makarikari Strain.*
106627. DIGITARIA sp.  
*Malmaniesoog Strain, Selection 1.*
106628. DIGITARIA sp.  
*Malmaniesoog Strain, Selection 2.*
106629. DIGITARIA sp.  
*Molopo Strain.*
106630. DIGITARIA sp.  
*Pangola River Strain.*
106631. DIGITARIA sp.  
*Port Elizabeth Strain, Selection 1.*
106632. DIGITARIA sp.  
*Pretoria Small Strain.*
106633. DIGITARIA sp.  
*Pretoria Strain "Irene."*
106634. DIGITARIA SWAZILANDENSIS Stent.  
For previous introduction see 91769.
106635. DIGITARIA sp.  
*Vakwe Camp Strain.*

## 106636. PANICUM MEYERIANUM Nees. Poaceae.

A tall grass, 2 to 3 feet high, with rigid leaves about 8 inches long and large racemes 3 inches long and wide. Native to the Cape of Good Hope.

## 106637 to 106639.

From British Guiana. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received October 1, 1934.

Introduced for Department specialists.

## 106637. BANISTERIA RETICULATA (Poir.) C. B. Robins. Malpighiaceae.

No. 2503. Barima River, September 8, 1934. A tropical shrub with opposite oblong-ovate leaves 6 to 12 inches long and small yellow flowers in panicked cymes.

## 106638. CALOPOGONIUM MUCUNOIDES Desv. Fabaceae.

No. 2542. Mabaruma Compound, Northwest District, September 18, 1934. A stout twining vine with rhombic-ovate leaflets and long-stalked racemes of pale-blue flowers. It forms a mat of foliage 1 to 2 feet thick and is used as a cover crop as well as for forage. Native to tropical America.

For previous introduction see 94228.

106639. LONCHOCARPUS LATIFOLIUS (Willd.) H. B. K. (*Amerimnon latifolium* Willd.). Fabaceae.

No. 2506. Above Koriabo on the Barima River, September 8, 1934.

## 106640 to 106645.

From the Union of Soviet Socialist Republics. Seeds and bulbs collected by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received October 11, 1934.

## 106640 to 106645—Continued.

106640 to 106642. ALLIUM spp. Liliaceae.  
106640. ALLIUM GIGANTEUM Regel.

No. 150-C. Kopet Dag, near Ashkhabad, June 1934. Bulbs. One of the largest members of the genus, with large bulbs and broad fleshy leaves about 18 inches long. The bright-lilac flower heads, 4 inches across, are on stalks about 4 feet high.

For previous introduction see 82387.

## 106641. ALLIUM sp.

150-D. Ashkhabad, June 20, 1934. Bulbs found in rolling wheatland near mountains.

## 106642. ALLIUM sp.

150-E. *Chrystoph.* Bulbs found in the mountains near Ashkhabad, June 20, 1934.

106643 and 106644. From Kopet Dag, south of Ashkhabad, near the Iranian (Persian) frontier, June 1934.

## 106643. GLADIOLUS sp. Iridaceae.

No. 148. Bulbs and seeds.

## 106644. HYACINTHUS sp. Liliaceae.

No. 149. Bulbs and seeds.

106645. TULIPA MICHELIANA Hoog. Liliaceae.  
Tulip.

No. 150-A. Kopet Dag Mountains, near Ashkhabad, June 19, 1934. Bulbs and seeds of a tulip, native to the Caspian region, with a pubescent scape 12 inches high. The lanceolate to linear-lanceolate leaves, usually four, are striped with brown and have undulate margins. The large single flowers are lilac scarlet and vermilion scarlet inside, with black lanceolate blotches at the base.

For previous introduction see 100644.

## 106646 to 106648.

From Wales. Seeds presented by Dr. E. G. Stapledon, Welsh Plant Breeding Station, Aberystwyth. Received October 19, 1934.

Introduced for Department specialists.

106646. DACTYLIS GLOMERATA L. Poaceae.  
Orchard grass.

S. 26.

106647. LOLIUM PERENNE L. Poaceae.  
Perennial ryegrass.

S. 23.

106648. PHELEUM PRATENSE L. Poaceae.  
Timothy.

S. 50.

## 106649. TARCHONANTHUS CAMPHORATUS L. Asteraceae.

From the Union of South Africa. Seeds presented by the McGregor Museum, Kimberley. Received October 20, 1934.

*Vaalbos.* An evergreen aromatic shrub 8 to 10 feet high, with lanceolate-oblong leaves 1 inch long and a terminal panicle of purple flower heads. The shrub is eaten by stock during droughts.

For previous introduction see 75401.

## 106650 to 106653.

From British Guiana. Cuttings collected by W. A. Archer, Bureau of Plant Industry. Received October 12, 1934.

Introduced for Department specialists.

## 106650 to 106653—Continued.

106650. *CLITORIA ARBORESCENS* Ait. Fabaceae.

No. 2537. Wauna Sub-Experiment Station, Koriabo River, September 16, 1934. A shrubby climber with trifoliolate leaves and purple flowers in long-stalked racemes. Native to Trinidad, British West Indies.

For previous introduction see 21327.

106651. *LONCHOCARPUS NICOU* (Aubl.) DC. Fabaceae.

No. 2520. Near Eclipse Falls, on the Barima River, September 10, 1934. *Red Haiari*. A strong-growing vine with three to five pinnate, papery leaves. The stems become reddish with age. Native to northern South America.

106652. *PHYLLANTHUS* sp. Euphorbiaceae.

No. 2521. Red Hill, on the Barima River, September 10, 1934. *Conuparu*.

106653. *PHYLLANTHUS ACUMINATUS* Vahl. Euphorbiaceae.

No. 2544. Mabaruma Compound, North-west District, September 18, 1934. *White conuparu*. A bushy perennial 3 to 6 feet high with pinnate leaves. It is native to British and French Guiana.

106654. *COCCOTERINAX CRINITA* Becc. Phoenicaceae.

From California. Seeds presented by David Barry, Jr., Los Angeles. Received October 16, 1934.

*Palma petate, guano barbudo*. A fan-leaved palm, native to Cuba, with a slender spineless trunk crowned by a large cluster of roundish leaves divided into narrow acute obliquely folded leaves. The juicy berrylike fruits are purplish black.

106655 to 106663. *DIGITARIA* spp. Poaceae. Grass.

From the Union of South Africa. Plants purchased from Dr. I. B. Pole Evans, Division of Plant Industry, Department of Agriculture, Pretoria. Received October 20, 1934.

Introduced for Department specialists.

106655. *DIGITARIA DIVERSINERVIS* (Nees) Stapf.

*Unkomaas*. A perennial grass with weak ascending stems up to 18 inches high and linear-lanceolate leaves 1 to 3 inches long. Native to the Cape of Good Hope.

106656. *DIGITARIA PENTZII* MINOR Stent.

A perennial, densely tufted grass, with numerous stolons and erect stems 2 to 3 feet high. Native to the Cape of Good Hope.

106657. *DIGITARIA SERIATA* Stapf.

*Kuruman Strain*. A perennial grass with a creeping branched rhizome. The erect culms are 4 feet or more high. Native to southwestern Africa.

106658. *DIGITARIA* sp.

*Hamba Strain*.

106659. *DIGITARIA* sp.

*Inkinip Strain*.

106660. *DIGITARIA* sp.

*Port Elizabeth Strain*, Selection No. 2.

## 106655 to 106663—Continued.

106661. *DIGITARIA* sp.

*Steyn's Strain*.

106662. *DIGITARIA* sp.

*Theron's finger grass*.

106663. *DIGITARIA* sp.

V 2.

106664. *STAPELIA CANTABRIGIENSIS* Berger. Asclepiadaceae.

From Pennsylvania. Plants presented by Mrs. J. Norman Henry, Gladwyne. Received October 25, 1934.

A hybrid stapelia of the *Stapeltonia* section. The four-angled, bright-green stems, covered with fine hairs, are about 6 inches high. The long-stalked flowers, nearly 5 inches across, are broadly campanulate, brownish red at the center, changing to red at the tips and greenish on the outside. These plants originated from seeds received from the Cambridge Botanic Garden in 1899 as *Stapelia hirsuta*.

106665. *CITRUS* sp. Rutaceae.

From French Indo-China. Seeds presented by M. Poilane, Institut des Recherches Agronomiques de Indochine, Division de Botanique. Received October 13, 1933. Numbered October 26, 1934.

A wild orange from dry, sandy, rocky soil, near the seashore, Nhatrang, Annam.

106666 to 106669. *ALLIUM SATIVUM* L. Liliaceae. Garlic.

From Bulgaria. Bulbs purchased through Cavendish W. Cannon, American vice consul, Sofia. Received October 27, 1934.

106666. *Radomir*, summer garlic. A very hot, strong garlic with 9 to 12 bulbils to each bulb.

106667. Ordinary summer garlic. A very hot, strong garlic with 12 to 14 bulbils to each bulb.

106668. *Devet Dishlia*, winter garlic. A mild-flavored garlic with 9 to 12 bulbils to each bulb.

106669. Ordinary winter garlic. A moderately hot garlic with 12 to 16 bulbils to each bulb.

106670. *PENNISETUM NERVOSUM* (Nees) Trin. Poaceae.

From Ecuador. Seeds presented by Nelson Marquez, official agronomist, Subdirección de Agricultura del Litoral, Guayaquil. Received October 25, 1934.

A tropical American perennial grass 2 feet or more high, with rough, broadly linear leaves a foot long.

106671 and 106672.

From France. Seeds presented by A. Gérard, La Fosse, par Montoire sur Loir, Loir et Cher. Received October 25, 1934.

106671. *MAGNOLIA NICHOLSONIANA* Rehd. and Wils. Magnoliaceae.

A deciduous shrub or small tree, sometimes 20 feet high, closely allied to *Magnolia wilsonii*, from which it is distinguished by its vinous-red bark, shorter petioles, and oblong-obovate leaves with densely hairy under surfaces. The cup-shaped flowers, appearing before the



## 106671 and 106672—Continued.

leaves, are white with red pistils and about 6 inches across. This magnolia is native to western China.

For previous introduction see 66078.

106672. *MAGNOLIA WILSONII* (Finet and Gagn.) Rehd. Magnoliaceae.

A large shrub with pure white, deliciously fragrant flowers which are produced freely during late May and early June. It is native to western Szechwan, China.

For previous introduction see 62128.

## 106673 to 106723.

From Australia. Seeds presented by Albert Morris, Broken Hill, New South Wales. Received October 19, 1934.

Introduced for Department specialists.

106673 to 106693. *ACACIA* spp. Mimosaceae.106673. *ACACIA ANEURA* F. Muell.

*Mulga* or *Yarren*. A tall yellow-flowered shrub which, in times of drought, is considered a good forage for livestock. The wood is very hard and is valued as timber.

For previous introduction see 63698.

106674. *ACACIA BRACHYBOTRYA* Benth.

A handsome shrub several feet high, which is silvery white with a close silky pubescence. It bears a small number of axillary racemes of yellow flower heads and has very short leaves. Native to southeastern Australia.

For previous introduction see 75579.

106675. *ACACIA CALAMIFOLIA* Sweet.

A tall shrub or small tree with slender erect branches and filiform drooping phyllodes 1 to 2 inches long. The large yellow flower heads are in short erect racemes. It is said to be an excellent tanbark species, containing 20 percent of tannin. Native to southeastern Australia.

For previous introduction see 48038.

106676. *ACACIA DODONAEIFOLIA* Willd.

A tall shrub, glabrous but very resinous, with oblong-linear phyllodes 2 to 4 inches long and numerous globular flower heads. Native to South Australia.

106677. *ACACIA EXCELSA* Benth.

A large forest tree with oblong-falcate phyllodes 2 to 3 inches long and small yellow flowers in dense globular heads. Native to Queensland, Australia.

106678. *ACACIA FALCATA* Willd.

An evergreen tree, 20 to 30 feet high, with few slender branches and small yellow flowers in dainty spherical clusters on racemes borne in the axils of the dark glossy green falcate leaves. The timber is hard, heavy, and tough.

For previous introduction see 80060.

106679. *ACACIA GLADIFORMIS* A. Cunn.

A tall glabrous shrub with thick curved linear-lanceolate phyllodes 3 to 6 inches long and racemes of small dense flower heads. Native to New South Wales.

## 106673 to 106723—Continued.

106680. *ACACIA HORRIDA* (L.) Willd.

Received as *A. larroo*, which is now referred to the above species. A spreading flat-topped spiny tree about 20 feet high, widely distributed throughout South Africa. The fragrant yellow flower heads are often visited by bees. It grows mostly in the open and seeds abundantly.

For previous introduction see 94236.

106681. *ACACIA LONGIFOLIA SOPHORAE* (Labill.) F. Muell.

A yellow-flowered, rapid-growing evergreen shrub or small tree, 15 to 20 feet high, excellent for preventing the encroachments of the sea along sandy coasts. It frequents the coast line of southeastern Australia and southern Queensland to South Australia, and also Tasmania.

For previous introduction see 91598.

106682. *ACACIA MELANOXYLON* R. Br.

An evergreen Australian tree up to 100 feet high, with lanceolate leathery phyllodes 4 inches long, heads of creamy flowers in short racemes, and reddish-brown twisted pods. The dark wood is very similar to black walnut and is used for the same purposes. The tree makes a rapid growth when young.

For previous introduction see 90841.

106683. *ACACIA NOTABILIS* F. Muell.

A tall handsome shrub native to the mountain slopes of southeastern Australia. The sword-shaped, almost linear phyllodes are 4 to 6 inches long, and the dense globular heads of about 50 flowers each are borne in short racemes.

For previous introduction see 47368.

106684. *ACACIA OBLIQUA* A. Cunn.

A much-branched shrub with small roundish or obovate phyllodes one-half inch or less long, and small flower heads on slender peduncles. Native to New South Wales.

106685. *ACACIA PODALYRIAEOFOLIA* A. Cunn.

A gray pubescent shrub 4 to 6 feet high, with ovate phyllodes and numerous yellow flowers in long racemes at the ends of the branches. The pinkish wood is nicely marked. Native to Queensland.

For previous introduction see 104070.

106686. *ACACIA PYCNANTHA* Benth.

A small, rapid-growing tree up to 30 feet high, with coriaceous leaves and masses of fragrant bright-yellow flowers. The plant is useful as a sand binder.

For previous introduction see 54439.

106687. *ACACIA RIGENS* A. Cunn.

An Australian shrub 4 to 6 feet high, with threadlike compressed phyllodes 3 to 4 inches long and solitary yellow flower heads.

106688. *ACACIA SALICINA* Lindl.

A tall shrub or small tree, native to Australia, with pendulous branches and willowlike phyllodes up to 5 inches long. The yellow flowers are in short racemes of two or three globular heads.

For previous introduction see 90678.

## 106673 to 106723—Continued.

106689. *ACACIA SALIGNA* (Labill.) Wendl.

The *Weeping wattle*, an ornamental acacia found in Western Australia, is a tall shrub or small tree, 10 to 30 feet high, with long thick phylloides and short clusters of rather large globular golden-yellow flower heads. This tree is said to be the principal source of tanbark in southwestern Australia.

For previous introduction see 56561.

106690. *ACACIA SOWDENI* Maiden.

A spreading shrub or small tree with handsome silvery foliage. The linear, slightly curved phylloides are 3 inches long. Native to South Australia.

106691. *ACACIA STENOPHYLLA* A. Cunn.

An evergreen tree 40 to 60 feet high, with long narrow phylloides 6 to 12 inches in length and small yellow flowers in globular heads. Native to New South Wales.

106692. *ACACIA SUAVEOLENS* (J. E. Smith) Willd.

An Australian shrub up to 6 feet high, with linear to lanceolate phylloides and small heads of yellow flowers in axillary racemes.

For previous introduction see 90842.

106693. *ACACIA WATTSIANA* F. Muell.

A dense bushy shrub 4 to 5 feet high, with angular branches and leathery obovate-oblong, obtuse phylloides up to 1 inch long. Native to South Australia.

106694. *ALBIZZIA LOPHANTHA* (Willd.) Benth. Mimosaceae. Plume albizzia.

A shrub or small tree up to 20 feet high, with compound leaves made up of 14 to 24 pairs of pinnae each bearing 60 pairs of small linear leaflets. The small yellow flowers are in spikes about 2 inches long. It is native to Australia.

For previous introduction see 92332.

106695 to 106699. *ATRIPLEX* spp. Chenopodiaceae. Saltbush.

106695. *ATRIPLEX HALIMOIDES* Tines.

*Mealy or gray saltbush*. A low-growing shrubby robust perennial about 1 foot high, with variable, ovate-lanceolate leaves which are covered with whitish, dustlike scales. It is native to the central desert regions of Australia where it affords excellent forage for both sheep and cattle.

For previous introduction see 46875.

106696. *ATRIPLEX MORRISII* Anderson.

A low annual, more or less farinose-hairy throughout, with small obovate dentate leaves. Native to Australia.

106697. *ATRIPLEX NUMMULARIA* Lindl.

A tall shrubby perennial sometimes reaching a height of 10 feet and covered all over with downy whitish scales. The leaves are mostly round, rather thick, and toothed along the margins. It is extensively planted and highly valued in central Australia for its remarkable drought-resisting qualities; livestock are very fond of it.

For previous introduction see 90735.

106698. *ATRIPLEX SPONGIOSA* F. Muell.

A low-growing plant less than a foot high, with numerous ascending stems,

## 106673 to 106723—Continued.

more or less farinose throughout. The rather thick orbicular leaves are less than an inch long. Native to Australia.

106699. *ATRIPLEX VESICARIA* Howard.

An erect bushy shrub, covered throughout with a scaly tomentum. The very small oblong-lanceolate leaves are less than an inch long. Native to southern Australia.

106700. *BAUHINIA* sp. Caesalpinaceae.

106701. *BRACHYCHITON* sp. Sterculiaceae.

106702. *CALLITRIS GLAUCA* R. Br. Pinaceae.

A large tree sometimes 90 feet tall or sometimes a tall shrub with short crowded erect branchlets and very short glaucous green leaves. The brown heartwood and yellowish sapwood are easily worked and are suitable for building purposes. Native to Australia.

106703. *CASUARINA HUMILIS* Otto and Dietr. Casuarinaceae.

Received as *Casuarina lehmannii*, which is now referred to the above species. An erect shrub 2 to 6 feet high, with the branchlets usually in whorls of four and the angles of the internodes prominent but obtuse. Native to Western Australia.

For previous introduction see 105796.

106704. *CASUARINA LEPIDOPHLOIA* F. Muell. Casuarinaceae.

A small or moderately large tree with very slender, linear, faintly angled branchlets. The cones are depressed-globose and about 1 inch in diameter. This species had hitherto been confused with *Casuarina glauca*.

For previous introduction see 93792.

106705. *CASSIA* sp. Caesalpinaceae.

106706. *CHORIZEMA CORDATUM* Lindl. Fabaceae.

A tall slender glabrous evergreen shrub, 7 to 10 feet high, with weak branches, more or less prickly leaves about 2 inches long, and numerous red flowers. It is propagated from cuttings and may be grown in the open in southern California and southern Florida, being excellent for training on pillars and trellises. In colder regions it is an attractive plant for the cool greenhouse. Native to Western Australia.

For previous introduction see 75552.

106707. *CODONOCARPUS COTINIFOLIUS* F. Muell. Phytolaccaceae.

A tall evergreen shrub or small tree 20 to 40 feet high, with rather thick, flat, roundish leaves up to 2 inches long and racemes of small inconspicuous flowers. Native to Victoria, Australia.

106708 to 106711. *EUCALYPTUS* spp. Myrtaceae.

106708. *EUCALYPTUS CITRIODORA* Hook.

A handsome fast-growing tree which in favorable situations becomes 60 to 100 feet high. The long narrow leaves, equally shiny on both sides, possess a pleasant odor closely resembling that of the lemon, giving the tree its specific name, *citriodora*. This eucalypt thrives in California in the frostless coast regions, but is not suited to the dry interior valleys.

For previous introduction see 38711.

## 106673 to 106723—Continued.

**106709. EUCALYPTUS INCRASSATA PROTRUSA** J. M. Black.

A shrub or small tree, up to 25 feet high, with smooth whitish bark and lanceolate, gray-green, thick, stiff leaves about 3 inches long. Native to dry regions in South Australia.

**106710. EUCALYPTUS LEUCOXYLON MACROCARPA** J. E. Brown.

A tall tree, native to South Australia, with rough bark on the trunk, but soft and white on the branches. The thick coriaceous leaves are lanceolate, falcate, and 3 to 6 inches long. The white or pink flowers are in long-stalked clusters of two to five, and the obovoid fruits are truncate.

For previous introduction see 75631.

**106711. EUCALYPTUS TORQUATA** Luehm.

A tree with lanceolate, oblique, leathery, dull, gray-green leaves 4 inches long and reddish-orange flowers in umbels of seven on a stalk 1 inch long. Native to Western Australia.

For previous introduction see 104168.

**106712. ENCHYLAENA TOMENTOSA** R. Br. Chenopodiaceae.

A procumbent or widely branched shrub up to 3 feet high, native to Australia. The branches are silvery woolly, the alternate linear leaves are about one-half inch long, and the small inconspicuous flowers develop into fleshy edible red or yellow berries about the size of a small pea.

For previous introduction see 99419.

**106713. GREVILLEA HÜGELII** Meisn. Proteaceae.

A procumbent evergreen shrub with bipinnate leaves, the linear leaflets rigid, leathery, and 1 inch long. The reddish flowers are in small racemes. Native to Australia.

**106714. HETERODENDRUM OLEAEFOLIUM** Desf. Sapindaceae.

A gray-barked shrub with alternate, lanceolate, leathery leaves and very small flowers in axillary racemes. Native to Australia.

**106715. INDIGOFERA AUSTRALIS** Willd. Fabaceae.

An erect Australian shrub 2 to 4 feet high, with pinnately compound leaves and dense racemes of showy red flowers. It may be suitable for growing as an ornamental in the warmer parts of the United States.

For previous introduction see 98098.

**106716 to 106718. KOCHIA** spp. Chenopodiaceae.**106716. KOCHIA PYRAMIDATA** Benth.

A rigid bushy shrub with cottony-pubescent twigs and leaves, the latter linear or terete, very short. Native to New South Wales.

**106717. KOCHIA SEDIFOLIA** F. Muell.

A bushy perennial, velvety-tomentose throughout, with short crowded leaves and small red solitary flowers. Native to dry situations in Australia.

## 106673 to 106723—Continued.

**106718. KOCHIA TRIPTEBA** Benth.

A low, stout, spreading shrub with crowded linear semiterete leaves one-half inch long. Native to New South Wales.

**106719. MELALEUCA HYPERICIFOLIA** J. E. Smith. Myrtaceae.

A tall glabrous shrub with opposite lanceolate leaves 1 to 2 inches long, dotted beneath. The rich-red flowers are borne in dense spikes 2 inches long and nearly as wide. It is native to Australia.

For previous introduction see 95332.

**106720. MELALEUCA PUBESCENS** Schauer. Myrtaceae.

A tall shrub or small tree with small linear leaves, one-half inch long, crowded on the pubescent branches and small white flowers borne in loose cylindrical spikes. Native to Australia.

For previous introduction see 99439.

**106721. MIDA ACUMINATA** (R. Br.) Kuntze (*Fusanus acuminatus* R. Br.) Santalaceae. Quandong.

An Australian evergreen tree up to 80 feet high, with long narrow leaves which are eaten by sheep and cattle in times of drought. The inconspicuous flowers are in terminal clusters. The fleshy part of the fruit is used for jelly, and the kernel of the nut, besides being edible, contains an oil which may be used for illumination.

For previous introduction see 77021.

**106722. STURTIA GOSSYPIOIDES** R. Br. Malvaceae.

A large shrub closely related to cotton (*Gossypium* spp.), with broadly oval, stiff leaves up to 2 inches long and large purple flowers. Native to Australia.

For previous introduction see 106479.

**106723. SWAINSONIA GREYANA** Lindl. Fabaceae.

A bushy perennial, tomentose throughout, with dull-brownish pinnate leaves and large purple flowers in large axillary racemes. Native to Australia.

## 106724 to 106744.

From the Union of South Africa. Seeds presented by F. R. Long, Superintendent, St. George's Park, Port Elizabeth, Cape of Good Hope. Received October 24, 1934.

Introduced for Department specialists.

**106724 to 106730. ALOE** spp. Liliaceae.

A collection of aloes, native to the Cape of Good Hope.

**106724. ALOE AFRICANA** Mill.

A large plant with a simple trunk finally about 20 feet high. The few spreading or recurved leaves are triangular-oblong, up to 2 feet long, and the yellow flowers are borne on a stalk 2 feet high.

**106725. ALOE ARBORESCENS** Mill.

An arborescent succulent with a simple trunk 10 to 15 feet high, clothed at the top with dull-green, sinuately spreading, gradually narrowed leaves about 2 feet long, with prickly margins. The red flowers are in an elongated raceme.

For previous introduction see 79470.

## 106724 to 106744—Continued.

## 106726. ALOE FERROX Mill.

An aloe with a thick stem 10 to 15 feet high and a rosette of curved, glaucous lanceolate leaves 2 feet long by 5 inches wide and half an inch thick; both surfaces are prickly, and the purple margins are armed with large red-brown teeth. The flowering stem is 4 feet high, and the greenish-yellow flowers with smoky tipped segments are 1 to 2 inches long.

For previous introduction see 81118.

## 106727. ALOE LINEATA (Ait.) Haw.

A red-flowered aloe with lanceolate leaves a foot long in a dense rosette on a stem up to a foot high. The flowers, half an inch long, are in a dense raceme 6 inches long, on a simple peduncle about as long as the leaves.

## 106728. ALOE MICROSTIGMA Salm-Dyck.

A large aloe with an elongated stem bearing a rosette of 20 to 30 sword-shaped leaves, 6 to 12 inches long and a dense raceme of greenish-yellow flowers on a scape a foot high.

## 106729. ALOE SAPONARIA (Ait.) Haw.

An aloe which grows in caespitose clusters, with ascending oblong-lanceolate acuminate leaves 7 inches long, often reddish with pale blotches and with long confluent brown marginal teeth. The red flowers are in a branched inflorescence 1 or 2 feet high.

For previous introduction see 81134.

## 106730. ALOE STRIATA Haw.

A low fleshy plant with a dense rosette of thick narrowly oblong leaves 1 to 2 feet long, obscurely spotted, and bright-red flowers, about an inch long, in 20 or more heads, borne on a stout branched peduncle.

For previous introduction see 88738.

