UNITED STATES DEPARTMENT OF AGRICULTURE

2757



INVENTORY No. 118

V

Washington, D. C.

Issued June 1936

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PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EX-PLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, JANUARY 1 TO MARCH 31, 1934 (Nos. 103989-105035)

CONTENTS

INTRODUCTORY STATEMENT

Inventory 118 lists the introductions (nos. 103989-105035) received by the Division of Plant Exploration and Introduction during the period from January 1 to March 31, 1934. Nearly all types of economic plants are represented, but certain introductions are worthy of special mention as continuations of projects now in progress within the Bureau.

Two lots of chestnut scions (nos. 104000-104009, 104057-104064) from northern China, representing three native Chinese species of *Castanea*, and a shipment of Japanese chestnut seeds (*Castanea* crenata, nos. 104014-104021) will be used by Department specialists in breeding experiments incidental to the chestnut-blight investigations.

Noteworthy also are several rather large introductions of scions and young plants of deciduous-fruit varieties. These include two lots of apples, pears, apricots, and peaches from Italy (nos. 104022– 104056, 104483–104555), one of grapes, plums, and cherries (nos. 104281–104314) from Morocco, and one of apples, pears, and cherries (nos. 104776–104836) from Sweden. These are destined to be grown by Department specialists for comparison with varieties now growing in the United States.

Seeds of three lots of hardy shrubs and perennials (nos. 104345– 104378, 104837–104851, and 104852–104864), mostly from eastern Asia, were presented respectively by the botanic gardens at Edinburgh, Kew, and Cambridge. These will be tested in the colder parts of the country. Among them are included some species that may be of particular interest in the planting problems of our more arid sections.

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The interests of specialists working with lespedezas in a botanical review of the genus are recorded by the following numbers from Chosen, Japan, and Austria (nos. 104065–104067, 104068 and 104069, also 104669–104672). A collection of legumes from the Belgian Congo (nos. 104070–104102) was presented by the Director of the experiment station at Kisozi, Ruanda-Urundi Territory, as of possible use in the extreme South.

The interests of plant breeders are shown by the numerous importations of delphiniums (nos. 104351-104369, 104570-104573, 104847-104851, 104890-104895, 104939-104943, and 104950-104953), of antirrhinums (nos. 104557, 104924, 104925, 104948, and 104949), and of althaeas (nos. 104636, 104837-104839, and 104921-104923) for breeding experiments with rust-resistant strains, of digitalis (nos. 104574-104576, 104896-104898, and 104954-104960) for botanical review, and of salvias (nos. 104581-104592 and 104651-104658) for horticultural examination and testing.

Many palm species (nos. 104213-104216, 104331-104336, 104338-104343, 104679-104704) have been presented by the botanic gardens of Peradeniya, Trinidad, Georgetown, etc., to assist in the building up of the palm collection at the Coconut Grove Garden, where a valuable collection is already established.

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

B. Y. MORRISON,

Principal Horticulturist, in Charge.

Division of Plant Exploration and Introduction, Washington, D. C., November 30, 1935.

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INVENTORY¹

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108989. TSUGA Hayata. FORMOSANA · Pinaceae.

From Japan. Seeds presented by F. Seki, Minector, Department of Forestry, Gov-ernment Research Institute, Taihoku, Tai-wan. Received January 17, 1934.

A handsome hemlock, native of Taiwan, closely allied to *Teuga diversifolia*, from which it differs chiefly in the shape of the seed wings and in having glabrous branch-lets. It develops into a large tree with **alcender** spreading branches and glossy dark-green follage.

108990, DAVIDIA INVOLUCRATA Baill. Cornaceae: Dovetree.

From France. Seeds presented by A. Ger-ard, La Fosse, par Montroire sur Loir, Loir-et-Cher. Received January 9, 1934.

A handsome tree native to central and western China, where it reaches a height of four to 70 feet. In habit and foliage it re-sembles a linden. The bright-green oval leaves, 3 to 6 inches long, are sharply toothed and slender stalked, and the globular heads of small flowers, borne on slender notding stalks about 2 inches long, are inside unusually striking because of two or three large white bracts of unequal length.

For previous introduction see 101963.

103991. GENTIANA sp. Gentianaceae.

"From Japan. Seeds presented by T. Tanaka, Osaka. Received January 6, 1934.

A Rotatina Rinde. An alpine gentian of the Scabra section. The stem is prostrate, and the large deep-blue flowers are freely borne on the branchicts in autumn. Native to Mount Kirishima, Japan.

108992 to 103999. VITIS VINIFEBA L. .6 Vitaceae. European grape.

Prom Hungary. Cuttings purchased from M. Kir Mathiasz, through the Royal Hun-garian Plant Breeding Institute, Katona-telep. Received January 5, 1984.

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

103992 to 103999-Continued.

103992. Gustav Szauter (muscat).

108993. Mathiasz y-ne no. 40.

103994. Mathiasz j diandala no. 14.

103995. Nicolas Horthy no. 39.

103996. Scolokertek hiralymoje no. 26 (muscat).

108997. Tallian (muscat).

103998. Thalloczy (muscat).

103999. Vorosmarthy (muscat).

- 104000 to 104009. CASTANEA spp. Fagaceae. Chestnut.
- From China. Scions collected by Peter Liu and sent through Owen L. Dawson, agri-cultural commissioner, Shanghai. Received January 3, 1934.

104000. CASTANEA SEGUINII Dode.

Ya Lee Tzu, or wild chestnut. Collected on the mountain of Lao Hu Shan, near Hongchow, and native to east-central China. It is usually a bush or low tree, but occasionally a shapely tree 40 feet high, with deep-green leaves, paler be-neath, and small nuts of sweet agreeable flavor flavor.

For previous introduction see 102923.

- 104001 to 104009. CASTANEA MOLLISSIMA Blume. Hairy chestnut.
 - 104001. No. 2. Helao Chia Lee, or small home chestnut. Collected in the foot-hills near the village of Tamiao, east of Nanking. A locally grown, rather small variety, said to be somewhat reddish, and used for roasting or with meat dishes.
 - 104002. No. 3. Ta Chia Lee, or large home chestnut. Collected in the footnome chestnut. Collected in the foot-hills of Sun Chia Tzu Lang, east of Nanking. A locally grown variety bearing nuts a little larger than those of *Hsiao Chia Lee* (no. 2, 104001). The marketing season is about 6 weeks long.

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

herificultural 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 identi-fication 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 iden-tification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications therefore must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this Division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

104000 to 104009-Continued.

- 104003. No. 4. La Yu Lee, or large oll chestnut. Collected in the footbills south of Sun Chia Tzu Lang, east of Nanking. A very large, dark-brown chestnut, rarely grown in this region.
- 104004. No. 5. Pai Mao Lee, or white-hairy chestnut. Collected in the foothills near the village of Tiehling-kiang, northeast of Yuhong. A lo-cally grown chestnut, rather small but with a very sweet kernel. The dark-brown hull is covered with white hairs on the lower end, and because of this it is called white-heiry chestnut. hairy chestnut.
- 4005. No. 6. Mao Heiang Lee, or hairy fragrant chestnut. Collected near the foot of Pao Shih Shan, near Hsiang Lee, or estnut. Collected 104005. No. Hongchow. A little-grown variety.
- 104006. No. 7. Kuei Hus Lee Tzu, or cassia-flower chestnut. This chestnut is so named because it has a cassia-like fragrance when young.
- 4007. No. 8. Kuei Lee, or large chestnut. Collected at the foot of Pao Shih Shan, near Hongchow, A, very common chestnut of this region, used in cooking. The flavor is not as good as that of the North China 104007. No. chestnuts.
- 104008. No. 9. Kuei Lee, or large chest-nut. Collected in the foothills of Ssu , Yen Ching, at the south mountain of Hongchow.
- 104009. No. 10. Kuei Lee, or large chestnut. Collected in the footbolls of Ssu Yen Ching, at the south moun-tain of Hongchow. Nuts from a dif-ferent tree than no. 9 (104008).

104010 to 104012.

From China. Seeds presented by G. Weid-man Groff, Lingnan University, Canton. Received January 4, 1934.

(L.) Uspec... Grapefruit. 104010. CITRUS GRANDIS Rutaceae.

Kao Phuang, or white tassel. Grown near Bangkok, Siam, and considered one of the best pomelos of the Far East.

104011. DIOSPYROS KAKI L. f. Diospyra-ceae. Kaki persimmon.

Tasi Tsz. A large oblong persimmon from Canton and a good edible variety.

104012. DIOSPYROS KAKI L. f. Diospyra-ceae. Kaki persimmon.

Kaai Sam Tsz. Chicken-heart persim-mon. An interesting and vigorous small Canton persimmon which is especially good for stock.

- 104013. AMYGDALUS COMMUNIS L. Almond. Amygdalaceae.
- From Italy. Plants purchased from Dr. Mario Calvino, Stazione Sperimentale di Floricultura, San Remo. Received January 8, 1984.

Pollardi. An ornamental bushy almond that originated as a seedling in the garden of Mr. Pollard at Ballarat, Victoria, Aus-tralia, in 1964.

104014 to 104021. CASTANEA CBENATA Sieb. and Zucc. Fagaceae. Japanese chestnut.

104014 to 104021-Continued.

- From Japan. Seeds purchased from the Yokohama Nursery Co., New York, N. Y. Received January 3, 1934.
 - 104014. From the Temple Forest, Koy-asan, Wakayana-ken.
 - 104015. From Nobeoka Eirinsho, Yokugo-mura, Higashi, Usuki-gun, Miyasakiken.
 - 104016. From Numakunai Eirinsho, Ippoimura, Iwate-gun, Iwate-ken.
 - 104017. From Masuda-gun, Shimoharamura, Gifu-ken (Hidadani).
 - 104018. From Sendai Eirinsho, Kamasakimura, Shibata-gun, Miyagi-ken.
 - 104019. From Kakudate Eirinsho, Ko-maniuchi National Forest, Senhokugun, Akita-ken.
 - 104020. From Mizusawa Eirinsho, Ezashi-gun, Yanagawa-mura, Iwate-ken.
 - 104021. From Oshima Province, Kameta-gun, Yunokawa-mura, Hokkaido.

104022 to 104056.

com Italy. Plants purchased from Mar-tino Bianchi, Pistola. Received January 8, 1934. From Italy.

Received under the following varietal names, for the use of Department specialists.

104022 to 104026. AMYGDALUS spp. Amygdalaceae.

104022 to 104024. AMYGDALUS PERSICA L. Peach.

104022. Grossa gialla di Verona.

104088. Maddalena precoce.

104024. Poppa di Venere Settemhrina.

104025 and 104026. AMYGDALUS PERSICA NECTABINA Alt. Nectarine.

104025. Noce perca gialla.

104026. Violet Musquè.

104027 to 104036. MALUS SYLVESTEIS MMI. Malaceae. Apple.

104027. Carpondola Reale.

104028. Cellini.

104029. Dal Ferro.

104030. Golden Noble.

104031. Jakob Lebel.

104038. Morgenduft.

104033. Renetta di Mans.

104084. Renetta dorata.

194085. Renetta grigia di Brownien.

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104036. Rosa di Berna.

104037 to 104056. PIRUS COMMUNIS L. Malaceae. Common par.

104037. Abbe Fetel.

104038. Ananassa.

104039. Belle di Pistoia.

104040. Blickling.

- 104041. Bonne de Beugny.
- 194042. Bonne d'Hzee.

104043. Butirra Bedford.

104022 to 104056-Continued.

- 11 104044. Butirra Bachelier.
 - 104045. Butirra d'Amanlis.
- 104048. Butirra d'Aprile.
- 104047. Charles Cognee.
- 101018. Directeur Varenne.
 - 104049. Docteur Jules Guyot.
 - 104050. Duchessa Berard.
- 104051. La Coscia Precoce.
 - 104058. La Coscia Tardiva.
 - 104053. Lardona.
 - 104054. Moscatello Piccolo.
 - 104055. Fico.

104056. Souvenir d'Emile Coue.

- 104057 to 104064. CASTANEA SDD. Fagaceae. Chestnut.
- rom China. Seeds collected by Peter Liu and sent through Owen L. Dawson, agri-cultural commissioner, Shanghai. Re-ceived January 3, 1934. From China.
 - 104057. CASTANEA HENRYI (Skan.) Rehder and Wilson.

From Hsiaofeng.

and Wilson.

From Hsiaohsing, Anhwei Province.

- Blume. Hairy chestnut.
 - 1059. From Fengchiao, C Province. A large chestnut. 104059. From Chekiang
 - 104060. Chia Lee, or home chestnut, from Nanking.
- 1. 1. 1. 1. **194061.** Lui An. A locally grown chest-nut from Chekiang Province.
 - 104063. Tsai Lee, or vegetable chest-nut from Shucheng, Anhwei Prov-ince.
 - 104063. Kuei Lee, or large chestnut, from Hsinteng, Chekiang Province.

104064. CASTANEA SEGUINII Dode.

A wild chestnut from Hongchow.

104065 to 104067. LESPEDEZA spp. Fabaceae. Bushclover.

Frem Chosen. Seeds presented by Dr. T. Kaburaki, Director, Forest Experiment Station, Keijo. Received January 8, 1934.

194965. LESPEDEZA BICOLOR TURCZ. Shrub busholover.

A bushy perennial which bears a pro-studion of rose-purple flowers during the early autumn, practically covering the drooping branches which sometimes be-come 6 feet in length. Native to eastern Asia Asia.

For previous introduction see 101483. 104066. LESPEDEZA CYRTOBOTRYA Miquel.

A shrub about 6 feet high, resembling L. bloolor in habit, with oval-oblong leaf-lets and dense clusters of purple flowers. It is native to Japan.

For previous introduction see 101484.

104065 to 104067-Continued.

104067. LESPEDEZA JAPONICA INTERMEDIA Nakai.

A bushy shrub 6 to 12 feet high, with large el.iptic or oblong, obtuse or emar-ginate hary green leaflets, paler beneath ; and rose-purple flowers half an inch long, in axiliary and terminal racemes. The oblong reticulate pod is covered with long hairs and is one-fourth to one-third of an inch long. Native to Chosen.

104068 and 104069.

- From Japan. Seeds presented by T. Nakai, Botanic Gardens, Science College, Im-perial University, Tokyo. Received Jan-uary 12, 1934.
 - 104068. LESPEDEZA HOMOLOBA Nakai. Fa-Fa-

A small shrub with trifoliolate leaves, the leaflets being elliptic or ovate oblong and up to 2 inches long. The pale-purple flowers, half an inch long are in small axillary racemes. Closely allied to *Lespe-deca bicolor*, but differing in its more shin-ing leaflets and longer sorely. Native to ing leaflets and longer sepals. Native to Japan.

104069. LESPEDEZA SENDAICA Nakai. Fa-baceae. Bushclover. baceae.

A bushclover with elongated branches and ternate leaves, the leaf divisions be-ing ovate oblong and about 1 inch long. The flowers, in small axillary racemes, are purplish with pink standards. Native to northern Japan.

104070 to 104102.

From Africa. Seeds presented by J. B. H. Lejeune, Director, Government Experi-mental Station, Kisozi, Ruanda-Urundi Territory, Belgian Congo. Received Janu-ary 10, 1934.

104070. ACACIA PODALYRIAEFOLIA A. Cunn. Mimosaceae.

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

For previous introduction see 48057.

- 104071 to 104073. CAJANUS INDICUS Spreng. Fabaceae. Pigeonpea.
 - 104071. A variety with brownish-pink seeds.
 - 104072. 4973. A variety with light-tan seeds marbled with brownish pink.

104073. A variety with straw-colored seeds.

104074 to 104076. CROTALABIA Spp. Fabaceae.

104074. CROTALARIA FULVA ROXD.

Collected in Urundi Territory at 6,000 feet altitude. A stiffly erect le-guminous shrub 3 to 6 feet high, with numerous paniculate branches. The silky narrow leaves are about 4 inches long, and the flowers, in panicles, are about an inch long.

For previous introduction see 65699.

104075. CROTALARIA Sp.

Collected in Buhnama, Kasanga.

104076. CROTALARIA INCANA L.

104070 to 104102-Continued.

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

For previous introduction see 64059.

104077. CYTISUS PROLIFERUS L. f. Fabaceae. Tagasaste.

A stout leguminous shrub up to 12 feet high, of rather lax habit, with long slender branches and green trifoliolate leaves with silky pubescent lower surfaces. The white flowers are in axillary clusters among the branches. It is native to the Canary Islands where it is considered an excellent drought-resistant forage plant.

For previous introduction see 90725.

104078. ELEUSINE CORACANA (L.) Gaertn. Poaceae. African millet.

Collected in Urundi.

104079. ERIOSEMA MONTANUM Baker. Fabaceae.

An erect perennial leguminous plant with trifollolate leaves; the ovate-oblong, acute leaflets are about 2 inches long. The small yellow flowers are in axillary racemes. Native to eastern and northeastern Africa.

104080. INDIGOFERA Sp. Fabaceae. Indigo.

104081. LUPINUS sp. Fabaceae.

Collected at Kevin.

104082. LUPINUS sp. Fabaceae.

Collected at Kidega.

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104083 to 104092. PHASEOLUS spp. Fabaceae.

104088 to 104085. PHASEOLUS LUNATUS. Lima bean.

104083. A small brown bean with blackish areas.

104084. A small gray bean with deepbrown blotches.

104085. A small white bean.

104086 to 104092. PHASEOLUS VULGARIS L. Common bean.

104086. A large, deep reddish-brown bean.

104087. A rose-brown bean with deeper brown marbling.

104088. A brownish-yellow bean with brown marbling.

104089. A black bean.

104090. A reddish-brown bean.

104091. A light-gray bean with black marbling.

104092. A greenish-yellow bean.

104093. PISUM SATIVUM L. Fabaceae. Pea.

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104094. SESBANIA sp. Fabaceae.

104095. SESBANIA sp. Fabaceae.

104096. SMITHIA AESCHYNOMENOIDES Welw. Fabaceae.

104070 to 104102-Continued.

Collected at 6,000 feet altitude. An erect shrub about 2 feet high, with numerous siender bristly branches, pinnate leaves about 1 inch long with sensitive leaflets, and racemes of small yellow, purple-veined flowers. Native to Angola, Africa.

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104097. SORGHUM VULGARE Pers. Poeceae. Sorghum.

A red variety.