## 106731. ASTER FRUTICOSUS L. Asteraceae.

A twiggy bush 2 to 3 feet high and across, with flat linear leaves and blue flower heads.

## 106732. CAESALPINIA GILLIESII (Hook.) Wall.

*Bird of Paradise Tree.* A tall shrub or small tree, native to Argentina, with pinnately compound leaves and terminal racemes of light-yellow flowers from which the brilliant red stamens protrude 3 to 5 inches.

For previous introduction see 76786.

## 106733. CERATOTHECA TRILOBA E. Mey. Pedalaceae.

An erect annual plant up to 6 feet high. The obtusely quadrangular stems are hairy, and the coarsely crenate leaves, 1 to 6 inches long, vary from broadly cordate and 3-lobed near the base to lanceolate and sparingly crenate at the top of the plant. The solitary axillary flowers, 2 to 3 inches long, are lilac streaked with purple, and the loosely pubescent capsules, an inch long, have two horns at the tip.

For previous introduction see 106079.

## 106734. ECHINUS sp. Aizoaceae.

Received under the name "*echinatus*," for which a place of publication has not been found.

## 106724 to 106744—Continued.

## 106735. ERYTHRINA CAFFRA Thunb. Fabaceae.

A tree 30 to 40 feet high, with prickly branches, trifoliate leaves with broadly ovate leaflets, and scarlet flowers borne in dense, many-flowered racemes. Native to southern Africa.

For previous introduction see 50151.

## 106736. GLADIOLUS ALATUS L. Iridaceae.

A very interesting plant with flowers of a delightful fragrance not unlike that of the sweet briar. The three upper petals are bright orange scarlet, and the three lower ones are yellowish tipped with orange scarlet. The bulbs are not larger than ordinary peas and cannot remain long out of the ground.

For previous introduction see 105284.

## 106737. GLADIOLUS BLANDUS Ait. Iridaceae.

A South African plant with sword-shaped leaves somewhat shorter than the stem, which is from 6 inches to 2 feet in height and bears 3 to 10 white or reddish-tinged scentless flowers.

For previous introduction see 105285.

## 106738. GLOTTIPHYLLUM sp. Aizoaceae.

## 106739 to 106742. MESEMBRYANTHEMUM spp. Aizoaceae.

## 106739. MESEMBRYANTHEMUM AMOENUM Salm-Dyck.

A low succulent plant with a woody branched stem, green somewhat triangular leaves, and reddish flowers. Native to the Cape of Good Hope.

## 106740 and 106741. MESEMBRYANTHEMUM BLANDUM Haw. Figmarigold.

An erect perennial succulent, 2 feet high, with numerous branches, compressed-triangular leaves 2 inches or less long, with minute dots, and pale-rose or white flowers 2 inches across. Native of South Africa.

106740. A form with pink flowers.

106741. A form with white flowers.

## 106742. MESEMBRYANTHEMUM SPECIOSUM Haw.

A fleshy shrub about 3 feet high, with distant, turgid-cylindric leaves one-half inch long and large deep-scarlet flowers nearly 2 inches across. Native to the Cape of Good Hope.

## 106743. PROTEA sp. Proteaceae.

A form with pink flowers.

## 106744. SCHONLANDIA sp. Aizoaceae.

Received under the name of "algoense," for which a place of publication has not been found.

## 106745. SEMPERVIVUM KOSANINII Praeger. Crassulaceae.

From Europe. Plant collected by Dr. Edgar Anderson, Arnold Arboretum Balkan expedition. Received November 1, 1934.

Peč, Yugoslavia, October 1934. A sempervivum, native to Macedonia, that forms open rosettes about 2 inches across, with oblanceolate, glandular-hairy, dark-green leaves, purple at the apex, and about 1 inch long. The red flowers, three-fourths of an inch wide, are produced on a leafy stem 6 to 8 inches high.

**106746. MAACKIA AMURENSIS BUERGERI**  
C. Schneid. Fabaceae.

From Washington, D. C. Seeds collected by O. M. Freeman, Bureau of Plant Industry, in the National Botanic Garden. Received November 2, 1934.

A deciduous tree about 15 feet high with odd-pinnate leaves; the 7 to 11 leaflets are pubescent and 2 to 3 inches long. The small white flowers are borne in dense upright racemes. Native to Japan.

For previous introduction see 77836.

**106747 to 106801.**

From the Union of Soviet Socialist Republics. Material collected in Turkistan by H. L. Westover and C. R. Enlow, agricultural explorers, Bureau of Plant Industry. Received October 30, 1934.

Introduced for Department specialists.

**106747 to 106749. ALLIUM spp. Liliaceae.****106747. ALLIUM CAERULEUM** Pall. Onion.

No. 871. July 23, 1934. Bulbs and seeds collected in the mountains south of Alma Ata. A blue-flowered onion with slender grassy leaves and 14-inch stalks bearing close heads of small deep-blue flowers.

For previous introduction see 104627.

**106748. ALLIUM** sp.

No. 669. July 24, 1934. Bulbs from the foothills southeast of Alma Ata.

**106749. ALLIUM** sp.

No. 867. July 26, 1934. Bulbs from Issyk Kul, east of Alma Ata.

**106750. AMARYLLIS** sp. Amaryllidaceae.

No. 186. June 1934. Bulbs from south of Stalinabad, Tajikistan.

**106751. AMARYLLIS** sp. Amaryllidaceae.

No. 320. July 15, 1934. Bulbs from Chingan, east of Tashkent, Uzbekistan.

**106752. ARISAEMA TRIPHYLLUM** (L.) Torr. Araceae. Jack-in-the-pulpit.

No. 182. July 8, 1934. Bulbs from the Varsov River Canyon, Tajikistan.

**106753. EREMURUS** sp. Liliaceae.

No. 541. July 26, 1934. Roots collected at 6,800 feet altitude above Issyk Kul, near Alma Ata.

**106754. FRITILLARIA** sp. Liliaceae.

No. 191. July 8, 1934. Bulbs and seeds from the Varsov River Canyon, Tajikistan.

**106755. HYACINTHUS ATROVIOLOACEUS** (Regel) Macbride. Liliaceae.

Hyacinth.

No. 524. July 1934. Bulbs from the Tashkent Botanic Garden. A hyacinth with four to six linear-ligulate leaves 4 to 8 inches long and a dense oblong raceme of dark-violet flowers on a scape about the same length as the leaves. Native to Bokhara.

**106756 to 106766. IRIS** spp. Iridaceae.**106756. IRIS ALBERTI** Regel.

No. 546. July 23, 1934. Roots from the mountains of Alma Ata, of a bearded iris with glaucous, sword-shaped leaves about as long as the stem and yellow or purplish flowers, yellow-

**106747 to 106801—Continued.**

ish toward the base, nearly 2 inches long. Native to Turkistan.

For previous introduction see 105474.

**106757. IRIS BUCHARICA** Foster.

No. 244. July 1934. Bulbs and seeds from Tajikistan of one of the most vigorous of the Juno irises, this bears five to seven flowers on each of the stems. The stems are over a foot high, and the bright-green, narrow leaves are 8 to 12 inches long and about 2 inches broad. The bright-yellow, rounded-obovate falls are over 2 inches long, while the small standards are pure white. Native to eastern Bokhara.

**106758. IRIS MAGNIFICA** Vvedensky.

No. 525. July 1934. Bulbs from the Tashkent Botanic Garden. A stout iris of the Juno section, with light shining-green falcate leaves, 1 to 2 inches wide, and generally two inodorous pale-lilac flowers about 2 inches long, on a stem 10 to 16 inches high. Native to Turkistan.

**106759. IRIS TENUIFOLIA** Pallas.

No. 881. August 13, 1934. Bulbs from Chelkar. An iris of the Apogon section, usually with a very short stem and rigid narrow-linear leaves a foot long. The flowers are bluish purple. Native to eastern Asia.

**106760. IRIS** sp.

No. 179. July 1934. Bulbs collected at 5,500 feet altitude along the Varsov River, Tajikistan.

**106761. IRIS** sp.

No. 184. July 8, 1934. Bulbs from the Varsov River Canyon, 50 km north of Stalinabad, Tajikistan.

**106762. IRIS** sp.

No. 190. July 8, 1934. Bulbs from the Varsov River Canyon, 5,500 feet altitude, Stalinabad, Tajikistan.

**106763. IRIS** sp.

No. 315. July 16, 1934. Roots found in moist soil near Chingan, east of Tashkent, Uzbekistan.

**106764. IRIS** sp.

No. 317. July 15, 1934. Roots and seeds from Chingan, east of Tashkent, Uzbekistan.

**106765. IRIS** sp.

No. 396. July 15, 1934. Bulbs from the rocky slopes of Little Chingan, east of Tashkent.

**106766. IRIS** sp.

No. 700. August 4, 1934. Seeds and roots from the Karakol River, Issyk Kul.

**106767 to 106769. IXIOLIRION** spp. Amaryllidaceae.**106767. IXIOLIRION** sp.

No. 377. July 15, 1934. Seeds and bulbs from Chingan, east of Tashkent, Uzbekistan.

**106768. IXIOLIRION** sp.

No. 824. August 6, 1934. Seeds and bulbs from the Chu River Canyon, east of Tokmak.

## 106747 to 106801—Continued.

## 106769. IXIOLIRION sp.

No. 869. August 31, 1934. Bulbs from the foothills south of Frunze.

106770 to 106788. TULIPA spp. Liliaceae.  
Tulip.

## 106770. TULIPA OSTROWSKIANA Regel.

No. 544. July 23, 1934. Bulbs and seeds from Alma Ata. A tulip with a stem about 8 inches high, bearing three linear-lanceolate leaves and a solitary flower. The perianth segments are cinnabar purple and more or less spreading.

For previous introduction see 105476.

## 106771. TULIPA sp.

No. 539. July 25, 1934. Bulbs and seeds from the mountains south of Alma Ata. Received under the name "desifolia," for which a place of publication has not been found.

## 106772. TULIPA FOSTERIANA Hoog.

No. 526. July 1934. Bulbs from the Tashkent Botanic Garden. A stout broadleaved tulip with large flowers, brilliant scarlet with yellow-black blotches. Native to Bokhara, central Asia.

## 106773. TULIPA GREIGII Regel.

No. 527. July 1934. Bulbs from the Tashkent Botanic Garden, of a handsome tulip native to Turkistan, with broadly campanulate, purplish-red flowers about 2 inches across, borne on a peduncle 3 to 8 inches high. The ovate-lanceolate green leaves are brown spotted.

## 106774. TULIPA KAUFMANNIANA Regel.

No. 528. July 1934. Bulbs from the Tashkent Botanic Garden of a tulip about 8 inches high, with yellowish-green, erect, narrowly oblong leaves and campanulate flowers. These vary in color from white tinged with pink to pale yellow blotched with carmine. Native to Turkistan.

## 106775. TULIPA KOLPAKOWSKIANA Regel.

No. 529. July 1934. Bulbs from the Tashkent Botanic Garden. A tulip with three erect-spreading, undulate, linear-lanceolate leaves and yellow flowers, the outer surface of which is sometimes reddish or purplish. Native to Turkistan and related to *Tulipa gesneriana*.

## 106776. TULIPA KOROLKOVII Regel.

No. 392. July 15, 1934. Bulbs and seeds from Chimgan, east of Tashkent, Uzbekistan. A low crimson-flowered tulip from Turkistan, 4 to 6 inches high, with narrowly lanceolate leaves exceeding the flowers.

## 106777. TULIPA KUSCHKENSIS B. Fedtsch.

No. 530. July 1934. Bulbs from the Tashkent Botanic Garden of a tulip about a foot high, with four to six undulate, sickle-shaped leaves with narrow white margins. The flower, yellow with the perianth segments black at the base, is about 2 inches long. Native to Turkistan.

## 106778. TULIPA LANATA Regel.

No. 531. July 1934. Bulbs from the Tashkent Botanic Garden of a rather large tulip with a stem over a foot high and three or four commonly fal-

## 106747 to 106801—Continued.

cate leaves exceeding the flower. The purple perianth segments are marked with large black spots on a yellow background. Native to Bokhara.

## 106779. TULIPA LINIFOLIA Regel.

No. 532. July 1934. Bulbs from the Tashkent Botanic Garden of a narrow-leaved tulip from Bokhara with a slender stem 2 to 5 inches high. The obovate perianth segments are purplish with dark blue-black blotches outlined with yellow.

## 106780. TULIPA OSTROWSKIANA Regel.

No. 533. July 1934. Bulbs from the Tashkent Botanic Garden.

For previous introduction and description see 106770.

## 106781. TULIPA PRAESTANS Hoog.

No. 534. July 1934. Bulbs from the Tashkent Botanic Garden of an attractive tulip native to Turkistan, with pale scarlet-vermilion flowers on peduncles up to a foot or more high. The peduncles as well as the light-green leaves are covered with minute white hairs.

## 106782. TULIPA WILSONIANA Hoog.

No. 535. July 1934. Bulbs from the Tashkent Botanic Garden of an alpine tulip from Turkistan with narrow purple-edged leaves and a deep-red flower on a stem 4 inches high.

## 106783. TULIPA sp.

No. 832. July 31, 1934. Bulbs and seeds from the foothills south of Frunze.

## 106784. TULIPA sp.

No. 193. July 1, 1934. Bulbs collected south of Stalinabad, Tajikistan.

## 106785. TULIPA sp.

No. 308. July 1934. Seeds from Tajikistan.

## 106786. TULIPA sp.

No. 399. July 19, 1934. The exact source of these bulbs is unknown; probably from near Stalinabad, Tajikistan.

## 106787. TULIPA sp.

No. 567. July 29, 1934. Bulbs and seeds from the mountain pass between Alma Ata and Frunze.

## 106788. TULIPA sp.

No. 584. July 26, 1934. Bulbs and seeds collected on the mountains near Issyk Kul, east of Alma Ata.

## 106789. ALLIUM sp. Liliaceae.

No. 607. July 26, 1934. Bulbs found at 6,500 feet altitude in the mountains above Issyk Kul, near Alma Ata.

106790 to 106795. TULIPA spp. Liliaceae.  
Tulip.

## 106790. TULIPA sp.

No. 607-A. July 26, 1934. Seeds collected at 6,500 feet altitude in the mountains above Issyk Kul, near Alma Ata.

## 106791. TULIPA sp.

No. 695. July 29, 1934. Bulbs and seeds collected on the river slopes between Alma Ata and Frunze.

## 106792. TULIPA sp.

No. 696. July 31, 1934. Bulbs and seeds from the foothills south of Frunze.

## 106747 to 106801—Continued.

## 106793. TULIPA sp.

No. 699. July 31, 1934. Bulbs from the foothills south of Frunze.

## 106794. TULIPA sp.

No. 769. August 4, 1934. Bulbs and seeds from the Karakol River, Issyk Kul.

## 106795. TULIPA sp.

No. 825. August 3, 1934. Bulbs and seeds from the Jetty August River Canyon, west of Issyk Kul.

## 106796. FRITILLARIA sp. Liliaceae.

No. 833. August 4, 1934. Bulbs and seeds from the Karakol River, Issyk Kul.

## 106797. TULIPA sp. Liliaceae.

No. 865. August 6, 1934. Bulbs from the Chu River, east of Tokmak.

## 106798. (Undetermined.)

No. 204. July 1, 1934. An unknown bulb from the mountains south of Stalinabad, Tajikistan.

## 106799. (Undetermined.)

No. 192. July 1, 1934. An unknown bulb from south of Stalinabad, Tajikistan.

## 106800. (Undetermined.)

No. 195. July 1, 1934. Seeds from the mountains near Stalinabad, Tajikistan.

## 106801. IRIS sp. Iridaceae.

No. 763. August 1934. Bulbs found in dry rocky soil near Frunze.

106802. ROSA ODORATA GIGANTEA (Collett) Rehd. and Wils. Rosaceae.  
Giant tea rose.

From India. Seeds presented by F. H. Butcher, curator, Government Botanic Garden, Ootacamund. Received October 30, 1934.

A strong-climbing evergreen rose, native to Burma, with creamy-white, single flowers 4 to 6 inches across, followed by large yellowish hips. It resembles the Cherokee rose, but is hardy in the United States only in the South and on the Pacific coast.

For previous introduction see 91292.

## 106803. PRUNUS PROSTRATA Labill. Amygdalaceae. Mountain cherry.

From the Union of Soviet Socialist Republics. Seeds collected in Turkistan by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received October 29, 1934.

No. 236. July 1, 1934. From the mountains near Stalinabad, Tajikistan. A low, widespread, drought-resistant deciduous shrub up to 3 feet high, with sharply serrate, broadly ovate leaves, pubescent beneath and over an inch long. The rose-colored flowers, less than an inch across, are followed by small red, nearly sessile fruits.

For previous introduction see 101880.

## 106804. LITCHI PHILIPPINENSIS Radlk. Sapindaceae.

From the Philippine Islands. Seeds presented by Arthur F. Fischer, Director of Forestry, Department of Agriculture and Commerce, Manila. Received November 2, 1934.

## 106804—Continued.

A Philippine relative of the lychee (*Litchi chinensis*). The tree is about 50 feet high, with dark-green pinnate leaves similar to those of the lychee and roundish oblong fruits about an inch long, borne in loose terminal clusters. The tough leathery shell encloses scanty edible pulp in which is embedded a relatively large seed. This seed is roasted and eaten. The tree may have value as a stock for the lychee.

For previous introduction see 106144.

## 106805. PHOENIX sp. Phoenicaceae.

From Africa. Seeds collected by J. F. Ward and presented by J. K. Mayo, Agricultural Department, Samiru-Zaria, Nigeria. Received November 2, 1934.

The wild date occurs quite commonly in the northern districts of Nigeria. It is practically always confined to swamps and stream sides and is commonly found in swampy glades growing on old decomposed anthills. These hills are mostly of darkish clay and, being raised above the surrounding level, do not get flooded.

## 106806 to 106813.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received November 30, 1934.

106806. COFFEA ARABICA L. Rubiaceae.  
Arabian coffee.

Harrar variety.

## 106807. IXORA MACROTHYESA Teijsm. and Binn. Rubiaceae.

A large shrub with linear-oblong leaves a foot long and attractive scarlet flowers in dense corymbs 8 inches across. Native to the East Indies where it thrives in regions of heavy rainfall.

For previous introduction see 70761.

## 106808. KOELREUTERIA FORMOSANA Hayata. Sapindaceae.

A large handsome tree with attractive, compound leaves and large terminal panicles of yellow flowers. Native to the island of Taiwan.

For previous introduction see 62345.

## 106809. LANGUAS SPECIOSA (Wendl.) Small. Zinziberaceae.

A herbaceous perennial 3 to 12 feet high, the stems clothed with the imbricated leaf bases. The large oblong-lanceolate leaves are 5 to 20 inches long, and the flowers, white tinged with red, are in terminal thyrsoid panicles. Native to the East Indies.

## 106810. PHYLLANTHUS GRANDIFOLIUS L. Euphorbiaceae.

A tall, symmetrical tree with thick alternate oblong-lanceolate leaves 4 inches long. Native to tropical America.

## 106811. PSIDIUM GUAJAVA L. Myrtaceae.

Peruviana. A Peruvian variety.

## 106812. PSIDIUM GUAJAVA L. Myrtaceae.

Pomiferum. A variety with round fruits. Presented by Carlos Jurgens, Passo de Mangueira, Rio Pardo, Brazil.

## 106806 to 106813—Continued.

106813. RHUS LANCEA L. f. Anacardiaceae.

A small tree with gray bark and numerous slender branches. The leaves are long-stalked, and the lanceolate linear leaflets are 4 to 5 inches long. Native to the Cape of Good Hope.

106814 to 106827. TRITICUM AESTIVUM L. Poaceae. Common wheat.

From Italy. Seeds presented by the Director, Royal Experimental Station for Wheat-growing, Rieti. Received October 27, 1934.

Introduced for Department specialists.

106814. *Aziziak* 17-45.106815. *Balilla*.106816. *Battisti*.106817. *Damiano*.106818. *Edda*.106819. *Fanfulla*.106820. *Fausto*.106821. *Fieramosca*.106822. *Filzi*.106823. *Mentana*.106824. *Mentana Mutico*.106825. *Oberdan*.106826. *Rismondo*.106827. *Villa Glori*.

## 106828 to 106838.

From the Union of Soviet Socialist Republics. Seeds presented by the Botanical Institute, Ashkhabad, Turkmenistan. Received October 26, 1934.

Introduced for Department specialists.

106828 to 106834. AGROPYRON spp. Poaceae. Grass.

106828. AGROPYRON BUONAPARTIS (Spreng.) Dur. and Schinz.

An annual grass, native to Asia Minor and central Asia, with erect culms and broadly linear leaves.

106829. AGROPYRON CRISTATUM (L.) Gaertn. Wheatgrass.

106830. AGROPYRON ORIENTALE (L.) Roem. and Schult.

An annual, much-branched grass, prostrate-ascending in habit, native to sandy places in Asia Minor and Turkistan.

For previous introduction see 101977.

106831. AGROPYRON POPOVII Drobov.

A perennial grass with erect stems. Native to Turkistan.

106832. AGROPYRON REPENS (L.) Beauv.

106833. AGROPYRON SIBIRICUM DESERTORUM Trautv.

A caespitose perennial grass with a fibrous root, slender erect leafy culms, and long rigid narrow-linear leaves. Native to central Asia.

106834. AGROPYRON TRINICEBUM Gaertn.

An annual Siberian grass, much branched at the base, with stems up to 8 inches in length.

For previous introduction see 61391.

## 106828 to 106838—Continued.

106835. AGROSTIS TRANSCASPICA Litv. Poaceae. Grass.

A perennial grass 1 to 3 feet high, native to the Transcaspien region.

106836. GASTRIDUM VENTRICOSUM (Gouan) Schinz. and Thell. (*Alopecurus ventricosus* Huds.). Poaceae. Grass.

An annual grass 8 to 16 inches tall, with scant rough foliage and dense, spike-like panicles. Native to France.

106837. AMYGDALUS BRAHUICA Boiss. Amygdalaceae.

A bushy shrub, armed with short spines, with small oblong-obtuse leaves and small flowers crowded toward the ends of the branchlets. Native to Asia Minor between 7,000 and 10,000 feet altitude.

106838. AMYGDALUS BUCARICA Korsh. Amygdalaceae.

A small white-flowered tree from the hot dry regions of Turkistan. The fruits are about an inch long.

106839 and 106840. ZOYSIA JAPONICA Steud. Poaceae. Japanese lawngrass.

From Japan. Seeds purchased from the Chugai Shokubutsu Yen, Tamamoto, Kawabegun, near Kobe. Received November 20, 1934.

Introduced for the use of Department specialists.

106839. Korean strain.

106840. Japanese strain.

106841. ZENOBIA CASSINEFOLIA (Vent.) Pollard. Ericaceae.

From North Carolina. Seeds collected by G. M. Darrow, Bureau of Plant Industry. Received November 21, 1934.

A shrub 4 to 6 feet high, of irregular habit with ovate-oblong, dark shining-green leaves up to 2 inches long and white pendent bell-shaped flowers, less than an inch across, in axillary clusters. Native to the southeastern United States.

## 106842 to 106913.

From the Union of Soviet Socialist Republics. Seeds presented by the Botanical Institute, Ashkhabad, Turkmenistan. Received October 26, 1934.

Introduced for Department specialists.

106842 to 106844. ARISTIDA spp. Poaceae. Grass.

106842. ARISTIDA ARACHNOIDEA Litv.

A tufted grass about 10 inches high, with sharp, filiform leaves. Native to the Transcaspien region.

106843. ARISTIDA PENNATA Trin.

A grass, native to Turkistan, where it is found in dry sandy places.

For previous introduction see 105804.

106844. ARISTIDA PENNATA KARELINI Trin. and Rupr.

A perennial grass of possible value as a forage crop. Native to the Caspien region.

For previous introduction see 98203.



## 106842 to 106913—Continued.

**106845 to 106859.** *ASTRAGALUS* spp. Fabaceae.

**106845.** *ASTRAGALUS ACKERBERGENSIS* Freyn.

A short-stemmed or stemless herbaceous perennial with a thick woody root and elliptic-obovate leaflets. Native to Asia Minor.

**106846.** *ASTRAGALUS ALOPECIAS* Pall.

A perennial with white-woolly ovate leaflets and pale-yellow flowers. Native to central Asia.

**106847.** *ASTRAGALUS BRACHYLOBUS* Fisch.

A shrub with linear-acute leaflets an inch long and small racemes much longer than the leaves. Native to Iran (Persia).

**106848.** *ASTRAGALUS COMMIXTUS* Bunge.

A dwarf annual with a very short stem, oblong-elliptic leaflets, and small white flowers. Native to Turkistan.

**106849.** *ASTRAGALUS CONFIRMANS* Freyn and Bornm.

A shrub 3 to 5 feet high, with oblong-lanceolate, caducous leaves up to 2 inches long, and racemes of dark-violet flowers. Native to the Caspian region.

For previous introduction see 92967.

**106850.** *ASTRAGALUS FILICAULIS* Fisch. and Mey.

An erect annual leguminous plant 3 to 10 inches high, native to Asia Minor and Turkistan.

For previous introduction see 73182.

**106851.** *ASTRAGALUS GLOBICEPS* Bunge.

An erect perennial, native to Turkistan, with large compound leaves composed of 40 or more oblong leaflets about an inch long. The small flowers are in globular heads.

**106852.** *ASTRAGALUS LAGOCEPHALUS* Fisch. and Mey.

An erect perennial from semiarid regions in Turkistan. The leaflets are ovate elliptic, and the flowers are in short dense spikes.

**106853.** *ASTRAGALUS PAUCIJUGUS* Schrenk.

A much-branched shrub up to 6 feet high, with thick ovate-rounded leaflets half an inch long. Native to Turkistan.

**106854.** *ASTRAGALUS* sp.

Received under the name "piletocladus," for which a place of publication has not been found.

**106855.** *ASTRAGALUS RETAMOCARPUS* Boiss. and Hohen.

A hardy herbaceous perennial about 2 feet high, native to Asia Minor.

For previous introduction see 73183.

**106856.** *ASTRAGALUS SCHAHRUDENSIS* Bunge.

A hardy perennial, 2 feet high, with leaves 6 to 7 inches long. Native to northern and central Iran [Persia].

For previous introduction see 30553.

## 106842 to 106913—Continued.

**106857.** *ASTRAGALUS SIEVERSIANUS* Pall.

A perennial herb with numerous ascending stems and pale-yellow flowers. Native to Turkistan.

**106858.** *ASTRAGALUS TURBINATUS* Bunge.

An erect hairy perennial with leaves often a foot long and rigid leaflets one-half inch in length. The yellowish flowers are in axillary clusters. Native to Turkistan.

**106859.** *ASTRAGALUS* sp.

Received as *Astragalus chinensis*, but the seeds are not of that species.

**106860 to 106865.** *BROMUS* spp. Poaceae.

**106860.** *BROMUS DANTHONIAE* Trin.

An annual grass, usually upright or ascending in habit. Native to southern Europe and central Asia.

For previous introduction see 61400.

**106861.** *BROMUS KOPETDAGHENSIS* Drobov.

A perennial grass with a creeping rootstalk and stems up to 2 feet high. Native to Turkistan.

**106862.** *BROMUS MACROSTACHYS* Desf.

An erect annual grass up to 2 feet high. The narrow compact panicle consists of a few large spikelets. It is native to Iran (Persia) and the Mediterranean region and is sometimes cultivated as an ornamental.

For previous introduction see 16041.

**106863.** *BROMUS PSEUDODANTHONIAE* Drobov.

An annual grass with a few slender stems 8 to 10 inches high. Native to Turkistan.

**106864 and 106865.** *BROMUS TECTORUM* L. Downy chess.

A weedy annual grass with erect slender stems 1 to 2 feet tall and hairy narrow leaf blades. It will produce a good cover crop with very little rainfall. Native to Europe.

For previous introduction see 98287.

**106866 to 106868.** *CAREX* spp. Cyperaceae.

**106866.** *CAREX DIVISA* Huds.

A low sedge with a creeping, hard rootstock and short slender stems. Native to the seacoasts of southern Europe.

**106867.** *CAREX PACHYSTYLIS* Gay.

A low sedge with a creeping rootstock and flat narrow leaves. Native to western Asia.

**106868.** *CAREX PHYSODES* Bieb.

A perennial sedge, usually about 6 inches high, rarely more, with filiform leaves and panicles of brownish globose membranous perigynia, or sacs, half an inch long. Native to the sandy deserts of Turkistan.

For previous introduction see 98210.

**106869.** *CHONDRILLA PAUCIFLORA* Led. Cichoriaceae.

A biennial herb with a vertical root and numerous slender branches. The basal leaves are pinnatifid, and the yellow flower heads are solitary, terminating the branches. Native to Turkistan.

## 106842 to 106913—Continued.

106870. *COTINUS COGGYRIA* Scopoli (*Rhus cotinus* L.). Anacardiaceae.

Smoketree.

A spreading, rather dense shrub up to 15 feet high, with oval or obovate leaves over 3 inches long on slender petioles. The small flowers, usually purplish, are in a densely plumose panicle about 8 inches long. Native to central China and the Himalayas.

106871. *CRAMBE KOTSCHYANA* Boiss. Brassicaceae.

A perennial with cordate radical leaves about 8 inches long and rather large white flowers. Native to western Asia.

106872 to 106877. *DELPHINIUM* spp. Ranunculaceae. Larkspur.

106872. *DELPHINIUM BITERNATUM* Huth.

A perennial herb with a thick root, erect hairy stem 3 to 4 feet high, biternate leaves, and dense racemes of yellow flowers. Native to Turkistan.

106873. *DELPHINIUM CAMPTOCARPUM* Fisch. and Mey.

A somewhat bushy annual 6 inches high, with biternate leaves and small grayish-blue flowers. Native to sandy places in the southern part of the Union of Soviet Socialist Republics.

106874. *DELPHINIUM ORIENTALE* J. Gay.

An annual larkspur which closely resembles *Delphinium ajacis*, but differs in being from 12 to 18 inches high, with an upright branching stem bearing numerous dense racemes of violet, pink, or white flowers. Native to southern Europe.

For previous introduction see 81885.

106875. *DELPHINIUM PILOSULUM* (Trautv.) F. Fedtsch.

106876. *DELPHINIUM RUGULOSUM* Boiss.

An annual plant up to 5 inches high, often with several stems and with grayish-blue flowers.

For previous introduction see 61412.

106877. *DELPHINIUM SEMIBARBATUM* Bienert.

A low perennial about a foot high with fine-cut foliage and long lax racemes of small yellow flowers. Native to Iran (Persia).

106878. *ELYMUS GIGANTEUS* Vahl. Poaceae. Siberian wild-rye.

A tall erect perennial grass, native to Siberia.

For previous introduction see 61417.

106879. *ERAGROSTIS* sp. Poaceae.

106880. *HORDEUM BULBOSUM* L. Poaceae.

A perennial grass a foot or more high. Native to Asia Minor.

For previous introduction see 88926.

106881 and 106882. *KOBLERIA PHLEOIDES* (Vill.) Pers. Poaceae. Grass.

An annual grass with culms up to a foot high, narrow leaves, and dense spike-like panicles. Native to Europe.

106883. *LEPTALEUM FILIFOLIUM* (Willd.) DC. Brassicaceae.

A low annual 1 to 2 inches high, with subsessile linear leaves 1 inch long and

## 106842 to 106913—Continued.

small white flowers with linear petals. Native to Siberia.

106884. *LOLIUM PERSICUM* Boiss. and Hohen. Poaceae. Grass.

An annual grass, closely resembling *Lolium multiflorum*, which does well in a very hot dry region.

For previous introduction see 92234.

106885. *LOLIUM TEMULENTUM LEPTOCHAETON* A. Br. Poaceae. Grass.

A tall annual grass about 3 feet high, with flat leaves and slender spikes. Native to Europe.

106886. *MEDICAGO MINIMA* (L.) Grufberg. Fabaceae. Medick.

A prostrate leguminous annual with stems about 2 feet long, native to dry situations in southern Europe.

For previous introduction see 69857.

106887 to 106890. *ONOBRYCHIS* spp. Fabaceae.

106887. *ONOBRYCHIS CHORASSANICA* Bunge.

An erect shrub with ovate-acute leaflets and purple flowers in long lax racemes. Native to Iran (Persia).

106888. *ONOBRYCHIS MICRANTHA* Schrenk.

An annual erect leguminous plant with very narrow acute leaflets, stems about 2 feet high, and dull-yellow flowers. Native to the Union of Soviet Socialist Republics.

For previous introduction see 73609.

106889. *ONOBRYCHIS PULCHELLA* Schrenk.

An annual less than a foot high, with narrow leaflets and pink flowers. Native to the Union of Soviet Socialist Republics.

For previous introduction see 73611.

106890. *ONOBRYCHIS SINTENISII* Fr. and Sint.

106891. *PENNISSETUM ORIENTALE* L. Rich. Poaceae.

A tall coarse species growing to a height of 6 feet and quite ornamental.

For previous introduction see 33613.

106892. *PHASEOLUS AUREUS* Roxb. Fabaceae. Mung bean.

106893. *PHASEOLUS CALCARATUS* Roxb. Fabaceae. Rice bean.

106894. *PHLEUM PANICULATUM* Huds. Poaceae. Timothy.

An erect or ascending annual grass 4 to 16 inches high. Native to the Mediterranean countries.

For previous introduction see 84475.

106895. *PISTACIA VERA* L. Anacardiaceae. Pistache.

106896. *PSORALEA DRUPACEA* Bunge. Fabaceae.

A woody perennial about a foot high, with roundish dentate leaflets nearly an inch long and small white flowers in dense axillary racemes. Native to Bokhara.

106897. *RHUS CORIARIA* L. Anacardiaceae. Sumac.

## 106842 to 106913—Continued.

A shrub up to 20 feet high, with greenish flowers and small crimson fruits. The leaves yield a commercial tannin. Native to southern Europe.

For previous introduction see 72684.

**106898. RHUS SUCCEDANEA L.** Anacardiaceae. **Sumac.**

A shrub or small tree up to 30 feet high, with grayish-green elliptic-oblong, long-pointed leaflets, and slender panicles of yellowish-green flowers. Native to eastern Asia.

For previous introduction see 48733.

**106899. SACCHARUM SPONTANEUM L.** Poaceae.

A grass closely related to sugarcane.

For previous introduction see 86174.

**106900. SALSOLA ARBORESCENS RICHLERI Karel.** Chenopodiaceae.

A much-branched shrub with semiterete leaves and small inconspicuous flowers. Native to the deserts of Siberia.

**106901. SALSOLA RIGIDA Pall.** Chenopodiaceae.

A small shrub, yellow hairy throughout, with prostrate or ascending branches and alternate linear leaves. Native to salty places in southwestern Asia.

**106902 to 106905. STIPA spp.** Poaceae. **Grass.**

**106902. STIPA HOHENACKERIANA Trin.** and Rupr.

A caespitose perennial grass with slender culms and long rigid leaves. Native to Transcaucasia and Iran (Persia).

**106903. STIPA HOLOSERICEA Trin.** and Rupr.

A tufted perennial grass with spreading stems and rigid leaves. Native to Asia Minor.

**106904. STIPA SPLENDENS Trin.** Feathergrass.

A coarse grass 6 feet high, native to the steppes of western Asia, with dense nodding panicles a foot long. The tough leaves and stalks are used to make brooms.

For previous introduction see 78482.

**106905. STIPA SZOVITZIANA Trin.**

A tufted perennial grass with fibrous roots and short rigid leaves. Native to Asia Minor, Arabia, and Iran (Persia).

**106906. THALICTRUM MINUS L.** Ranunculaceae. **Low meadowrue.**

A species 1 to 2 feet high, native to Europe, Asia, and northern Africa, with loose panicles of drooping yellow or greenish flowers.

For previous introduction see 95608.

**106907. THALICTRUM SULTANABADENSE Stapf.** Ranunculaceae.

A low herb about 6 inches high, with biternate leaves and flowers in a leafy raceme. Native to Iran (Persia).

**106908. TRIFOLIUM LAPPACEUM L.** Fabaceae.

## 106842 to 106913—Continued.

This European clover has a somewhat reclining habit of growth; the rather soft and delicate stems are seldom more than 12 or 15 inches long.

For previous introduction see 97794.

**106909 to 106913. TULIPA spp.** Liliaceae. **Tulip.**

**106909. TULIPA ANDROSSOWI Litv.**

A wild tulip from central Asia, with a stem 4 to 10 inches high, bearing a single small white flower. The two linear-acute leaves are borne at about the middle of the stem.

**106910. TULIPA BORSCHOWI Regel.**

A Russian tulip with stems 12 to 18 inches high, bluish-green, narrowly ovate leaves up to 6 inches in length, and red flowers with black blotches at the base of the petals.

For previous introduction see 61447.

**106911. TULIPA HOOGIANA B. Fedtsch.**

A tulip of the section *Eriobulbi*, with a stem 6 to 18 inches high and four to six lanceolate-tapering leaves 8 to 10 inches long. The flower is scarlet, with a large black blotch bordered with orange on the inner side of each segment. Native to Bokhara.

**106912. TULIPA KUSCHKENSIS B. Fedtsch.**

For previous introduction and description see 106777.

**106913. TULIPA MICHELIANA Hoog.**

A tulip native to the Caspian region, with a pubescent scape 12 inches high. The lanceolate to linear-lanceolate leaves, usually four, are striped with brown and have undulate margins. The large single flowers are lilac scarlet and vermilion scarlet inside with black lanceolate blotches on the back.

For previous introduction see 100644.

## 106914 to 106932.

From British Guiana. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received October 19, 1934.

Introduced for Department specialists.

From the Georgetown Botanic Garden, September 27, 1934.

**106914. BARRINGTONIA ASIATICA (L.) Kurz.** **Lecythidaceae.**

No. 2571. A handsome tree 50 feet high, with thick leathery bright-green leaves a foot long and racemes of large showy flowers having white petals and crimson-tipped stamens resembling a brush. The smooth shining-black fruits are shaped like a four-sided pyramid and are 3 to 4 inches long on each side. It is native to the East Indies.

For previous introduction see 97875.

**106915. BAUHINIA GALPINI N. E. Br.** **Caesalpiniaceae.**

No. 2561. A small tree 15 feet high. The leaves, two lobed at the apex, are up to 3 inches long, and the brick-red flowers are borne continuously from spring to late autumn.

For previous introduction see 76775.

## 106914 to 106932—Continued.

**106916. CENTROSEMA PUBESCENS** Benth. Fabaceae.

No. 2582. A leguminous vine, native to tropical America, with trifoliolate leaves and small yellowish flowers. Used as a cover crop.

For previous introduction see 98081.

**106917. CASSIA GRANDIS** L. f. Caesalpinjaceae.

No. 2569. A leguminous tree, 40 to 50 feet high, that produces masses of pale-pink flowers in the early spring, before the leaves appear. Native to Panama.

For previous introduction see 101077.

**106918. CASSIA SURATTENSIS** Burm. f. Caesalpinjaceae.

No. 2569. A tropical leguminous shrub or small tree up to 15 feet high, with pale-green compound leaves and clusters of pale-yellow flowers. Native to the East Indies.

For previous introduction see 99696.

**106919 to 106922. CROTALARIA** spp. Fabaceae.

**106919. CROTALARIA QUINQUEFOLIA** L.

No. 2584. An annual plant cultivated in British Guiana as a cover crop.

**106920. CROTALARIA RETUSA** L.

No. 2577. A bushy plant with sulphur-yellow flowers with brown markings. Cultivated as a cover crop.

For previous introduction see 102603.

**106921. CROTALARIA SPECTABILIS** Roth.

No. 2583. A handsome shrub 3 to 5 feet high, native to India and sometimes cultivated for the sake of its yellowish-purple flowers, produced in dense lax racemes often 20 inches long. It is also cultivated as a cover crop.

For previous introduction see 86706.

**106922. CROTALARIA USARAMOENSIS** Baker f.

No. 2579. A leguminous plant which forms a dense low growth and endures partial shade. Cultivated as a cover crop.

For previous introduction see 97875.

**106923. DOLICHOS LABLAB** L. Fabaceae. Hyacinth-bean.

No. 2580. Cultivated as a cover crop.

**106924. ERYTHRINA VARIEGATA** Stickm. Fabaceae.

No. 2574. A tree 20 to 30 feet high, native throughout India, with clusters of large bright-red flowers which appear before the leaves. The pods, 4 to 8 inches long, contain dark-carmine seeds.

For previous introduction see 104126.

**106925. ERYTHRINA** sp. Fabaceae.

No. 2575. A small tree 20 to 30 feet high, with white seeds.

**106926. GUSTAVIA** sp. Lecythidaceae.

No. 2551. A medium-sized tree 30 feet high, with yellow flowers which shatter easily.

**106927. HIPPOMANE MANCINELLA** L. Euphorbiaceae.

## 106914 to 106932—Continued.

No. 2570. A tropical evergreen tree, sometimes 60 feet or more tall, with thick, shining, oval leaves 2 to 4 inches long. The acrid milky sap is poisonous, and the hard, brown, fine-grained wood is used in making furniture. Native to tropical America.

**106928. INDIGOFERA HIRSUTA** L. Fabaceae. Indigo.

No. 2555. An annual 3 feet high, with crimson flowers. Cultivated as a cover crop.

For previous introduction see 42173.

**106929. INDIGOFERA SUFFRUTICOSA** Mill. Fabaceae. Indigo.

No. 2585. A slender yellow-flowered bushy legume 3 to 5 feet high, producing a rather scanty growth, which is not considered one of the best cover crops. Native to tropical America.

For previous introduction see 99780.

**106930. LONCHOCARPUS SERICEUS** (Poir.) H. B. K. Fabaceae.

No. 2564.

For previous introduction and description see 106595.

**106931. PHASEOLUS LATHYROIDES** L. Fabaceae.

No. 2558. A semierect annual legume which makes a good growth on poor land. The dark-red flowers are very ornamental. It is cultivated as a cover crop.

For previous introduction see 97893.

**106932. ANDIRA INERMIS** (Sw.) H. B. K. Fabaceae. Cabbage angelin.

No. 2563. A slow-growing leguminous tree called in Jamaica, cabbage tree, on account of its disagreeable odor. The purple flowers are followed by fleshy pods each containing one seed. The wood, which is very hard and durable, varies in the same tree from reddish yellow to black and takes on a high polish. It is used for all sorts of carpenter work. The tree is native to tropical America.

For previous introduction see 48509.

**106933. SORGHUM VULGARE** Pers. Poaceae. Sorghum.

From Mexico. Seeds presented by P. E. Baffert, Nogales, Ariz., at the request of Walter Douglas, of the Southern Pacific Railroad Co. of Mexico. Received November 5, 1934.

A prolific sorghum which becomes 10 to 12 feet tall in the Barrancas region, Jalisco, Mexico.

**106934 and 106935. SACCHARUM OFFICINARUM** L. Poaceae. Sugarcane.

From Australia. Cuttings presented by the Bureau of Sugar Experiment Stations, Brisbane, Queensland. Received November 14, 1934.

Introduced for Department specialists.

**106934. S. J. No. 4. 106935. S. J. No. 7.**

**106936. PHYLANTHUS ACUMINATUS** Vahl. Euphorbiaceae.

From British Guiana. Cuttings collected by W. A. Archer, Bureau of Plant Industry.

## 106936—Continued.

Received August 14, 1934. Numbered November 1934.

Introduced for the use of Department specialists.

No. 2355. *Dakanant*. From Wauna on the Koriabo River, July 20, 1934. A bushy perennial 4 to 6 feet high. It is native to British and French Guiana.

## 106937 and 106938. TULIPA spp. Liliaceae. Tulip.

From the Union of Soviet Socialist Republics. Bulbs collected in Turkistan by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received November 9, 1934.

Collected at Chelkar, August 13, 1934.

106937. No. 903. 106938. No. 901.

## 106939. PINUS TORREYANA Parry. Pinaceae. Soledad pine.

From California. Seeds purchased from John R. Fleming, La Jolla. Received November 19, 1934.

Obtained for Department specialists.

## 106940. JATROPHA GOSSYPIFOLIA L. Euphorbiaceae.

From British Guiana. Plants collected by W. A. Archer, Bureau of Plant Industry. Received November 6, 1934.

No. 2623. *Bellyache bush*. From near Georgetown, October 15, 1934. A woody perennial 2 to 6 feet high, with five-lobed leaves 4 to 6 inches across and dark-red flowers followed by globular warty fruits. Native to tropical America.

## 106941. PERSEA AMERICANA Mill. Lauraceae. Avocado.

From Florida. A tree, seedling "B" of the *Collinred* avocado, P. I. 62376, growing at the Plant Introduction Garden, Coconut Grove. Numbered November 23, 1934, for convenience in distribution.

## 106942 to 106945. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.

From Czechoslovakia. Plants purchased from Dr. Joseph Blaha, Brno. Received November 17, 1934.

Introduced under the following varietal names for the use of Department specialists.

106942. *Joniska*.

106943. *Syrská*.

106944. *Velká raná*.

106945. *Velkopavlovická*.

## 106946 and 106947. EUCHLAENA MEXICANA Schrad. Poaceae. Teosinte.

From the Distrito Federal, Mexico. Seeds presented by Mrs. Walter Douglas, Mexico City. Received November 5, 1934.

Introduced for Department specialists.

A coarse annual grass, native to Mexico, where it was cultivated in prehistoric times. It resembles corn rather closely, and some botanists consider that corn is a hybrid of which teosinte is one of the parents.

For previous introduction see 95686.

106946. Seeds from plant No. 1.

106947. Seeds from plant No. 2.

## 106948. AMYGDALUS PERSICA L. Amygdalaceae. Peach.

From China. Seeds purchased through Peter Liu, Peiping. Received November 24, 1934.

*Mao Tao* (hairy peach); from the villages around Feicheng, where the seedlings are used as stocks for cultivated varieties of peaches.

## 106949 to 106960.

From British Guiana. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received November 5, 1934.

Introduced for Department specialists.

Nos. 106949 to 106957 were collected in the Botanic Garden, Georgetown, September 27, 1934.

## 106949. BARRINGTONIA ASIATICA (L.) Kurz. Lecythidaceae.

No. 2571.

For previous introduction and description see 106914.

## 106950. CARICA PAPAYA L. Papayaceae. Papaya.

No. 2598.

106951. CERRERA THEVETIA L. (*Thevetia nerifolia* Juss.). Apocynaceae. Yellow oleander.

No. 2600. An ornamental, willow-leaved, yellow-flowered evergreen tree or shrub 10 to 15 feet high. Native to tropical America.

For previous introduction see 60396.

## 106952. COCCINEA CORDIFOLIA Cogn. Cucurbitaceae.

No. 2597. A perennial tropical vine with small, broadly ovate-cordate, deep-green leaves, white flowers, and intensely scarlet, oval, edible fruits about 2 inches long, which taste like cucumbers. Native to eastern India.

## 106953. COUROUPITA GUIANENSIS Aubl. Lecythidaceae.

No. 2591. *Cannonball tree*. A tall tropical tree with oblong-ovate leaves and odd, showy, yellow and red-tinged flowers about 2 inches long, in long racemes. The globular reddish-brown fruits are 6 to 8 inches in diameter.

For previous introduction see 98550.

## 106954. TEPHROSIA NOCTIFLORA Bojer. Fabaceae.

For previous introduction and description see 106594.

## 106955. CROTALARIA STRIATA DC. Fabaceae.

No. 2599. A low-growing, shrubby, ornamental, leguminous plant, native to India, with rounded green branches and elongated terminal clusters of drooping yellow flowers, the petals striped with deep orange brown. Cultivated as a cover crop.

For previous introduction see 78772.

## 106956. GUSTAVIA AUGUSTA L. Lecythidaceae.

No. 2593. A slender evergreen tree 20 feet high, native to tropical America, which bears flowers 4 inches across, creamy white, tinged with rose inside, and externally rose-colored. The stamens form a circle in the center of the flower and are white at the base with rosy filaments and yellow anthers.

For previous introduction see 106354.

## 106949 to 106960—Continued.

106957. HURA CREPITANS L. Euphorbiaceae. Sandboxtree.

No. 2595. An ornamental tree, native to the American Tropics, up to 100 feet high, with broad-ovate, repand-dentate, poplarlike, long-stemmed leaves. The small reddish flowers are followed by deeply ribbed capsules 3 inches wide and over an inch thick, which explode with a loud noise when ripe and throw the seeds many feet.

For previous introduction see 94192.

106958. NICOTIANA TABACUM L. Solanaceae. Tobacco.

No. 2602. *Bush tobacco*. A native strain collected at Rupununi by Carib Indians.

Nos. 106959 and 106960 were collected in the Botanic Garden, Georgetown, September 27, 1934.

106959. PAULLINIA PINNATA L. Sapindaceae.

No. 2554. A strong-growing vine that climbs 30 to 40 feet to the tops of trees. The bright-red fruits, the size of cherries, are borne in racemes 6 inches or more in length.

For previous introduction see 99001.

106960. PHYLLANTHUS ACIDUS (L.) Skeels. Euphorbiaceae. Star-gooseberry.

No. 2576. A shrub or tree up to 50 feet high, with ovate acute leaflets; flowers on separate branches below the foliage; the edible, white, very acid fruits are used for pickles or made into preserves. Native to the East Indies.

For previous introduction see 76491.

## 106961 to 106969.

From Arizona. Seeds collected by Robert Burton, Bureau of Plant Industry. Received October 26, 1934.

Collected for Department specialists.

106961. AMELANCHIER UTAHENSIS Koehne. Malaceae.

A dwarf shrub with thick branches, small roundish leaves, and short racemes of small white flowers. Native to the western United States.

106962. ARCTOSTAPHYLOS PUNGENS H. B. K. Ericaceae.

A shrub 3 to 10 feet high, with smooth red-brown bark, lanceolate to rounded leaves about an inch long, and small edible brown fruits one-fourth inch in diameter. Native to Mexico and the southwestern United States.

106963. ATRIPLEX CANESCENS (Pursh) James. Chenopodiaceae.

A shrub up to 3 feet high, with grayish-white stems and narrow-oblong leaves. Native to the western United States.

106964. CERCOCARPUS INTRICATUS S. Wats. Rosaceae.

A low rigid evergreen shrub with short revolute leaves, inconspicuous flowers, and small feathery tailed fruits. Native to the western United States.

106965. RHAMNUS BETULAEFOLIA Greene. Rhamnaceae.

A deciduous shrub with oval or elliptical, finely serrulate leaves 2 to 3 inches long. Native to New Mexico and Arizona.

## 106961 to 106969—Continued.

106966. COWANIA MEXICANA D. Don. Rosaceae.

A shrub up to 6 feet high, with small crowded cuneate three- to seven-cleft leaves less than half an inch long and creamy-white flowers an inch across. It is native to Mexico and the southwestern United States.

For previous introduction see 99410.

106967. ELYMUS GLAUCUS Buckl. Poaceae. Blue wild-rye.

A perennial grass with a loose or dense tuft of erect culms 2 to 4 feet high and lax flat leaves. Native to the western United States.

106968. RIBES LACUSTRE (Pers.) Poir. Grossulariaceae.

A deciduous shrub 3 to 5 feet high, thickly covered with slender prickles. The leaves, 1 to 2½ inches wide and long, are deeply three- to five-lobed, and the funnel-shaped flowers, brownish crimson inside and creamy white or pinkish outside, are borne in drooping racemes 2 to 3 inches long. The small round black fruits are edible. Native to the northern and western United States.

For previous introduction see 40593.

106969. SYMPHORICARPOS ROTUNDFOLIUS Gray. Caprifoliaceae.

An upright shrub about 4 feet high, with elliptic acute leaves and small pinkish flowers in axillary pairs or small terminal spikes. Native to the western United States.

## 106970 to 106981.

From the Territory of Ruanda and Urundi, Belgian Congo. Seeds presented by J. B. H. Lejeune, Director, Government Experimental Station, Kisozi. Received October 30, 1934.

Introduced for Department specialists.

106970. ACACIA sp. Mimosaceae.

106971 to 106973. CROTALARIA spp. Fabaceae.

106971. CROTALARIA DIGITATA Hook.

An erect annual 1 or 2 feet high, white woolly throughout. The five or seven leaflets are obovate, and the large yellow flowers are in terminal racemes. Native to southern India.

For previous introduction see 99820.

106972. CROTALARIA sp.

106973. CROTALARIA sp.

106974. DOLICHOS sp. Fabaceae.

106975 to 106978. INDIGOFERA spp. Fabaceae. Indigo.

106975. INDIGOFERA sp.

106976. INDIGOFERA sp.

106977. INDIGOFERA sp.

106978. INDIGOFERA sp.

106979. PHASEOLUS sp. Fabaceae.

106980. SESBANIA sp. Fabaceae.

106981. (Undetermined.)

An unidentified leguminous plant.

## 106982 to 107002.

From British Guiana. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received November 7, 1934.