104098. SORGHUM VULGABE Pers. Poaceae. Sorghum.

104099 to 104101. ZEA MAYS L. Poaceae. Corn.

104102. SESAMUM ANGOLENSE Welw. Pedaliaceae.

An erect herb, often 6 feet high, native to tropical Africa. The square stems are clothed with numerous oblong to ovate, wavy-margined leaves 2 to 4 inches long. The solitary axiliary flowers have brilliant violet-purple, obliquely campanulate corollas 2 to 3 inches long.

For previous introduction see 61681,

104103 to 104124.

From Argentina. Seeds presented by the Director, Botanic Gardens, Buenos Aires. Received January 12, 1934.

104103, ACACIA BONARIENSIS Gillies. Mimosaceae.

An almost glabrous tree, with angular branches sparsely covered with short recurved spines. The long bipinnate leaves and branc'ves are glabrous; the youngest leaflets and the peduncles are silky hairy, as are also the short panicled, flower spikes.

For previous introduction see 88198.

104104. ACACIA MONILIFORMIS Criseb. Mimosaceae.

A shrub with fragrant yellow dowers, common in the subtropical forests of Tucumán, Argentina, beáring dusty fourangled branches and petioles and glabraus bipinnate leaves. The flat linear leaves pods when young are used as cattle feed.

For previous introduction see 48054.

104105. ACNISTUS PARVIFLORUS GAISED. Solanaceae.

A small shrub with elliptic, acute, longcuncate papery leaves about 3 inches long and small, fragrant, funnel-shaped, white flowers one-third inch long, in small, clusters. It is native to Argentina.

104106. ANNESLIA TWEEDII (Benth.) Minosaceae.

A low tropical tree, with bisinnate leaves made up of 3 to 4 pairs of very small hairy linear-oblong leaflets and globose flower heads with rather showy purplish stamens. Native to Britash Guiana.

For previous introduction see 94769.

104107. CHOMELIA BRASILIANA A. Rich. Rubiaceae.

A small spiny shrub, pubescent throughout, with opposite ellipfic leaves and siky white flowers in small graceful axillary clusters. Native to Brazil.

104103 to 104124 Continued.

104108. CHORISIA SPECIOSA St. Hil. Bombacaceae. Floss-silk-tree.

A handsome tree 20 feet high, abundant in Argentina and the river provinces of Paraguay. The boll is nearly 5 inches long. The yellow fiber, called Samahu or Samuy, and similar to the best Javan kapok, is used to a limited extent for stuffing pillows and can be used commercially for life preservers, jackets, water wings, mattresses, etc. The tree has resisted 3° C. without injury to its flowers, although the bolls require hot sun.

For previous introduction see 88221.

104109. CISSUS sp. Vitaceae.

Received as *Oissus rutilans*, a name for which a place of publication has not been found. Said to be popular in Buenos Aires as a cover for trellises and for growing over walls in patios.

104110. CNICOTHAMNUS LOBENTZII Griseb. Asteraceae.

A handsome shrub about 20 feet high, with thick branches oval leaves about 5 inches long, and purple flowers in large solitary heads. Native to Tucumán, Argentina.

For previous introduction see 101512.

104111. COMBRETUM FRUTICOSUM (Loefl.) Stuntz. Combretaceae.

An ornamental climbing shrub with opposite, elliptic leaves and spikes of orange and green flowers. It is native in temperate regions from Argentina to Brazil.

For previous introduction see 42326.

104112. CROTON URUCUBANA Baill. Euphorbiaceae.

A Brazilian shrub with heart-shaped acuminate leaves about 3 inches long, resembling those of the poplars. The small inconspicuous flowers are in terminal cymes.

104118, DAUBENTONIA TRIPETII Poit. Fabaceae.

An ornamental leguminous shrub or small; tree, native to Argentina, ; with pinnately compound leaves which are dull green above and paler beneath. The rather large, orange-red flowers are borne in drooping racemes.

For previous introduction see 101513.

104114. ERYTHRINA FALCATA Benth. Fabaceae.

A tropical tree allied to Erythrina orista-paili. The oval-oblong leaflets are 4 to 6 inches long, becoming leathery with age. The scarlet flowers, a little, smaller than those of M. orista-paili, are in small racemes in the upper leaf axils. Native to Brazil.

104115. GLEDITSIA AMORPHOIDES (Griseb.) Taub. Caesalpiniaceae. Honeylocust.

A spiny tree, native to Boltvia, which sometimes attains a height of 50 feet with a trunk diameter of over 2 feet. The bark is used in place of soap for removing spots from woolen and cotton goods, hence the name "quillay." The leaves, young twigs, and roots have astringent properties. The wood is used in turning, for furniture, and for wooden soles and pegs. 104103 to 104124-Continued.

For previous introduction see 48673.

104116. PSYCHOTRIA Sp. Rubiaceae.

The psychotrias are small tropical trees with opposite leaves and small flowers in axillary or terminal cymes.

104117. IODINA RHOMBIFOLIA HOOK, and Arn. Santalaceae.

Quebrachillo. A low bushy shenderbranched tree with three-pointed spiny leaves. The wood is white and smooth and the bark is thick. It is native to Brazil.

For previous introduction see 101517.

104118 to 104120. MIMOSA spp. Mimosaceae.

104118. MIMOSA ACULEATICARPA Ortega.

A shrub over 6 feet high, covered all over with stout spines, forming an impenetrable hedge which thrives on the very driest poor soils. The small flower heads are pink or white. Native to central and southern Mexico.

For previous introduction see 62095.

104119. MIMOSA CARINATA Griseb."

A subtropical spiny tree, with bipinnate leaves consisting of 1 or 2 pairs of pinnae and 12 to 24 pairs of minute pinnules. The purple and green piaid flowers are in small heads. Native to Argentina.

For previous introduction see 94778.

104120. MIMOSA SEPIARIA Benth.

A shrub or small tree, with hipinnate leaves made up of 4 to 8 pinnae each bearing 20 to 40 linear pinnules one-fourth of an inch long. The small white flowers are borne in large lax panicles. It is native to Brazil.

For previous introduction see 91786.

104121. PIPTADENIA MACBOCARPA Benth. Mimosaceae.

An important timber tree, native to Brazil, with compound leaves 6 inches long composed of plnnae each with 10 to 25 pairs of pinnules. The small white flowers occur in globose heads in the axils of the leaves, sometimes at the ends of the branchlets. The pods are 4 to 10 inches long and 1 inch wide, with thickened margins.

For previous introduction see 88244.

104122. PIPTADENIA RIGIDA Benth. Mimosaceae.

An unarmed tree or shrub from spbtropical South America, with axillary beads of small white flowers and small stiff linear, shining-green leaflets. The long slender stiff-winged pods are rich in tannin; the wood is used in shipbuilding.

For previous introduction see 48075.

104123. PORLIERIA LORENTZII Engl. and Prantl. Zygophyllaceae.

An evergreen shrub or small tree, with stout crooked branches and pinnate leaves with small narrow leaflets. The small fragrant bluish flowers are in small clusters or solitary. Native to Argentina.

1. N. M. M.

104103 to 104124-Continued.

104124. QUILLAJA BRASILIENSIS (St. Hil. and Tul.) Mart. Rosaceae.

A Brazilian tree up to 25 feet high, with alternate oblong-lanceolate leaves and corymbs of white flowers. The symmetrical habit and very leafy crown of the tree make it a striking ornamental when in flower. The bark and the wood contain saponin.

For previous introduction see 48686.

- 104125 to 104127. EBYTHRINA spp. Fabaceae.
- From Cuba. Seeds presented by Percy Wilson, associate curator, New York Botanical Garden. Bronx Park, New York, N. Y. Received January 19, 1984.

104125. ERYTHBINA GRISEBACHII Urb.

No. 3 (753425). Piñon botijo or piñon real. From Punta Podre, Oriente, Cuba. A large tree with trifoliolate leaves; these are roundish, about 4 inches long, and membranous. The scarlet flowers, about 2 inches long, are produced in small racemes. Native to Cuba.

104126. EBYTHBINA VARIEGATA Stickm. (E. indica Lam.).

No. 2 (753424). From Soledad, Cienfuegos. A deciduous tree, native throughout India, with clusters of large brightred flowers that appear before the leaves. The pods, 4 to 8 inches long, contain several dark-carmine seeds.

For previous introduction see 98846.

104127. EBYTHBINA Sp.

No. 1 (753423). From Estación Experimental Agronómica, Santiago de las Vegas, Cuba.

104128 and 104129.

From Jamaica Plain, Mass. Cuttings presented by the Arnold Arboretum. Received January 20, 1934.

104128. VIBURNUM SETIGERUM Hance (V. theiferum Rehd.). Caprifoliaceae.

An upright deciduous shrub about 12 feet high, with dark-green, oval-oblong leaves about 4 inches long and ovoid bright-red fruits. Native to central China.

For previous introduction see 77851.

104129. VIBURNUM SETIGERUM Hance (V. theiferum Rehd.). Caprifoliaceae.

Variety aurantiaoum. A yellow-fruited form.

104130 to 104140. TRITICUM AESTIVUM L. (T. vulgare Vill.). Poaceae.

Common wheat.

- From Argentina. Seeds presented by Raul Famella, Fitotecnia, Ministerio de Agricultura, Buenos Aires. Received January 20, 1934.
 - 104180. Alto de sierra. From Guatrache. Developed at the Federal Department of Agriculture, Buenos Aires.
- 104131. Excelsior. Developed at La Prevision, private seed farm.
 - 104132. General Urquiza. SF. no. 12771. Developed at Solo Experiment Station, private seed farm.

104130 to 104140-Continued.

- 104183. Guatrache. SF. no. 12723. Developed at the Federal Department of Agriculture, Buenos Aires.
- 104184. La Prevision 25. SF. no. 12728. Developed at La Prevision, private seed farm.

Nos. 104135 and 104136 were developed at the Federal Department of Agriculture, Buenos Aires.

104135. Lin Calel. SF. no. 13568.

104136. Rafaela 6, M. A. SF. no. 12751.

Nos. 104137 to 104139 were developed by E. Klein, private seed farm.

104137. San Martin. SF. no. 12706.

104138. Triunfo. SF. no. 12709.

104139. Vencedor. SF. no. 12708.

104140. 38 M. A. SF. no. 12713. Developed at the Federal Department of Agriculture, Buenos Aires.

104141 to 104144.

- From Chosen. Seeds presented by Dr. T. Kaburaki, Director, Forest Experiment Station, Keijo. Received January 19, 1934.
 - 104141. ABIES NEPHROLEPIS (Trauty.) Maxim. Pinaceae. Fir.

A Siberian conifer up to 100 feet high, resembling the Siberian fir, Abies stbirica, but with rough bark, pubescent branchlets, shorter leaves, and smaller cones.

For previous introduction see 90784.

104142. BETULA DAVURICA Pall. Betulaceas.

A tree up to 60 feet high, with widespreading branches and purplish-brown flaky bark. The broadly wedge-shaped leaves, 2 to 4 inches long, are dark green above and have serrate margins.

For previous introduction see 82474.

104143. FORSYTHIA VIRIDISSIMA KOREANA Rehd. Oleaceae.

This variety differs from the typical and well-known F. viridissima in being more spreading in habit and in having broader leaves and larger and brighter flowers. It is cultivated in Keijo, Chosen.

For previous introduction see 82477.

104144. THUJA KORAIENSIS Nakai. Pinaceae.

A small evergreen tree native to the mountains of Chosen at 6,000 feet altitude. While commonly prostrate, it sometimes becomes 12 feet high; the lower branches are usually elongated, and the foliage is intensely green.

104145. VITIS VINIFERA L. Vitaceae. European grape.

From Tripoli, Africa. Cuttings presented by Ernestine Fenzi. Received January 26, 1934.

The common grape of Tarhuna, Tripoli.

104146 to 104149. PISTACIA VERA L. Anacardiaceae. Pistache.

From the Union of Soviet Socialist Republics. Seeds presented by the Department of New Cultures and Introduction, Leningrad. Received January 26, 1984. 6

104146 to 104149-Continued.

A collection of seeds originally from **Turkmenistan**, Russian Turkistan.

104148. No. 141591. **104148.** No. 141805. **104147.** No. 141715. **104149.** No. 142059.

104150 to 104157. PRUNUS spp. Amyg-

From Manitoba, Canada, Scions presented by G. F. Chipman, Winnipeg. Received January 30, 1934.

104150 and 104151. PRUNUS ARMENIACA L. Apricot.

Seedlings of a native apricot from the Harbin district, Manchurla. The trees have been growing near Winnipeg for 4 years and have shown no winterkilling on the wood, but the fruit buds have not been entirely hardy.

104150, No. 335.

104151. No. 336.

104152, PRUNUS SD.

Champa cherry. A hybrid between the North Dakota sand cherry (Prunus bessey!) and some unknown plum; originated by Dr. N. E. Hansen, Brookings, S. Dak.

104153. PRUNUS Sp.

Sand cherry, selection no. 842. A seedling of the Sioux sand cherry, originated by Dr. N. E. Hansen. The fruit is over three-quarters of an inch in diameter, and, although the flesh is soft, the flavor is very good. The tree is winter-hardy at Winnipeg.

104154. PRUNUS SD.

Tom Thumb cherry. A hybrid between the North Dakota native sand cherry (Prunus besseyi) and some unknown plum; originated by Dr. N. E. Hansen, Brookings, S. Dak.

104155 to 104157. PRUNUS spp.

Hybrids originated by Dr. N. E. Hansen, at Brookings, S. Dak., between the Assiniboine, a pure Manitoba native plum, and three of Burbank's best California plums. At a temperature as low as 45° to 50° F. below zero they show only slight winter injury.

104155. PRUNUS sp.

Oree plum.

104156. PRUNUS Sp.

Ojibwa plum.

104157. PRUNUS SP.

Pembina plum.

104158 to 104160. PRUNUS DOMESTICA L. Amygdalaceae. Common plum.

From Germany. Scions presented by Adolf Schrey, Ratzeburg. Received January 30, 1934.

A collection of plum scions, received under the following varietal names, for the use of Department specialists.

104158. Buhler.

104159. Erfinger Frühzwetsche.

104160. Lützelsachsener.

48500-36-2

104161 to 104163.

 $\{ \phi_{i} \in [0,1]_{i \in \mathbb{N}} \}$

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledud, Cienfuegos, through F. G. Walsingham. Received February 5, 1984.

104161. GLEDITSIA AMORPHOIDES (Griseb.) Taub. Caesalpiniaceae. Honeylocust.

For previous introduction and description see 104115.

104162. PINUS EDULIS Engelm. Pinaceae. Pino.

A small tree, generally 10 to 20 feet high, sometimes as much as 40 feet high, with horizontal branches, developing a rounded head in old age. The rigid darkgreen leaves are about 1 inch long, and the small greenish-yellow cones are over an inch long. Native to the southwestern United States.

104163. TOLUIFERA PEREIRAE (Klotzsch) Baill. Fabaceae. Balsam-of-Peru.

A handsome leguminous tree with glossy green, pinnate leaves and racemes of white flowers. The balsam-of-Peru of commerce is obtained from the lower part of the trunk.

For previous introduction see 97900.

104164 to 104172.

From Australia. Seeds presented by F. H. Baker, Richmond, Victoria. Received January 26, 1934.

104164. ACACIA sp. Mimosaceae.

Locally known as jam wood; the blossom has the fragrance of raspberry jam. Received as *Acacia acuminata*, but the seeds do not agree with that species.

104165 to 104172. EUCALYPTUS spp. Myrtaceae.

104165. EUCALYPTUS CALOPHYLLA Lindl.

Variety rosea. A medium-sized Australian tree with dense foliage and dark, corky, deeply furrowed bark. The thick firm leaves are ovate-lanceolate, and the large pink flowers appear in big clusters. It is an ornamental tree of slow growth, not enduring much frost or drought, and is used as a shade tree in California.

For previous introduction see 44959.

104166. EUCALYPTUS GOMPHOCEPHALA DC. Tooart.

A tree, native to Australia, of fairly rapid growth, which reaches a height of 100 feet. The very heavy, tough, and strong wood is used for general construction. This species will endure but little frost and prefers limestone soils.

For previous introduction see 103654.

104167. EUCALYPTUS LEHMANNI (Schauer) Preiss. Lehmann gum.

A large shrub or small tree with rough reddish bark, peeling off in irregular sheets. The greenish-yellow flowers open from July to September. Native to Western Australia.

For previous introduction see 95318.

104164 to 104172-Continued.

104168. EUCALYPTUS TORQUATA Luchm.

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

104169. DUCALYPTUS MACBOCARPA Hook.

A stout Australian shrub or small tree up to 15 feet high, with thick, rigid, cordate, glaucous leaves 6 inches long and large, solitary, brilliant orange or crimson flowers.

For previous introduction see 93838.

104170. EUCALYPTUS PATENS Benth.

An Australian tree up to 100 feet high, with falcate lanceolate leaves 6 inches long, short panicles of small flow-ers, and flat-topped globular fruits. The tough durable wood is used by

wheelwrights.

For previous introduction see 77611.

104171. EUCALYPTUS PREISSIANA Schau.

A shrubby eucalyptus about 8 feet high, with rigid branchlets, shining-green oblong-elliptic leaves nearly 4 inches long, and small yellowish flowers in axillary clusters. Native to southern Australia.

104172. EUCALYPTUS sp.

Received under the name "steedman-nii." It is said to have golden-yellow flowers and shining, reddish bark. Na-tive to Western Australia.

104173 to 104190. VITIS VINIFEBA L. Vitaceae. European grape.

From India. Plants purchased from the Government Botanical Gardens, Mohala, Sangyan, Saharanpur. Received Febru-ary 1, 1934. From India.

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

104173. Bedana.

104174. Bedana Red Kishmish.

104175. Bedana White.

104176. Black Round.

104177. Country.

104178. Crystal.

104179. General de la Marmora.

104180. Haitha

104181. Hussaini.

104182. James.

104183. Japan.

104184. Kadhari.

104185. Large White.

104186. Mothea.

104187. Red Prince.

104188. Sharbati.

104189. Trebbina.

104190. Vineyard.

104191. Gossypium sp. Malvaceae. Cotton.

cotton. om Hawaii. Seeds presented by J. M. Westgate, Director, Hawaii Agricultural Experiment Station, Honolulu. Received February 1, 1934. From Hawaii.

Caravonica cotton. Introduced for the use of Department specialists interested in cotton breeding.

104192, ERYTHBOXYLON COCA Lam. Cocaine-tree. Erythroxylaceae.

rom Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Clen-fuegos, through F. G. Walsingham. Re-ceived February 1, 1934. From Cuba.

A tropical shrub, native to Peru, 5 to 6 feet high with yellowish flowers borne in clusters of 3 to 5. It is grown commercially on a large scale throughout the warmer parts of South America, also in Java and Ceylon, for the sake of cocaine, which is extracted from the dried leaves.

For previous introduction see 78509.

- 104193 to 104195. ALLIUM CEPA L. Onion. Lillaceae.
- From Italy. Seeds purchased through W. Roderick Dorsey, American consul gen-eral, Genoa. Received February 3, 1934.
 - 104193. Rossa della rocca. Introduced as a red onion, but proved to be a fine large yellow-skinned, white-fleshed onion of exceptionally sweet taste.

104194. Rossa Piatta di Bassano.

104195. Rossa Sanguigna di Genova.

104196. SALIX TAXIFOLIA H. В. K. Salicaceae.

From Tucson, Ariz. Cuttings collected by S. B. Detwiler, Bureau of Plant Industry. Received February 6, 1934.

A shrub, or occasionally a tree 50 feet high, with silvery silky lanceolate or linear leaves about 1 inch long. Native to north-ern Mexico and the southwestern United States.

104197 to 104210.

From France. Plants purchased from the Grandes Roseraies du Val de la Loir, Orléans. Received February 6, 1934.

104197. CARBIEREA CALYCINA Franch. Flacourtiaceae.

A beautiful tree up to 50 feet high, very similar in foliage to Idesta poly-carpa. The alternate leaves, 5 to 7 inches long, are ovate to ovate-oblong, smooth, dark green shaded to purple. The tubular white flowers, less than an inch long, are in few flowered terminal clus-ters. Native to the northeastern part of Szechwan, China, at 4,500 feet altitude.

For previous introduction see 29094.

104198. CERCIS RACEMOSA Oliver. salpiniaceae. R Cae-Redbud.

An ornamental Chinese tree about 15 feet high, with dark-green, heart-shaped leaves and small rosy flowers in pendulous racemes about 4 inches long. The free commences to flower when 1 year old.

For previous introduction see 78118.

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104197 to 104210-Continued.

101191. CLETHRA BARBINERVIS Sieb. and Zuec. Clethraceae. Tree clethra. T_{Li}

A shrub or tree from eastern Asia, up to 80 feet high, with oval-oblong, pointed, sharply, serrate, hairy-veined leaves from 3 to 6 inches long and panicled racemes of white fragrant flowers which appear from July to September. 12.12

For previous introduction see 43834.

106390 to 104202. CORVLOPSIS spp. Hamamelidaceae.

104200. CORYLOPSIS PAUCIFLORA Sieb. and Zucc. Winterhazel.

A spreading shrub, usually about 4 feet high, with slender branches, bright-green, broadly oval acuminate leaves, heart-shaped at the base and up to 3 inches long. The primrose-yellow flow-ers, less than an inch across, are in pairs or threes on short spikes. Native to Japan and said to be less hardy than *Corylopsis spicata*, but more attractive because of its larger flowers. their entis.

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104201. CORYLOPSIS PLATYPETALA LEVIS Rehd. and Wils. : 19

A deciduous shrub 3 to 7 feet high, with slender branches, ovate cordate, and dark-green leaves 2 to 4 inches long, by and fragrant pale-yellow flowers in rather dense racemes. Native to western Szechwan, China.

104202. CORYLOPSIS WILLMOTTIAE Rehd. and Wils.

A deciduous shrub, up to 12 feet high, native to central China. The leaves, 1 to 3 inches long, are oval or some-wuat heart-shaped with sinuate mar-gins, and the yellow, fragrant flowers, which appear in early spring, are in racemes about 3 inches long.

aphabic For previous introduction see 73428.

104203. DAPHNIPHYLLUM G LAUCESCENS Blume. Euphorbiaceae.

An East Indian evergreen tree with en-tire oblong-lanceolate leaves, inconspicu-ous flowers, and black fleshy drupes. The tree is valued for the ornamental char-acter of its laurellike foliage.

For previous introduction see 96521.

104204. DIPELTA VENTRICOSA Hemsl. Caprifoliaceae.

A deciduous shrub, 6 to 15 feet high, with downy young shoots and oval to ovate-lanceolate leaves 2 to 6 inches long. The bell-shaped flowers, about 1 inch long. are borne on drooping pedicels at the end and in the leaf axils of short side shoots. The corolla is deep rose outside and paler within, except in the throat, which is orange colored. Native to western China.

For previous introduction see 81848.

104205. DIPELTA YUNNANENSIS Franch. Caprifoliaceae.

A shrub 10 to 15 feet high, native to western China, with opposite, entire, lanceolate leaves 3 to 6 inches long and leafy racemes of two-lipped, tubular-cam-panulate, pinkish to purple flowers having shieldlike floral bracts.

For previous introduction see 103423.

104197 to 104210-Continued.

104206. LIRIODENDRON CHINENSE (Hemsl.) Sargent. Magnoliaceae. Chinese tuliptree.

An ornamental deciduous tree up to 50 feet high, native to central China. The leaves, 5 to 6 inches long, have four acute or acuminate lobes, rounded or slightly cordate at the base; the lilylike flower is almost 2 inches long. This variety is somewhat more tender than our native species, *Liriodendron tulipifera*.

For previous introduction see 99188

104207. LOROPETALUM CHINENSE (R. Br.) Oliver. Hamamelidaceae.

but somewhat tender. handsome bushy evergreen Chinese shrub, about 5 feet high, with wiry hairy branches, oval, unsymmetrical leaves, and curious white witch-hazellike flowers during the early spring.

For previous introduction see 102949.

104208. STYRAX DASYANTHA Perkins. Styracaceae Snowbell.

An ornamental Chinese shrub or small tree up to 25 feet high, with oblong-elliptic leaves about 3 inches long and showy white flowers in slender racemes.

For previous introduction see 72966.

104209. STYRAX PLANTINIFOLIA Engelm. Styracaceae.

A large deciduous shrub about 15 feet high, with roundish, sinuate-serrate leaves 2 to 3 inches across, and showy pure-white flowers in racemes. Native to southern and central Texas.

104210. HOLBOELLIA CORIACEA Diels. Lardizabalaceae.

An evergreen climbing shrub with dark-green leathery compound digitate leaves of three to seven leaflets and small flowers in axillary racemes; the staminate flowers are white and the pistillate flowers violet. Native to China.

04211 and 104212.

om Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cien-fuegos, through F. G. Walsingham. Re-ceived in February 1934. From Cuba.

104211. ANTIGONON GUATIMALENSE Meisn. Polygonaceae.

Throughout the American Tropics one Throughout the American Tropics one of the most popular and conspicuous orna-mental herbaceous climbers is the rosa de montana (Antigonon leptopus), with its showy racemes of rose-pink flowers. The species A. guatimalense, while much less common in cultivation, has more numerous flowers that are deeper pink and nearly twice as large.

for previous introduction see 101703.

104212. CASSIA TIMORIENSIS DC. Caesalpiniaceae.

Originally from the Botanic Garden, Buitenzorg, Java. A rather low tree with slender downy branches, pale green leaves up to 9 inches long, bright-yellow flowers, and thin, glossy, flexible pods sometimes 6 inches long. The tree is distributed throughout the Malay Archipelago and the Philippine Islands.

For previous introduction see 100682.

104213 to 104216.

From Ceylon. Seeds presented by T. H. Parsons, Curator, Royal Botanic Gardens, Peradeniya. Received February 1, 1934.

104213. ACTINOBHYTIS CALAPPABIA Wendl. and Drude. Phoenicaceae. Palm.

A robust palm 40 feet high, with a smooth stem conspicuously ringed, pinnate leaves 9 feet long and 6 feet wide, and a large pendulous cluster of small flowers followed by ovoid, red fruits 3 inches long. Native to the East Indies.

For previous introduction see 94093.

104214. ARECA Sp. Phoenicaceae. Palm.

104215. EUTERPE EDULIS Mart. Phoenicaceae. Para palm.

A palm, native to Brazil, which becomes 40 feet high, with a slender inclined trunk, pinnate leaves, and fruits the size of marbles. A nutritious beverage is made by the natives from the fibrous fiesh surrounding the seeds.

For previous introduction see 97913.

104216. MARTINEZIA EBOSA Linden. Phoenicaceae. Palm.

A small ornamental feather-leaved palm from tropical America, which is covered throughout with long needlelike spines. A related species (Martinezia caryotacfolia) is grown to some extent in lower Florida.

For previous introduction see 72600.

104217 to 104219.

From Africa. Seeds presented by H. G. Poynter, Department of Agriculture, Ibadan, Nigeria. Received February 3, 1934.

104217. PHOENIX RECLINATA Jacq. Phoenicaceae. Senegal date palm.

Okunkun or Okun. Collected about 5 miles from the town of Oyo, Nigeria. A date paim 20 to 30 feet high, native to tropical and subtropical parts of Africa. The reclinate pinnate leaves are 6 to 9 feet long and have rigid green leaflets. The yellowish fruits with sweet edible pulp are half an inch long.

For previous introduction see 102637.

104218. STRYCHNOS SD. Loganiaceae.

Sample A. Collected about 4 miles from the town of Oyo.

104219. STRYCHNOS Sp. Loganiaceae.

Sample B. Collected about 5 miles from the town of Oyo.

104220 to 104225.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received February 6, 1934.

104220 to 104224. CINCHONA spp. Rubiaceae.

Seeds received from the Government Cinchona Plantation, Musong Kalimpong, Bengal, India.

104220. CINCHONA LEDGERIANA MOENS.

A tree, native to the Andes, yielding a bark remarkably rich in quinine

104220 to 104225-Continued.

which crystallizes readily as quinate supphate. The percentage of the other alkaloids present is relatively small. The bark of this species matures in the fifth or sixth year and does not increase its quinine content after that age.

For previous introduction see 103441.

104221. CINCHONA LEDGEBIANA × OFFI-CINALIS.

For previous introduction see 100115.

104222. CINCHONA LEDGERIANA × SUC-CIRUBRA.

For previous introduction see 100116.

104223. CINCHONA OFFICINALIS L.

A small tree only 20 feef high, native to Peru and Ecuador in the high valleys of the Andes. It is now the most important species grown in the Nilgiri Hills in India.

For previous introduction see 100987.

104224. CINCHONA SUCCIRUBBA Pavon.

104225. FLACOURTIA INERMIS Roxb. Flacourtiaceae.

Collected at the Plant Introduction Garden, Summit, Canal Zone. The Lovilovi tree of Ceylon. The brilliant red fruits, the size of cherries, are produced in immense quantities. They are very sour and are said to make excellent jelly and preserves.

For previous introduction see 102666.

- 104226. TSUGA FORMOSANA Hayata. Pinaceae.
- From Japan. Seeds presented by Motoo Ohsako, Forest Experiment Station, Maguro, Tokyo. Received February 8, 1934.

For previous introduction and description see 103989.

104227 and 104228.

From French Indo-China. Seeds presented by M. Pol'ane, Institut des Recherches Agronomiques de l'Indochine, Division de Botanique. Received February 12, 1984.

104227. CITRUS sp. Rutaceae.

104228. CITRUS sp. Rutaceae.

104229. ZEA MAYS L. Poaceae. Corn.

From Brazil. Seeds presented by Dr. J. F. Assis. Received February 10, 1934.

Introduced for the use of Department specialists.

- 104230. QUERCUS DENTATA Thunb. Fagaceae. Daimyo oak.
- From Japan. Seeds purchased from the Yokohama_Nursery Co., Yokohama. Received February 15, 1934.

A large tree, native to Chosen, northern and western China, 75 to 80 feet high. The obovate, sinuate-lobed leaves, dark green above and grayish tomentose beneath, are 10 to 12 inches long and 9 inches wide, and the ovoid acoms, 1 inch wide, are about half covered by the cup which has lanceolate spreading scales. The leaves turn a gorgeous red in the autumn.

For previous introduction see 89697.

104931 to 104938. GOSSYPIUM spp. Malvaceae. Cotton.

From Africa. Seeds presented by the Director, Cotton Breeding Station, Barberton, Transval, Union of South Africa. Received February 8, 1934.

introduced for the use of Department appecialists interested in cotton breeding.

104931. GOSSYPIUM sp.

U. 4. Original type.

104232. GOSSYPIUM sp.

920. A rather late strain.

104233. GOSSYPIUM sp.

921. A medium strain.

104234. GOSSYPIUM SP.

955. A very early strain.

104985. GOSSYPIUM Sp.

0240. A medium strain.

104936. GOSSYPIUM sp.

9264. A rather late strain.

104237. GOSSYPIUM SD.

9363. A selection from Cambodia which is practically immune from Jassid in the "Transvaal.

104238. GOSSYPIUM Sp.

4/4. An early strain.

104239 and 104240.

Phom Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnoid Arboretum, Soledad, Clenfuegos, through F. G. Walsingham. Received February 12, 1934.

104239. BUTIA ERIOSPATHA (Mart.) Becc. Phoenicaceae. Apricot palm.

A handsome pinnate-leaved palm with violet-colored stems, creamy flowers, and collie yellow fruits the size of a small plum. It is native to Brazil.

For previous introduction see 91776.

100040. LIVISTONA COCHINCHINENSIS (Blume) Mart. Phoenicaccae. Palm. A slender palm about 50 feet high, with a crown of large fan-shaped leaves. It is

a crown of large lan-snaped leaves. It is

For previous introduction see 87434.

104941. OPERCULINA TUBEROSA (L.) Meisn. Convolvulaceae.

From Texas. Seeds presented by L. G. McLean, San Antonio Field Station. Received February 12, 1934.

A perennial, stout stemmed, herbaceous vine with large compound leaves composed of seven oblong leadets. The three to six pellow flowers are borne on a long peduncie. The fruit is a membranous globular capsule about 1 inch long, containing two to four large seeds which are covered with short black hairs. It is native to Brazil.

For previous introduction see 87516.

104242 to 104247. VITIS VINIFERA L. Vitaceae. European grape.

From Morocco. Cuttings presented by H. Brayard, Directeur de la Station Experimentale, Marrakech, Morocco Department of Agriculture. Received February 16, 1934.

104242 to 104247-Continued.

A collection of grape cuttings introduced, under the following varietal names, for the use of Department specialists.

104242. Ain Naja.

104243. Bernike.

104244. Besoul el Aouada.

104245. Feriala.

104246. Kalb el Tir.

104247. Sébad-Tolba

104248 to 104250.

From Arizona. Plants collected by S. B. Detwiler and F. J. Crider, Bureau of Plant Industry. Received February 12, 1984.

104248. COWANIA STANSBURIANA TOFF. Rosaceae.

A bushy shrub 6 to 12 feet high, with deeply lobed, oval leaves half an inch long, white-tomentose beneath, and sulphur-yellow solitary howers three-fourths of an inch across. Native to the mountains of the southwestern United States.

104249. PAROSELA GREGGII (A. Gray) A. A. Heller, Fabaceae.

A low shrub with silky hairy branches and densely hairy compound leaves with 5 to 11 obovate leaflets less than half an inch long. The pink flowers are in dense spikes about 1 inch long. Native to Mexico and Arizona.

104250. SENECIO sp. Asteraceae.

A bush about 3 feet high, with pinnately divided leaves at first whitish tomentose, and yellow flower heads about 1 inch across. Native to western Arizona.

104251. GOSSYPIUM AFRICANUM Watt. Malvaceae.

From Africa. Seeds collected by Aug. Chevalier in Damergou, French Nigeria. Received February 14, 1934.

A spreading bush about 4 feet high, with ovate-rounded, cordate, tomentose leaves 1½ inches across and large yellow flowers with purple blotches. Native to tropical Africa.

104252 to 104263.

From India. Seeds presented by Dr. Eileen W. Erlanson, Science College, Trivandrum, Travancore. Received February 14, 1934.

104252. ANTIGONON GUATIMALENSE Meisn. Polygonaceae.

Collected January 6, 1984, at Trivandrum.

For previous introduction and description see 104211.

104253. CEDRELA ODOBATA L. Meliaceae. Cigarbox-cedar.

Collected January 1984 in the mountains of Travancore. This is the West Indian or Spanish cedar, the soft fragrant wood of which is easily worked and is in great demand for cigar boxes. It is also used as a shade tree in coffee plantations.

For previous introduction see 100377.

104254 to 104257. CLITORIA TERNATEA L. Fabaceae.

An ornamental leguminous vine with pea-shaped flowers about 1 inch long. The green seed pods are used as a vegetable in India.

104252 to 104263-Continued.

104254. Deep blue single flowers.

104255. Dark blue double flowers.

104256. White single flowers.

104257. Pale mauve single flowers.

104258. HELICTERES ISORA L. Sterculiaceae.

A tomentose shrub or small tree with obliquely cordate, often lobed, serrate leaves, scabrous above, pubescent beneath, and about 3 inches long. The red flow-ers, about 1½ inches long, are in short cymes. Native to India and Cevion.

104259. PTEBOCARPUS MARSUPIUM Roxb. Fanaceae.

An erect tree with alternate leathery smooth green trifollolate leaves and small yellowish flowers one-half inch long, in copious racemes. Native to western India.

104260. PTYCHOSPERMA sp. Phoenicaceae. Palm.

Collected December 3, 1933, in the Bo-tanic Garden at Trivandrum. A small, very ornamental palm.

104261, QUASSIA AMARA L. Simaroubaceae.

Indian cinchona. A lofty tree, native to Surniam, which resembles the ash, with large showy red flowers, followed by beautiful and decorative fruits arranged in fives around a fleshy peduncie. The wood of this tree is extremely bitter and is used as a remedy for certain fevers.

For previous introduction see 98878.

104262 and 104263. SESAMUM OBLENTALE L. Pedaliaceae. Sesame.

Yellu-chedi. Collected at 200 feet alti-tude in Shoranus, S. Malabar, India, De-cember 19, 1933.

104264 to 104267.

From Central America. Seeds presented by Señor Julio E. Castañeda de Ranero, Huehuetenango, Huehuetenango, Guate-mala, through J. L. Colom, chief, division of agricultural cooperation, Pan American Union, Washington, D. C. Received Feb-ruary 16, 1934.