Introduced for Department specialists.

**106982. ABELMOSCHUS ESCULENTUS (L.) Moench. Malvaceae. Okra.**

No. 2364. From near Georgetown, October 15, 1934. A cultivated variety with fruits  $1\frac{1}{2}$  inches in diameter and  $3\frac{1}{2}$  inches long.

Nos. 106983 to 106988 were collected in the Georgetown market, October 10, 1934.

**106983. ANNONA SQUAMOSA L. Annonaceae. Sugar-apple.**

No. 2604. The fruit is the size of an orange, with pale-green skin, the markings of which resemble dressed alligator hide.

For previous introduction see 100711.

**106984. CAPSICUM ANNUM L. Solanaceae. Common redpepper.**

No. 2610.

**106985. CARICA PAPAYA L. Papayaceae. Papaya.**

No. 2609.

**106986. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. Cushaw.**

No. 2605.

**106987. CUCURBITA PEPO L. Cucurbitaceae. Pumpkin.**

No. 2606.

**106988. DIOSPYROS DISCOLOR Willd. Diospyraceae. Mabolo.**

No. 2612. A medium-sized tree, native to the Philippine Islands, with shining green leaves 5 to 10 inches long, pubescent beneath. The velvety dull-reddish, thin-skinned fruits, 3 inches long and nearly 4 inches in diameter, have firm, rather dry flesh of a rather indefinite sweet flavor and four to eight large seeds.

For previous introduction see 101139.

**106989. RHYNCHOSIA MINIMA (L.) DC. Fabaceae.**

No. 2622. From near Georgetown, October 5, 1934. A leguminous vine 2 to 3 feet long, with pale-yellow flowers striped with lavender.

For previous introduction see 98990.

**106990. GLIRICIDIA SEPIUM (Jacq.) Kunth. (G. maculata H. B. K.). Fabaceae.**

No. 2603. Botanic Garden, Georgetown, October 10, 1934. A small tree up to 30 feet high with alternate compound leaves. The flowers resemble those of the black locust in size, but are pink.

For previous introduction see 80691.

**106991. GUSTAVIA sp. Lecythidaceae.**

No. 2613. Botanic Garden, Georgetown, October 11, 1934.

**106992. HURA CREPITANS L. Euphorbiaceae. Sandboxtree.**

No. 2595.

For previous introduction and description see 106957.

## 106982 to 107002—Continued.

**106993. JACQUINIA AURANTIACA Ait. Theophrastaceae.**

No. 2568. Botanic Garden, Georgetown, September 27, 1934. A shrub 15 feet high with orange-red flowers.

**106994. JATROPHA CURCAS L. Euphorbiaceae.**

No. 2630. From near Georgetown, October 15, 1934. A tropical American shrub or small tree 6 or 7 feet high. It is used as a hedge in the East Indies, and an oil obtained from the seeds is used in soap making. The leaves and sap are used medicinally.

For previous introduction see 74215.

**106995. JATROPHA PODAGRICA Hook. Euphorbiaceae.**

No. 2592. Botanic Garden, Georgetown, September 27, 1934. An ornamental shrub up to 4 feet high, with peltate, three- to five-lobed leaves 4 to 8 inches wide and orange flowers with scarlet petals. Native to tropical America.

For previous introduction see 103986.

**106996. LONCHOCARPUS SERICEUS (Poir.) H. B. K. Fabaceae.**

No. 2564. Botanic Garden, Georgetown, September 27, 1934.

For previous introduction and description see 106595.

**106997. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.**

No. 2607. *Creole* tomato. Georgetown market, October 10, 1934. A cultivated variety.

**106998. NICOTIANA TABACUM L. Solanaceae. Tobacco.**

No. 2631. Near Georgetown, October 15, 1934. *Buck* tobacco. A variety grown in the dooryards of the natives. The leaves are used for smelling, and they are cured for smoking.

**106999. PASSIFLORA QUADRANGULARIS L. Passifloraceae. Giant granadilla.**

No. 2608. Georgetown market, October 10, 1934. An ornamental vine, native to Brazil, which is cultivated for its strongly perfumed fruits; these are yellow to orange and have flesh about an inch thick.

For previous introduction see 100499.

**107000. PHYLLANTHUS ACIDUS (L.) Skeels. Euphorbiaceae. Star-gooseberry.**

No. 2611. Georgetown market, October 10, 1934. *Otaheite gooseberry*.

For previous introduction and description see 106960.

**107001. QUASSIA AMARA L. Simaroubaceae.**

No. 2596. Botanic Garden, Georgetown, September 27, 1934. *Bitter wood, Indian cinchona*. A lofty tree native to northern South America, which resembles the ash, with large showy red flowers, followed by beautiful and decorative fruits arranged in fives around a fleshy peduncle. The wood of the tree is extremely bitter and is used by the natives as a substitute for quinine.

For previous introduction see 104261.

## 106982 to 107002—Continued.

## 107002. SOPHORA TOMENTOSA L. Fabaceae.

No. 2587. Botanic Garden, Georgetown, September 27, 1934. A shrub or small tree, native to India and Ceylon, with slender wandlike branches and pinnate leaves made up of 15 to 19 obovate leaflets, 1 to 2 inches long, densely gray hairy beneath. The yellow pea-shaped flowers, nearly an inch in length, are borne in racemes 6 inches long.

For previous introduction see 99700.

## 107003 and 107004.

From Africa. Seeds presented by the superintendent, Government Gardens, Khartoum, Anglo-Egyptian Sudan, through F. G. Walsingham, Atkins Institution, Arnold Arboretum, Soledad, Cienfuegos, Cuba. Received November 7, 1934.

## 107003. ACACIA SEYAL Delile. Mimosaceae.

For previous introduction and description see 106614.

## 107004. BAUHINIA sp. Caesalpinziaceae.

A red-flowered variety.

## 107005 to 107007.

From Brazil. Seeds collected by J. R. Swallen, Bureau of Plant Industry. Received November 6, 1934.

## 107005. ANNONA SQUAMOSA L. Annonaceae.

Sugar-apple.

*Piña, Azatas.* From the mountains of Batarite, Ceará. A common fruit in this region.

## 107006. PASSIFLORA EDULIS Sims. Passifloraceae.

*Maracuya.* From Maranhao. The juice of this fruit has a pleasing flavor and is used for making cold drinks.

## 107007. VITIS VINIFERA L. Vitaceae.

European grape.

Collected in the mountains of Beatrice, Ceará. Apparently everbearing.

## 107008 to 107134.

From the Union of Soviet Socialist Republics. Seeds collected in Turkistan by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received October 29, 1934.

## 107008 and 107009. AEGILOPS spp. Poaceae.

July 3, 1934. From heavy soil, in permanent mountain pastures, adjacent to the Sultanabad Valley, Tajikistan.

107008. No. 230. 107009. No. 207.

## 107010 to 107012. AGROPYRON spp. Poaceae.

107010. AGROPYRON sp.

No. 174. July 1934. From mountain slope, Gissar Valley, Tajikistan.

107011. AGROPYRON sp.

No. 156. July 1934. From dry rocky slopes, Gissar Valley, Tajikistan.

107012. AGROPYRON sp.

No. 153. July 1934. From dry rocky mountain slopes, Gissar Valley, north of Stalinabad, Tajikistan.

## 107013. ALLIUM sp. Liliaceae.

No. 229. July 1, 1934. Mountains of Stalinabad, Tajikistan.

## 107008 to 107134—Continued.

## 107014. ARNEBIA sp. Boraginaceae.

No. 267. July 9, 1934. From the hills near Stalinabad, Tajikistan. A plant with yellow flowers marked with black.

## 107015. AMYGDALUS sp. Amygdalaceae.

No. 183. July 1, 1934. Rocky mountains south of Stalinabad, Tajikistan.

## 107016. AMYGDALUS sp. Amygdalaceae.

No. 188. July 8, 1934. From the Varsov River Canyon, north of Stalinabad, Tajikistan.

## 107017. ANDROPOGON sp. Poaceae.

No. 260. July 3, 1934. A perennial grass from the mountain pastures near Stalinabad, Tajikistan.

## 107018. ARNEBIA sp. Boraginaceae.

No. 234. July 4, 1934. From the foothills adjacent to the Sultanabad Valley, near Stalinabad, Tajikistan. A plant with yellow flowers marked with black.

## 107019 to 107025. ASTRAGALUS spp. Fabaceae.

## 107019. ASTRAGALUS SIEVERSIIANUS Pall.

No. 162. July 1934. From a mountain slope, Gissar Valley, Tajikistan.

For previous introduction and description see 106857.

## 107020. ASTRAGALUS sp.

No. 196. July 1, 1934. From the Gissar Mountains, south of Stalinabad, in rocky soil. Good forage.

## 107021. ASTRAGALUS sp.

No. 205. July 1, 1934. From the mountains south of Stalinabad, growing in rocky soil.

## 107022. ASTRAGALUS sp.

No. 289. July 8, 1934. Varsov Canyon, 20 km north of Stalinabad, Tajikistan.

## 107023. ASTRAGALUS sp.

No. 231. July 1934. From the Varsov River Canyon, Tajikistan.

## 107024. ASTRAGALUS sp.

No. 187. June 1934. From the Varsov Canyon, Tajikistan.

## 107025. ASTRAGALUS sp.

No. 277. July 7, 1934. Varsov Canyon, north of Stalinabad.

## 107026. ATRAPHAXIS sp. Polygonaceae.

No. 242. July 1, 1934. Stalinabad, Tajikistan. A shrub growing in rocky mountain soil.

## 107027. AVENA FATUA L. Poaceae. Oats.

No. 219. June 30, 1934. Near railroad, Denan, Tajikistan, near Stalinabad. A wild oat, native to Asia.

For previous introduction see 69126.

## 107028. AVENA LUDOVICIANA Durien. Poaceae. Grass.

No. 281. July 1, 1934. Stalinabad, Tajikistan. Found on dry hillsides growing in clay soil. An annual or biennial grass, very similar to *Avena sterilis*, but smaller. Native to southern Europe.

For previous introduction see 64094.



## 107008 to 107134—Continued.

- 107029 to 107040. *BROMUS* spp. Poaceae.  
Grass.
107029. *BROMUS DANTHONIAE* Trin.  
No. 237. July 1934. Mountains of Tajikistan.  
For previous introduction and description see 106860.
107030. *BROMUS INERMIS* Leyss.  
No. 226. July 3, 1934. Adjacent to the Sultanabad Valley, Tajikistan. A perennial upright European grass which forms a thick mat with creeping rhizomes. The stems are 1 to 3 feet high. A permanent mountain-pasture grass.  
For previous introduction see 101647.
107031. *BROMUS OXYDON* Schrenk.  
No. 223. July 1, 1934. From the foothills south of Stalinabad, Tajikistan. A tall annual grass up to 2 feet high, with flat linear leaves. Native to Turkistan.
107032. *BROMUS TECTORUM* L.  
No. 198. July 1, 1934. Found in the foothills near Stalinabad in clay soils. An annual grass.  
For previous introduction and description see 106865.
107033. *BROMUS* sp.  
No. 288. June 30, 1934. From Denan, Tajikistan, near the railroad.
107034. *BROMUS* sp.  
No. 202. July 4, 1934. From the Yavan Valley, Tajikistan, growing in clay soil.
107035. *BROMUS* sp.  
No. 210. July 3, 1934. Found in mountain pastures adjacent to the Sultanabad Valley, Stalinabad, Tajikistan.
107036. *BROMUS* sp.  
No. 249. July 1, 1934. From the foothills near Stalinabad, growing in clay soil.
107037. *BROMUS* sp.  
No. 228. June 30, 1934. Found in heavy soil in the desert along the railroad between Kelif and Termez, Uzbekistan.
107038. *BROMUS* sp.  
No. 238. July 4, 1934. From the Yavan Valley, Stalinabad, Tajikistan.
107039. *BROMUS* sp.  
No. 261. June 30, 1934. Found in heavy soil in the desert along the railroad between Kelif and Termez, Uzbekistan.
107040. *BROMUS* sp.  
No. 269. July 1, 1934. Found in clay soil in the foothills near Stalinabad, Tajikistan.
107041. *CALAMAGROSTIS PSEUDOPHRAGMITES* (Hall. f.) Koel. Poaceae.  
Grass.  
No. 278. July 1, 1934. From a dry rocky hillside, Stalinabad, Tajikistan. A perennial grass about 3 feet tall with creeping rhizomes. Native to central Europe.
107042. *CICER* sp. Fabaceae.  
No. 178. July 8, 1934. From the Varsov River Canyon, at 5,500 feet altitude.

## 107008 to 107134—Continued.

107043. *CICER* sp. Fabaceae.  
No. 221. July 2, 1934. Experiment Station, Stalinabad, Tajikistan. Occurring as a weed in wheatfields.
107044. *COLUTEA* sp. Fabaceae.  
No. 189. July 1, 1934. From the mountains south of Stalinabad, Tajikistan. Received under the name "bukharica," for which a place of publication has not been found.
- 107045 and 107046. *CYNODON DACTYLON* (L.) Pers. Poaceae.  
Bermuda grass.
107045. No. 172. July 1934. From mountain slope, Gissar Valley, Tajikistan.
107046. No. 240. July 9, 1934. From clay hills, east of Stalinabad, Tajikistan.
- 107047 to 107049. *DACTYLIS GLOMERATA* L. Poaceae.  
Orchard grass.
107047. No. 168. July 1934. Mountain slope, Gissar Valley, Tajikistan.
107048. No. 206. July 1, 1934. Found in clay soil on the mountains south of Stalinabad, Tajikistan.
107049. No. 241. July 1, 1934. From the foothills, Stalinabad, Tajikistan.
- 107050 and 107051. *ELYMUS CAPUT-MEDUSAE* L. Poaceae.  
Grass.
107050. No. 201. July 1, 1934. From clay hills near Stalinabad, Tajikistan.
107051. No. 194. June 30, 1934. Found in heavy soil near the railroad at Denan, Tajikistan.
- 107052 and 107053. *ERAGROSTIS CILIANENSIS* (All.) Link. Poaceae.  
Grass.  
For previous introduction see 101657.
107052. No. 215. July 4, 1934. Found in clay soil in the Yavan Valley, Tajikistan.
107053. No. 275. July 5, 1934. Found in heavy soil in the Yavan Valley, Tajikistan.
107054. *EREMURUS* sp. Liliaceae.  
No. 262. July 3, 1934. From the Varsov River Canyon, north of Tajikistan.
107055. *EREMURUS* sp. Liliaceae.  
No. 272. July 8, 1934. From the Varsov River Canyon, Tajikistan, at 5,500 feet altitude.
- 107056 to 107058. *FESTUCA* spp. Poaceae.  
Grass.
107056. *FESTUCA ELATIOR* L.  
Meadow fescue.  
No. 158. July 1934. From the Gissar Valley, Tajikistan.
107057. *FESTUCA MYUROS* L.  
No. 200. July 1, 1934. From the foothills south of Stalinabad. An annual grass with culms a foot high and narrow leaf blades. Native to Europe.
107058. *FESTUCA* sp.  
No. 197. July 4, 1934. Found in heavy soil in the Yavan Valley south of Stalinabad.

## 107008 to 107134—Continued.

**107059. FRITILLARIA BUCHARICA** Regel.  
Liliaceae.

No. 233. July 1, 1934. From the mountains south of Stalinabad, Tajikistan, in rocky soil. A bulbous plant with an erect stem 6 to 18 inches high, with alternate ovate or lanceolate leaves and white flowers in terminal racemes. Native to Bokhara, central Asia.

**107060 to 107062. HORDEUM** spp. Poaceae.

**107060 and 107061. HORDEUM BULBOSUM** L.

For previous introduction see 106880.

**107060.** No. 224. July 1, 1934. Found in clay soil near Stalinabad, Tajikistan.

**107061.** No. 270. June 30, 1934. Near railroad, Denan, Tajikistan.

**107062. HORDEUM SPONTANEUM** C. Koch.

No. 209. July 1, 1934. Stalinabad, Tajikistan, in clay soil.

For previous introduction see 94850.

**107063. IXIOLIRION** sp. Amaryllidaceae.

No. 257. July 1, 1934. Gissar Mountains, south of Stalinabad, Tajikistan.

**107064. KOELERIA** sp. Poaceae. Grass.

No. 203. July 1, 1934. Found in clay soil in the foothills near Stalinabad, Tajikistan.

**107065. KOELERIA PHELOIDES** (Vill.) Pers.  
Poaceae. Grass.

No. 235. July 4, 1934. From the Ringantau Mountains, near Stalinabad, Tajikistan.

For previous introduction and description see 106881.

**107066 to 107070. LATHYRUS** spp. Fabaceae.

**107066. LATHYRUS ANNUUS** Hoerj.

No. 170. July 1934. Mountain slope, Gissar Valley, Tajikistan.

**107067. LATHYRUS HIRSUTUS** L.

No. 159. July 1934. Gissar Valley, Tajikistan. A biennial vine with linear oblong leaflets and pale blue purple flowers. Native to Europe.

For previous introduction see 16998.

**107068. LATHYRUS SPHAERICUS** Retz.

No. 169. July 1934. Mountain slope, Gissar Valley, Tajikistan.

**107069. LATHYRUS** sp.

No. 185. July 8, 1934. Varsov Canyon, north of Stalinabad, Tajikistan. A plant with beautiful red flowers.

**107070. LATHYRUS** sp.

No. 227. July 1934. Varsov River, Tajikistan, at 5,000 feet altitude.

**107071 to 107073. LOLIUM** spp. Poaceae.  
Grass.

**107071. LOLIUM RIGIDUM** Gaud.

No. 218. July 3, 1934. From a permanent mountain pasture adjacent to the Sultanabad Valley, near Stalinabad, Tajikistan. An annual, gray-green, bushy grass, with ascending stems up to 2 feet long. Native to southern and central Europe.

For previous introduction see 64632.

## 107008 to 107134—Continued.

**107072 and 107073. LOLIUM TEMULENTUM**  
L. Darnel.

An annual European grass.

For previous introduction see 99138.

**107072.** No. 246. July 3, 1934. From a mountain wheatfield adjoining the Sultanabad Valley.

**107073.** No. 284. July 3, 1934. Collected on a mountain slope 25 km southeast of Stalinabad, on the Government horse farm, adjacent to the Sultanabad Valley.

**107074. LONICERA** sp. Caprifoliaceae.

No. 273. July 8, 1934. Varsov Canyon, Tajikistan.

**107075 to 107081. MEDICAGO** spp. Fabaceae.  
Medick.

**107075. MEDICAGO SATIVA** L. Alfalfa.

No. 173. July 1934. Tajikistan.

**107076. MEDICAGO** sp.

No. 250. July 9, 1934. Found in clay soil on the hills east of Stalinabad, Tajikistan.

**107077. MEDICAGO HISPIDA APICULATA**  
(Willd.) Urban.

No. 264. July 4, 1934. From the Yavan Valley, southeast of Stalinabad, Tajikistan.

**107078. MEDICAGO ORBICULARIS** (L.) All.

No. 245. July 1, 1934. From hillside in foothills near Stalinabad, Tajikistan.

For previous introduction see 90023.

**107079. MEDICAGO** sp.

No. 256. July 1, 1934. From clay soil in foothills near Stalinabad, Tajikistan.

**107080. MEDICAGO ORBICULARIS** (L.) All.

No. 247. July 4, 1934. From the Yavan Valley, Tajikistan.

**107081. MEDICAGO** sp.

No. 258. July 4, 1934. From the mountains adjacent to the Sultanabad Valley, Stalinabad, Tajikistan.

**107082. MELICA** sp. Poaceae. Grass.

No. 263. July 1, 1934. Found on very dry rocky soil in the mountains south of Stalinabad, Tajikistan.

**107083. MELICA** sp. Poaceae. Grass.

No. 199. July 1934. Found among rocks at 5,000 feet altitude along the Varsov River, Tajikistan.

**107084. MELILOTUS ALBA** Desr. Fabaceae.  
White sweetclover.

No. 154. July 1934. From dry rocky slopes in the Gissar Valley, north of Stalinabad, Tajikistan.

For previous introduction see 90031.

**107085. MELILOTUS OFFICINALIS** (L.) Lam.  
Fabaceae. Sweetclover.

No. 155. From the Gissar Valley, Tajikistan.

**107086 to 107090. ONOBRYCHIS** spp. Fabaceae.

## 107008 to 107134—Continued.

107086. *ONOBRYCHIS AMOENA* M. Popov and Vved.

No. 161. July 1934. From a mountain slope in the Gissar Valley, Tajikistan. An erect herb with slender stems over a foot high, lanceolate-linear leaflets, and yellow purple-streaked flowers in slender racemes. Native to central Asia.

107087. *ONOBRYCHIS GRANDIS* Lipsky.

No. 163. July 1934. From a mountain slope, Tajikistan. An herb over 3 feet high, with elliptic-ovate leaflets 2 inches long and flowers in long racemes. Native to Bokhara, central Asia.

107088. *ONOBRYCHIS PULCHELLA* Schrenk.

For previous introduction and description see 106889.

107089. *ONOBRYCHIS* sp.

No. 212. July 9, 1934. Found in clay soil in the foothills back of Stalinabad, Tajikistan.

107090. *ONOBRYCHIS* sp.

No. 286. July 4, 1934. From the Ringantau Mountains between Stalinabad and Yavan Valley, Tajikistan.

107091 to 107095. *ORYZOPSIS* spp. Poaceae. Grass.

107091. *ORYZOPSIS* sp.

No. 211. July 1, 1934. Mountains of Stalinabad, Tajikistan.

107092. *ORYZOPSIS* sp.

No. 280. July 8, 1934. From the Varsov River Canyon, north of Stalinabad, Tajikistan.

107093. *ORYZOPSIS* sp.

No. 266. July 7, 1934. From the Varsov River Canyon, in the mountains north of Stalinabad.

107094. *ORYZOPSIS* sp.

No. 279. July 1, 1934. Found in rocky soil in the mountains south of Stalinabad, Tajikistan.

107095. *ORYZOPSIS* sp.

No. 292. July 7, 1934. Found in rocky soil north of Stalinabad in the Varsov River Canyon.

107096. *PAPAVER* sp. Papaveraceae. Poppy.

No. 276. July 3, 1934. From the Varsov River Canyon, north of Stalinabad, Tajikistan.

107097. *PAPAVER* sp. Papaveraceae. Poppy.

No. 232. July 8, 1934. Varsov River Canyon, Tajikistan. A yellow poppy.

107098. *PHALARIS MINOR* Retz. Poaceae. Grass.

No. 287. July 4, 1934. From the Yavan Valley, Tajikistan.

107099. *PHALARIS MINOR* Retz. Poaceae. Grass.

No. 290. June 30, 1934. Near the railroad, Denan, Tajikistan.

107100 to 107102. *PHLEUM* spp. Poaceae. Grass.

## 107008 to 107134—Continued.

107100. *PHLEUM* sp.

No. 151. June 1934. From a dry rocky slope, Gissar Valley, north of Stalinabad, Tajikistan.

107101. *PHLEUM* sp.

No. 243. July 1, 1934. From dry foothills, Stalinabad, Tajikistan.

107102. *PHLEUM* sp.

No. 239. June 30, 1934. Denan, Tajikistan.

107103. *PIPTANTHUS* sp. Fabaceae.

No. 176. July 8, 1934. From the Government rest house, 20 km from Stalinabad.

107104. *PISUM* sp. Fabaceae.

No. 253. July 3, 1934. From a mountain wheatfield, adjacent to Sultanabad Valley, southeast of Stalinabad, Tajikistan.

107105 to 107111. *POA* spp. Poaceae. Grass.

107105. *POA BULBOSA* L.

No. 208. July 1, 1934. Found in clay soil in the foothills near Stalinabad, Tajikistan.

For previous introduction see 84477.

107106. *POA* sp.

No. 213. July 4, 1934. Found in clay soil in the Yavan Valley, Stalinabad, Tajikistan.

107107. *POA* sp.

No. 220. July 8, 1934. Varsov River Canyon, Tajikistan, at 5,500 feet altitude.

107108. *POA* sp.

No. 285. July 8, 1934. Varsov River Canyon, north of Stalinabad, Tajikistan.

107109. *POA* sp.

No. 216. July 3, 1934. From permanent mountain pastures, adjacent to the Sultanabad Valley, Tajikistan.

107110. *POA* sp.

No. 225. July 7, 1934. From the Varsov River Canyon, in the mountains north of Stalinabad.

107111. *POA* sp.

No. 282. July 8, 1934. From the Varsov River Canyon, north of Stalinabad, Tajikistan.

107112. *POLYGONUM BUCCHARICUM* Greig. Polygonaceae.

No. 181. July 1, 1934. A perennial vine 3 feet high, with ovate leaves and branched panicles of small blue flowers, found in the mountains south of Stalinabad. Native to Bokhara.

107113. *POLYPOGON MONSPELIENSIS* (L.) Desf. Poaceae. Grass.

No. 248. July 4, 1934. Found in salty soil in the Yavan Valley, Stalinabad, Tajikistan. An annual grass with soft bristly green or yellowish spikes up to 6 inches long.

For previous introduction see 106440.

## 107008 to 107134—Continued.

107114. PRUNUS ARMENIACA L. Amygdalaceae.  
Apricot.

No. 177. June 30, 1934. Purchased at the station of Amirabad, Tajikistan.

107115. PRUNUS ARMENIACA L. Amygdalaceae.  
Apricot.

No. 291. June 30, 1934. Cultivated apricots purchased at Termez, Uzbekistan.

107116. PUCCINELLIA sp. Poaceae. Grass.

No. 222. July 7, 1934. Yavan Valley, Stalinabad, Tajikistan. A grass 3 feet tall, found in salty soil.

107117. SANGUISORBA MINOR Scop. Rosaceae.  
Small burnet.

No. 157. July 1934. Dry rocky slopes of the Gissar Valley, Tajikistan. An exceedingly hardy and long-lived perennial up to 2 feet high; the young leaves, resembling the cucumber in flavor, are used as a salad. Native to France.

For previous introduction see 53921.

107118. SCABIOSA sp. Dipsacaceae.

No. 255. July 3, 1934. From mountain pastures adjacent to the Sultanabad Valley, Stalinabad, Tajikistan.

107119. SCABIOSA sp. Dipsacaceae.

No. 274. July 8, 1934. From the mountains north of Stalinabad, Tajikistan. An herb with reddish-purple flowers.

107120 to 107123. TRIFOLIUM spp. Fabaceae.  
Clover.

107120. TRIFOLIUM LAPPACEUM L.

No. 164. July 1934. From a mountain slope, Gissar Valley, Tajikistan.