104264. BYRSONIMA COTINIFOLIA H. B. K. Malpighiaceae.

Nance. An erect shrub or small tree, up to 30 feet high, with oblong-orate leaves, 2 to 4 inches long, densely hairy beneath when young. The small reddish or yellowish flowers are succeeded by small yellow acid edible fruits one-half inch in diameter. Native to tropical America. America.

104265. CROTALARIA GUATEMALENSIS Benth. Fabaceae.

Chipilin. A small shrub with trifolio-late leaves, the leaflets ovate-oblong or elliptic and short dense racemes of bright yellow flowers. Native to Guatemala.

104266. DOLICHOS LABLAB L. Fabaceae. Hyacinth-bean.

Morada.

104267, PHASEOLUS CALCABATUS Roxb. Fabaceae. Rice bean.

Choreque. A very productive pole bean of rapid growth. The seeds are small, about the size of a grain of rice, kidney-shaped, and dark red.

For previous introduction see 102672.

104268. PRUNUS ABMENIACA L. Amyg-Apricot. dalaceae.

com China. Scions presented by Carter IX Holton. Shunkwa, Kansu. Received Feb-ruary 21, 1934. From China.

A freestone apricot received under the varietal name *Peach*, with the shape of an apricot but resembling a large peach in size. Flavor reported excellent either in the fresh or the canned state. Grafted on apricot rootstock.

- 104269. CINCHONA LEDGERIANA MOENS. Rubiaceae.
- From South America. Seeds presented by Col. Victor E. Ruehl, Caldwell, N. J. Received February 19, 1934.

For previous introduction and description see 104220. È.

- 104270 to 104273. VITIS VINIFERA L. European grape. Vitaceae.
- From northern Africa. Cuttings presented by Ernestine Fenzi, Tripoli. Received February 23, 1934.
 - 104270. A red grape resembling Flame Tokay, the vines of which make a vigorous growth. Collected at Bengasi, but said to have been introduced from the Sudan. Used as a table grape.
 - 104271. A seedless table grape, ripening early in July, with the fruit is large loose bunches. Cultivated in vineyards in Tripoli.
 - 104272. A white table grape from Tar-huna, said to have come originally from the Sudan.

104273. A grape from Tarhuna with round black fruits.

104274. CISTUS CYPRIUS Lam. Cistaceae.

From Oregon. Plants presented by Ralph A. Fenton, Portland. Received February 24, 1934.

An erect shrub up to 6 feet high, bearing large white flowers which are blotched with purple at the base. Native to southern Europe.

For previous introduction see 74515.

104275 to 104280. PBUNUS ABMENIACA Apricot. L. Amygdalaceae.

From northern Africa. Scions presented by J. B. Plessis, Jardin d'Essais, Sfax, Tu-nista. Received February 24, 1934.

A collection of apricot scions received under the following variefal names for the use of Department specialists. 104975. Amor Leuch.

104276, Chechi.

104277. Le plus précoce.

104278. Lenadgin. An indigenous variety,

arel: veniev Nationalist

1. 10064

el 11,34

104279. Luizeb-bouchoi. Log association and

104280. Musque. An indigenous variety.

104281 to 104314.

From Morocco. Trees and cuttings pre-sented by H. Brayard, Directent de la Station Experimentale, Marrakech, Mo-rocco Department of Agriculture, Re-ceived February 28, 1934.

104281 to 104314—Continued.	104315 to 1
A collection of fruit trees and grape cut- tings introduced under their varietal names for the use of Department specialists.	From the publics. of Plant
104281 to 104283. AMYGDALUS PERSICA L. Amygdalaceae, Peach.	104315. A
104281. Charles Foucauld.	dalacea Collecte
104282. De Noël.	cultivatio
104283. Edouard André.	region. 104316. E
104284. PRUNUS DOMESTICA L. Amygdal- aceae. Common plum.	ceae.
104285 to 104289, AMYGDALUS PERSICA L. Amygdalaceae. Peach.	Collecte Desert St
104285. Reine des Précoces.	sented by branching
104286. Senateur Cazenave.	setumlike and inco
104287. Soleil d'Octobre.	Arabia ar
104288, Souvenir de St. Fortunat.	104817 to
104289. Sr. du 20 Juillet.	ceae. 104317.
104290. MALUS SYLVESTRIS Mill. Mala- ceae. Apple.	no. 1 sian
Reinette lyonnaise.	104318.
104291 and 194292. PRUNUS ABMENIACA L. Amygdalaceae. Apricot.	Turk 104319. Russ
	104320. sian
104292. Précoce du Portugal.	104321.
104293 to 104298. PRUNUS AVIUM L. Amygdalaceae. Sweet cherry.	Russ 104322.
104293. Bigarreau de Bounanol.	sian
104294. Bigarreau du Centenaire.	104328. Tran
104295. Bigarreau Moreau.	104824. P
104296. Cerisier hâtif de Bâle. 104297. Cerisier Précace de la Marche.	SPINOS.
104298. Hative de Berny.	A natu in the no
104299. PYRUS COMMUNIS L. Malaceae.	104325 te
Common pear.	Oleacead
104300 to 104303. PRUNUS DOMESTICA L. Amygdalaceae. Common plum.	From Tunis by J. V.
104800. Monsieur Hatif.	service of l'Agricult
104301. Reine-claude de Juillet.	27, 1934.
104302. Royal.	A collecti
104303. Saint-Jean.	der the fol use of Dep
104304 to 104311. PYRUS COMMUNIS L. Malaceae. Common pear.	104825. B
104804. Beurre d'Étampes.	104326. B
104305. Duchesse Beierd.	104327. M
104306. Duchesse de Poitiers.	104828. M
104807. Gardaia.	104829. N
104308. Professeur Lemaire.	104330. S
104309. Tardive de Toulouse.	104331 to :
104810. Triomphe de Vienne.	From Trin Bruins-Li
104811. Souvenir du Congrès.	den, St.
104312 to 104314. VITIS VINIFEBA L. Vita-	February
ceae. Laropoun Brape.	104331 to 104331.
104312. Abbo.	104331. An
	gracefu
104314. Rackel Jmel.	feet lon

04324.

- Union of Soviet Socialist Re-Seeds presented by the Institute Industry, Leningrad. Received 20, 1934.
 - MYGDALUS PERSICA L. Amyg-Peach. e.
 - ed at the northern limit of peach n in the northern Caucasus
 - PHEDRA ALATA Decaisne. Gneta-

ed near Farab, Repetek Sand tation, Turkmenistan, and pre-Dr. N. I, Vavilov. A tall freely g shrub with rough green equi-branches, small scalelike leaves, nespicuous flowers. Native to and northern Africa.

- 104323. MORUS ALBA L. Mora-White mulberry.
 - From the Soviet Silk Farm, Stalinabad, Tadjikistan, Rus-Turkistan.
 - From Uzbekistan, Russian istan.
 - From Utchkurgan Uzbekistan, ian Turkistan.
 - From Nijniy, Urgentch, Rus-Turkistan.
 - From Kerki, Turkmenistan, an Turkistan.
 - From Amu, Darya River, Rus-Turkistan.
 - From Askeran, Azerbaijan, scaucasia.
- RUNUS CEBASIFERA DIVARICATA: X . Amygdalaceae.

ral hybrid, found in the forest orthern Caucasian region.

- 104330. OLEA EUBOPAEA L. Common olive.
- sia, Africa. Cuttings presented Amiable, inspector, chief of the La Gnaba, Direction Generale de ure, Tunis. Received February

on of olive varieties received un-lowing varietal names, for the artment specialists. ÷

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- arouni.
- dh-el-Haman.

arsaline.

eski.

ab Tamri,

aiali.

.04343.

dad. Seeds presented by M. ch, Curator, Royal Botanic Gar-Clair, Port-of-Spain. Received 19, 1934.

104336. Phoenicaceae. Palm.

ARECA ALICAE F. Muell.

Australian cluster palm, with l shining-green leaves 3 to 6 g. The handsome scarlet oblong

104381 to 104343-Continued.

fruits, three-fourths of an inch long, make this one of the most attractive of all dooryard palms.

For previous introduction see 102590.

104332. ASTROCARYUM AUREUM Griseb. and Wendl.

A paim closely related to Elaeis, with a prickly trunk, pinnately divided leaves of linear-lanceolate segments, shining above and greenish golden be-neath. It is native to Trinidad.

For previous introduction see 80762.

104383. BACTRIS sp.

These are low pinnate-leaved palms, usually with spiny trunks.

104334. BENTINCKIA NICOBARICA (Kurz.) Beccari.

An elegant little palm with a habit resembling that of a Kentia; its native home is the Nicobar Islands. The pin-nate, irregularly divided fronds are large and spreading, and the branched spadix bears small purplish berries.

For previous introduction see 56530.

104335. CHRYSALIDOCARPUS MADAGAS-CARIENSIS Beccari.

A graceful palm, native to Madagas-car, about 15 feet high, with pinnate leaves 10 feet long having the segments arranged in fascicles and appearing to be in threes, giving a triangular effect.

For previous introduction see 103161.

104336. ELAEIS GUINEENSIS Jacq. African oil palm.

COCA Lam.

104337. ERYTHROXYLON Erythroxylaceae. Cocaine-tree.

For previous introduction and description see 104192.

104338 to 104343. Phoenicaceae. Palm

104838. MAXIMILIANA CARIBARA Griseb. and Wendl.

A tall, spineless, pinnate-leaved palm, in general habit resembling the coconut palm. The large pale-green leaves have segments about 3 inches long. Native to St. Kitts, British West Indies.

: 104339. PHYTELEPHAS KARSTENI O. F. Cook.

An ivory palm from the valley of the Magdalena River, Colombia, with no trunk. The numerous large pinnate leaves, with 80 to 100 pairs of pinnae, have no petioles.

104340. PTYCHOSPERMA sp.

The ptychospermas are pinnate-leaved palms, native to the tropical islands of the Pacific Ocean.

104341. RHYTICOCOS AMARA (Jacq.) Beccari

A tall slender perfectly straight feather paim 50 feet high, with leaves 15 feet long. The golden-yellow fruits, 2 inches long by over 1 inch wide, are covered with a pulp filled with long fibers. This pulp ferments easily and develops butyric acid. The seed is large and of the characteristic coconut shape shape.

For previous introduction see 99631.

104331 to 104843-Continued.

104342. SEAFORTHIA ELEGANS R. Br.

A palm up to 30 feet high, native to the southern coast of Australia and the neighboring islands. The dark-green, pinnate fronds are 15 feet long, and the small fruits are oval and very fibrous.

For previous introduction see 96490.

104343. STYLOMA PACIFICA (Seem. and Wendl.) O. F. Cook. Fiji fan palm.

Variety longipedunculata. A form with longer peduncies. A fan palm, native to the Fiji Islands, with a smooth native to the Fiji Islands with a smooth straight trunk^oup to 30 feet high and a foot in diameter. The nearly circular leaves, 4 feet long by 3 feet wide, are on petioles 3 to 4 feet long and, when young, are densely covered with whitish-brown tomentum, later becoming smooth and dom grace. and deep green.

For previous introduction see 80192.

- 104344. MAGNOLIA SPLENDENS Urban. Magnoliaceae.
- rom Puerto Rico. Seeds presented by Mrs. C. E. Horne, of Santurce. San Juan, through T. B. McClelland, Director, Insu-lar Experiment Station, Mayaguez. Re-ceived February 26, 1934. From Puerto Rico.

A Puerto Rican forest tree 45 to 90 feet high, with oval leathery leaves 3 to 7 inches long and white flowers about 3 inches across.

For previous introduction see 30912.

104345 to 104378.

com Scotland. Seeds presented by Sir William Wright Smith, Regius Keeper, Royal Botanic Garden, Edinburgh. Re-ceived February 24, 1934. From

104345. CARAGANA ARBORESCENS Lam. Fabaceae. Siberian pea-tree.

A deciduous Siberian shrub of erect habit up to 20 feet in height which, by pruning, may be made to take the form of a small tree. The pinnate leaves are about 2 inches long, and the small yellow flowers are produced singly on slender stalks.

For previous introduction see 52691.

104346. CARAGANA ABBORESCENS CUNEI-FOLIA (Dipp.) C. Schneid. Fabaceae.

A dwarf form of the well-known Sibe-rian pea-tree with the leaflets quite uni-formly wedge-shaped and the flowers on shorter stalks. This form was originally described from Dahuria and Mongolia.

For previous introduction see 102357.

104347. CARMICHAELIA FLAGELLIFORMIS Colenso. Fabaceae.

A New Zealand shrub about 4 feet high, with stiff slender leaves and short dense axillary fascicles of purplish flowers borne in great profusion.

For previous introduction see 78920.

104348. CARMICHAELIA PETRIEI T. Kirk. Fabaceae.

A stout leafless shrub, 1 to 6 feet high, with rigid branches and very small pur-plish flowers in lax racemes. Native to New Zealand.

104345 to 104378-Continued.

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101349. COTONEASTER AMOENA Wilson. Malaceae.

A branching shrub, 8 to 5 feet high, native to Yunnan, China. The oval leaves are glossy green above and thickly spatial with gray wool underneath. The shall cymes of white flowers are followed by bright-red fruits.

For previous introduction see 76230.

101100. COTONEASTER Sp. Malaceae.

Received as *Ootoneaster denticulata*, a name now referred to *Amelanohier denti*oulota. These seeds, however, are those of a Cotoneaster.

104351 to 104369. DELPHINIUM spp. Ranunculaceae. Larkspur.

> 104351. DELPHINIUM ALTISSIMUM Wall.

> A perennial larkspur from the mountains of Nepal where it becomes 3 to 5 feet high with only a few shining-green, palmately five-lobed leaves 2 or 3 inches across and purplish flowers in an erect raceme.

> 104352. DELPHINIUM AMOENUM Stev.

A hardy herbaceous perennial, glandular hairy throughout, with stems about 2 feet high and palmately divided leaves. The pale-blue flowers are in simple dense racemes. Native to central Asia.

104853. DELPHINIUM AZUREUM Michx.

A hardy herbaceous perennial 1 to 2 feet high, finely gray pubescent, with deeply three- to five-parted leaves and sky-huge flowers. Native to the southern United States.

104854. DELPHINIUM BICOLOB Nutt.

A perennial larkspur about 3 feet high, from the Rocky Mountains near the source of the Columbia River. The three or more leaves are divided into short linear segments. The showy flowers have large bright-blue sepais and yellow petals veined with blue.

104355. DELPHINIUM BRUNONIANUM Royle.

A perennial larkspur a foot or less high, with five-parted leaves, the lobes snarply cut or toothed. The blue and purple flowers are in corymbs. Native to western Tibet at 14,000 feet altitude.

104856. DELPHINIUM BULLEYANUM Forrest.

An alpine larkspur 2 to 4 feet high, native to Yunnan, China, between 11,000 and 12,000 feet altitude. The long-stemmed leaves are palmately divided and incised serrate, and the deep rich-blue flowers are in a paniculate raceme.

104357. DELPHINIUM DECOBUM Fisch.

A laxly upright perennial about 1 foot high. The three-parted leaves with bidd segments are often thick and somewhat succulent, and the handsome deep-blue flowers are in dense racemes. Native to California.

104358. DELPHINIUM DELAVAVI Franch.

A herbaceous perennial 2 to 3 feet high, with incised five-lobed leaves and

48509-36-3

104345 to 104378-Continued.

dense racemes of blue flowers. It is native to Yunnan, China.

For previous introduction see 93886. 104359. DELRHINIUM DYCTIOCARPUM Steud.

A hardy perennial from Siberia with three- to seven-lobed leaves and blue flowers in a lax-branched racesne.

104360. DELPHINIUM DUHMBERGII Huth.

A perennial larkspur from southern Russia about 2 feet high, with five- to seven-parted leaves and pale-blue or white flowers in a narrow dense raceme.

104361. DELPHINIUM FLEXUOSUM Bieb.

A hardy perennial larkspur with violet flowers. Native to Armenia.

For previous introduction see 73973.

104362. DELPHINIUM OCCIDENTALE S... Wats.

An alpine larkspur, glandular pubescent throughout, with a stout stem 3 to 6 feet high and palmately lobed leaves. The purple or white flowers are in a loose terminal raceme. Native to the western United States.

104363. DELPHINIUM PRZEWALSKII Huth.

A Mongolian larkspur about 8 feet high, with three- to five-parted leaves, the divisions deeply laciniate, and skyblue flowers that appear from July to September. Closely related to *Delphinium henryi*, which, however, blooms in March.

104364. DELPHINIUM SCOPULORUM STACHYDEUM Gray.

A form with narrow leaf lobes and an erect stem 3 to 7 feet high. The blue or purple flowers are in dense racemes. Native to the western United States.

104365, DELPHINIUM SPECIOSUM GLA-BRATUM Stapf.

A Himalayan variety about 3 feet high, with dark-blue flowers over an inch across, with a long spur.

104366. DELPHINIUM TATSIENENSE Franch.

A larkspur from western China, with slender stems and hairy leaves divided into three to five sections. The deepblue flowers are in a large loose raceme.

104367. DELPHINIUM TROLLIFOLIUM A. Gray.

A hardy herbaceous perennial with stout elongated roots, erect stems 3 to 6 feet high, and thin five- to sevenparted leaves, orbicular in outline. The dark-blue flowers are in loose manyflowered racemes. Native to Oregon.

104368. DELPHINIUM VESTITUM Wall.

An alpine perennial with a hispid stem 1 to 3 feet high, palmately fiveto seven-lobed leaves, sometimes a foot across, on long stems, and blue flowers in long dense racemes. Native to the temperate Himalayas from 8,000 to 12,000 feet altitude.

104345 to 104878-Continued.

104369. DELPHINIUM YUNNANENSE Franch.

A perennial alpine with a simple or branched stem and pale-green, finely public teaves that are divided to the middle into five obovate include to age ments. The calvx is intensely blue while the petals are bluish violet, the entire flower being four-fifths of an inch long.

For previous introduction see 103214.

104370 to 104373. DRACOCEPHALUM spp. Menthaceae. Dragonhead.

104370. DRACOCEPHALUM Regel. RUPRECHTI

A dwarf compact perennial 1 to 2 feet high, with ovaie-lanceolate, incised and toothed leaves, and axillary clusters of rose purple to linc, tubular two-lipped flowers 1 inch long. It is native to Turkistan.