107121. TRIFOLIUM PRATENSE L.  
Red clover.

No. 175. July 1934. From the Gissar Valley, Tajikistan.

107122. TRIFOLIUM PROCUMBENS L.

No. 251. July 1, 1934. From the mountains south of Stalinabad, Tajikistan.

107123. TRIFOLIUM REPENS L.  
White clover.

No. 252. July 1, 1934. From the mountains south of Stalinabad, Tajikistan.

107124. TRIGONELLA sp. Fabaceae.

No. 265. July 1, 1934. Stalinabad, Tajikistan. An excellent fodder crop, found on a rocky hillside.

107125 to 107132. VICIA spp. Fabaceae.  
Vetch.

107125. VICIA ANGUSTIFOLIA Grufberg.  
Fabaceae.

No. 166. July 1934. From a mountain slope, Gissar Valley, Tajikistan.

For previous introduction see 81051.

107126. VICIA HYRCANICA Fisch. and Mey.

No. 166. July 1934. From mountain slopes, Gissar Valley, Tajikistan. An annual yellow-flowered vetch, cultivated in northern Iran (Persia) and Armenia.

For previous introduction see 73619.

## 107008 to 107134—Continued.

107127. VICIA LUTEA L.

No. 167. July 1934. From a mountain slope, Gissar Valley, Tajikistan. An annual vetch with ascending stems up to 2 feet long, small linear-lanceolate leaflets, and bright-yellow flowers. Native to central Europe.

For previous introduction see 6962.

107128 and 107129. VICIA TENUIFOLIA Roth.

A deep-rooted perennial, cut for hay, which thrives in very dry situations.

For previous introduction see 88702.

107128. No. 171. July 1934. From a mountain slope, Gissar Valley, Tajikistan.

107129. No. 180. July 1, 1934. From the experiment station, Stalinabad, Tajikistan, where it occurs as a bad weed in their wheatfields.

107130. VICIA sp.

No. 268. July 9, 1934. Found in dry clay soil in fields east of Stalinabad, Tajikistan.

107131. VICIA sp.

No. 268-a. July 9, 1934. Seeds mixed with No. 268 [107130].

107132. VICIA sp.

No. 293. July 11, 1934. Gissar Mountains, south of Stalinabad, Tajikistan.

107133. (Undetermined.)

No. 217. July 8, 1934. Varsov River, north of Stalinabad, Tajikistan. An herb with yellow flowers.

107134. (Undetermined.)

No. 259. July 3, 1934. Experiment station, Stalinabad, Tajikistan. A pretty flowering plant growing as a weed in fields at the station.

107135 and 107136. FICUS LAEVIGATA Vahl. Moraceae. Fig.

From British Guiana. Seeds presented by the Botanic Garden, Georgetown, through W. A. Archer, Bureau of Plant Industry. Received November 17, 1934.

A shrub or small tree up to 15 feet high, with medium-sized, glossy, ovate leaves and an abundance of globular white fruits, less than an inch in diameter, which turn pink as they ripen. Native to tropical America.

For previous introduction see 98850.

107137 to 107143.

From the Union of South Africa. Seeds presented by the School of Agriculture, Grootfontein, Middleburg, Cape Province. Received November 10, 1934.

107137. ASTER FILIFOLIUS Vent. Astera-ceae.

A much-branched shrub 2 to 3 feet high, with filiform leaves and flower heads with yellow disk and blue rays. Native to the Cape of Good Hope.

107138. ATRIPLEX HALIMUS L. Chenopodiaceae.

For previous introduction and description see 106615.

## 107137 to 107143—Continued.

107139. *EURYOPS MULTIFIDUS* (Thunb.) DC. Asteraceae.

A stout bush a foot or more high, with linear filiform leaves  $\frac{1}{2}$  to  $1\frac{1}{2}$  inches long and numerous small yellow flower heads on slender stems an inch long.

For previous introduction see 105937.

107140 and 107141. *PENTZIA SPHAEROCEPHALA* DC. Asteraceae.

A rigid twiggy shrub with long erect branches and trifid leaves an inch or more long, with linear lobes. The yellow flower heads are half an inch across.

For previous introduction see 105939.

107140. *Groot Berg Gansie*.

107141. Typical form.

107142. *TETRAGONIA ARBUSCULA* Fenzl. Aizoaceae.

A much-branched, semishrubby perennial, with fleshy leaves less than an inch long, varying from linear to ovate-oblong. The small inconspicuous flowers are borne in leafy racemes and are followed by three- to four-winged, nutlike fruits.

For previous introduction see 105942.

107143. (Undetermined.)

A composite received as *Tripteria pachypteris*, but the seeds are not of that genus.

## 107144 to 107148.

From Cuba. Bulbs presented by Ing. Gonzalo M. Fortun, Director, Estaciones Experimentales, Santiago de las Vegas. Received November 16, 1934.

107144. *STERNBERGIA LUTEA* (L.) Ker-Gawl. Amaryllidaceae.

*Brujita amarilla*. A low bulbous plant with six to eight strap-shaped leaves becoming a foot long and one to four small yellow flowers about an inch long. Native to the Mediterranean region.

107145 to 107148. *ZEPHYRANTHES* spp. Amaryllidaceae. Zephyrilly.

107145. *ZEPHYRANTHES CARINATA* Herbert.

A bulbous perennial with linear leaves and a scape about a foot high, bearing a single rosy flower 3 to 5 inches across and 3 inches long. It is said to be the largest and choicest of the rosy-flowered zephyrillies and blooms in the summer. Native to the West Indies.

For previous introduction see 81496.

107146 and 107147. *ZEPHYRANTHES ROSEA* Lindl. Pink zephyrilly.

A tender bulbous autumn-blooming plant, native to Cuba, with linear, bright-green leaves and rose-colored flowers an inch long, on a peduncle 4 to 6 inches long.

For previous introduction see 80017.

107148. *Atamasco rosea*.

107147. *Atamasco rosea*, from Camaguey.

107148. *ZEPHYRANTHES TUBISPATHA* (L'Herit.) Herb.

*Brujita blanca*. A plant with four or five narrow-linear leaves 5 to 12

## 107144 to 107148—Continued.

inches long and a slender scape 4 inches long, bearing a white flower about 2 inches in length. Native to the West Indies.

## 107149 to 107168.

From British Guiana. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received November 8, 1934.

Introduced for Department specialists.

107149. *HIPPOMANE MANCINELLA* L. Euphorbiaceae.

No. 2570. Botanic Garden, Georgetown, September 27, 1934.

For previous introduction and description see 106927.

107150. *ALBIZZIA LEBBECK* (L.) Benth. Mimosaceae.

No. 2645. Botanic Garden, Georgetown, October 17, 1934. A tropical Asiatic tree with doubly compound leaves made up of obliquely oval leaflets, axillary globular heads of greenish-yellow flowers, and long flat pods.

For previous introduction see 78330.

107151. *ALLIUM ASCALONICUM* L. Liliaceae. Shallot.

No. 2636. From the vicinity of Georgetown, October 15, 1934. A cultivated shallot.

For previous introduction see 66422.

107152 to 107155. *CAPSICUM ANNUUM* L. Solanaceae. Common redpepper.

Nos. 107152 to 107154 were collected near Georgetown, October 15, 1934.

107152. No. 2632. A bell-shaped, bright-red pepper.

107153. No. 2633. A yellow bell-shaped pepper.

107154. No. 2637. *Bird pepper*. The small fruits are orange red and less than an inch long.

107155. No. 2642. *Bukrumani*. Georgetown, October 17, 1934. A very hot pepper, used by the aborigines.

107156. *CASSIA HIRSUTA* L. Caesalpinaceae.

No. 2619. Near Georgetown, October 15, 1934. An erect annual herb covered with long hairs. The compound leaves are made up of three to five pairs of ovate leaflets 2 to 3 inches long, and the orange flowers are borne in axillary racemes. Native to Brazil.

For previous introduction see 103607.

107157. *CLIBADIUM SURINAMENSE* L. Asteraceae.

No. 2620. Near Georgetown, October 15, 1934. A tropical shrub 4 to 10 feet high, with rigid, hairy, dark-green, ovate-cordate leaves and panicles of small, white, ovoid flower heads. Native to northern South America.

Nos. 107158 to 107160 were collected near Georgetown October 15, 1934.

107158. *CUCUMIS MELO* L. Cucurbitaceae. Muskmelon.

No. 2629. A muskmelon 8 inches long, with ribbed, pale-yellow surface and firm flesh.

## 107149 to 107168—Continued.

107159. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. Cushaw.

No. 2635. An oval cushaw about 18 inches long, with finely patterned green and white skin.

107160. CYCLANTHERA sp. Cucurbitaceae.

No. 2638. A vine cultivated for its yellow to orange-colored fruits which are used in curries or as a stewed vegetable. The bitter principle has to be removed first by boiling.

107161. DESMANTHUS VIRGATUS (L.) Willd. Mimosaceae.

No. 2643. Georgetown, October 17, 1934. A slender climbing shrub 5 to 6 feet high. The sensitive leaves are bipinnate, and the linear-compressed pods contain brown polished seeds which are used as beads.

For previous introduction see 93588.

107162. DREPANOCARPUS LUNATUS (L. f.) G. F. W. Meyer. Fabaceae.

No. 2616. Near Georgetown, British Guiana, October 15, 1934. A thorny shrub or small tree with three-foliolate leaves and bluish-white flowers in terminal racemes. Found growing near the sea, along creeks, and in drainage canals. Native to northern South America.

107163. FURCRAEA TUBEROSA (Mill.) Ait. Amaryllidaceae.

No. 2644. Georgetown, October 17, 1934. Bulbs of a fiber plant generally cultivated in northern South America; native country not known.

For previous introduction see 33668.

107164. JATROPHA GOSSYPIFOLIA L. Euphorbiaceae.

No. 2623. Near Georgetown, October 15, 1934.

For previous introduction and description see 106940.

107165. JATROPHA PODAGRICA Hook. Euphorbiaceae.

No. 2592. Botanic Garden, Georgetown, September 27, 1934.

For previous introduction and description see 106995.

107166. PAULLINIA PINNATA L. Sapindaceae.

No. 2554. Botanic Garden, Georgetown, September 27, 1934.

For previous introduction and description see 106959.

107167. QUASSIA AMARA L. Simaroubaceae.

No. 2615. Botanic Garden, Georgetown, October 11, 1934.

For previous introduction and description see 107001.

107168. SAPIUM HIPPOMANE G. F. W. Meyer. Euphorbiaceae.

No. 2581. Botanic Garden, Georgetown, September 27, 1934. A tropical tree 30 feet high, with lanceolate-oblong, leathery leaves about 6 inches long and blackish seeds. Native to tropical America.

## 107169 to 107181.

From England. Scions presented by the East Malling Research Station, Kent. Received April 13, 1933. Numbered November 22, 1934.

## 107169 to 107181—Continued.

Introduced under the following varietal names for the use of Department specialists.

107169 to 107179. MALUS SYLVESTRIS Mill. Malaceae. Apple.

107169. *Beauty of Bath*.

107170. *Blenheim Orange*.

107171. *Bramley's Seedling*.

107172. *Cox's Orange Pippin*.

107173. *Early Victoria*.

107174. *Grenadier*.

107175. *Lane's Prince Albert*.

107176. *Laaton's Superb*.

107177. *Lord Derby*.

107178. *Newton Wonder*.

107179. *Worcester Pearmain*.

107180 and 107181. PRUNUS DOMESTICA L. Amygdalaceae. Common plum.

107180. *Belle de Louvain*.

107181. *Cambridge Gage*.

107182 to 107186. PRUNUS DOMESTICA L. Amygdalaceae. Common plum.

From India. Plants purchased from the Saharanpur Botanic Garden. Received February 28, 1934. Numbered November 22, 1934.

Introduced under the following varietal names for the use of Department specialists.

107182. *Alucha purple*. 107185. *Sumomo*.

107183. *Alucha red*. 107186. *Sinka*.

107184. *Large yellow*.

107187 to 107190. PRUNUS spp. Amygdalaceae.

From Africa. Scions presented by Ernestine Fenzl, Tripoli. Received March 1, 1934. Numbered November 22, 1934.

107187. PRUNUS ARMENIACA L. Apricot.

*Mesch-Mesch Amrah* (red apricot). A rather small tree found in the Oasis of Tripoli, which bears apricots with a downy skin, having the color and fragrance of raspberries. The dark-green foliage is in vivid contrast with the red fruit which ripens the end of May.

For previous introduction see 93489.

107188. PRUNUS ARMENIACA L. Apricot.

A variety which matures the end of June. The tree is a more vigorous grower, the fruit is slightly larger than 107187, but it does not attain the uniform raspberry color, one side remaining a bright orange.

107189. PRUNUS CERASIFERA DIVARICATA (Ledeb.) C. Schneid. Cherry plum.

A good substitute where cherries cannot be grown.

107190. PRUNUS sp.

*Early Castello*.

107191. ASTREBLA ELYMOIDES Bailey and F. Muell. Poaceae. Grass.

From Australia. Seeds purchased from Arthur Yates & Co., Sydney, New South Wales. Received November 23, 1934.

*Mitchell grass*.

For previous introduction see 48977.

**107192 to 107194. Gossypium spp. Malvaceae. Cotton.**

From British Guiana. Seeds collected by W. A. Archer, Bureau of Plant Industry. Received in October and November 1934. Introduced for Department specialists.

**107192. Gossypium sp.**

No. 2504. September 8, 1934, from Koriabo, on the Barima River. Cultivated plants found growing in the dooryard of a deserted dwelling. A tree cotton with pale-yellow flowers, which grows from 6 to 20 feet high. It is probably a hybrid of *Gossypium peruvianum*.

**107193. Gossypium sp.**

No. 2618. October 15, 1934. Near Georgetown. A slender tree-like shrub 15 feet high, with green foliage and pale greenish-yellow flowers, each petal with a slight marking of purple near the inner base. Probably a hybrid of *Gossypium hirsutum* and *G. peruvianum*.

**107194. Gossypium sp.**

No. 2624. October 15, 1934. Near Georgetown. A hybrid of *Gossypium peruvianum*, which is a slender tree-like shrub about 20 feet high. The petals of the pale-yellow flowers are mottled with faint brown spots. The outside of the calyx is dark red, as are the veins on the lower side of the leaf, the petioles, and the stems.

**107195 to 107255. Malus sylvestris Mill. Malaceae. Apple.**

From the Union of Soviet Socialist Republics. Scions presented by the Michurin Research Institute of Fruit Production, through the Institute of Plant Industry, Leningrad. Received November 15, 1934.

Received under the following varietal names for Department specialists.

107195. *Antonovka Monastirskaia*.107196. *Antonovka* 1½ pounds.107197. *Antonovka Shafran*.107198. *Antonovka Zheltaia* (yellow).107199. *Arkad Zimmii* (winter).107200. *Belfer kitaika* (Chinese bell-flower).107201. *Bellflower Phoenix*.107202. *Bessemianka* (seedless).107203. *Borsdorf Kitaika*.107204. *Cecmpa Belfer Kitaika* (sister of Chinese bellflower).107205. *Chelbi Kitaika*.107206. *Chinese Shampansen*.107207. *Danzigscoe Rebristoe* (ribbed Danzig).107208. *Diana*.107209. *Dushistii Ledenetz*.107210. *Dvurogoe*.107211. *Filia*.107212. *Flava*.107213. *Iamnoie*.107214. *Izumrudnoie*.107215. *Kalvil Anis*.107216. *Kalvil Record*.**107195 to 107255—Continued.**107217. *Kandil Kitaika*.107218. *Kistevoe*.107219. *Kitaika Anisovaia*.107220. *Kitaika Arkadovaia*.107221. *Kitaika Dessertnaia*.107222. *Kitaika Dessertnaia*.107223. *Kitaika Zolotaia* (Chinese golden).107224. *Komsomoletz*.107225. *Korichnevoie* (brown).107226. *Krasnii Shtandart* (Red standard).107227. *Krasnoznamennoie*.107228. *Kren Kitaika* (Chinese cream).107229. *Kulon Kitaika*.107230. *Oleg*.107231. *Paradoz*.107232. *Phoenix*.107233. *Pippin Chernenko*.107234. *Pippin Chetvertii*.107235. *Pippin Kitaika* (Chinese pippin).107236. *Pippin Shafran*.107237. *Pomon Kitaika*.107238. *Rebristoe*.107239. *Renet Bergamotnii*.107240. *Renet Reshatnikova*.107241. *Renet Sakharnii*.107242. *Repa Iubileinaia*.107243. *Rosmarin Ukrainskii*.107244. *Rubinovoi*.107245. *Severnii Bujon*.107246. *Severnii Bujon*.107247. *Shampansen Kitaika* (Chinese Shafran).107248. *Shafran Osennii*.107249. *Sinap Michurina*.107250. *Sinap Michurina*.107251. *Slovianka*.107252. *Sovetskoie*.107253. *Tayeshnoe*.107254. *Titfler*.107255. *Zimnee Sladkoe* (winter sweet).**107256 and 107257.**

From Arizona. Seeds presented by the Boyce Thompson Southwestern Arboretum, Superior, through F. J. Crider. Received April 9, 1932. Numbered in November 1934.

**107256. ECHINOEREUS RIGIDISSIMUS** (Engelm.) Rose. Cactaceae.

A short stout cylindrical cactus, with 16 to 20 coarse stiff straight white to brown spines in each interlocking cluster. The spines form broad bands of brown and white around the surface of the plant. The large purple flowers are 3 inches long and as wide when fully expanded. Native to Arizona and New Mexico.

## 107256 and 107257—Continued.

**107257. FEROCACTUS LECONTEI** (Engelm.) Britt. and Rose. Cactaceae.

A slender cylindrical cactus, about 15 feet high, sometimes taller with stout interlocking spines, 1 to 3 inches long, pink with yellow tips, and yellow flowers about 2 inches long and half as wide. Native to the southwestern United States and northwestern Mexico.

## 107258 to 107263. NEOMAMMILLARIA spp. Cactaceae.

From Mexico. Seeds collected by Paul Russell and Max Souviron, Bureau of Plant Industry, in the Botanic Garden, Mexico City. Received September 20, 1930. Numbered in November 1934.

**107258. NEOMAMMILLARIA DEALBATA** (Dietr.) Britt. and Rose.

A globose or short-cylindrical cactus, 2 to 3 inches high, with the surface densely covered by the clusters of white appressed spines. The small carmine flowers are followed by small club-shaped fruits. Native to central Mexico.

**107259. NEOMAMMILLARIA MAGNIMAMMA** (Haw.) Britt. and Rose.

A globular cactus 4 inches in diameter, with very milky juice, often in a colony of 25 or more. The conical tubercles, two-fifths of an inch high, are crowned by three to five unequal, stout, whitish, or colored spines, and the cream-colored flowers are borne in the axils of the tubercles near the top of the plant. Native to central Mexico.

For previous introduction see 81183.

**107260. NEOMAMMILLARIA MYSTAX** (Mart.) Britt. and Rose.

A globose or short-cylindrical cactus 3 to 6 inches high, flat-topped, with thick-set tubercles filled with milky juice, and small white spines. The abundant dark-red flowers, three-fourths of an inch across, appear in two or three rows, and the red fruits are about 1 inch long. Native to south-central Mexico.

**107261. NEOMAMMILLARIA WILDII** (Dietr.) Britt. and Rose.

A small cylindrical or globose cactus that grows in small colonies. From the slender elongated tubercles arise pinkish hairs and bristles; also short yellow or white spines. The white flowers, half an inch across, are succeeded by club-shaped red fruits. Native to Hidalgo, Mexico.

**107262. NEOMAMMILLARIA** sp.

A rather small cylindrical-globose cactus with numerous short tubercles which bear short reddish-brown spines.

**107263. NEOMAMMILLARIA** sp.

A globular cactus with long tubercles and long pale-brown spines.

## 107264 and 107265. NICOTIANA TABACUM L. Solanaceae. Tobacco.

From South America. Seeds presented by Mario del Rio, chief, Estación Agronómica, Piura, Peru. Received November 22, 1934.

Introduced for Department specialists.

**107264. Silvestre.** A wild tobacco grown at 2,750 m above sea level.

**107265.** Commercial tobacco.

## 107266 and 107267.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received November 11, 1934.

**107266. ARDISIA WALLICHII** A. DC. Myrsinaceae.

A low bushy perennial with thick obovate-acute leaves 4 to 5 inches long and white flowers in lax racemes. Native to Burma.

**107267. CINNAMOMUM CASSIA** Blume. Lauraceae. Chinese cinnamon.

A handsome evergreen tree with sub-opposite leathery oblong-lanceolate leaves 3 to 6 inches long and very small yellowish flowers in terminal axillary panicles. Native to southern China.

For previous introduction see 6867.

## 107268 to 107271. IRIS spp. Iridaceae.

From Germany. Roots purchased from Karl Foerster, Bornim-Potsdam-Sanssouci. Received November 30, 1934.

**107268.** Baron Götz von Oocchim.

**107269.** Jenny.

**107270.** Kazimir Missoua.

**107271.** Valery Germanis.

## 107272. ZOYSIA MATRELLA (L.) Merr. Poaceae. Manila grass.

From South Manchuria. Seeds purchased from Manshu Nosan Shokai, Inc., Daifren. Received November 27, 1934.

A creeping grass, important for binding coast sands, which does well on alkali soils and also as a lawn grass. Said to be relished by stock.

## 107273 and 107274. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Rutaceae. Mandarin orange.

From Palestine. Budwood presented by S. H. Holzman, Rehovoth. Received December 1, 1934.

**107273. Devise.** A very early maturing orange, with about 12 seeds, of insipid flavor.

**107274. Pride of Ellendale.** Originally from Australia. This fruit has a fine flavor, the skin adheres well to the pulp, and it is a good shipper.

## 107275. ALOE GLOBULIGEMMA Pole Evans. Liliaceae.

From the Union of South Africa. Seeds presented by the McGregor Museum, Kimberley. Received November 26, 1934.

A stemless succulent with a rosette of erect-spreading, sword-shaped leaves 1 to 2 feet long, having cartilaginous, wavy-toothed margins. The flower stalk, 3 to 4 feet high, carries a dense raceme a foot long of tubular flowers which are globular and red in the bud, becoming elongated and sulphur-yellow tinged with red at the base. It is native to South Africa.

For previous introduction see 89992.

## 107276. JUANIA AUSTRALIS (Mart.) Drude. Phoenicaceae. Palm.

From Juan Fernandez Island. Seeds collected by Max Yunge and presented



## 107276—Continued.

through the American consul at Santiago, Chile. Received November 26, 1934.

A pinnate-leaved palm of moderate size, native to Juan Fernandez Island. The leaves are 4 to 5 feet long, with linear-acuminate pinnae, and the slender trunk is without spines.

For previous introduction see 91297.

## 107277. (Undetermined.)

From Ecuador. Roots presented by Mrs. Ynez Mexia, through the American consulate, Guayaquil. Received November 22, 1934.

## 107278 to 107284.

From Norway. Seeds presented by Prof. Olav Moen, horticultural division, Agricultural College, Aas. Received November 27, 1934.

Introduced under the following varietal names, for Department specialists.

107278 to 107280. *BRASSICA OLERACEA CAPITATA* L. Brassicaceae. Cabbage.

107278. No. 390. *Moens hvitkal.*

107279. No. 400. *Amager Faales Blatopp.*

107280. No. 426. *Tronder.*

107281. *BRASSICA RAPA* L. Brassicaceae. Turnip.

No. 516. *Trondhjemske.*

107282. *DAUCUS CAROTA* L. Apiaceae. Carrot.

No. 298. *Londoner torv.*

107283. *PHASEOLUS VULGARIS* L. Fabaceae. Common bean.

No. 151. *Erstling, Erikarud.*

107284. *SPINACIA OLERACEA* L. Chenopodiaceae. Common spinach.

No. 850. *Kongen av Danmark.*

## 107285 and 107286.

From the Isla de Pinos, Cuba. Bulbs presented by Charles F. Fetter, through G. L. Hoyt, Nueva Gerona. Received December 5, 1934.

107285. *ZEPHYRANTHES* sp. Amaryllidaceae.

A variety with pink flowers.

107286. *ZEPHYRANTHES* sp. Amaryllidaceae.

A variety with white flowers.

107287. *PHLEUM PRATENSE* L. Poaceae. Timothy.

From England. Seeds purchased from A. G. Leighton, Whitechurch, Shropshire, through R. C. Stapledon, Welsh Plant Breeding Station, Aberystwyth, Wales. Received December 1, 1934.

Strain *Timothy S. 48*; introduced for Department specialists.

107288. *A C A C I A BONARIENSIS* Gillies. Mimosaceae.

From Argentina. Seeds presented by the Jardín Botánico, Buenos Aires, through the Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba. Received December 3, 1934.

An acacia with angular branches covered with scattered short recurved spines. The long bipinnate leaves and branches are gla-

## 107288—Continued.

brous; the youngest leaflets and the peduncles are silky hairy, as are also the short panicles of white flower spikes.

For previous introduction see 104103.

107289. *PHOENIX RECLINATA* Jacq. Phoenicaceae. Senegal date palm.

From Kenya Colony, Africa. Seeds collected by H. C. Sampson, economic botanist, Royal Botanic Gardens, Kew, England. Received July 26, 1934. Numbered in November 1934.

A date palm 20 to 30 feet high, but sometimes stemless, native to tropical and subtropical parts of Africa. The reclinate pinnate leaves are 6 to 9 feet long and have rigid green leaflets. The yellowish fruits with sweet edible pulp are half an inch long.

For previous introduction see 106104.

## 107290 to 107293.

From Argentina. Seeds presented by the Jardín Botánico, Buenos Aires, through the Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba. Received December 3, 1934.

107290. *ALNUS JORULLENSIS* H. B. K. Betulaceae.

A shrub or small tree 10 to 20 feet high, with smooth reddish-brown branches and oblong or obovate leaves 3 to 5 inches long. Native to southern Mexico.

107291. *CEDRELA FISSILIS* Vell. Meliaceae.

A tall ornamental tree, native to Brazil and Paraguay, with pinnate leaves 10 to 15 inches long and large panicles of small whitish flowers. Because of its handsome foliage it is suitable for growing as an avenue tree in the warmer parts of the United States.

For previous introduction see 65272.

107292. *COMBRETUM FRUTICOSUM* (Loef.) Stuntz. Combretaceae.

Received as *C. micropetalum*, which is now referred to the above species. An ornamental climbing shrub, with opposite elliptic leaves and spikes of orange and green flowers. It is native to the temperate regions from Argentina to Brazil.

For previous introduction see 104111.

107293. *ENTEROLOBIUM TIMBOUVA* Mart. Mimosaceae. Timbo.

A large tree with bipinnate leaves made up of two to five pinnae, each bearing 10 to 20 pairs of falcate-oblong leaflets and large heads of greenish flowers followed by coriaceous kidney-shaped pods. It is native to Brazil.

For previous introduction see 88230.

107294 and 107295. *SOLANUM MELONGENA* L. Solanaceae. Eggplant.

From California. Seed presented by Claude D. Tribble, Elk Grove. Received December 5, 1934.

107294. Seeds from a native Syrian eggplant which grows 48 inches high and is well branched. The fruits are from 3½ to 8 inches long and 2 inches in diameter. The flavor is better than any of our domestic varieties.

107295. Seeds from California-grown plants from P. I. 107294.

**107296. PISTACIA LENTISCUS L. Anacardiaceae. Lentisk.**

From Palestine. Seeds presented by the Department of Agriculture and Forests, Jerusalem. Received November 30, 1934.

A wild shrub common in the Mediterranean regions where it grows on poor soil and withstands severe drought. It produces a gum used by the Arabs as a perfume; an edible oil known as shinia, used as a substitute for olive oil, is obtained from the berries.

For previous introduction see 99350.

**107297 and 107298.**

From Turkey. Plants collected by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received December 3, 1934.

Introduced for Department specialists.

**107297. CAREX sp. Cyperaceae.**

From the market at Istanbul. An excellent shade-enduring plant used in Turkey for lawns under shade trees and for flower-bed borders.

**107298. MEDICAGO SATIVA L. Fabaceae. Alfalfa.**

Roots collected on dry mountain slopes north of Nallihan.

**107299 to 107302. TRITICUM AESTIVUM L. Poaceae. Common wheat.**

From Ireland. Seeds presented by M. Gaffrey, Albert Agricultural College, Glasnevin, Dublin. Received November 30, 1934.

A collection of wheat hybrids introduced for the use of Department specialists.

**107299.** *April Red* × *Ironmaster* 7/1. A spring type.

**107300.** *Ironmaster* × *Yeoman* No. 8. A winter type with stiff straw.

**107301.** *Ironmaster* × *Yeoman* No. 14. A winter type with very short stiff straw.

**107302.** Unselected; old land sort, spring wheat from Galway.

**107303 and 107304. AVENA SATIVA L. Poaceae. Oats.**

From Scotland. Seeds presented by the Scottish Society for Research in Plant Breeding, Corstorphine, Midlothian. Received November 30, 1934.

Introduced for the use of Department specialists.

**107303.** *Bell*.

**107304.** *Early Miller*.

**107305. MEDICAGO SATIVA FAUREI Maire. Fabaceae. Alfalfa.**

From Algeria. Seeds presented by Dr. R. Maire, University of Algiers, Algiers. Received December 11, 1934.

A variety with the habit of *Medicago falcata*. The yellow flowers are in short dense racemes. Native to the mountains of western Algeria.

**107306 to 107308. SOLANUM TUBEROSUM L. Solanaceae. Potato.**

From Germany. Tubers presented by Dr. A. Schlumberger, Berlin-Dahlem, Bio/ogi-

**107306 to 107308—Continued.**

sche Reichsanstalt, Institut für Kartoffelbau. Received December 17, 1934.

A collection of potato varieties, apparently scab-resistant, introduced for the use of Department specialists.

**107306.** *Ackersegen von Bohm*.

**107307.** *Gubel von Richter*.

**107308.** *Frühe Hornchen*.

**107309 to 107325.**

From the Union of Soviet Socialist Republics. Plants presented by the Mitchurin Research Institute of Fruit Production, Mitchurinsk, through the Institute of Plant Industry, Leningrad. Received December 13, 1934.

A collection of fruit trees introduced under the following varietal names, for the use of Department specialists.

**107309 to 107324. MALUS SYLVESTRIS Mill. Malaceae. Apple.**

**107309.** *Antonofka common*.

**107310.** *Antonofka She Haia* (yellow).

**107311.** *Autumn Shafran*.

**107312.** *Bellflower*.

**107313.** *Krem Kitaika* (Chinese cream).

**107314.** *Flava*.

**107315.** *Korichnoie*.

**107316.** *Oleg* (Ohleg).

**107317.** *Paradiska Mitchurin*.

**107318.** *Pippin Shafran*.

**107319.** *Renet Bergamotnii*.

**107320.** *Shafran-Kitaika* (Shafran-Chinese).

**107321.** *Winter Arcad Gold*.

**107322.** Unknown.

**107323.** Unknown.

**107324.** Unknown.

**107325. PYRUS COMMUNIS L. Malaceae. Common pear.**

*Mitchurin Winter Pear*.

**107326 to 107423.**

From the Union of Soviet Socialist Republics. Seeds collected in Turkistan by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received October 31, 1934.

Introduced for the use of Department specialists.

**107326 to 107330. AGROPYRON TRICHOPHORUM (Link) Richt. Poaceae. Grass.**

**107326.** No. 330. July 15, 1934. From Little Chimgan Mountains, east of Tashkent, Uzbekistan, on dry slopes.

**107327.** No. 369. July 15, 1934. Chot Kol River, east of Tashkent.

**107328.** No. 373. July 15, 1934. Chot Kol River Canyon, east of Tashkent.

**107329.** No. 389. July 15, 1934. Chot Kol River Canyon, 50 km east of Tashkent.

**107330.** No. 376. July 15, 1934. Chimgan, east of Tashkent in dry soil.

## 107326 to 107423—Continued.

- 107331. AGROSTIS** sp. Poaceae. **Grass.**  
No. 301. July 8, 1934. Varsov River Canyon, north of Stalinabad, Tajikistan.
- 107332. AGROSTIS** sp. Poaceae. **Grass.**  
No. 350. July 11, 1934. Roadside, near Tashkent, Uzbekistan.
- 107333. ALLIUM** sp. Liliaceae.  
No. 326. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan.
- 107334. ALYSSUM** sp. Brassicaceae.  
No. 351. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan. A small flowering plant found in rocky soils.
- 107335 to 107337. AMYGDALUS** spp. Amygdalaceae.
- 107335. AMYGDALUS PERSICA** NECTARINA Ait. **Nectarine.**  
No. 347. July 16, 1934. Tashkent, Uzbekistan. A nectarine of delicious quality.
- 107336. AMYGDALUS** sp.  
No. 324. July 15, 1934. Rocky slopes of Little Chimgan, east of Tashkent, Uzbekistan.
- 107337. AMYGDALUS** sp.  
No. 335. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan. A small attractive shrub.
- 107338. ANDROPOGON** sp. Poaceae. **Grass.**  
No. 398. July 16, 1934. Chot Kol River, east of Tashkent.
- 107339 to 107346. ASTRAGALUS** spp. Fabaceae.
- 107339. ASTRAGALUS** sp.  
No. 313. July 15, 1934. Rocky slopes of Little Chimgan, east of Tashkent, Uzbekistan.
- 107340. ASTRAGALUS** sp.  
No. 319. July 15, 1934. Little Chimgan, in the mountains east of Tashkent, Uzbekistan.
- 107341. ASTRAGALUS** sp.  
No. 329. July 15, 1934. Rocky slopes of Little Chimgan, east of Tashkent, Uzbekistan.
- 107342. ASTRAGALUS** sp.  
No. 339. July 15, 1934. Little Chimgan, in rocky soil, east of Tashkent, Uzbekistan.
- 107343. ASTRAGALUS** sp.  
No. 342. July 15, 1934. Little Chimgan, east of Tashkent.
- 107344. ASTRAGALUS** sp.  
No. 365. July 15, 1934. Little Chimgan, east of Tashkent.
- 107345. ASTRAGALUS** sp.  
No. 386. July 15, 1934. Little Chimgan, east of Tashkent.
- 107346. ASTRAGALUS** sp.  
No. 394. July 15, 1934. Rocky slopes of Little Chimgan, east of Tashkent.
- 107347. BROMUS** sp. Poaceae. **Grass.**  
No. 367. July 15, 1934. Mountain slope, Little Chimgan, east of Tashkent.

## 107326 to 107423—Continued.

- 107348. BROMUS** sp. Poaceae. **Grass.**  
No. 327. July 15, 1934. From dry slopes of Little Chimgan, east of Tashkent, Uzbekistan.
- 107349. CICER** sp. Fabaceae.  
No. 316. July 15, 1934.
- 107350. DELPHINIUM** sp. Ranunculaceae.  
No. 294. July 9, 1934. Stalinabad, Tajikistan. An annual flowering plant.
- 107351. DELPHINIUM** sp. Ranunculaceae.  
No. 302. July 3, 1934. Southeast of Stalinabad, adjacent to Sultanabad, in rocky pasture.
- 107352. ELICHRYSUM** sp. Asteraceae.  
No. 392-a. Chimgan, east of Tashkent, July 15, 1934. A beautiful yellow strawflower.
- 107353. ELYMUS CAPUT-MEDUSAE** L. Poaceae. **Grass.**  
No. 343. July 16, 1934. Near the Chot Kol River, east of Tashkent. An erect annual grass.  
For previous introduction see 53047.
- 107354. EREMURUS SPECTABILIS** Bieb. Liliaceae.  
No. 384. July 15, 1934. Chimgan, east of Tashkent. A handsome perennial 3 to 4 feet high, with light-green triangular leaves and yellow flowers in racemes often 6 inches long. Native to the Caucasus region.
- 107355. ERODIUM** sp. Geraniaceae.  
No. 307. July 7, 1934. Varsov River Canyon, north of Stalinabad, Tajikistan.
- 107356. FERULA** sp. Apiaceae.  
No. 328. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan.
- 107357 to 107359. FESTUCA** spp. Poaceae. **Grass.**
- 107357. FESTUCA** sp.  
No. 321. July 11, 1934. Plant Breeding Station near Tashkent. A wild grass found along the irrigation ditches and roadsides.
- 107358. FESTUCA** sp.  
No. 371. July 15, 1934. Chot Kol River, east of Tashkent.
- 107359. FESTUCA** sp.  
No. 382. July 17, 1934. Chimgan, east of Tashkent. A grass 4 feet tall, found in moist soils.
- 107360. FRITILLARIA** sp. Liliaceae.  
No. 380. July 15, 1934. Chimgan, east of Tashkent.
- 107361. HORDEUM BULBOSUM** L. Poaceae. **Grass.**  
No. 336. July 15, 1934. Little Chimgan, east of Tashkent, on mountain slopes.
- 107362. HYPERICUM** sp. Hypericaceae.  
No. 300. July 3, 1934. Stalinabad, adjacent to Sultanabad Valley, Tajikistan. A flowering plant found in permanent mountain pastures.
- 107363 to 107365. IXIOLIRION** spp. Amaryllidaceae.
- 107363. IXIOLIRION** sp.  
No. 360. July 15, 1934. Chimgan, east of Tashkent, Uzbekistan.

## 107326 to 107423—Continued.

- 107364.** IXIOLIRION sp.  
No. 363. July 15, 1934. Chimgan, east of Tashkent, Uzbekistan.
- 107365.** IXIOLIRION sp.  
No. 299. July 8, 1934. From hillsides in the Varsov River Canyon, Tajikistan.
- 107366.** LATHYRUS sp. Fabaceae.  
No. 306. July 1, 1934. Foothills north of Stalinabad, Tajikistan.
- 107367 to 107371.** MEDICAGO spp. Fabaceae.
- 107367.** MEDICAGO LUPULINA L.  
Black medick.  
No. 356. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan.
- 107368 to 107370.** MEDICAGO SATIVA L.  
Alfalfa.  
**107368.** No. 375. July 11, 1934. Middle Asia Plant Breeding Station. Wild alfalfa.
- 107369.** No. 379. July 11, 1934. Collected in the mountains of Tajikistan by Mr. Kobeler, of the Middle Asia Plant Breeding Station. Wild alfalfa.
- 107370.** No. 391. July 15, 1934. Collected in the mountains of Tajikistan by Mr. Kobeler, of the Middle Asia Plant Breeding Station. Wild alfalfa.
- 107371.** MEDICAGO sp.  
No. 310. July 3, 1934. From a mountain pasture adjacent to Sultana-bad Valley, southeast of Stalinabad, Tajikistan.
- 107372 to 107374.** MELILOTUS spp. Fabaceae.
- 107372.** MELILOTUS sp.  
No. 338. July 11, 1934. Growing along an irrigation ditch at the Plant Breeding Station, Tashkent, Uzbekistan.
- 107373.** MELILOTUS OFFICINALIS (L.) Lam.  
Sweetclover.  
No. 355. July 16, 1934. Plant Breeding Station, Tashkent, on irrigation ditch banks.
- 107374.** MELILOTUS sp.  
No. 332. July 11, 1934. Roadside, near Tashkent, Uzbekistan, in clay soil.
- 107375.** ONOBRYCHIS sp. Fabaceae.  
No. 311. July 15, 1934. From the rocky slopes of Little Chimgan, east of Tashkent, Uzbekistan.
- 107376.** ONOBRYCHIS sp. Fabaceae.  
No. 323. July 15, 1934. On mountain slope, Little Chimgan, east of Tashkent, Uzbekistan.
- 107377 to 107380.** ORYZOPSIS spp. Poaceae.  
Grass.
- 107377.** ORYZOPSIS sp.  
No. 337. July 15, 1934. Found in rocky soil along the Little Chimgan, east of Tashkent, Uzbekistan.
- 107378.** ORYZOPSIS sp.  
No. 298. July 7, 1934. Found on the rocky slopes of the mountains in the Varsov River Canyon, north of Stalinabad, Tajikistan.

## 107326 to 107423—Continued.

- 107379.** ORYZOPSIS sp.  
No. 370. July 15, 1934. Chot Kol River, east of Tashkent.
- 107380.** ORYZOPSIS sp.  
No. 381. July 15, 1934. From gravelly slope on the Chimgan, east of Tashkent.
- 107381.** OXYTROPIS sp. Fabaceae.  
No. 333. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan.
- 107382.** PAPAVER sp. Papaveraceae.  
No. 297. July 8, 1934. Varsov Canyon, north of Stalinabad, Tajikistan. A yellow-flowered poppy.
- 107383.** PARACARTUM sp. Boraginaceae.  
No. 344. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan. A blue-flowered herb.
- 107384.** PEDICULARIS sp. Scrophulariaceae.  
No. 353. July 15, 1934. Little Chimgan, east of Tashkent. An annual flowering plant.
- 107385.** PHALARIS sp. Poaceae. Grass.  
No. 372. July 15, 1934. Chimgan, east of Tashkent.
- 107386 to 107394.** POA spp. Poaceae. Grass.
- 107386.** POA BULBOSA L.  
No. 331. July 15, 1934. Found in clay loam soil on the Little Chimgan, east of Tashkent, Uzbekistan.
- 107387.** POA sp.  
No. 352. July 14, 1934. East of Tashkent, near the Chot Kol River.
- 107388.** POA sp.  
No. 340. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan.
- 107389.** POA sp.  
No. 374. July 15, 1934. From moist mountain slopes, Chimgan, east of Tashkent, Uzbekistan.
- 107390.** POA sp.  
No. 388. July 15, 1934. Moist soils, Chimgan, east of Tashkent, Uzbekistan.
- 107391.** POA sp.  
No. 346. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan.
- 107392.** POA sp.  
No. 296. July 7, 1934. Varsov River Canyon, north of Stalinabad.
- 107393.** POA sp.  
No. 361. July 15, 1934. Chimgan, east of Tashkent, in moist soil.
- 107394.** POA sp.  
No. 390. July 15, 1934. Chimgan, east of Tashkent, in fairly moist soil.
- 107395.** POLYPOGON sp. Poaceae. Grass.  
No. 362. July 11, 1934. From the roadside near Tashkent.
- 107396 to 107399.** PRANGOS spp. Apiaceae.
- 107396.** PRANGOS BUCHARICA Fedtsch.  
No. 378. July 1, 1934. From a mountain slope near Stalinabad, Tajikistan.

## 107326 to 107423—Continued.

- kistan. A herbaceous perennial with branches somewhat whorled, narrow-oblong, deeply lacinate leaves, and dense umbels of small globular fruits. Native to Bokhara.
- 107397. PRANGOS TSCHIMGANICA** Fedtsch.  
No. 397. July 15, 1934. Chimgan, east of Tashkent. A bushy herbaceous perennial, with deeply lacinate oblong leaves and dense umbels of small yellowish flowers. The plant is good forage in the fall when dry. Native to T'ian Shan, central Asia.
- 107398. PRANGOS PABULARIA** Lindl.  
No. 398. July 15, 1934. Chimgan, east of Tashkent. A tall perennial, 4 to 5 feet high, with much-divided leaves a foot or more long and large umbels of small yellow flowers. Native to the Himalayas between 6,000 and 11,000 feet altitude. The plant is good fodder in the fall, when dry.
- 107399. PRANGOS** sp.  
No. 385. July 15, 1934. Mountain slope, Little Chimgan, east of Tashkent, Uzbekistan.
- 107400 to 107402. PRUNUS** spp. Amygdalaceae.
- 107400 and 107401. PRUNUS ARMENIACA** L. Apricot.  
**107400.** No. 314. July 13, 1934. Tashkent, Uzbekistan. Cultivated apricots.  
**107401.** No. 383. A cultivated apricot of excellent quality.
- 107402. PRUNUS** sp.  
No. 322. July 15, 1934. From the slopes of Little Chimgan, east of Tashkent, Uzbekistan. A semiprostrate shrub 10 to 12 inches high.
- 107403. PRUNUS** sp.  
No. 325. July 15, 1934. From the Little Chimgan, east of Tashkent, Uzbekistan.
- 107404. RHEUM** sp. Polygonaceae.  
No. 357. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan. Received under the name "chimganica," for which a place of publication has not been found.
- 107405. RHEUM** sp. Polygonaceae.  
No. 395. July 15, 1934. Chimgan, east of Tashkent, Uzbekistan.
- 107406. ROSA** sp. Rosaceae. Rose.  
No. 334. July 15, 1934. Little Chimgan, east of Tashkent, Uzbekistan.
- 107407 to 107409. RUMEX** spp. Polygonaceae.
- 107407. RUMEX** sp.  
No. 364. July 15, 1934. Chimgan, east of Tashkent. A flowering shrub.
- 107408. RUMEX** sp.  
No. 303. July 1, 1934. Varsov Canyon, north of Stalinabad, Tajikistan. A flowering shrub.
- 107409. RUMEX** sp.  
No. 304. July 7, 1934. Varsov Canyon, north of Stalinabad, Tajikistan. A flowering shrub.

## 107326 to 107423—Continued.

- 107410. SILENE** sp. Silenaceae.  
No. 345. July 15, 1934. Found growing among rocks on Little Chimgan, east of Tashkent, Uzbekistan.
- 107411. SILENE** sp.  
No. 295. July 7, 1934. Varsov Canyon, north of Stalinabad, Tajikistan. An annual flowering plant.
- 107412. STIPA PENNATA** L. Poaceae. Feathergrass.  
No. 366. June 1934. Source unknown.
- 107413 to 107416. TRIFOLIUM** spp. Fabaceae.
- 107413 and 107414. TRIFOLIUM PRATENSE** L. Red clover.  
**107413.** No. 341. July 11, 1934. On the bank of an irrigation ditch, Cotton Breeding Station, Tashkent, Uzbekistan.  
**107414.** No. 359. July 15, 1934. Chimgan, east of Tashkent, Uzbekistan. Near a stream.
- 107415 and 107418. TRIFOLIUM REPENS** L. White clover.  
**107415.** No. 305. July 8, 1934. Near the Varsov River, Tajikistan.  
**107416.** No. 354. July 15, 1934. Chimgan. Mountains, near Tashkent, near a stream.
- 107417 to 107419. TULIPA** spp. Liliaceae. Tulip.
- 147417. TULIPA** sp.  
No. 368. July 15, 1934. On a rocky slope of Little Chimgan, east of Tashkent.
- 107418. TULIPA** sp.  
No. 318. July 15, 1934. Chimgan, east of Tashkent, Uzbekistan.
- 107419. TULIPA** sp.  
No. 348. July 15, 1934. Rocky soil on Little Chimgan, east of Tashkent, Uzbekistan.
- 107420. VICIA** sp. Fabaceae. Vetch.  
No. 309. July 8, 1934. From Varsov Canyon, north of Stalinabad, Tajikistan.
- 107421. VICIA** sp. Fabaceae. Vetch.  
No. 312. July 15, 1934. Rocky slopes of Little Chimgan, east of Tashkent, Uzbekistan.
- 107422.** (Undetermined.)  
No. 358. July 15, 1934. Chimgan, east of Tashkent, Uzbekistan. A beautiful flowering plant found in gravelly soil.
- 107423. GENTIANA** sp. Gentianaceae. Gentian.  
No. 214. July 3, 1934. From a mountain pasture, Tajikistan, adjacent to the Sultanabad Valley.
- 107424 and 107425.**  
From Ecuador. Seeds collected by Mrs. Ynes Mexia, in Santa Lucia, Canton Vinces, Province of Los Rios, and presented through the American Legation, Quito. Received November 22, 1934.
- 107424. PHYTELEPHAS** sp. Phoenicaceae. Ivory nut palm.  
No. 6586. Low pinnate-leaved palms.

## 107424 and 107425—Continued.

107425. SYAGRUS sp. Phoenicaceae. Palm.

No. 6580. *Palma mulatto*. A pinnate-leaved palm, related to the coconut.

107426. MALUS SYLVESTRIS Mill. Malaceae. **Apple.**

From Puerto Rico. Cuttings presented by J. A. B. Nolla, assistant commissioner, Department of Agriculture and Commerce, San Juan. Received December 26, 1934. Cuttings of an apple tree which originated in the highlands near Orocovis as a seedling from an imported American variety. The tree has borne two small crops.

## 107427 to 107431.

From the Union of Soviet Socialist Republics. Bulbs presented by the Botanical Institute, Ashkhabad, Turkmenistan, through H. L. Westover, Bureau of Plant Industry. Received December 22, 1934.

107427 to 107429. TULIPA spp. Liliaceae. **Tulip.**

107427. TULIPA KUSCHKENSIS B. Fedtsch.

For previous introduction and description. see 106777.

107428. TULIPA WILSONIANA Hoog.

For previous introduction and description see 106782.

107429. TULIPA sp.

107430. (Undetermined.)

107431. (Undetermined.)

107432. EORA SAPIDA (Soland.) Cook. Phoenicaceae. **Nikau palm.**

From California. Seeds presented by David Barry & Co., Los Angeles. Received December 19, 1934.

Seeds from a tree growing in Santa Barbara, Calif. A New Zealand palm 30 feet high, with a green ringed stem, pinnate leaves 14 feet long, and large clusters of pale-pink flowers.

For previous introduction see 101151.

## 107433 and 107434.

From the Union of South Africa. Seeds presented by the McGregor Museum, Kimberley. Received December 15, 1934.

107433. SALSOLA GLABRESCENS Burt-Davy. Chenopodiaceae.

A dwarf shrub up to 3 feet high, with very small, ovate, or triangular, spirally arranged leaves and inconspicuous flowers.

For previous introduction see 105941.

107434. TETRAGONIA ARBUSCULA Fenzl. Aizoaceae.

A much-branched, semishrubby perennial with fleshy leaves less than an inch long, varying from linear to ovate-oblong. The small inconspicuous flowers are borne in leafy racemes and are followed by three- to four-winged fruits. It is native to southern Africa.

For previous introduction and description see 107142.

107435. EUCHLAENA MEXICANA Schrad. Poaceae. **Teosinte.**

From Mexico. Seeds presented by the Government Experimental Station at Cha-

## 107435—Continued.

pingo, State of Mexico, through Walter Douglas, Mexico, D. F. Received December 19, 1934.

For previous introduction and description see 106947.

107436 to 107448. ILEX spp. Aquifoliaceae. **Holly.**

From New York. Seeds presented by J. B. Murray, Brooklyn. Received December 20, 1934.

107436 to 107445. ILEX AQUIFOLIUM L. **English holly.**

107436. Variety *Argentea marginata*.

107437. Variety *Argentea medico-picta*.

107438. Variety *Aurifodina*.

107439. Variety *Camelliaefolia*.

107440. Variety *Ciliata major*.

107441. Variety *Cookii*.

107442. Variety *Flavescens*.

107443. Variety *Fructu-luteo*.

107444. Variety *Integrifolia*.

107445. Variety *Rubicaulis aurea*.

107446. ILEX BEANII Rehder.

A hybrid (*Ilex aquifolium* × *dipyrena*) which is an evergreen tree with dull-green, elliptic, spine-tipped leaves 2 to 8 inches long and oval red berries.

107447. ILEX sp.

Received under the name "hendersonii," for which a place of publication has not been found.

107448. ILEX PLATYPHYLLA Web. and Berth.

An evergreen tree of pyramidal habit, 20 feet high, with leathery, broadly ovate leaves about 2 inches long and short cymes of white flowers. Native to the Canary Islands.

## 107449 to 107477.

From Surinam. Bulbs and seeds collected by W. A. Archer, Bureau of Plant Industry. Received December 1, 1934.

Unless otherwise noted, the introductions of this shipment were received as seeds. Introduced for Department specialists.

107449. ALLIUM CEPA L. Liliaceae. **Onion.**

No. 2696. November 6, 1934. Bulbs of a red onion from the market at Paramaribo. Said to have been imported from Madeira, Spain.

107450. ASCLEPIAS CURASSAVICA L. Asclepiadaceae. **Bloodflower.**

No. 2670. From Scotelweg, November 2, 1934. An ornamental herb 3 feet high with red and yellow flowers.

For previous introduction see 99772.

107451. DIOCLEA MACRANTHA Huber. Fabaceae.

No. 2659. November 2, 1934. From Scotelweg. *Kumatra*. A somewhat woody tropical climber with trifoliolate leaves, the leaflets broadly ovate and about 2 inches long. The small lavender flowers are in axillary racemes. Native to northern South America.

For previous introduction see 106540.

## 107449 to 107477—Continued.

107452. *DIOCLEA MACRANTHA* Huber. Fabaceae.

No. 2675. November 2, 1934. From Scotelweg. A legume with glabrous pods.

107453 and 107454. *CARICA PAPAYA* L. Papayaceae. **Papaya.**

From Paramaribo, October 29, 1934.

107453. No. 2676, 107454. No. 2677.

107455. *CERBERA THEVETIA* L. Apocynaceae. **Yellow oleander.**

No. 2668. November 2, 1934. From near Scotelweg. *Jorro Jorro.*

For previous introduction and description see 106951.