For previous introduction see 97604.

104371. DRACOCEPHALUM SPECIOSUM Benth.

A robust herbaceous perennial 18 inches high, with radical leaves on petioles up to 1 foot long. The leaf-biades are orbicular-cordate, crenate, and 2 to 4 inches across; the tubular flowers, 1 inch long, are blue purple with black spots and are borne in dense heads. It is native to the Himalayas in India.

For previous introduction see 97606.

104372. DRACOCEPHALUM STAMINEUM Kar. and Kir.

A low bushy perennial with small orbicular-cordate, rugose leaves about two-thirds of an inch across and small dark-blue flowers in dense terminal heads. Native to Kashmir, India, be-tween 11,000 and 16,000 feet altitude.

104373. ESCALLONIA RUBRA (Pav.) Pers. Escalloniaceae. (Ruiz and

A prostrate shrub, with foliage similar to that of *Escallonia macrantha* and large rose-red flowers.

For previous introduction see 78346.

104874. OPHIOPOGON INTERMEDIUS D, Don. Liliaceae.

A hardy perennial indigenous to Ceylon, with grasslike leaves and white flowers. It reaches a height of 12 inches and is only suited to moist shady places.

For previous introduction see 99744.

104375 to 104377. RHEUM spp. Polygon-Rhubarb. лсеяе.

104375. RHEUM OFFICINALE Baill.

104376. RHEUM PALMATUM L. Sorrel rhubarb.

A tall, leafy perennial about 5 feet high, with subcylindrical stems and broad, roundish leaves deeply palmately lobed. Native to northwestern Asia.

104377. RHEUM BHAPONTICUM L. Common rhabarb.

A rhubarb, native to Siberia, where it is hardy in a climate that drops to 45° F. below zero in midwinter.

For previous introduction see 76929.

104345 to 104378-Continued.

104878. RODGERSIA AESCULIFOLIA Batal. Saxifragaceae.

A vigorous plant with large rhizomes and slender petioles supporting six large umbellate, oval leaves, heavily veined and of a beautiful dark green, resembling those of the chestont. The white flowers, in panicles 30 inches long, appear in June. The plant flourishes in cool, half-shaded, peaty soils.

For previous introduction see 42695.

- 104379. SAGITTARIA SAGITTIFOLIA T. Alismaceae. Old-world-arrowhead.
- om China. Corms presented by the in-spector for the Bureau of Plant Quaran-tine, Boston, Mass. Received March 2, 1934. From China.

A Chinese vegetable grown on wet land, very much as dasheens and taros are grown in other parts of the world. The tubers are used like protector used like potatoes.

For previous introduction see 85692.

104380 and 104381. ERIOBOTRYA JAPON-ICA (Thunb.) Lindl. Malaceae. Loquat.

om Italy. Scions purchased from Gio-vanni Ruggiero, gardener, Hotel Schweitz-erhof, Capri, through Col. Coert du Bois, American consul general, Naples. Re-ceived March 2, 1934. From Italy.

Scions from exceptionally fine trees, grow-ing in the grounds of the Schweitzerhof Hotel, Capri.

104382 to 104480. PISTACIA VERA L. Anacardiaceae. Pistache.

From the Union of Soviet Socialist Repub-lics. Seeds presented by the Department of New Cultures and Introduction, Lenin-grad. Received March 2, 1934.

A collection of seeds, originally from Transcaucasia. The U. S. S. R. numbers follow the introduction numbers.

104382.	No.	1.
104383.	No.	2.
104384.	No.	3.
104385.	No.	4.
104386,	No.	5.
104387.	No.	6.
104888.	No.	7.
104389.	No.	8.
104390.	No.	9.
104391.	No.	10.
104392.	No.	11.
104393.	No.	12.
104394.	No.	13.
104395.	No.	14.
104396.	No.	15.
104897.	No.	16.
104398.	No.	17.
104399.	No.	18.
104400.	No.	19.
104401.	No.	20.

JANUARY 1 TO MARCH 31, 1984

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104382 to 104480 Continued. 104408. No. 21.	104454. No. 73.
- 104403. No. 22.	104455. No. 74.
104404. No. 23.	104456. No. 75.
104405. No. 24.	104457. No. 76.
104406. No. 25.	104458, No. 77.
101107. No. 26.	104459. No. 78.
104408. No. 27.	104460. No. 79.
104409. No. 28.	104461. No. 80.
104410. No. 29.	104462. No. 81.
104411. No. 30.	104463. No. 82.
104418. No. 31.	104464. No. 83.
104413. No. 32.	104465. No. 84.
104414. No. 33.	104466. No. 85.
104415. No. 34.	104467. No. 86.
104416. No. 35.	104468. No. 87.
104417. No. 36.	104469. No. 88.
104418. No. 37.	104470. No. 89.
104419. No. 38.	104471. U.S.S.R. no. 149856. Collected a
104480. No. 39.	Tadjikistan, central Asia.
104421. No. 40.	Nos. 104472 to 104480 were collected a Baku, Transcaucasia.
104422. No. 41.	104472. No. 149857.
104423. No. 42.	104473. No. 149858.
104424. No. 43.	104474. No. 149859.
104425. No. 44.	104475. No. 149860.
104426. No. 45.	104476. No. 149861.
104427. No. 46.	104477. No. 149862.
104428. No. 47.	104478. No. 149863,
104429. No. 48.	104479. No. 149864.
104430. No. 49.	104400 No 140908
104431. No. 50.	
104432. No. 51.	104481 and 104482.
104433. No. 52.	From China. Seeds presented by the Man shu Nosan Shokai, Inc., Dairen, Manchu
104484. No. 53.	ria. Received February 8, 1984.
104435. No. 54.	104481. ACER CARPINIFOLIUM Sieb. an
104436. No. 55.	Zucc. Aceraceae. Hornbeam maple
104437. No. 56.	A tree up to 30 feet high, with oblong sharp-pointed doubly servet leaves 3 t
101438. No. 57.	sharp-pointed, doubly servate leaves 3 t 5 inches long, short racemes of greenis
104439. No. 58.	flowers, and glabrous fruits about an inc long. The bright-green hornbeamlik leaves turn bright brownish yellow is
104440. No. 59.	leaves turn bright brownish yellow i autumn. Native to Japan.
104441. No. 60.	For previous introduction see 97495.
104448. No. 61.	Figure 1. A second sec second second sec
104443. No. 62.	104482. BETULA ERMANI Champ. Betula ceae. Bircl
104144. No. 63.	A tree up to 100 feet in height, wit
104445. No. 64.	A tree up to 100 leet in height, we peeling, creamy white bark and orang brown branches. Native to northeaster China. It is said to be liable to injur by spring frosts, owing to its habit o starting early into growth.
104146. No. 65.	China. It is said to be liable to injur
194447. No. 66.	starting early into growth.
104448. No. 67.	For previous introduction see 73057.
104440 No 09	104483 to 104555.
101119. No. 68.	
104451. No. 70.	From Italy. Scions and plants purchase from Fratelli Ingegnoli, Milan. Receive
104453. No. 71.	March 5, 1934.
	104483 to 104496. AMYGDALUS spi
104453. No. 72.	Amygdalaceae.

18

PLANT MATERIAL INTRODUCED

104483 to 104555-Continued.	1044
104483 to 104495. AMYGDALUS PERSICA L. Perch.	10
L. Peach. 104483. Bellezza di Arp.	
104484. Carota.	
104485. Celeste imper.	
104486. Cotogna di Siena.	
104487. Di Verona.	:
104488. Gaschina Novembre.	1
104489. Gialla tardiva di Milano.	
104490. Gialla Tosi.	
104491. Grossa di Vigevano.	
104492. Santa Caterina.	:
104493. Santa Anna.	: :
104494. Santa Anna Hallo.	
104495. Topazio.	1 :
104496. Amygdalus persica nectarina Ait. Nectarine.	
Bronzato di Hunt.	. :
104497 to 104519. MALUS SYLVESTRIS Mill. Malaceae. Apple.	
104497. Apione Rosso.	
104498. Araucano.	
104499. Bellezza d'Occidente.	
104500. Bianca di Luglio.	
104501. Brianza.	
104502. Corta di Wick.	
104503. Cortipendola Rosso. 104504. Di Gerusalemme.	
104505. Fam brois.	
104506. MacCloud's family.	
104507. Mantovano.	
104508. Mio desiderato.	
104509. Olimpico.	1045
104510. Parmain dorato.	From
104511. Presepio.	seu
104518. Pupina dorata d'inverno.	cei
104518. Bambour Papeleau.	104
104514. Renetta Moscata.	
104515. Renetta ruggine.	an blu
104516. San Pietro.	to Un
104517. Sonoma.	104
104518, Syud Alma.	
104519. Tanton.	
104520 to 104526. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.	hig ple per
104580. A carne verde.	104
104521. Del Caucaso.	
104522. Di Russia.	104
104523. Giallo di Tortona.	
104524. Grossa bianca.	ma um
104525. Pesco Reals.	of int
104526. Tentazione.	int

104483 to 104555—Continued
104527 to 104555. Pyrus communis L. Malaceae. Common pear.
104527, B. G. Lormier.
104528. Belle des Arbres
104529. Belle di Soignies.
104530. Belle Guerandaise.
104531. Bergamotta Hertrich.
104532. Butirra Capiaumont.
104533. Butirra Daniele Lesuour.
104534. Butirra Lebrum.
104535. Calebasse E. Furst.
104536. Catillac.
104587. Colorato di Luglio.
104538. Decana di Luglio.
104539. Delizia d'Agosto.
104540. Gnocco.
104541. La France.
104542. La Postale.
104543. Lawson.
104544. Legipont.
104545. Mamam Levavasseur.
104546. Maria Guisse.
104547. Meraviglia d'Italia.
104548. Passa Tutti.
104549. Pero del Briga.
104550. Pero Pasdecana.
104551. President Deviolaine.
104552. Professor Bazin.
104553. Reale di Torino.
104554. Re Umberto.
104555. Ricordo di J. Guindan.
104556 to 104604.

From France. Seeds presented by the Mu-séum d'Histoire Naturelle, Paris. Re-ceived March 5, 1934.

104556. MAURANDYA ANTIRBHINIFLORA Willd. Scrophulariaceae.

A slender vine with thin, hastate-tri-angular leaves and solitary, axiiiary pale-blue flowers 1 inch or more long. Native to northern Mexico and the southwestern United States.

104557. ANTIRRHINUM O E O N T I U M. L. Scrophulariaceae. Snapdragon.

An erect slender annual, 6 to 12 inches high, with narrow-linear leaves and pur-ple or white flowers. Native to tem-perate Europe and Asia.

104558. APIUM GRAVEOLENS L. Apiaceae. Celery.

104559. APIUM NODIFLOBUM Reichenb. f. Apiaceae.

A perennial, native to western Ger-many, with pinnately divided leaves and umbels of small white **Sovers**. The stem of this species does not take root at the internodes.

For previous introduction see 97921.

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104556 to 104604 Continued.

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104560. ASTRAGALUS GLICIPHYLLOS L. Fabaceae. Milkvetch. 二十十日 任

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A prostrate spreading herbaceous per-ennial, native to Asia Minor.

For previous introduction see 78764.

104561 to 104563. CHEYSANTHEMUM spp. Asteraceae.

104561. CHRYSANTHEMUM ALPINUM L.

An -alpine tufted perennial 2 to 6 inches high, ascending or upright, with the lower part of the stem covered with pinnately divided leaves. The golden-yellow flower heads are about 1 inch across. Native to central Europe.

104562. CHRYSANTHENON DEMNATENSE Murbeck.

A perennial compute about 1 foot high, with ashy pubescent, finely cut foliage, and flower highs with white disk flowers and pales once ray flowers. Native to the Atlas Mountains in Mornee to the Atlas Mountains in Morocco. 1 14. 160

194568. CHRYSANTHEMUM MAWIL Hook. f. Asteraceae.

A short woody perennial, hative to Morocco, forming bushes up to 2 feet high, like the marguerite, with small woolly gray triangular-onling pinnatifid leaves. The long statised flowers are 1 to 2 inches across and have red-purple disks and three-toothed white rays which are reddish on the back.

For previous introduction see 101777. ,此词过于朝村(

104564 to 104568. Copposition spp. Fa-104584. CORONILLA CARTICA L.

An annual or biennial with a slender rootstock and provintie for ascending stems up to 2 feet long. The leaves consist of about five pairs of obovate leaders one-third of an inch long, and the white flowers are in small clusters. Native to southern klurope.

194565. CORONILLA GLAUCA JUSI. Honey coronilla.

Sea-green or day-smelling coronilla. A small round bush with beautiful glaucous green foliage and fragrant, pure-yellow flowers. Native to south-ern France.

104566. CORONILLA JUNCHA L.

A smooth gray-green shrub with rush-like branches, incanapiong leaflets, and umbels of golden-yellow flowers. Native to southern France.

104567. COBONILLA VANIA L. Crownwetch.

A prostrate or ascending leguminous perennial, up to about 4 feet high, with a thick rootstalk, stamptund leaves, and pinkish flowers in dense umbels. It is native to central Europe.

For previous introduction see 78776.

104568. COBONILLA VIMINALIS Salisb.

A trailing shrub, native to Algeria, with odd-pinnate leaves composed of 13 to 21 leaflets and pale-red or red-striped white flowers in small umbels.

104556 to 104604-Continued.

104569. DAUCUS CABOTA L. Apiaceae. Carrot.

- 104570 to 104578. DELPHINIUM spp. Ra-Larkspur.
 - 104570. DELPHINIUM HALTBRATUM Sibth.

An annual larkspur about 1 foot high, with finely divided leaves and light-blue flowers that appear from June to August. Native to the Mediterranean region.

104571. DELPHINIUM PUBESCENS DC.

An annual larkspur, pubescent throughout, with finely cut foliage and pale-violet or rose-colored flowers. Na-tive to southern Europe and northern Africa.

104572. DELPHINIUM REQUIENI DC.

A biennial larkspur about 4 feet high, with three- or five-parted leaves and sky-blue flowers in lax racemes. Native to the islands of Corsica and Majorca.

104578. DELPHINIUM STAPHISAGRIA L.

A stout-stemmed perennial or bien-nial, soft-hairy throughout, 1 to 3 feet high. The leaves are five to seven-lobed, sometimes three-cleft. The light-blue flowers are in a dense simple or branched raceme. Native to the Mediterranean countries.

For previous introduction see 91453.

104574 to 104576. DIGITALIS spp. Scro-phulariaceae, Forglove.

104574. DIGITALIS FERRUGINEA L.

A biennial or perennial, 4 to 6 feet high, densely leafy, with long dense racemes of rusty-red flowers. Native to southern Europe.

104575. DIGITALIS LANATA Ehrh.

A perennial or biennial foxglove 2 to A perturbation of blemma for blemma for anceolate leaves and grayish or creamy-yellow flowers about 1 inch long, in dense facemes. Native to southern Europe.

104576. DIGITALIS THAPSI L.

A perennial foxglove about 3 feet high, native to Spain. The rugose, de-current leaves are ovate-oblong, and the purple red-dotted flowers are in a lax raceme. Native to Spain.

104577 to 104579, LACTUCA spp. Cichoriaceae.

104577. LACTUCA CHONDRILLAEFLORA Bor.

A biennial 1 to 2 feet high, whitish hairy and much branched, with the lower leaves runcinate-pinnatifid with linear lobes. The flower heads are bright yellow.

104578. LACTUCA SAGITTATA Waldst.

A biennial, 3 to 4 feet high, with thin ovate-elongate or sagittate leaves up to 4 inches long and small yellow flower heads in a terminal corymb. Native to Hungary.

104579. LACTUCA SIBIRICA (L.) Benth.

A Siberian perennial about 2 feet bigh, with lanceolate denticulate leaves and corymbs of small blue flower heads.

104556 to 104604-Continued.

104580. RANUNCULUS GRAMINEUS L. Ra-nanculaceae. Grassy buttercup.

A smooth herbaceous perennial with rosettes of linear to lanceolate leaves and bright-yellow flowers on stalks 6 to 12 inches high. It is native to Europe.

For previous introduction see 101954.

104581 to 104592. SALVIA spp. Menths. ceae. Sage.

104581. SALVIA AEGYPTICA L.

A low shrub, with numerous stiff branches and few linear-oblong, bullate-crenate leaves about one-half inch long. The very small whitish flowers are in small whorls. Native to Egypt.

104582. SALVIA AETHIOPIS L.

A perennial a foot or less high, with erect white-woolly stems, cordate-clasp-ing, incised dentate leaves, and white ing, incised-dentate leaves or slightly reddish flowers.

104583. SALVIA ALBO-CAEBULEA Linden.

A shrubby salvia, about 3 feet high, with long-acuminate leaves 4 to 6 inches long and simple racemes of creamy-white and blue flowers. It is native to the pine forests of Michoacan, Moreles Mexico.

104584, SALVIA ALGERIENSIS Desf.

An erect hairy annual 2 to 3 feet high, with the lower leaves ovate-oblong, crenate, 1 to 2 inches wide, and 6 inches long. The sky-blue flowers are in small whorls. Native to Algeria.

104585. SALVIA ARGENTEA L.

An erect white-woolly biennial 2 to 4 feet high, with broadly ovate, sinuate-lobate leaves 4 to 8 inches long and showy rose-white, purplish, or yellow-ish flowers. Native to the Mediter-region region ranean region.

104586. SALVIA CLEISTOGAMA De Bary.

An erect perennial 1 to 2 feet high, covered with long hairs, with ovate-oblong irregularly pinnatifid leaves usually about 2 inches long and blue flowers half an inch long in distant whorls. Native to southern Africa.

104587. SALVIA GLUTINOSA L.

A perennial sage about 8 feet tall, glutinous hairy throughout, with ovate-oblong, dentate leaves up to 7 inches long and pale-yellow flowers an inch long in lax whorls. Native to Europe and Asia.

104588, SALVIA HISPANICA L.

A perennial herb with ovate serrate leaves and quadrangular spikes of blue flowers. The mucilaginous seeds are used in making the Mexican drink called "chia."

104589. SALVIA JUBISICI Kosanin.

A perennial sage, with a long, much-branched rootstock and erect stems about 2 feet high. The lower leaves are long-stalked, orate-oblong, crenate or dentate, and rugose, while the upper leaves are pinnatisect and short-stalked. The small blue-violet flowers are in small whorls. Native to south-ern Yugoslavia.

104556 to 104604-Continued.

104590, SALVIA LYRATA L.

A hardy perennial with erect stems 8 to 24 inches high. The radical leaves 8 to 24 inclues man. The function texts of a restrict, erose-dentate, and the stem leaves are oblong lanceolate. The bluish-purple flowers are in lax whorls. Native to the western United States.

4591. SALVIA COCCINEA CINEA (Jacq.) A. Gray. 104591. SALVIA PREUDOCOC

A perennial sage with flowers the same shade of intense red as that of the cardinal flower (Lobelia cardi-nails). The plants have from two to five stems and vary in height from 15 to 30 inches. Found in Hitle pockets of limestone soil in dry sunny places in Mexico and Central America.

For previous introduction see 64668.

104592. SALVIA TILIAEFOLIA Vahl.

A perennial sage, said to be native to Mexico, with cordate, rugose, crenate-serrate leaves 2 inches or more long and sky-blue flowers nearly 1 inch long.

104598 to 104596 SOLANUM spp. Solanaceae.

104598, SOLANDM AUBICULATUM Ait.

A shrubby perennial, 4 feet high, with large hairy, mulleinlike leaves 6 to 7 inches long and small violet flow-ers in dense corymbs. Native to Madagaacar.

104594. SOLANUM CALDASII Humb. and Bonpl.

A white hairy perennial with un-equally pinnatizect leaves 4 inches long and small flowers, one-half inch across, in long stalked, racemes. Native to Ecuador, This species is related to the potato (Solanum tuberosum).

104595. SOLANUM CORNUTUM Lam.

A spiny annual 1 to 4 feet high, with a spiny smart 1 to 2 feet sign, with ovate pinastely lobed leaves and yellow flowers an then across, in small termi-nal clusters. Native to Mexico.

104596. SOLANUM DULCAMARA L.

An ornamental vine with red berries.

For previous introduction see 95573.

104597. SQLANUM PSEUDOCAPSICUM L. Jerusalem-cherry.

104598. SOLANUM TRIFLORUM Nutt. Nightshade.

A low-growing annual, with oblong seven- to nine-lobed leaves, small white flowers, and greenish fruits. Native to the western United States.

104599 to 206006, VIOLA spp. Violaceae. Violet.

104599. VIOLA DELPHINIFOLIA Nutt.

A perennial violet with a short ver-tical rootstock and palmately multiful leaves up to 3 inches wide. The showy violet flowers are on scapes exceeding the leaves. Native to the prairie region of the central United States.

104600. VIOLA HIBTA L.

A hardy perennial violet, closely re-lated to Viola odorata, from which it differs in being more hairy and in hav-ing narrower leaves and scentless dull-bluish flowers. The stems are about 6

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104556 to 104604-Continued.

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inches high, and the leaves are nar-rowly cordate. Native to England and northern Europe.

104601. VIOLA MACROCERAS Bunge.

A Siberian violet with cordate cre-nate-serrate leaves with stems 3 to 4 inches long and fragrant violet flowers.

104602. VIOLA MIRABILIS I

A hardy violet, native to northern Rurope, which becomes about 3 inches high, producing pale-blue flowers in midsummer.

For previous introduction see 72623.

104603. VIOLA PATRINII Ging.

A low stemless perennial, native to northeastern Asia, with a stout root-stalk, ovate-oblong leaves, and lilac flowers about one-half inch in diameter.

For previous introduction see 103898.

104604. VIOLA SYLVESTRIS Lam.

A violet native to France, with stems 3 to 4 inches long, heart-shaped leaves, and incherous violet or nearly white flowers on stalks longer than the leaves.

104605 to 104612. PRUNUS spp. Amygdalaceae.

From Palestine. Trees and scions presented by Asaph Grasovsky, Department of Agri-culture and Forests, Jerusalem, through the citrus fruit specialist and chief horti-cultural officer, Department of Agricul-ture and Forests, Jaffa. Received March 9, 1984.

A collection of apricot trees and plum scions received under their varietal names, for the use of Department specialists.

104605 to 104608. PRUNUS ARMENIACA L. Apricot.

9 104605. Alawi. 104607. Baladi. 1111 101606. Artassi. 104608. Hamawi.

196699. PRUNUS DOMESTICA L. Common plum.

Swedah.

104610 to 104612. PRUNUS ARMENIACA L. Apricot.

104610. Lozi.

104611. Mawi.

104612. Mustakawi.

104613 to 104624.

From Bristol, England. Scions and rooted cuttings presented by Prof. B. T. P. Barker, University of Bristol, through G. T. Spinks. Research Station. Received March 9, 1934.

A collection of fruit-tree scions and rooted cuttings of a blackberry, introduced under their varietal names for the use of Department specialists.

104615 to 104618. MALUS SYLVESTRIS Mill. Malacese. Apple. Apple.

104618. Gloucester Cross.

104614. Hereford Cross.

104615. Newport Cross.

104616. Plymouth Cross.

104617. Taunton Cross.

104613 to 104624-Continued.

104618. Worcester Cross.

104619 to 104622. PRUNUS DOMESTICA L. Amygdalaceae. Common plum.

104619. Avon Cross.

104620. Severn Cross.

104621. Teme Cross.

104622. Wye Cross.

Malaceae. 104623. PYRUS COMMUNIS L. Common pear. Bristol Cross.

104624. RUBUS sp. Rosaceae.

Ashton Cross, a blackberry.

104625 to 104661.

rom Lithuania. Bulblets and seeds pre-sented by Prof. Dr. C. Regel, Director, Hortus Botanicus Lituaniae, Kaunas. Re-From Lithuania. ceived March 5, 1934.

104625 to 104635. ALLIUM spp. Liliaceae. Onion.

104625. ALLIUM CANADENSE L. Loadow garlic.

Bulblets.

104626. ALLIUM CABINATUM L.

Bulblets of a species with narrowly linear leaves and lilac-purple flowers, produced in a comparatively large head. It is found throughout southern Europe, especially in the Alps.

For previous introduction see 91984.

104627. ALLIUM CAEBULEUM Pall.

A blue-flowered onion with slender grassy leaves and 14-inch stalks bearing close heads of small deep-blue flowers.

For previous introduction see 95354.

104628. ALLIUM CYANEUM Regel.

A rather dwarf plant, less then a foot high, with small heads of pendu-lous pale-blue flowers. Native to north-ern China.

For previous introduction see 95454.

104629. ALLIUM DARWASICUM Regel.

A rather low allium with flat lanceo-late leaves 5 to 6 inches long and white flowers in a roundish head about 1 inch across. Native to Bokhara.

104630. ALLIUM FISTULOSUM L. Welsh onion.

about 2 feet high, A hardy onion, about 2 f with green and yellow flowers.

For previous introduction see 101390.

104631. ALLIUM FISTULOSUM L.

Variety viviparum.

A name for which a place of publica-tion and a description have not been found.

104682. ALLIUM FLAVUM L.

A wild onion with an upright or ascending stem up to a foot high, nar-rowly linear leaves about as long as the stem, and small yellow bell-shaped flowers in a rather dense cluster. Na-tive to dry rocky places, especially in chalky soil, in south-central Europe.

For previous introduction see 91988.

104625 to 104661-Continued.

1046833. ALLIUM FOMINIANUM Mischenko.

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

For previous introduction see 90599.

104634. ALLIUM PULCHELLUM Don.

An onion with narrow-linear leaves about 1 foot long and a rather dense umbel of bell-shaped, violet flowers. Native to Asia Minor.

For previous introduction see 93153.

104635. ALLIUM SATIVUM L. Garlic.

A variety with white flowers. The Chinese use both the leaves and scapes as a vegetable.

For previous introduction see 103701.

104636. ALTHAEA NUDIFLOBA Lindl. Malvaceae.

A biennial 6 feet high, with large, roundish cordate, 3-lobed, fough-hairy leaves and large white flowers. Native to the Altai Mountains, Siberia.

104637. APIUM GRAVEOLENS L. Apiaceae. Celery.

104638. CAPSICUM ANNUUM L. Solanaceae. Common redpepper.

Variety longum.

104639. CHRYSANTHEMUM Sp. Asteraceae.

From Antakiya.

104640. CHRYSANTHEMUM sp. Asteraceae.

From Asia Minor.

104641. DAUCUS CAROTA L. Apiaceae.

101612. DIGITALIS NERVOSA Stend. and Hochst. Scrophulariaceae. Foxglove.

A perennial forgiove with entire oblonglanceolate leaves and small yellowish flowers in long dense racemes. Native to the Caucasus.

104643 to 104647. IRIS spp. Iridaceae.

104643. IRIS GERMANICA L.

A collection of mixed varieties.

104644. IRIS LURIDA Ait.

An iris of the section Pogoniris, with slightly glaucous leaves 1 foot long and three or four flowers in a cluster. The outer segments are obovate cuneate, dead purple at the top, velned with dull purple on a yellowish ground below, while the inner segments are dull purple and narrower. Native to southeastern Europe.

104645. IEIS SINTENISII Janka.

A beardless iris of the same general type as Iris graminea, with tufted evergreen leaves about 12 inches long and flower stalks little higher than the leaves. The flowers are blue purple with red purple on the style branches and hafts. Native to southeastern Europe and Asia Minor.

For previous introduction see 91821.

104625 to 104661-Continued.

104646. IE18 sp.

Received under the name "thunbergil."

104647. IRIS sp.

104648. RHEUM UNDULATUM L. Polygonaceae. Rhubarb.

104649. RUBUS COBRANUS Miquel, Rosaceae. Korean raspberry.

A deciduous shrub 8 to 10 feet high, native to China and Chosen, with erect or arching, stout blennial stems. The pinnate leaves, 6 to 10 inches log, are usually composed of seven ovate, dark lustrous-green, coarsely toothed leaflets. The small fruit, varying in color from red to nearly black, is edible but of poor flavor.

104650. RUBUS LEUCODERMIS Doug. Rosa- ' ceae.

An erect shrub 3 to 6 feet high, found in open woods in the northwestern United States. The leaves are usually trifoliolate, the small white flowers are in few-flowered corymbs, and the black hemispherical fruits are one-half inch in diameter.

104651 to 104658. SALVIA spp. Menthaceae. Sage.

104651. SALVIA ALGEBIENSIS Desf.

For previous introduction and description see 104584.

104652. SALVIA BULLEYANA Diels.

A perennial 12 to 18 inches high, with cordate, triangular-ovate, or hastate leaves 2 to 3 inches long and purplishblue flowers in racefues. Native to the mountains of Yunnan, China, between 6,200 and 7,000 feet altitude.

104658, SALVIA CARDUACEA Benth.

A perennial a foot or more high, with white-woolly stems and leaves. The pinnatifid leaves have spiny, acuminate teeth. The likac flowers are in remote, dense whorls. Native to California.

104654. SALVIA VERTICILLATA L.

A stout perennial 3 feet high, with white-woolly basal leaves 6 inches or more long, usually entire, and white flowers in remote whorls. Native to Asia Minor.

104655. SALVIA PREBWALSKII Maxim.

A white-hairy shrub, 2 feet or more high, with entire, ovate, acute leaves and blue flowers in 6- to 10-flowered whorls. Native to Asia Minor.

104656. SALVIA JUBISICI Kosanin.

For previous introduction and description see 104589.

104657. SALVIA BOEMEBIANA Scheele,

A perennial sage 1 or 2 feet high, with leaves roundish or reniform cordate, coarsely toothed or incled. The deep-scarlet howers, about 1 inch long, are in few-flowered whorls. Native to Texas and Mexico.

104658. SALVIA TILIAEFOLIA Vahl.

For previous introduction and description see 104592.

104625 to 104661-Continued.

· 104659 to 104661. SPINACIA spp. Chenopodiaceae. Spinach.

104659. SPINACIA OLERACEA L. Common spinach.

104660, SPINACIA SPINOSA Moench.

This is very closely allied to common spinach (Spinacia oleracea), but it differs in having spiny, nearly triangular fruits.

104661. SPINACIA TETRANDRA Stev.

A wild spinach which grows in heavy soil in central Asia.

For previous introduction see 73202.

104662 and 104663.

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From Dehra Dun, India. Seeds presented by the Forest Botanist. Forest Research Institute, through Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Clenfuegos, Cuba. Received March 7, 1934.

104662. CUDRANIA JAVANENSIS Trecul. Moraceae.

Cocklespur. A thorny trailing shrub which should prove useful in making an almost impenetrable hedge. The greenish fruit, which is edible and of pleasant flavor, is irregular in shape and 2 to 3 inches in diameter. Native to tropical Africa.

104863. DEGUELIA TIMORIENSIS (DC.) Taub. Fabaceae.

A woody climber with compound leaves 8 to 6 inches long, composed of 9 to 18 leaflets, leathery, oblong, and 1 to 2 inches in length. The pale-rose flowers are in dense axillary racemes. Native to the East Indies.

104664 and 104665.

- From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received March 7, 1934.
 - 104884. ENTADA SUDANICA Schweinf. Mimosaceae.

A small tree, native to tropical Africa, with compound leaves a foot long and small white or yellowish flowers in dense cylindrical spikes 2 to 6 inches long. The straight brown pod, 8 to 15 inches long, is distinctly constricted between the seeds.

For previous introduction see 70842.

104665. TRICHILIA HIRTA L. Meliaceae.

A shrub or tree up to 60 feet high, with pinnately compound leaves of obliquely ovate, glabrous leaflets and 11 to 21 panicles, 9 inches long, of greenish flowers. It is native to Mexico and the West Indies.

For previous introduction see 90937.

104666 and 104667. CITRUS SINENSIS (I.) Osbeck. Rutaceae. Orange.

- From Puerto Rico. Scions presented by Edmund H. Twight, Department of Agriculture and Commerce, Rio Piedras. Received March 6, 1934.
 - 104666. Rico No. 1. B. V. 2.
 - 104667. Rico No. 2. B. V. 4.
 - 48500-36----4

104668. TRITICUM AESTIVUM L. (T. vulgare Vill.). Poaceae.

Common wheat,

From Canada. Seeds presented by the. cereal division of the Central Experimental Farm, Ottawa. Received February 14, 1934.

Ruby, Ottawa 623. Introduced for the use, of Department specialists.

104669 and 104670.

From Japan. Seeds presented by Professor-Nakai, Botanic Garden, Tokyo. Received March 9, 1934.

104669. LESPEDEZA FORMOSA (Vogel). Koehne. Fabaceae. Purple bushclover.

An erect semishrubby plant 6 to 12 feet high, with trifoliolate leaves of oblongleaflets and racemes of rose-purple flowers. It is native to Chosen.

For previous introduction see 100879.

104670. LESPEDEZA MAXIMOWICZI C. Schneid. Fabaceae. Bushclover.

A shrubby bushclover from Chosen, resembling Lespedeza buergeri, from which it differs in the structure of its calyx. The leaves are very thin, dull green above, and bright green below, and the violet flowers are arranged in loose whorls.

For previous introduction see 82482.

104671 and 104672.

- From Austria. Seeds presented by the Botanic Garden, Wien. Received February 24, 1934.
 - 104671. LESPEDEZA BICOLOR TURCZ. Fabaceae. Shrub bushclover,

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

For previous introduction see 104065.

104672. LESPEDEZA HIRTA (L.) Hornem, Fabaceae.

An erect or ascending, hairy, ratherstout plant, 2 to 4 feet high, with rounded or oval leaflets and 'yellowish-white or purple-spotted flowers in cloncated terminal heads. Native to the eastern United States.

104673 to 104678.

From Poland. Seeds presented by Stowarzyzenie Lakarzy, Sarny-Zaklad Doswiadczalny. Received March 7, 1934.

A collection of grasses, introduced for the use of Department specialists working with forage crops.

104673. BECKMANNIA ERUCAEFORMIS (L.). Host. Poaceae. Sloughgrass.

A very good fodder plant for growing on moist soil.

For previous introduction see 60772.

104674. DACTYLIS GLOMEBATA L. Ponceae. Orohard grass.

For previous introduction see 101103.

104673 to 104678---Continued.

104675. FESTUCA ELATIOR L. POAceae. Meadow feacue.

A loosely tufted perennial European grass with short creeping rootstalks and erect stems up to 4 feet high.

For previous introduction see 99124.

104676. HOMALOCENCHRUS OBYZOIDES (L.) Poll. Poaceae.

A perennial grass with stout ascending culms arising from creeping rootstalks. The broadly linear leaves, about 1 foot long, are very rough.

104677. POA PALUSTRIS L. POACERE. Fowl meadowgrass.

For previous introduction see 64781.

104678. POA PRATENSIS L. POAceae. Kentucky bluegrass.

104679 to 104704. Phoenicaceae.

Palm.

From British Guiana. Seeds presented by the Director, Botanic Gardens, Georgetown. Received February 28, 1934.

104679. ABCHONTOPHOENIX ALEXANDRAE (F. Muell.) Wendl. and Drude.

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

For previous introduction see 103724.

104680. ARECA ALICAE F. Muell.

For previous introduction and description see 104331.

104681. A RIKURYROBA SCHIZOPHYLLA (Mart.) Bailey.

A slender, straight-stemmed palm with pinnate leaves.

For previous introduction see 101131.

104683. ASTROCARYUM SEGREGATUM Drude.

A rather low-growing Brazilian palm with a spiny trunk and large pinnate leaves armed with large stout black spines along the midribs. The oily smooth fragrant fruits are from 1 to 2 inches in diameter. Native to eastern Brazil.

For previous introduction see 98511.

104683. ASTROCARYUM STANDLEYANUM Bailey.

A tall slender handsome spiny palm with pinnate leaves, found in dense rain forests. The orange-yellow fruits, 1% by 1% inches, are rugose and mucroinate and are covered with a thin fleshy fibrous julcy sweetish pulp. They are borne in long pendent clusters.

For previous introduction see 102651.

104684. BENTINCKIA NICOBARICA (Kurz.) Beccari.

For previous introduction and description see 104334.

104685. ARECASTRUM ROMANZOFFIANUM AUSTRALE (Mart.) Becc.

104679 to 104704-Continued.

Pindo-poi. A very tall palm, with a habit like a slender reversed pyramid. In the forests of eastern Paraguay it frequently becomes over 60 feet high, equaling the tallest trees of the region. The mature specimens of this palm furnish a very hard and resistant wood.