107456. *LISIANTHUS ALATUS* Aubl. Gentianaceae.

No. 2653. Near Scotelweg, November 2, 1934. An annual, 1 to 3 feet high, with elliptical or elliptical-oblong, sessile leaves and terminal cymes of greenish-yellow flowers. Native to tropical America.

107457. *CLEOME PSORALEAEFOLIA* DC. Caprifoliaceae.

No. 2701. Near Paramaribo, November 9, 1934. An erect annual with digitate leaves of three leaflets and terminal corymbs of white flowers. Found growing as a weed in a cultivated field. Native to Brazil.

107458 and 107459. *CLIBADIUM SURINAMENSE* L. Asteraceae.

For previous introduction and description see 107157.

107458. No. 2647. November 2, 1934. Near Scotelweg.

107459. No. 2684. November 6, 1934. Collected 8 miles northwest of Paramaribo.

107460 to 107462. *TEPHROSIA* spp. Fabaceae.

107460. *TEPHROSIA TOXICARIA* Pers.

No. 2646. Georgetown, British Guiana, October 17, 1934. *Cure-for-all.* A shrub 6 feet high, with pale lavender-tinted flowers. The leaves of this plant are boiled and used as a cough and cold remedy.

107461. *TEPHROSIA CANDIDA* DC.

No. 2665. From near Scotelweg, November 2, 1934. A sparsely branched shrub 4 to 10 feet high, with white flowers.

For previous introduction see 98925.

107462. *TEPHROSIA TOXICARIA* Pers.

No. 2646-a. Near Scotelweg, November 2, 1934. A leguminous shrub 6 to 8 feet high, with leaves made up of nine or more leaflets and racemes of white and lavender flowers. It is used as a cover crop.

For previous introduction see 106352.

107463 to 107466. *CROTALARIA* spp. Fabaceae.

107463. *CROTALARIA RETUSA* L.

No. 2655. Near Scotelweg, November 2, 1934. *Gorro gorro.*

For previous introduction and description see 106920.

## 107449 to 107477—Continued.

107464. *CROTALABIA ANAGYROIDES* H. B. K.

No. 2666. Near Scotelweg, November 2, 1934. An open shrub over 6 feet high, with mucronate, pubescent, trifoliate leaves and terminal racemes of brilliant yellow flowers.

For previous introduction see 98834.

107465 and 107466. *CROTALABIA STRIATA* DC.

November 6, 1934, 8 miles northwest of Paramaribo, on the highway. Leguminous plants 3 to 8 feet high, of possible use as a cover crop.

For previous introduction see 106955.

107465. No. 2686. 107466. No. 2691.

107467. *EUPHORBIA GENICULATA* Ort. Euphorbiaceae.

No. 2664. Near Scotelweg, November 2, 1934. An annual with a stout stem and thin ovate leaves, native to the West Indies.

107468 to 107470. *GOSSYPIUM* spp. Malvaceae. **Cotton.**

Near Scotelweg, November 2, 1934. Cotton cultivated by the Carib Indians.

107468. *GOSSYPIUM* sp.

No. 2671-A. A variety with green leaves.

107469. *GOSSYPIUM* sp.

No. 2671-B. A variety with red leaves.

107470. *GOSSYPIUM BARBADENSE* L.

No. 2667. A cotton which becomes 14 feet high, with yellow flowers which change to rose.

107471. *INDIGOFERA SUFFRUTICOSA* Mill. Fabaceae.

No. 2680. Eight miles northwest of Paramaribo on the highway, November 6, 1934. Plants from 2 to 5 feet high, with pale salmon-colored flowers.

For previous introduction see 99780.

107472 and 107473. *JATROPHA CURCAS* L. Euphorbiaceae.

107472. No. 2672. *Purgeernoot.* Near Scotelweg, November 2, 1934. A cultivated shrub.

107473. *Schijfnoot.* November 6, 1934. Found along the highway, northwest of Paramaribo. A shrub 10 to 15 feet high, with pale greenish flowers and frothy sap.

107474. *MUCUNA URENS* (L.) Medic. Fabaceae.

No. 2695. *Kowai.* November 6, 1934. Found along the highway northwest of Paramaribo. A wide-climbing woody vine with trifoliate leaves of ovate-oblong, papery leaflets 3 to 5 inches long and dense heads of sulphur-yellow flowers 2 inches across followed by hispid pods, hanging down on long peduncles.

For previous introduction see 88160.

107475. *NICOTIANA TABACUM* L. Solanaceae. **Tobacco.**

No. 2689. Near Scotelweg, November 2, 1934. A tobacco cultivated by the Javanese in Surinam. Source of seed unknown.

## 107449 to 107477—Continued.

107476. *PHYSALIS ORINOCENSIS* H. B. K.  
Solanaceae.

No. 2663. Near Scotelweg, November 2, 1934. A perennial herb with ovate acute leaves about 2 inches long, native to northern South America.

107477. *ZEA MAYS* L. Poaceae. Corn.

No. 2698. Paramaribo, November 6, 1934. Native (?) corn, planted by all people, including Indians.

## 107478 to 107596.

From the Union of Soviet Socialist Republics. Seeds collected in Turkistan by H. L. Westover and C. R. Enlow, Bureau of Plant Industry. Received November 1, 1934.

Introduced for Department specialists.

Collected in the Botanic Garden, Tashkent.

107478. *AEGILOPS TRIUNCIALIS* L. Poaceae.  
Grass.

No. 400. A thickly branched annual grass with ascending stems and flat rough leaves. It is native to dry places in the Mediterranean region.

For previous introduction see 78752.

107479. *AEGILOPS CRASSA* Boiss. Poaceae.  
Grass.

No. 401. A decumbent annual grass with flat leaves. Native to Asia Minor.

107480. *AGRIOPHYLLUM MINUS* Fisch. and Mey. Chenopodiaceae.

No. 403. An annual, native to sandy deserts in Turkistan, with sessile linear-subulate leaves and inconspicuous axillary flowers.

For previous introduction see 98200.

107481. *AGROPYRON INTERMEDIUM* (Host) Beauv. Poaceae.  
Grass.

No. 404. A very good grass for dry soils, especially on slopes.

For previous introduction see 56502.

107482. *AGROPYRON TRICHOPHORUM* (Link) Richt. Poaceae.  
Grass.

No. 405.

For previous introduction and description see 107330.

107483. *AGROSTIS INTERRUPTA* L. Poaceae.  
Grass.

No. 406. An annual bushy grass up to 2 feet high, native to sandy places in the Mediterranean countries.

For previous introduction see 74158.

107484 to 107487. *ALLIUM* spp. Liliaceae.

107484. *ALLIUM JESDIANUM* Boiss. and Buhse. Onion.

No. 407. A pink-flowered onion about 2 feet high, with flat linear leaves and a many-flowered umbel. Native to the mountains of Caucasus.

For previous introduction see 73599.

107485. *ALLIUM SEWERZOWI* Regel. Onion.

No. 408. An onion with a scape about 6 inches high and linear-lanceolate leaves slightly exceeding the scape. The

## 107478 to 107596—Continued.

rosy-llac flowers are in a hemispherical umbel. Native to Turkistan.

107486. *ALLIUM STENOPHYLLUM* Schrenk. Onion.

No. 410. An onion with narrow-linear leaves and a fastigate-globose head of pinkish flowers. Native to central Asia.

107487. *ALLIUM SUWOROWI* Regel.

No. 409. A hardy bulbous plant with very narrow flat leaves up to 16 inches long and hemispherical umbels of fragrant violet-rose flowers. Native to the Kirghis Desert, central Asia.

For previous introduction see 73601.

107488. *ALYSSUM STRICTUM* Willd. Brassicaceae.

No. 411. July 1934. An annual alyssum with numerous ascending branches 18 inches high, oblong-linear leaves, and cylindrical racemes of yellow flowers. Native to Asia Minor.

For previous introduction see 90614.

107489. *ALYSSUM ZOVITSIANUM* Fisch. and Mey. Brassicaceae.

No. 412. An annual yellow-flowered alyssum from southeastern Europe, about a foot high, with oblong-linear leaves and pods sometimes an inch long.

For previous introduction see 90615.

107490. *ANDROPOGON ISCHAEMUM* L. Poaceae.

No. 413.

For previous introduction see 84274.

107491 to 107496. *ASTRAGALUS* spp. Fabaceae.

107491. *ASTRAGALUS CAMPYLORHYNCHUS* Fisch. and Mey.

No. 414. A low slender annual with linear, truncate leaflets. Native to northeastern Asia.

107492. *ASTRAGALUS CAMPYLOTRICHUS* Bunge.

No. 415. An erect annual with linear-oblong leaflets. Native to Turkistan.

107493. *ASTRAGALUS FILICAULIS* Fisch. and Mey.

No. 416.

For previous introduction and description see 106850.

107494. *ASTRAGALUS RETAMOCARPUS* Boiss. and Hohen.

No. 417.

For previous introduction and description see 106855.

107495. *ASTRAGALUS SCHMALHAUSENI* Bunge.

No. 418.

107496. *ASTRAGALUS SIEVERSIANUS* Pall.

No. 419. For previous introduction and description see 106857.

107497. *ATRIPLEX FLABELLUM* Bunge. Chenopodiaceae.

No. 420. An annual about a foot high, with small cordate-dentate or five- to seven-lobed leaves. Native to Turkistan.



## 107478 to 107596—Continued.

107498. *BASSIA* sp. Chenopodiaceae.  
No. 477.
107499. *BOISSIERA BROMOIDES* Hochst.  
Poaceae. Grass.  
No. 421. A dwarf annual grass 6 inches or less high, with erect or ascending culms. Native to Asia Minor.
- 107500 to 107506. *BROMUS* spp. Poaceae.  
Grass.
107500. *BROMUS DANTHONIAE* Trin.  
No. 422.  
For previous introduction and description see 107029.
107501. *BROMUS INERMIS* Leyss.  
Common bromegrass.  
No. 423.  
For previous introduction and description see 107030.
107502. *BROMUS JAPONICUS* Thunb.  
Bromegrass.  
No. 424. A biennial upright or ascending grass of wide distribution in Europe and Asia. It is commonly from 1 to 2 feet high.  
For previous introduction see 98285.
107503. *BROMUS MACROSTACHYS* Desf.  
For previous introduction and description see 106862.
107504. *BROMUS POPOVII* Drobov.  
No. 426. An annual grass with erect or ascending culms 1 to 2 feet high. Native to Bokhara.
107505. *BROMUS SCOPARIUS* L.  
No. 427. An annual grass with culms about a foot high and erect panicles 1 to 3 inches long. Native to Spain.
107506. *BROMUS SEVERTZOWI* Regel.  
No. 428. An annual grass with erect culms up to 16 inches high. Native to Turkistan.
- 107507 to 107515. *CALLIGONUM* spp. Polygonaceae.
107507. *CALLIGONUM ARBORESCENS* Litv.  
No. 430.  
For previous introduction see 94927.
107508. *CALLIGONUM CAPUT-MEDUSAE* Schrenk.  
No. 431.  
For previous introduction see 105807.
107509. *CALLIGONUM COMOSUM TURKESTANICUM* Eug. Kor.  
No. 432.
107510. *CALLIGONUM ELATUM* Litv.  
No. 433.
107511. *CALLIGONUM ERIPODUM* Bunge.  
No. 434.  
For previous introduction see 105809.
107512. *CALLIGONUM MEMBRANACEUM* Litv.  
No. 435.

## 107478 to 107596—Continued.

107513. *CALLIGONUM SETOSUM* Litv.  
No. 436.  
For previous introduction see 105810.
107514. *CALLIGONUM TRISTE* Litv.  
No. 437.
107515. *CALLIGONUM* sp.  
No. 429.
107516. *CAREX PACHYSTYLIS* J. Gay. Cyperaceae.  
No. 438.  
For previous introduction see 106867.
107517. *CAREX PHYSODES* Bieb. Cyperaceae.  
No. 439.  
For previous introduction and description see 106868.
107518. *CONVOLVULUS LINEATUS* L. Convolvulaceae.  
No. 442. A perennial vine with long-stalked oblong to linear leaves and pink flowers. Native to southern Europe and Asia Minor.
107519. *COUSINIA RADIANS* Bunge. Asteraceae.  
No. 443. An herb a foot or more high, with pinnatifid clasping leaves and small dense heads of straw-colored flowers. Native to central Asia.
107520. *CRAMBE KOTSCHYANA* Boiss. Brassicaceae.  
No. 444. For previous introduction and description see 106871.
107521. *DACTYLIS GLOMERATA* L. Poaceae.  
Orchard grass.  
No. 445.
107522. *DELPHINIUM LONGIPEDUNCULATUM* Regel and Schmalh. Ranunculaceae.  
No. 447. A perennial larkspur with rounded-cordate, palmately lobed leaves and long-stalked azure-blue flowers in lax racemes. Native to the mountains of Turkistan.
107523. *DELPHINIUM SEMIBARBATUM* Bien. Ranunculaceae.  
No. 446. A low perennial a foot high, with palmately incised leaves and very small yellow flowers in long lax racemes. Native of Iran (Persia).
107524. *DIANTHUS CRINITUS* J. E. Smith. Silenaceae. Pink.  
No. 448. A dwarf plant with very short linear leaves and a smooth stem bearing two to four erect purplish flowers. Native to Armenia.  
For previous introduction see 101927.
- 107525 to 107528. *EREMURUS* spp. Liliaceae. Desertcandle.
107525. *EREMURUS HILARIAE* M. Popov and Vved.  
No. 449. A perennial 1 to 3 feet high, with broadly linear leaves 8 to 16 inches long and a dense raceme of white flowers, yellow at the base of the perianth segments. Native to Turkistan.
107526. *EREMURUS INDERIENSIS* Regel.  
No. 450. A hardy herbaceous perennial with a rosette of narrow-linear

## 107478 to 107596—Continued.

leaves and a raceme of purplish flowers on a scape up to 18 inches high. Native to Turkistan.

107527. *EREMURUS OLGAE* Regel.

No. 451. A hardy herbaceous perennial with white flowers produced in a dense raceme. Native to Turkistan.

For previous introduction see 73189.

107528. *EREMURUS ROBUSTUS* Regel.  
Giant desertcandle.

No. 452. A tall hardy herbaceous perennial with pale-pink flowers on a stalk 5 to 8 feet high. Native to Turkistan.

For previous introduction see 91627.

107529. *ERIANTHUS PURPURASCENS* Anders.  
Poaceae. Grass.

No. 453. A tall stout grass several feet high, related to *Saccharum*, with leaves about an inch wide. Native to southern Asia.

107530 to 107539. *FERULA* spp. Apiaceae.107530. *FERULA ANGRENI* Eug. Korovin.

No. 454.

107531. *FERULA ASSA-FOETIDA* L.

No. 455. A large herbaceous perennial, 6 to 12 feet high, with yellow flowers. The plant, which has a bad odor, is one source of *asafoetida*.

For previous introduction see 73192.

107532. *FERULA CERATOPHYLLA* Regel and Schmalh.

No. 456. A low herbaceous perennial 2 to 3 feet high, with the lower leaves rigid and trisect, the upper leaves smaller and incised. The small yellowish flowers are in umbels about an inch across. Native to Turkistan.

107533. *FERULA DIVERSIVITTATA* Regel and Schmalh.

No. 457. A perennial herb, native to Turkistan, with the lobes of the biternate leaves entire.

107534. *FERULA FOETIDISSIMA* Regel and Schmalh.

No. 458. A stout perennial herb with biternate, crenate-serrate leaves. Native to Turkistan.

107535. *FERULA FOLIOSA* Lipsky.

No. 459.

107536. *FERULA KABATAVICA* Regel and Schmalh.

No. 460. A perennial herb 3 to 4 feet high, with broad biternate leaves and umbels of small flat, ovate fruits. Native to Turkistan.

107537. *FERULA OVINA* Boiss.

No. 461. A tall coarse perennial 5 to 8 feet high, with finely divided leaves a foot or more in length. Native to Iran (Persia).

107538. *FERULA PRANGIFOLIA* Eug. Kor.

No. 462.

107539. *FERULA UGAMICA* Eug. Kor.

No. 463.

## 107478 to 107596—Continued.

107540. *FESTUCA ELATIOR* ARUNDINACEA  
(Schreb.) Celak. Poaceae.

Fescue grass.

No. 464.

For previous introduction see 99119.

107541. *FESTUCA ELATIOR* L. Poaceae.  
Meadow fescue.

No. 465.

107542 to 107544. *FRITILLARIA* spp. Liliaceae.107542. *FRITILLARIA BUCHARICA* Regel.

No. 466. A fritillaria from the mountains of eastern Bokhara.

For previous introduction and description see 107059.

107543. *FRITILLARIA SEWERZOWI* Regel.

No. 467. A bulbous plant with numerous ovate to lanceolate leaves up to 4 inches long and a terminal raceme of 5 to 12 purplish-green flowers. Native to central Asia.

107544. *FRITILLARIA STENANTHERA* Regel.

No. 468. A low bulbous plant about 3 inches high, with opposite, ovate oblong leaves. The small, lilac, violet-spotted flowers are one-half inch long. Native to Turkistan.

107545. *GLADIOLUS SEGETUM* Ker. Iridaceae.

No. 469. A European gladiolus of free habit, fond of warm dry soil and a sunny situation, with rather small rose-purple flowers.

For previous introduction see 69854.

107546. *HEDYSARUM SEMENOWII* Regel and Herd. Fabaceae.

No. 470. An erect hardy herbaceous perennial with purplish flowers. Native to Turkistan.

For previous introduction see 73975.

107547. *HORDEUM BULBOSUM* L. Poaceae.  
Grass.

No. 471.

For previous introduction and description see 107361.

107548. *HYACINTHUS ATROVIOLEACEUS*  
(Regel) Macbride. Liliaceae. Hyacinth.

No. 472.

For previous introduction and description see 106755.

107549. *IMPERATA CYLINDRICA* (L.) Beauv.  
Poaceae. Blady grass.

No. 473. A perennial grass native to the plains and hills of central and western India. The blades of this grass become 4 to 5 feet long. It resembles very closely the *esparto* of Spain and north Africa, and, when dried before making it into pulp, it yields as high as 68 percent of first-class paper-making pulp. In Queensland, Australia, this grass grows abundantly and three crops a year may be harvested.

For previous introduction see 49637.

107550. *INCARVILLEA OLGAE* Regel. Bigoniaceae.

No. 474. An erect biennial 3 to 4 feet high, with opposite pinnate leaves, the

## 107478 to 107596—Continued.

leaflets linear, oblong, and acute. The bell-shaped purple flowers are about an inch long. Native to central Asia.

**107551. INULA GRANDIS** Schrenk. Asteraceae.

No. 475. A bushy perennial with oblong leathery dentate-serrate leaves 6 to 8 inches long and yellow-rayed flowers. Native to Manchuria.

**107552. IXIOLIRION TATARICUM** (Pall.) Herbert. Amaryllidaceae.

No. 476. A bulbous herbaceous perennial which is native from the Caucasus through central Asia.

For previous introduction see 30817.

**107553. LACHNOPHYLLUM GOSSYPINUM** Bunge. Asteraceae.

No. 478. An annual composite related to erigeron, with slender stems, oblong leaves about one-half inch long, and small blue flower heads. Native to central Asia.

**107554. MALCOMIA AFRICANA** (Willd.) Ait. Brassicaceae.

No. 479. An annual about 9 inches high, with lanceolate dentate leaves and small purple flowers. Native to tropical Africa.

**107555. MALCOMIA TURKESTANICA** Litv. Brassicaceae.

No. 480. An annual with rigid stems about a foot high, with narrow-lanceolate, acute leaves about an inch long and small violet-rose flowers in elongated racemes. Native to Turkistan.

**107556 to 107560. MEDICAGO** spp. Fabaceae. Medick.

**107556. MEDICAGO FALCATA** L.

No. 481.

**107557. MEDICAGO LUPULINA** L. Black medick.

No. 482.

**107558. MEDICAGO MINIMA** (L.) Grufberg.

No. 483.

For previous introduction and description see 106886.

**107559. MEDICAGO ORBICULARIS** (L.) All.

No. 484.

**107560. MEDICAGO SATIVA** L. Alfalfa.

No. 485.

**107561 to 107563. MELILOTUS** spp. Fabaceae. Sweetclover.

**107561. MELILOTUS ALBA** Desr. White sweetclover.

No. 486.

**107562. MELILOTUS INDICA** (L.) All.

No. 487.

**107563. MELILOTUS OFFICINALIS** (L.) Lam.

No. 488.

**107564 to 107568. ONOBRYCHIS** spp. Fabaceae.

**107564. ONOBRYCHIS GRANDIS** Lipsky.

No. 489.

For previous introduction and description see 107087.

## 107478 to 107596—Continued.

**107565. ONOBRYCHIS CHORASSANICA** Bunge.

No. 490.

For previous introduction and description see 106887.

**107566. ONOBRYCHIS MICRANTHA** Schrenk.

No. 506.

For previous introduction and description see 106888.

**107567. ONOBRYCHIS PULCHELLA** Schrenk.

No. 491.

For previous introduction and description see 107088.

**107568. ONOBRYCHIS VULGARIS** Hill. Sanfoin.

No. 492.

**107569. PHELEUM PANICULATUM** Huds. Poaceae. Timothy.

No. 494.

**107570. PHELEUM** sp. Poaceae.

No. 493.

**107571. POA BULBOSA** L. Poaceae. Grass. No. 495. Wild alfalfa.

For previous introduction and description see 107386.

**107572. POA** sp. Poaceae. Grass.

No. 496.

**107573. POLYGONUM BALDSCHUANICUM** Regel.

No. 498. A large perennial 10 to 15 feet high, with a woody stem, cordate-hastate leaves, and terminal and axillary panicles of small reddish flowers. Native to Bokhara.

For previous introduction see 13599.

**107574. PROSOPIS STEPHANIANA** (Bleb.) Kunth. Mimosaceae.

No. 499. A deep-rooted shrubby legume which grows abundantly on dry lands in the island of Cyprus. Sheep and cattle browse on it and the bees make good honey from its abundant flowers.

For previous introduction see 105816.

**107575. SALSOLA ARBORESCENS** RICHLERI Karel. Chenopodiaceae.

No. 500.

For previous introduction and description see 106900.

**107576. SALSOLA SUBAPHYLLA** Meyer. Chenopodiaceae.

No. 501. A leafless, much-branched shrub about a foot high, native to desert places on the shores of the Caspian Sea.

For previous introduction see 105818.

**107577. SCALIGERIA ALLOIDES** Boiss. Apiaceae.

No. 504. A low herbaceous perennial 1 to 2 feet high, with pinnately incised leaves and white or pinkish flowers in umbels nearly 2 inches across. Native to Iran (Persia).

## 107478 to 107596—Continued.

107578. SCALIGERIA HIRTULA Lipsky. Apiaceae.

No. 505. A herb 1 to 3 feet high, with bisect or trisect leaves, the segments lanceolate and white margined. Native to central Asia.

107579 to 107583. TRIFOLIUM spp. Fabaceae. Clover.

107579. TRIFOLIUM FRAGIFERUM L.

No. 507.

107580. TRIFOLIUM PRATENSE L.

Red clover.

No. 508.

107581. TRIFOLIUM REPENS L.

White clover.

No. 509.

107582. TRIFOLIUM RESUPINATUM L.

Strawberry clover.

No. 510.

107583. TRIFOLIUM SQUARROSUM L.

No. 511.

107584. TRIGONELLA NOBANA Boiss. Fabaceae.

No. 512. A bushy annual with erect stems about 6 inches high, oblong-spatulate leaflets, and small solitary axillary yellow flowers. Native to Asia Minor.

107585 to 107592. TULIPA spp. Liliaceae. Tulip.

107585. TULIPA FOSTERIANA Hoog.

No. 513.

For the introduction of bulbs and the description see 106772.

107586. TULIPA GREIGII Regel.

No. 514.

For the introduction of bulbs and the description see 106773.

107587. TULIPA KAUFMANNIANA Regel.

No. 515.

For the introduction of bulbs and the description see 106774.

107588. TULIPA KOLPAKOWSKIANA Regel.

No. 516.

For the introduction of bulbs and the description see 106775.

107589. TULIPA LANATA Regel.

No. 517.

For the introduction of bulbs and the description see 106778.

107590. TULIPA LINIFOLIA Regel.

No. 518.

For the introduction of bulbs and the description see 106779.

107591. TULIPA PRAESTANS Hoog.

No. 519.

For the introduction of bulbs and the description see 106781.

107592. TULIPA TURKESTANICA Regel.

No. 520. A tulip with two or rarely three linear-lanceolate leaves and with yellow flowers, violet within, on a scape 3 to 12 inches high. Native to Turkistan.

## 107478 to 107596—Continued.

107593. UNGERNIA TADSHIKORUM Vved. Amaryllidaceae.

No. 521. A bulbous plant from central Asia, with 8 to 12 linear bluish two-ranked leaves and pinkish or yellowish flowers borne on a stem about a foot high.

107594 to 107596. VICIA spp. Fabaceae.

107594. VICIA ERVILIA (L.) Willd. Vetch.

No. 522.

For previous introduction see 98861.

107595. VICIA HYRCANICA Fisch. and Mey.

No. 523.

For previous introduction and description see 107126.

107596. VICIA sp.

No. 523-A. Oval-flattened seeds which were mixed with No. 523 (107595).

107597 to 107599. ALLIUM SATIVUM L. Liliaceae. Garlic.

From Germany. Bulbs presented by Dr. O. Knapp, Eisleben. Received December 29, 1934.

Wild garlic, said to be from the following localities:

107597. Thuringen.

107598. Spreewald, south of Berlin.

107599. Spreewald, south of Berlin.

107600 and 107601. HELIANTHUS TUBEROSUS L. Asteraceae.

Jerusalem-artichoke.

From France. Seeds presented by the experimental department of Vilmorin-Andrieux & Cie., Verrieres le Buisson. Received December 18, 1934.

Seeds grown in Algeria; introduced for the use of Department specialists.

107600. No. 2. 107601. No. 1.

107602. ZOYSIA MATRELLA (L.) Merr. Poaceae. Manila grass.

From Manchuria. Seeds purchased from Manshu Nosan Shokai, Inc., Dai'en. Received December 20, 1934.

Introduced for Department specialists.

For previous introduction and description see 107272.

107603 to 107613. TRITICUM AESTIVUM L. Poaceae. Common wheat.

From Australia. Seeds presented by Dr. H. Wenholz, Wagga Experiment Farm, Department of Agriculture, Sydney, New South Wales. Received December 14, 1934.