104686. COPERNICIA CERIFERA Mart. Carnauba palm.

The wax palm of Brazil becomes 25 feet high, with fan-shaped leaves. From the leaves is obtained carnauba wax, which is used in making phonograph records.

For previous introduction see 98491.

104687. CORYPHA ELATA ROXD.

A tall Philippine palm up to 60 feet high, with spiny stems and fan-shaped leaves.

For previous introduction see 74425.

104688. ENGLEBOPHOENIX BEGIA (Mart.) Kuntze.

Maripa. This is a massive ornate palm up to 50 feet high, with persistent leaf petioles and immense leaves, reminding one of the Cohune. The subacid fruits have thin fleshy pulp and are much appreciated by the natives of Surinam.

For previous introduction see 98499.

104689. HYOPHORBE AMARICAULIS Mart. Bottle paim.

A showy pinnate-leaved palm from Mauritius, with a bottle-shaped trunk up to 60 feet tall and terminal leaves with 40 to 60 pairs of linear leaflets.

Wendl. UPHOBBE VERSCHAFFELTY Spindle palm.

An unarmed palm, native to Mauritius, with a spindle-shaped trunk 25 to 30 feet high, pinnate leaves having a yellow band along the midrib, and orange-colored flowers.

For previous introduction see 81588.

104691. INODES MEXICANA (Mart.) Standl.

A tall palm up to 60 feet high, with palmate leaves divided into linear segments having numerous long threads on the margins. The inflorescence is short, dense, and recurved, and the flattened globose fruits are black. It is native to Oaxaca, Mexico.

For previous introduction see 80551.

104698. LICUALA GRACILIS Blume.

A fan palm 5 to 7 feet high, native to Java, with the stems growing in clusters. The orbicular, plicate leaves are deeply cut into cuncate segments, and the petioles are spiny along the edge,

For previous introduction see 93321.

104693. LICUALA GRANDIS (Bull.) Wendl.

A dwarf palm with the stem clothed with the dead leaf sheaths. The erect spreading fan-shaped leaves have closely plicate segments which are two-lobed at the end. Native to the island of New Pommern, Bismarck Archipelago.

For previous introduction see 98495.

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104679 to 104704-Continued.

104694 and 104695. LINOMA ALBA (Bory) O. F. Cook.

A small palm up to 30 feet high, native to tropical Africa. The pinnate leaves, which become 4 to 8 feet long, have whit-ish petioles and greenish-white veins when the plants are young.

For previous introduction see 103163.

104496. LIVISTONA BOTUNDIFOLIA (Lam.) To Mart. Java fan palm.

An erect pinnate-leaved palm, native to tropical Asia, about the same size as the coconut palm. The hard durable wood is used for general construction.

For previous introduction see 97548.

104697. OBBIGNYA SPECIOSA (Mart.) Babassu nut.

The Uauassu palm of Brazil and the Guianas is much like the Cohune palm, but its fruits, 8 to 4 inches long, are much larger. An edible oil is extracted from the seeds and is now being exported to the United States.

For previous introduction see 99608.

104698. PAUROTIS WRIGHTII (Griseb. and Wendl.) Britton.

Guano priets. A tree often with several erect trunks 25 to 40 feet high, native to southern Florida and the West Indies. The half-orbicular, fan-shaped leaves, which spread in all directions, are yellow green above and blue green beneath, and the segments are linear lanceolate. The drooping spadix, 3 to 5 feet long, bears yellow-green flowers, foilowed by lustrous black fruits one-third inch in diameter.

For previous introduction see 95048.

104699. PHOENIX ZEYLANICA Trimen. Ceylon date palm.

A pinnate-leaved palm, native to Cey-lon, with a stem 8 to 20 feet high and a crown of rather short leaves made up of numerous linear-lanceolate, light-green leaflets 7 to 10 inches long. The obovoid-oblong, violet-blue, edible fruits are half an inch long.

For previous introduction see 108732.

104700. PTYCHOSPERMA MACABTHUBI Wendl.

A palm, native to Australia, which grows to a height of 30 feet, but is usually a dwarf in cultivation with suckers from the base, making a bushy plant. The smooth-ringed trunk is crowned by a dense cluster of planate leaves with arch-ing leaflets 6 to 9 inches long.

For previous introduction see 97288.

104701. ROYSTONEA REGIA (H. B. K.) O. F. Cook. Cuban Royal Palm.

A Cuban palm, up to 80 feet high and 2 feet in diameter, with pinnately divided leaves 10 feet long.

For previous introduction see 93824.

104702. SABAL GLABBA (Mill.) Sarg. Bluestem palmetto.

An attractive palm 30 feet high. The smooth tapering trunk is marked at regu-lar intervals with scars.

For previous introduction see 97298.

104679 to 104704-Continued.

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104703. SABAL MAUBITIAEFORMIS (Karst.) Griseb, and Wendl. Palmetto.

A handsome West Indian palm with a trunk 60 to 80 feet in height and over a foot in diameter, and large roundish leaves, multifid to the middle, up to 12 feet in diameter. The black fruits are about the size of peas.

For previous introduction see 62106.

104704. THBINAX PARVIFLORA Swartz. Jamaica thatch palm.

An unarmed fan palm with a ringed trunk up to 20 feet high, circular leaves 1 to 2 feet across, divided into bifd seg-ments, and inconspiculous flowers and fruits. Native to Jamaica.

104705. Rehderodendron MACROCAR-PUM Hu. Styracaceae.

From China. Seeds presented by H. H. Hu, Director, Fan Memorial Institute of Biol-ogy, Peiping. Received March 10, 1934.

A tree about 30 feet high, native to Szech-wan, China. The papery, reddish-green, oval-elliptic leaves are about 4 inches long, and the showy flowers are followed by ribbed woody oblong fruits 2 inches long.

- 104706 to 104713. SOJA MAX (L.) Piper. Fabaceae. Soybean.
- From Poland. Seeds presented by the Direc-tor, Hortus Medicinalis, Wilno. Received March 14, 1934.

104706. B. S. 777.

104707. Czarna jagoda.

104708. C. S. S.

104709. Dublańska.

104710. Granum, 4041.

104711. Putawska weresna.

104718. Szhlotonitz.

104718. Wileńska.

104714. MANGIFERA INDICA L. Anacardiaceae. Mango.

From Egypt. Plants presented by Dr. Monir Baghat, Director, Plant Quarantine Sta-tion, Alexandria. Received March 16, 1934.

A variety with very large fine fruits.

104715 to 104736. MALUS SYLVESTRIS Mill. Malaceae.

Apple. rom England. Scions presented by R. G. Hatton, Director, East Malling Research Station, East Malling, Kent. Received March 17, 1934. From England.

A collection of apple scions received un-der their varietal names for the use of Department specialists.

104715. Allen's Everlasting.

104716. Anne Elizabeth.

104717. Barnack's Beauty.

104718. Beauty of Stoke.

104719. Claygate Pearmain.

104720. Crawley Beauty.

104721. Cutler Grieve.

104715 to 104736-Continued. 104739 to 104771-Continued. 104751. Borsani. 104722. Duchess Favorite. 104752. Butirra Bererd. 104723. Duke of Devonshire. 104753. Butirra Baltet Père. 104724. Dumelow's Seedling. 104725. Edward VII. 1997 Butirra Soprafina, 104755. Butirra Sterckmans. 104726. Encore. 104787. Irish Peach. 194706. Carlo Ernesto. 104788. King's Acre Pippin. 104757. Consigliere d'Appello. 104729, James Grieve. 104758. Coscia d'Inverno. 104730. Lord Grosvenor. 104759. Costant Lesueur. 104731. Margil. 104760. Cremisine Rochette. 104732. Mrs. Phillimore. 104761. Decana del Comizio. 104733. Orleans Reinette. 104762. Eva Baltet. 104734. Rival. 104763. General de Villebois-Mareuil. 104735. Rosemary Russet. 104764. Giovanna d'Arco. 104736. Roundway Magnum Bonum. 104765. Henry Martinet. 104766. Luisa Invernale. 104737. HEDERA HELIX POETICA Weston. English ivy. Araliaceae. 104767. Madame Ernest Baltet. From Greece. Seeds presented by Prof. P. T. Anagnostopoulos, Department of Horticulture, Ecolé Superieure d'Agricul-ture, Athens. Received March 16, 1934. 104768. Notaro Lepin. 104769. Ricardo di M. Capecchi. 104770. Robitaille Père. A form with broadly ovate, shallowly lobed, cordate, bright or yellowish-green leaves and orange-yellow fruits. Native to southeastern Europe. 104771. Suzette de Bavay. 104772 to 104775. VITIS VINIFERA L. European grape. Vitaceae. 104738. QUEBCUS Sp. Fagaceae. Oak. Cuttings purchased from From France. Richard Waller, Domaine de la Grande, Lauzade, Le Luc. Received March 21, From France. Trees presented by M. Kai-kenger, Corrèze. Received March 19, kenger, Corrèze: 1934. 1984 104772. Couderc 62-66. A species of oak which in France is a host to truffles. 104773. Coudero 161-19. 104774. Couderc 261-50. 104739 to 104771. From Italy. Plants purchased from G. Giannini, Pistoia. Received March 20, 104775, Melegue 106-8. 104776 to 104836. 1934. From Sweden. Scions presented by Dr. Carl G. Dahl, Director, Experimentalfaltet, A collection of fruit trees, introduced for the use of Department specialists. Åkarp, Alnarp. Received March 16, 1934. 104739. AMYGDALUS PERSICA L. Amyg-Peach. 104776 to 104818. MALUS SYLVESTRIS Mill. dalaceae. Malaceae. Blondeau. 104776. Åkerö. 104740 to 104742. COBYLUS AVELLANA L. 104777. Alnarps Rosmarin. Betulaceae. Filhert. 104740. Imperiale di Trebisonda. 104778. Antonovka. 104779. Arreskov. 104741. Meraviglia Bolhoiller. 104780. Arvidsäpple. 104742. Purpurea. 104781. Bodil Neergaard. 104743 to 104745. MALUS SYLVESTRIS Mill. Malaceae. Apple. 104782. Brunnsäpple. 104743. Api rose. 104788. Danzigsäpple. 104744. Losa. 104784. Dronning Louise. 104745. Regina della Renette. 104785. Eldrott Duväpple. 104746 to 104771. PYRUS COMMUNIS L. 104786. Flädie. Malaceae. Common pear. 104787. Fraas Kalvill. 104746. Alessandro III. 104788. Freiherr von Berlepsch. 104747. Alessandrine Douillard variegata. 104789. Friedrich von Baden. 104748. Admiral Gervaise. 104790. Frogmore. 104749. Belle Guerandaise. 104791. Frösaker.

104750, Blanguet.

104792. Granatäpple.

Apple_

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104776 to 104836-Continued.

104793. Gul Richard.

104794. Gyllenkroks Astrakan.

104795. Hampus.

104796, Herbert's Reinette.

104797, Hornsberg.

104798. Kalmar Glasäpple.

104799. Kavlds.

104800. Kesäter.

104801. Langeland.

104802. Large transparente Astrakan.

104603, Mank's Codlin.

104804. Ökna lökäpple.

104805. Ökna vita vintergytting.

104806. Oranie.

104807. Pederstrup.

104808. Ringstad.

104809. Risäter.

104810. Rossvik.

104811. Sävstaholm.

104812. Sommarkryddäpple.

104813. Sparreholm.

104814. Stenbock.

104815. Suislepper.

104816. Tornpipping.

104817. Vitgylling.

104818. Zuccalmaglios Renett.

164819 to 104828. PRUNUS CERASUS L. Amygdalaceae. Sour cherry.

104819. Brysselska Brunkörsbär.

104820. Imperatrice Eugenie.

104821. Ostheimer.

104822. Stora klarbär.

104828. Triana

104824 to 104827. PRUNUS DOMESTICA L. Amygdalaceae. Common plum.

104824. Gulplommon.

104825. Hagbyholms sviskon.

104826. Loio.

104827. Rött äggplommon.

104828 to 104836. PYRUS COMMUNIS L. Malaceae. Common pear,

104828. Cooilia.

104829. Esperons herrepäron.

104880. Reperimentalfaltets Augustipäron.

104831. Furstlight taffelpäron.

104832. Goteborg's Diamant.

104833. Grdpäron.

104834. Hostbergamott.

104885. Johantorp.

104836. Lybeckerbergamott.

104837 to 104851.

From England. Seeds presented by Sir Arthur W. Hill, Director, Royal Botanic Gardens, Kew, Surrey. Received March 16, 1934.

104837 to 104839. ALTHAEA spp. Malvaceae.

104837. ALTHAEA FICIFOLIA Cav Antwerp hollyhock.

A biennial 3 to 6 feet high, with large 7-lobed leaves and large lemon-yellow or orange flowers in terminal spikes.

104838. ALTHARA OFFICINALIS L. Marshmallow.

A downy perennial, 8 to 4 feet high, with ovate, offen heart-shaped leaves, and small pinkish flowers, 1 inch across. Native to Europe.

104839. ALTHAEA ROSEA (L.) Cav. Hollyhock.

A variety with dark-violet, almost black flowers; used as a dye in Siberia.

104840. CARAGANA AMBIGUA Stocks. baceae.

Shinaluk. A subshrubby, leguminous plant, with large conspicuous flowers that are said to be eaten by the natives of Baluchistan, where the plant is native. It is said to grow between 5,000 and 9,000 feet altitude feet altitude.

104841. CARAGANA AURANTIACA Koehne. Fabaceae.

A deciduous shrub about 4 feet high, with graceful, ultimately pendulous, long siender leafy branches armed with triple spines. The short-stalked leaves consist of four narrow, linear leaflets up to one-half inch wide. The orange-yellow, bell-shaped flowers, less than an inch long, are produced in great profusion, the flow-ers hanging thickly from the under side of the branches, 3 or 4 to the inch. It is native to central China.

104842. CELTIS BUNGEANA Blume. Ulma-Hackberry. ceae.

A tree, native to China, with small deep-green leaves and black fruits the size of small peas.

For previous introduction see 62168.

104843. CELTIS GLABBATA Stev. Ulma-Hackberry.

A shrubby hackberry, from the Caucasus region, with coarsely servate, obliquely ovate, short-acuminate, deep-green leaves, pale yellowish green beneath, and 1 to 2½ inches long. The tree is leafiess in the spring when the small greenish flowers appear.

104844 to 104846. COTONEASTER spp. Malaceae.

104844. COTONEASTER AMOENA Wilson.

For previous introduction and description see 104349.

104845. COTONEASTER Sp.

Received as Cotoneaster denticulata, a name new referred to Amelanchier denticulata.

194846. COTONEASTER LUCIDA Schlecht.

A deciduous bushy shrub, 6 to 8 feet high, with bright-green leaves, whitish green beneath. The bright rose-colored flowers are followed by globose black fruits. Native to northern Asia.

104837 to 104851-Continued.

104647 to 104851, DELPHINIUM spp. Ra-Larkspur.

104847. DELPHINIUM DUHMBERGII Huth.

For previous introduction and de-scription see 104360.

104848, DELPHINIUM DYCTIOCARPUM Steud.

For previous introduction and de-scription see 104359.

104849. DELPHINIUM FLEXUOSUM Bieb.

For previous introduction and de-scription see 104361.

104850. DELPHINIUM GAYANUM Wilmott.

An annual larkspur, 2 to 3 feet high, with trifid leaves and blue, rosy, or white flowers in numerous dense ra-cemes. Native to central Europe.

104851. DELPHINIUM TATSIENENSE Franch

previous introduction and de-For scription see 104366.

104852 to 104864.

From England. Seeds presented by the Bo-tanic Garden, Cambridge. Received March 19, 1934.

104852. CELTIS GLABRATA Stev. Ulmaceae. Hackberry.

For previous introduction and description see 104843.

104853. IRIS MILESII Baker. Iridaceae. Himalayan iris.

A semi-evergreen Himalayan iris re-lated to *Iris tectorum*, with seven or eight leaves 2 to 3 feet long on the tall flower stem; the latter is branched and bears about four heads of flowers, rosy lilac and more or less spotted with darker magenta.

For previous introduction see 92318.

104854. LACTUCA SCARIOLA L. Cichoria-Prickly lettuce. ceae.

An annual or biennial, sometimes 6 feet high, with a stiff stem, leaves 5 inches long and 1 to 2 inches wide, and incon-spicuous yellow flowers. Native to Europe.

104855 and 104856. LYCOPERSICON LENTUM Mill. Solanaceae. ESCU-Tomato.

164857. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Cherry tomato. Solanaceae.

Variety Cerasiforme.

104858. PISUM JOMARDI Schrank. Fabaceae. Pea.

A hardy, white-flowered, annual pea about 3 feet high, native to Egypt.

For previous introduction see 66475.

104859. RHEUM BHAPONTICUM L. Polyg-Common rhubarb. onaceae.

104860 to 104862. RUBUS spp. Rosaceae. 104860. RUBUS BIFLORUS Buch.-Ham.

A rambling shrub with large leaves, wooly beneath, and subacid yellow ber-ries about the size of a thimble. Na-tive to the Himalayas.

For previous introduction see 66604.

104852 to 104864—Continued.

104861. RUBUS BIFLORUS QUINQUE-FLORUS Focke.

This ornamental shrub, native to western Szechwan, China, between 5,800 and 6,800 feet altitude, produces its clusters of orange-yellow berries through so long a period as to be al-most perpetual-fruiting. Because of its white wax-coated stems, it is one of the most striking plants in the gar-den in autumn and winter.

104862. RUBUS FRAXINIFOLIUS Poir.

A sturdy, upright, little-branched bramble, with a stiff stem up to 15 feet high and over half an inch in diameter under favorable conditions. The stems and branches are red, armed with short sharp recurved hoks. The white flow-ers are followed by attractive bright-red fruits, half an inch in diameter, borne in large clusters. They are fairly juicy and edible, but rather tasteless.

For previous introduction see 68359.

104863. SOLANUM ATROPURPURRUM Schrank. Solanaceae.

A spiny shrub, with purple stems and deeply pinnatific leaves. The sulphur-yellow flowers are in small umbels. Native to Brazil.

104864. SOLANUM NODIFLORUM Jacq. Solanaceae.

A woody perennial about 2 feet high, with ovate entire leaves 2 to 5 inches long and very small white flowers in small umbels, followed by small black globose berries. Native to tropical Amer-ica.