Introduced for Department specialists.

107603. Apollo.

107604. Baroota Wonder.

107605. Bundar.

107606. Cadia.

107607. Esquisite.

107608. Firwhill.

## 107603 to 107613—Continued.

107609. *Ford*.107610. *Genoa*.107611. *Gluford*.107612. *Maharajah*.107613. *Nabawa*.

## 107614 to 107618.

From Algeria. Seeds and bulbs presented by Dr. René Maire, director of botanical service, University of Algiers, Algiers. Received December 27, 1934.

Introduced for Department specialists.

107614 to 107616. *ALLIUM* spp. Liliaceae.107614 and 107615. *ALLIUM CEPA* L.  
Onion.

107614. Seeds of a red onion, cultivated for centuries by the natives.

107615. Seeds of a white onion now grown in Algeria.

107616. *ALLIUM SATIVUM* L. Garlic.

Bulbs of a form cultivated by the natives.

107617 and 107618. *DAUCUS CAROTA* L. Apiaceae. Carrot.

107617. Seeds of a yellow carrot with a violet top.

107618. Seeds of a red carrot.

107619. *ALSEODAPHNE SEMECARPIFOLIA* Nees. Lauraceae.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received December 26, 1934.

A small evergreen tree with oblong or obovate leaves 2 to 7 inches long and spreading panicles of very small flowers. Native to southern India.

## 107620 and 107621.

From India. Seeds presented by Partap Singh, deputy conservator of forests, Research Forest Division, Lahore, Punjab. Received December 24, 1934.

107620. *EPHEDRA GERARDIANA* Wall. Gnetaceae.

A stiff erect leafless shrub 2 to 4 feet high, native to India, with green branches, inconspicuous flowers, and bright red fruits.

For previous introduction see 77607.

107621. *PISTACIA INTEGERRIMA* Stewart. Anacardiaceae. Pistache.

A large tree up to 40 feet high, native to the warm slopes of the Himalayas in northern India. The aromatic pinnate leaves are made up of four to five pairs of lanceolate leaflets with an oblique base. The small inconspicuous flowers are in racemose clusters and are followed by the bright-green drupes which are about a fourth of an inch across. This tree yields the famous zebra wood of India.

For previous introduction see 80035.

## 107622 to 107644.

From the Balkans. Seeds collected by Dr. Edgar Anderson, Arnold Arboretum Bal-

## 107622 to 107644—Continued.

kan expedition. Received December 19, 1934.

Seeds from plants growing in unusually dry, cold situations.

107622. *ACER TATARICUM* L. Aceraceae. Tatarian maple.

For previous introduction see 32422.

107623 and 107624. *CORNUS MAS* L. Cornaceae. Cornelian cherry.

For previous introduction see 28205.

107623. Environs of Sofia, Bulgaria.

107624. Bulgaria.

107625. *COTONEASTER INTEGERRIMA* Medic. Malaceae. European cotoneaster.

Bulgaria.

For previous introduction see 33156.

107626. *ILEX AQUIFOLIUM* L. Aquifoliaceae. English holly.

Sarajevo, Bosnia (Yugoslavia).

For previous introduction and description see 107445.

107627. *JUGLANS REGIA* L. Juglandaceae. Persian walnut.

Collected at 2,600 feet altitude, at Gabrovo, Bulgaria.

For previous introduction see 103653.

107628. *JUNIPERUS COMMUNIS* L. Pinaceae. Common juniper.

No. 58. Var. *Intermedia*. A dwarf alpine form.

107629. *JUNIPERUS EXCELSA* Willd. Pinaceae. Greek juniper.

No. 137.

107630 and 107631. *LIGUSTRUM VULGARE* L. Oleaceae. European privet.

107630. Sarajevo, Bosnia (Yugoslavia).

107631. No. 62. Cluj (Brate), Rumania.

107632. *LONICERA NIGRA* L. Caprifoliaceae. Honeysuckle.

Bulgaria.

107633 to 107635. *MALUS* spp. Malaceae. Apple.107633 and 107634. *MALUS PUMILA* Mill. Paradise apple.

107633. Drenovo, Bulgaria.

107634. From the mountains near the Kamtchia River, Bulgaria.

107635. *MALUS SYLVESTRIS* Mill.

Vicinity of Trewna, Bulgaria.

107636. *PRUNUS LAUROCERASUS* L. Amygdalaceae. English cherry-laurel.

Sofia, Bulgaria.

For previous introduction see 103598.

107637 to 107639. *PYRUS COMMUNIS* L. Malaceae. Common pear.

107637. No. 2. Trewna, Bulgaria.

107638. No. 6. Drenovo, Bulgaria.

107639. No. 10. Gabrovo, Bulgaria.

## 107622 to 107644—Continued.

**107640.** RHAMNUS RUPESTRIS Scop.  
Rhamnaceae. Buckthorn.

A low spreading shrub 2 to 3 feet high, with hairy branchlets, ovate to orbicular dull green leaves 1 to 2 inches long, and umbels of inconspicuous flowers followed by top-shaped fruits a quarter of an inch across, first red, then black. Native to the mountains of southeastern Europe.

For previous introduction see 89677.

**107641.** RHAMNUS SAXATILIS Jacq. Rhamnaceae. Buckthorn.

Bulgaria.

**107642.** SPIRAEA CHAMAEDRYFOLIA ULMIFOLIA Maxim. Rosaceae.

Bulgaria. An erect shrub up to 6 feet high with ovate, coarsely incised serrate leaves and white flowers one-half inch across, larger than those of the typical form. Native to southeastern Europe and eastern Asia.

**107643.** TAXUS BACCATA L. Taxaceae.  
English yew.

Sarajevo, Bosnia (Yugoslavia).

**107644.** VIBURNUM LANTANA L. Caprifoliaceae. Wayfaring-tree.

## 107645 to 107717.

From Manchuria. Seeds and plants collected by H. G. MacMillan and J. L. Stephens, Bureau of Plant Industry. Received November 23, 1934.

Introduced for Department specialists.

Unless otherwise specified, these introductions are seeds.

**107645 to 107648.** AGROPYRON spp. Poaceae. Grass.

**107645.** AGROPYRON CANINUM (L.) Beauv. Awned wheatgrass.

No. 16. August 13, 1934. Hallar. A grass from 2 to 4½ feet high, found along sand ridges in shaded places, growing in scattered bunches.

**107646.** AGROPYRON CRISTATUM (L.) Gaertn. Wheatgrass.

Plants.

**107647.** AGROPYRON CRISTATUM PUBERULUM Boiss.

No. 2. August 11, 1934. Hallar. A tall plant with a well-developed root system.

**107648.** AGROPYRON sp.

No. 29. August 24, 1934. Hallar. A grass between 3 and 4 feet tall, found on fairly dry ground. Similar in growing habit to *Elymus excelsus*.

**107649.** AGROSTIS PERENNANS (Walt.) Tuck. Poaceae. Grass.

No. 5. August 11, 1934. Hallar. An erect perennial grass 1 to 3 feet high.

**107650.** AGROSTIS sp. Poaceae.

No. 21. August 20, 1934. Hallar. A grass up to 2 feet tall, with abundant seed; found in a delta.

**107651.** AMORPHA FRUTICOSA L. Fabaceae.

No. 14. July 9, 1934. Dairen.

## 107645 to 107717—Continued.

**107652.** ASPARAGUS sp. Convallariaceae.

No. 60. September 12, 1934. Hallar. Hardy plants, 1 to 2 feet tall, found on high sand ridges.

**107653 to 107655.** ASTRAGALUS spp. Fabaceae.

**107653.** ASTRAGALUS ADSURGENS Pall.

No. 39. September 3, 1934. Hallar. A bushy sprawling plant which blooms profusely. Found in alluvial soil, also in patches on sand ridges.

For previous introduction see 89723.

**107654.** ASTRAGALUS CHINENSIS L. f.

No. 53. September 12, 1934. Hallar. Found in exposed places along sandy ridges. A woody plant 2 to 5 feet tall, with small pendulous racemes of yellow flowers and extremely long, fibrous roots. Native to China.

For previous introduction see 89399.

**107655.** ASTRAGALUS sp.

No. 45. September 3, 1934. Hallar. A plant 6 to 12 inches high found growing in bunches on a high dry sand ridge east of Hallar.

**107656.** AVENA SATIVA L. Poaceae. Oats.

No. 15. July 31, 1934. Harbin, at the North Manchurian Railroad Experiment Station. A very hardy variety.

**107657.** BECKMANNIA SYZIGACHNE (Steud.) Fern. Poaceae.

No. 7. August 9, 1934. Hallar. A plant found in scattered small colonies in wet places in the river delta.

**107658.** BETULA sp. Betulaceae.

No. 63. September 15, 1934. Hallar. A very hardy ornamental shade tree, common in this region.

**107659.** BROMUS INERMIS Leyss. Poaceae. Common bromegrass.

No. 6. August 7, 1934. Hallar.

For previous introduction and description see 107501.

**107660 to 107662.** CALAMAGROSTIS EPIGEIOS (L.) Roth. Poaceae.

A stout perennial grass, native to Manchuria, where it grows on rather poor soil.

For previous introduction see 101648.

**107660.** No. 25. August 20, 1934. Hallar.

**107661.** No. 31. August 24, 1934. Hallar.

**107662.** No. 50. September 12, 1934. Hallar.

**107663.** CARAGANA MICROPHYLLA MANDSHURICA Kom. Fabaceae.

No. 11. July 31, 1934. Harbin Botanical Garden. A yellow-flowered bush grown as an ornamental. This variety is larger than the typical form, with elliptic leaflets.

**107664.** CARAGANA sp. Fabaceae.

No. 35. August 30, 1934. Hallar. A spiny shrub up to 4 feet tall, found in shifting sand and on the plains. Cattle graze the plant before the spines are mature.

## 107645 to 107717—Continued.

107665. *CRATAEGUS SANGUINEA* Pall. Malaceae.

No. 18. August 11, 1934. Hailar. An ornamental shrub 4 to 10 feet high, with small bright-orange to red globose fruits one-third of an inch in diameter, in rather dense corymbs.

For previous introduction see 82072.

107666 to 107672. *ELYMUS* spp. Poaceae. Grass.

107666 and 107667. *ELYMUS DAHURICUS* Turcz.

A grass 1 to 3 feet tall which spreads by means of rhizomes. It is found both on plains and sand ridges and is one of the common grazing grasses.

For previous introduction see 101656.

107666. No. 20. August 12, 1934. Hailar.

107667. No. 34. August 23, 1934. Hailar.

107668. *ELYMUS EXCELSUS* Turcz.

No. 30. August 24, 1934. Hailar. An upright grass 2 to 4 feet high, which somewhat resembles rye; found in the delta along the drainage ditches.

For previous introduction see 64626.

107669 to 107672. *ELYMUS PSEUDO-AGROPYRON* Trin.

A perennial grass with a creeping rhizome and flat leaves, found in sandy places where it is grazed closely. Native to Siberia.

107669. Plants.

107670. No. 4. August 4, 1934. Hailar.

107671. No. 41. August 30, 1934. Hailar.

107672. No. 37. August 30, 1934. Hailar.

107673. *ERAGROSTIS PILOSA* (L.) Beauv. Poaceae. Grass.

No. 23. August 20, 1934. A grass over 2 feet tall, found in the river delta.

107674. *EUONYMUS* sp. Celastraceae.

No. 57. September 12, 1934. Hailar. An ornamental shrub 2 to 4 feet tall, with light-pink to red fruits in clusters. Found on high sand ridges.

107675 and 107676. *FESTUCA OVINA* L. Poaceae. Sheep fescue.

107675. Plants.

107676. No. 1. August 7, 1934. Hailar.

107677. *GLYCERIA REMOTA* Fries. Poaceae. Grass.

No. 10. August 7, 1934. Hailar. A perennial grass 3 to 6 feet tall, with a creeping rhizome and simple culms. Native to northwestern Europe.

107678. *IRIS ENSATA* Thunb. Iridaceae.

No. 42. August 28, 1937. Hailar. Variety *Chinensis*. A very hardy form, 1 to 2 feet tall, found in moist plains around Hailar.

## 107645 to 107717—Continued.

107679. *LEPTOCHLOA* sp. Poaceae. Grass.

No. 64. September 12, 1934. Hailar. A bunch grass up to 12 inches high which resembles Bermuda grass but does not spread by taking root at the nodes. Appears to afford a considerable amount of grazing.

107680 to 107682. *LESPEDEZA* spp. Fabaceae.

Collected in the vicinity of Hailar.

107680. *LESPEDEZA CYSTOIDES* Nakai.

No. 49. September 12, 1934. A Siberian bushclover with cream-colored, purple-spotted flowers.

107681. *LESPEDEZA* sp.

No. 44. September 3, 1934. A perennial *lespedeza* 1½ to 2½ feet tall, found in dry sandy soil. The plants seed abundantly.

107682. *LESPEDEZA* sp.

No. 51. September 12, 1934. A perennial *lespedeza*, found in dry sandy soil, which is over 2 feet high and seeds abundantly.

107683. *MALUS* sp. Malaceae.

No. 54. September 12, 1934. Hailar. A hardy shrub up to 6 feet high, found on high sand ridges. The hard, moderately sour fruits the size of cherries are borne in clusters and are usually red.

107684 to 107688. *MEDICAGO* spp. Fabaceae. Medick.

107684 and 107685. *MEDICAGO FALCATA* L.

A sprawling plant 1 to 2 feet high, found in patches in the delta and low places on the plains. Heavily grazed by cattle.

107684. No. 46. September 3, 1934. Hailar.

107685. No. 55. September 12, 1934. Hailar.

107686. *MEDICAGO LUPULINA* L. Black medick.

No. 58. September 12, 1934. Hailar. Plants 10 to 18 inches high, found on the river plain. Very few seeds.

107687. *MEDICAGO RUTHENICA* (L.) Trautv.

No. 48. September 10, 1934. Hailar. A wild alfalfa found on the river delta and on sand ridges. It resembles common alfalfa in its habit of growth, and the main stem is sometimes 4 feet high.

For previous introduction see 90365.

107688. *MEDICAGO SATIVA* L. Alfalfa.

Presented by the North Manchurian Railroad Experiment Station, Harbin, September 21, 1934.

107689. *OXYTROPIS OXYPHYLLA* (Pall.) DC. Fabaceae.

No. 47. September 10, 1934. Hailar. Plants 6 to 12 inches high, but with roots 5 to 6 feet long. Found on sand ridges where vegetation is scant.

For previous introduction see 64767.

107690. *PANICUM* sp. Poaceae. Grass.

No. 59. September 12, 1934. Hailar. Found on the river delta, near a Chinese

## 107645 to 107717—Continued.

garden; apparently a domesticated plant. It is reported that the Chinese eat it.

107691. *PAPAVER* sp. Papaveraceae. Poppy.

No. 62. September 12, 1934. Hallar. A hardy, everblooming poppy found on high sand ridges. The lemon-yellow flowers are  $1\frac{1}{2}$  to 2 inches across.

107692. *PHRAGMITES* sp. Poaceae. Grass.

No. 56. September 12, 1934. Hallar. A wet-land grass, 4 to 6 feet tall, found occasionally on low ground on the river plain.

107693 to 107695. *POA SPHONDYLODES* Trin. Poaceae. Bluegrass.

Found along the edges of sand dunes and in depressions on the plains in the vicinity of Hallar. A good grazing grass.

For previous introduction see 64786.

107693. No. 3. August 5, 1934.

107694. Plants.

107695. No. 19. August 15, 1934.

107696. *ROSA* sp. Rosaceae. Rose.

No. 61. September 12, 1934. Hallar. Hardy plants, 1 to 3 feet tall, densely covered with small spines, found in wind-blown sand, and usually growing in clumps. The large red hips are abundantly produced.

107697. *SALIX* sp. Salicaceae. Willow. Plants.

107698. *SETARIA ITALICA* (L.) Beauv. Poaceae. Millet.

September 21, 1934. From the North Manchurian Railroad Experiment Station, Harbin.

107699. *SETARIA VIRIDIS* (L.) Beauv. Poaceae. Grass.

No. 40. August 30, 1934. A common grazing grass around Hallar, especially in the river delta.

107700 to 107704. *STIPA* spp. Poaceae. Grass.

107700. *STIPA CAPILLATA* L. Feathergrass.

No. 33. August 24, 1934. Hallar. A slender grass, up to 4 feet high, found in small bunches on both the sand ridges and plains. The abundant seeds are scattered by the wind as soon as mature.

107701 to 107703. *STIPA SIBERICA* Lam.

An upright perennial grass, native to Siberia, up to 4 feet tall, with well-developed roots. It is found commonly in scattered bunches on the sand ridges and on the plains near Hallar.

107701. No. 17. August 13, 1934.

107702. No. 24. August 20, 1934.

107703. No. 38. August 30, 1934.

107704. *STIPA SPLENDENS* Trin. Feathergrass.

No. 22. August 20, 1934. Hallar. Erect, slender, dark-green plants over 4 feet tall, found in the sand. The abundant seed heads shatter as soon as the seed is ripe.

## 107645 to 107717—Continued.

107705. *THERMOPSIS LANCEOLATA* R. Br. Fabaceae.

No. 8. August 10, 1934. Hallar. A perennial herb up to 2 feet high, with oblong-lanceolate leaflets and bright-yellow flowers in terminal racemes. Native to Siberia and Alaska, where it is found in moist sandy places.

107706 and 107707. *TRIFOLIUM LUPINASTER* L. Fabaceae. Clover.

A wild clover, scantily furnished with foliage, that can withstand severe drought and is able to grow on very poor soil.

107706. No. 43. September 3, 1934. Hallar.

107707. No. 52. September 12, 1934. Hallar.

107708 to 107715. *VICIA* spp. Fabaceae. Vetch.

107708. *VICIA AMOENA* Fisch.

No. 28. August 24, 1934. Hallar, on a sandy ridge. A perennial hairy vetch, native to Siberia, with stems up to 2 feet high and purplish flowers.

107709 and 107710. *VICIA AMOENA OBLONGIFOLIA* Regel.

A variety with climbing, multiple-branched stems 6 to 8 feet long and elongate-oblong leaflets. The seed pods open as soon as the seed is mature. Native to eastern Siberia.

107709. No. 9. August 11, 1934. Hallar.

107710. No. 27. August 20, 1934. Hallar.

107711 and 107712. *VICIA PSEUDO-OROBUS* Fisch. and Mey.

Received as *Vicia tanakae*, now considered to be identical with the above species. A giant vetch, probably perennial, with many-branched stems 6 to 8 feet long, large leaflets, the basal ones over 2 inches long, and abundant flowers. Found growing in sand and climbing over shrubs.

107711. No. 26. August 20, 1934. Hallar.

107712. No. 32. August 24, 1934. Hallar.

107713. *VICIA* sp.

No. 36. September 3, 1934. Hallar.

107714. *VICIA* sp.

No. 12. June 6, 1934. Tokyo, Japan. A small feathery-leaved vetch resembling *Vicia monantha*, but smaller. Found growing among grasses as a volunteer in the Imperial Palace grounds.

107715. *VICIA* sp.

No. 13. June 6, 1934. Tokyo, Japan. A vetch which resembles *Vicia villosa* except that the young stems are glabrous. Found among grasses as a volunteer in the Imperial Palace grounds.

107716. (Undetermined.)

Plants of an undetermined grass.

107717. (Undetermined.)

Plants of an undetermined grass.



**107718. POA BULBOSA L. Poaceae.****Grass.**

From the Union of Soviet Socialist Republics. Seeds presented by the Botanical Garden, Academy of Science, Alma-Ata, Kazakstan. Received December 21, 1934.

Introduced for Department specialists.

For previous introduction see 78803.

**107719. STIPA CALAMAGROSTIS (L.)****Wahlenb. Poaceae. Grass.**

From France. Seeds presented by the Forest Service, at the request of J. Dufrenoy. Station Pathologie Vegetale, La Grande Ferrade, Pont-de-la-Maye. Received December 22, 1934.

*Bauche* grass. A grass valuable as a soil binder in the Pyrenees Mountains, up to about 4,000 feet altitude.

For previous introduction see 89955.

**107720 to 107729.**

From the Balkan region. Seeds collected by Dr. Edgar Anderson, Arnold Arboretum Balkan expedition. Received December 21, 1934.

Collected in unusually cold, dry regions; introduced for the use of Department specialists.

**107720. ACTAEA SPICATA L. Ranunculaceae. Black baneberry.**

No. 33. Rila Mountains, Bulgaria. A low herbaceous perennial 1 to 2 feet high, with racemes of deep-blue fruits in autumn.

For previous introduction see 106520.

**107721. CAMPANULA sp. Campanulaceae.**

From Yugoslavia.

**107722. CONVULVULUS sp. Convolvulaceae.**

No. 107. From Cagan Pass, Rumania.

**107723. FORSYTHIA EUROPAEA Degen. and Bald. Oleaceae.**

No. 143. Peč, Yugoslavia. An upright shrub 3 to 6 feet high, with stiff, ovate-lanceolate, long-acuminate leaves about 2 inches long and golden-yellow flowers about an inch long. Native to Albania.

**107724. HESPERIS DINARICA G. Beck. Brassicaceae.**

No. 152. Ravna Mountains, Yugoslavia. An erect herbaceous perennial 2 to 3 feet high, with broadly lanceolate, denticulate, or sinuate-dentate leaves, and fragrant white flowers in dense terminal racemes. Native to Bosnia.

**107725. ILEX OPACA Ait. Aquifoliaceae. American holly.****107726. LIGUSTRUM VULGARE L. Oleaceae. European privet.**

Babadg, Dobrogea, Rumania. October 20, 1934. A shrub found on a steep slope in a half-shaded situation.

**107727. LUNARIA sp. Brassicaceae.**

From Cagan Pass, Rumania.

**107728. PEDICULARIS COMOSUS L. Scrophulariaceae.**

From Rumania. An alpine perennial with pinnatifid leaves, the lobes terminated by white spines. The yellowish-white flowers are in spikes. Native to Switzerland.

**107730 to 107729—Continued.****107729. SYMPHYANDRA WANNERI Heuff. Campanulaceae.**

No. 26. Rila, Bulgaria. A low herbaceous perennial, native to the European Alps, up to 6 inches high, with oblong-ovate leaves and blue bell-shaped flowers about 1 inch long.

**107730. ADENIUM OBESUM (Forsk.) Roem. and Schult. Apocynaceae.**

From Jamaica. Seeds presented by M. S. Goodman, Department of Science and Agriculture, Hope, Kingston P. O. Received December 28, 1934.

A slow-growing shrub, not over 3 feet high, native to the dry regions of Arabia, and named after the desert port of Aden. The gorgeous rose-pink to white flowers are 3 inches across and remind one of enormous oleander blossoms. The flowers are borne so abundantly that they cover the entire shrub.

For previous introduction see 105731.

**107731 to 107742.**

From Surinam. Material collected by W. A. Archer, Bureau of Plant Industry. Received December 17, 1934.

Introduced for Department specialists.

**107731. ANANAS COMOSUS (L.) Merr. Bromeliaceae. Pineapple.**

No. 2845. November 19, 1934. Sandrij 1. Suckers from a wild pineapple.

**107732. ASPIDOSPERMA NITIDUM Benth. Apocynaceae.**

No. 2775. November 17, 1934. Sandrij 1. Roots of *Apukita* (Carib name), Par-elhout tree, from the jungle.

**107733 to 107736. STIGMAPHYLLON spp. Malpighiaceae.****107733. STIGMAPHYLLON sp.**

No. 2770. November 17, 1934. Sandrij 1. Root cuttings.

**107734. STIGMAPHYLLON FULGENS (Lam.) A. Juss.**

No. 2776. November 12, 1934. Sandrij 1. Root cuttings of a climbing shrub with rounded-cordate leaves, silvery beneath. Native to northern South America.

**107735. STIGMAPHYLLON sp.**

No. 2715. November 12, 1934. Near Scotelweg. Roots.

**107736. STIGMAPHYLLON FULGENS (Lam.) A. Juss.**

No. 2658. November 2, 1934. Near Scotelweg. Root cuttings.

For previous introduction and description see 107734.

**107737. CISSAMPELOS sp. Menispermaceae.**

No. 2729. November 14, 1934. Eight miles northwest of Paramaribo. *Boest njamsie*. Roots.

**107738. DIOSCOREA ALATA L. Dioscoreaceae. Winged yam.**

No. 2697. November 6, 1934. Paramaribo. *Njamsie*. Tubers from the market, said to be imported from the island of Madeira, Portugal.

For previous introductions see 105462.

## 107731 to 107742—Continued.

107739. *DIOSCOREA TRIFIDA* L. f. *Dioscoreaceae*. Dr. Yampi.

No. 2702. November 9, 1934. Paramaribo. *Napi*. Tubers from the market. A purple-fleshed variety.

For previous introduction see 102663.

107740. *FURCRAEA* sp. *Amaryllidaceae*.

No. 2740. November 17, 1934. Sandrij 1. *Mura* (Carib name). Found growing in white sand.

107741. *DIOCLEA* sp. *Fabaceae*.

No. 2713. November 12, 1934. Near Scotelweg. Roots of a vine which climbs to the tops of trees and has white and purple flowers.

107742. *LONCHOCARPUS NICOU* (Aubl.) DC. *Fabaceae*.

No. 2784. November 21, 1934. Sandrij 1. *Oeman nekoe*. Root cuttings of a plant cultivated in the forestry plots.

107743 to 107746. *Gossypium* spp. *Malvaceae*. Cotton.

From Africa. Seeds collected by Dr. and Mrs. Thomas Barbour, Cambridge, Mass.

## 107743 to 107746—Continued.

Received September 23, 1934. Numbered in December 1934.

107743. *Gossypium* sp.

March 8, 1934. Wild cotton from rocky kopjes north of the Letaba River, eastern Transvaal, near the Mozambique line.

107744. *Gossypium* sp.

March 8, 1934. Wild cotton from the bush near the Lower Sabi River on the low veldt, eastern Transvaal.

107745. *Gossypium* sp.

August 14, 1934. Wild cotton from a native dooryard at Bububu, Zanzibar.

107746. *Gossypium* sp.

August 11, 1934. Wild cotton, 7 miles inland from Majunga, Madagascar.

107747. *Gossypium* sp. *Malvaceae*. Cotton.

From British West Indies. Seeds presented by Dr. S. C. Harland, Trinidad. Received September 24, 1934. Numbered in December 1934.

Sea Island × (Contorta, G 2525) T.18 × T. 251.

Introduced for Department specialists.

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