104865. COUMABOUNA PANAMENSIS Pittier. Fabaceae.

From the Canal Zone. Seeds presented by J. E. Higgins, Director, Plant Introduc-tion Gardens, Summit. Received March 19, 1934.

A large tropical tree up to 150 feet high, with alternate compound leaves made up of five to eight obliquely elliptic leaflets 6 to 12 inches long, loosely branching terminal panicles of large pink flowers, and flattened, elliptic, chocolate brown fruits 2 to 3 inches long. It is native to the Canal Zone.

For previous introduction see 88113.

104866. TINNEA AETHIOPICA Kotschy · and Peyr. Menthaceae.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Clen-fuegos, through F. G. Walsingham. Re-ceived March 20, 1934. From Cuba.

An ornamental, much-branched shrub about 4 feet high, with short-stemmed, ob-long leaves. The dark purplish-brown flow-ers are produced in axillary whoris and have an odor like violets. Native to tropical Aretes Africa.

For previous introduction see 90893.

104867 to 104879.

From China. Seeds presented by H. K. Fu, Director, Botanic Garden, Dr. Sun Yat-Sen's Memorial Park, Nanking. Received March 21, 1934.

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104867 to 104879-Continued.

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104867, ACANTHOPANAX RVODIABFOLIUM Franch. Araliaceae. .01

An unarmed shrub 10 feet high, with trifoliolate leaves crowded at the ends of the branchlets. The small lanceolate acuminate leafiets are 3 to 4 inches long. Native to Yunnan, China.

For previous introduction see 93871.

104868. CARPINUS LAXIFLORA DAVIDII Franch. Betulaceae.

A Japanese tree up to 50 feet high, with ovate or elliptic, doubly serrate, long-acuminate, stiff leaves 2 to 8 inches long and inconspicuous flowers.

104869. CELASTRUS MONOSPERMA Roxb. Celastraceae.

A shrubby climber with glossy green, oblong-obovate leaves 3 to 5 inches long and numerous small pale greenish-yellow flowers, followed by smooth, oblong cap-sules enclosing solitary seeds covered with an orange-colored ariel. Native to India.

104870. DIOSPYROS GLAUCIFOLIA Metcalf. Diospyraceae.

A tree up to 50 feet high, with ovate or broad-eliptic, dull-green leaves about 5 inches long and small globose smooth fruits. Native to southeastern China. fruits.

104871. ERYTHRINA ABBORESCENS Roxb. Coraltree. Fabaceae. 9÷.

Much covered with its bright scarlet flowers, this small tree is very attractive and is often planted as an ornamental. There are but few prickles on its branches, and the thin greenish leaves are often a foot in width. The strongly curved pods are about an inch wide and 6 to 9 inches long. The tree is native to the central and eastern Himalayas up to ~7,000 feet altitude. . 7,000 feet altitude.

For previous introduction see 68334.

Hand.-Mazz. Fabaceae.

A tender shrub with five-foliolate mem-branous leaves 6 to 8 inches long and white flowers, less than an inch long, in graceful racemes. Native to southeastern China.

194878. MANGLIETIA FORDIANA Oliv. Magnoliaceae.

A tender evergreen tree about 25 feet high, closely allied to the magnolias. The stiff, leathery, oblanceolate leaves are 4 to 6 inches long, and the solitary terminal white flowers are about 4 inches across. Native to Hong Kong.

104874. ORMOSIA sp. Fabaceae.

The ormosias are handsome subtropical trees with pinnately compound leaves, showy flowers in large racemes, and red or red and black seeds.

194875, SINOJACKIA XYLOCARPA Hu. Styracaceae.

A small tree closely allied to the sty-raxes, from Kiangsu, China. The leaves are membranous, obovate, cuneate, about 3 inches long, and the showy white pendu-lous flowers, one-half inch long, are in numerous axillary cymes, covering the tree in late April.

104876. STYRAX sp. Styracaceae.

104877. VACCINIUM sp. Vacciniaceae.

104867 to 104879-Continued.

104878. (Undetermined.) No. 20.

104879. (Undetermined.)

No. 21.

104880. CITRUS MEDICA L. Rutaceae. Citron.

From New York. Seeds presented by A. Reich. Received March 26, 1934. Seeds presented by Dr.

Pome citron. A lemonlike fruit native to Palestine and Syria. The essential oil from the skin has a very fine odor.

- 104881. SOJA MAX (L.) Piper. Faba-Sovbean. ceae.
- From China. Seeds presented by Dr. Sheo Wang, University of Nanking, Nanking, through W. J. Morse, Bureau of Plant Industry. Received March 27, 1934.

Nanksoy. A medium-sized, glossy, yellow bean with a brown hilum. It resembles quite closely in seed characters the Nanking. The variety was developed by Dr. Wang from a native Chinese variety in the vicinity of Nanking. In field tests it has excelled other varieties in seed yield by as much as d5 proventies 45 percent.

04882 to 104898.

From Czechoslovakia. Seeds presented by Prof. Adolf Kutin, Horti Praefectus, Tabor. Beceived March 23, 1934.

104882 to 104887, ALLIUM spp. Liliaceae.

104882. ALLIUM BAICALENSE Willd.

An allium with flat linear leaves and lilac flowers in semiglobose heads. Na-tive to the Lake Baikal region, Siberia.

104888. ALLIUM FALLAX Schult. f.

An Austrian allium, 5 to 10 inches high, with linear leaves and lilac-pur-ple flowers in a hemispherical head.

For previous introduction see 66427.

104884. ALLIUM KOCHII Lange.

with An allium native to Denmark, strapshaped or almost terete leaves and kermisine-red flowers in a dense head, with very few bulbels in the inflorescence.

4885. ALLIUM LEDEBOUEIANUM Schult. f. 104885.

A stout-stemmed allinm 1 to 2 feet high, native to the Altai region in Si-beria. The linear leaves are terete, and the rosy-pink flowers are in dense hemi-spherical umbels about 1 inch in diameter.

104886. ALLIUM OPHIOSCORDON G. DOn.

Bulbs of an allium very closely allied to A. sativum, with a strongly curved stem sometimes 3 feet high and having whitish or greenish flowers. The bul-bels of the inflorescence are often nearly one-half inch in diameter.

104887. ALLIUM TULIPAEFOLIUM Ledeb.

A Siberian allium with oblong acute leaves 8 inches long and white or pink-ish flowers in small hemispherical umbels.

104882 to 104898-Continued.

104888. CORONILLA SCORPIOIDES (L.) Koch. Fabaceae.

An erect yellow-flowered herbaceous perennial about 8 inches high, native to the Mediterranean countries.

For previous introduction see 78775.

104889. CORONILLA VABIA L. Fabaceae. Crownvetch.

For previous introduction and description see 104567.

104890 to 104895. DELPHINIUM spp. Ranunculaceae. Larkspur.

104890. DELPHINIUM DECORUM Fisch.

For previous introduction and description see 104357.

104891. DELPHINIUM DISCOLOR Fisch.

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

104892. DELPHINIUM DYCTIOCARPUM Steud.

For previous introduction and description see 104848.

104893. DELPHINIUM EXALTATUM Ait.

A stout perennial larkspur 2 to 4 feet high, with flat leaves deeply cleft into three to seven wedge-shaped lobes. The blue flowers, marked with yellow on the upper petals, are in erect crowded racemes. Native to the United States from Alabama to Minnesota.

104894. DELPHINIUM PRZEWALSKII Huth.

For previous introduction and description see 104363.

104895. DELPHINIUM TIROLENSE Kern.

A perennial herb with pubescent stem and leaves, the leaves 3-parted. The blue flowers are in loose racemes. Native to central Europe.

104896 to 104898. DIGITALIS spp. Scrophulariaceae. Foxglove.

104896. DIGITALIS ARGYBOSTIGMA Fisch.

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

104897. DIGITALIS LAEVIGATA Waldst.

A perennial forglove 2 to 8 feet high, with linear-lanceolate leaves and scattered yellow flowers. Native to southcentral Europe.

104898. DIGITALIS NEEVOSA Steud.

For previous introduction and description see 104642.

104899 to 104920.

From France. Seeds presented by Vilmorin-Andrieux & Cie., Verrieres le-Buisson. Received March 24, 1934.

104899 to 104908. BETULA spp. Betulaceae. Birch.

104899. BETULA CORVLIFOLIA Regel and Maxim.

This is allied to the river birch (Betula nigra) of the eastern United States. The coarsely dentate leaves are broadly elliptic or obovate, 1% to 2% inches long, and sike hairy on the veins beneath. Native to Japan.

104899 to 104920-Continued.

104900. BETULA ERMANI Champ.

For previous introduction and description see 104482.

104901. BETULA EXCELSA Ait.

A large tree with yellowish-brown bark and broadly ovate, acute leaves over 2 inches long, pubescent beneath. Native to northern North America.

104902. BETULA HUMILIS Schrank.

A shrubby birch 2 to 6 feet high, with rounded or ovate, crenately serrate leaves from one-half to over an inch long. Native to northern Europe and Asia.

194903. BETULA JAPONICA SZECHUANICA C. Schneid. Japanese white birch.

A tree up to 60 feet high, native to western China. The rhombic-ovate leaves, 2 to 3 inches long, are unequally dentate-serrate and are deeply glandular-punctate beneath. The dark dull-green color of the leaves persists until late autumn.

For previous introduction see 102216.

104904. BETULA PAPYRIFERA OCCIDEN-TALIS Sarg.

This is one of the very finest of the birches, and it reaches sometimes a height of 120 feet. The bark is reddish brown to whitish, peeling, and the young shoots are warted, downy, and yellowish brown. The ovate leaves, with a rounded or heart-shaped base, are ordinarily 3 to 4 inches long, but on young trees they are often over 5 inches long, hairy along the midrib and veins on the under surface. This tree is closely allied to the paper birch (*Betula papyrifera*), but is disitinguished by its downy fruiting scales, its brown bark, its larger size, and bigger leaves.

104905. BETULA MAXIMOWICZIANA Regel.

This is considered, by some, the most beautiful of all tue birches, characterized by the rapidity of its growth, the luguriance of its foliage, and the yellow color of its bark.

For previous introduction see 63342.

104906. BETULA PUMILA FASTIGIATA Rehd.

A shrubby variety with upright branches, narrow-pyramidal in habit. The leaves are roundish or broadly rhombic. The typical form is native to the northern United States.

104907. BETULA TRISTIS WORMSK.

A shrub 3 to 12 feet high, with broadly ovate or elliptic acuminate leaves about 2 inches long. Native to northeastern Asia.

For previous introduction see 102471.

104908. BETULA ULMIFOLIA Sieb. and Zuce.

A large handsome tree, up to 50 feet high, with yellowish-brown bark and ovate, irregularly doubly serrate, longacuminate leaves 2 to 31% inches long. Native to Japan and Manchuria. 104899 to 104920-Continued.

4

104909 to 104915. COTONEASTER spp. Malvaceae.

104909. COTONEASTER UNIFLORA Bunge.

A dwarf deciduous shrub, 2 to 3 feet high, closely related to *O. integervima*, and native to Siberia. The thin, broadly oval to obovate leaves, less than 1 inch long, are smooth above and downy beneath when young. The single, usually solitary, white flowers are Tollowed by globose red fruits.

For previous introduction see 102479.

104910. COTONEASTER Sp.

No. 2005. Hers.

104911. COTONEASTER Sp.

No. 2007. Hers.

104912. COTONEASTER Sp.

No. 2061. Hers.

104913. COTONEASTER Sp.

No. 3737. M. V.

104914. COTONEASTER Sp.

No. 7087. M. V.

104915. COTONEASTER Sp.

No. A. 144. Forrest.

104916. PHILADELPHUS INCANUS Koehne. Hydrangeaceae. Gray mockorange.

A late-flowering species up to 6 feet high, with oval leaves, dull grayish beneath. The white flowers are produced 5 to 9 together on racemes about 2 inches long, at the end of short leafy shoots, and have an odor like that of hawthorn. The flowering season is from the middle to late July.

104917. PHILADELPHUS SERICANTHUS Koehne. Hydrangeaceae.

Silk mockorange.

A white-flowered shrub, 10 feet high, native to thickets of western Szechwan, China, at 4,000 feet altitude.

104918. STRANVAESIA sp. Malaceae.

The stranvaesias are evergreen shrubs, or sometimes small trees, up to 20 feet high, with loose clusters of white or pinkish flowers followed by orange or scarlet fruits. They are native to high altitudes in eastern Asia.

104919. STYBAX WILSONII Rehder. Styracaceae. Chinese snowbell.

A handsome free-flowering western Chinese shrub which begins flowering when very small. It reaches a height of 12 feet and has ovate leaves, clusters of white flowers, and small grayish fruits.

For previous introduction see 76275.

104920. TROCHODENDEON ARALIOIDES Sieb. and Zucc. Trochodendraceae.

A hardy evergreen shrub 3 feet high, with greenish flowers. Native to Japan.

For previous introduction see 73285.

104921 to 104938.

From Ventimiglia, Italy. Seeds, presented by S. W. McLeod Braggins, Superintendent, La Mortola Botanic Gardens. Received March 26, 1934.

104921 to 104923. ALTHARA spp. Malvaceae. 104921 to 104938-Continued.

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104921. ALTHAEA FICIFOLIA Cav. Antwerp hollyhock.

For previous introduction and description see 104837.

104922. ALTHAEA NARBONENSIS Jacq.

A white-hairy perennial with an erect stem 4 to 6 feet high, lanceolate serrate leaves, and rosy-purple flowers. Native to the Mediterranean region.

104923. ALTHAEA ROSEA (L.) Cav. Hollyhock.

104924. ANTIRRHINUM LATIFOLIUM Mill. Scrophulariaceae. Snapdragon.

A wild antirrhinum, native to Spain.

For previous introduction see 100958.

104925. ANTIRRHINUM ORONTIUM L. Scrophulariaceae. Snapdragon.

For previous introduction and description see 104557.

104926. CLEMATIS ARMANDI Franch. Ranunculaceae. Armand clematis.

A tender woody evergreen vine with lustrous coriaceous trifoliolate leaves with entire lanceolate leaflets, panicles of white flowers 2 inches across, and fruits with long plumose styles. Native to central and western China.

For previous introduction see 80105.

104927 to 104933. CORONILLA spp. Fabaceae.

104927. CORONILLA EMEBUS L.

Scorpion-senna.

A dense, half-hardy, symmetrical shrub, native to southern Europe, 3 to 5 feet high, with glossy deep-green compound leaves and large showy flowers that are yellow tipped with red. In warm regions this species is evergreen.

104928. COBONILLA GLAUCA Jusl.

Honey coronilla.

For previous introduction and description see 104565.

104929. CORONILLA JUNCEA L.

For previous introduction and description see 104566.

104930. CORONILLA MINIMA L.

A shrubby diffuse procumbent plant, 3 to 4 inches high, with leaves composed of 7 to 13 ovate leaflets and sweet-scented, golden-yellow flowers in small umbels. Native to dry sandy places in southern Europe.

104931. CORONILLA SCORPIOIDES (L.) Koch.

For previous introduction and description see 104888.

104932. CORONILLA VALENTINA L.

A herbaceous perennial about 2 feet high, with small compound leaves made up of 4 to 6 pairs of narrow leaflets, and yellow pendent flowers, fragrant at night, in 6- to 12-flowered racemes. Native to dry places in central Europe.

104933. CORONILLA VARIA L. Crownwetch.

For previous introduction and description see 104567.

104921 to 104938-Continued.

104934. HYACINTHUS TRIFOLIATUS Tenore. Liliaceae.

An Italian hyacinth, 8 to 16 inches high, with usually three linear-lanceolate leaves and violet flowers in a loose head of 10 to 30 flowers.

104935 to 104938. IRIS spp. Iridaceae.

104935, IRIS LUTESCENS Lam.

A dwarf iris of the Pogoniris section, with leaves 6 to 9 inches long, the stem being about the same length as the leaves. The flowers are bright yellow with outer segments obovate-cuneate, over 2 inches long, and streaked with pale brown; the inner segments are broader and abruptly narrowed to a claw, which is streaked with purple. Native to the stony mountain slopes of southern France.

104936. IRIS CHAMAEIRIS OLBIENSIS (Henon) Baker.

An iris of the Pogoniris section, with a stout rhizome, broadly ensiform, palegreen leaves, and dark-violet flowers on a stem about 6 inches high. Native to south-central Europe.

104937 and 104938. IBIS UNGUICULARIS Poir. Algerian iris.

An iris with bright-green leaves 2 feet long, growing in tufts of about six; tube up to 6 inches long, filiform, exserted from the spathe; limb bright lilac, rarely white; outer segments 3 inches long, 1 inch broad, with a yellow keel streaked with lilac on a white ground at the throat; inner segments oblong. The fragrant flowers appear in January and February. Native to the Mediterranean countries.

104937. Typical form.

104938. Variety alba. A white-flowered form,

104939 to 104947.

From Germany. Seeds presented by Direktor des Botanischen Gartens, Berlin-Dahlem. Received March 27, 1934.

104939 to 104943. DELPHINIUM spp. Ranunculaceae. Larkspur.

104939. DELPHINIUM BULLEYANUM Forrest.

For previous introduction and description see 104356.

104940. DELPHINIUM DELAVAYI Franch.

For previous introduction and description see 104358.

104941. DELPHINIUM FISSUM Waldst.

A perennial larkspur with a thickened rootstock, three- to five-parted hairy leaves, and blue flowers in dense elongated racemes. Native to southeastern Europe.

104942. DELPHINIUM SULPHURBUM Boiss.

An annual larkspur not more than 8 inches high, with racemes of three to five sulphur-yellow flowers. Native to Syria.

104943. DELPHINIUM TRISTE Fisch.

A perennial larkspur with three- to five-parted leaves and lax racemes of dark reddish-tan flowers. Native to Siberia.

104939 to 104947-Continued.

104944 to 104947. Syringa spp. Oleaceae. Lilac.

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104944, SYRINGA PINETORUM W. W. Smith.

A shrub related to S. microphylla, about 10 feet high, with densely pilose branchlets, ovate-lanceolate leaves 2 to 4 inches long, and purplish flowers in panicles about 9 inches long. It is native to southwestern China.

For previous introduction see 97629.

104945. SYRINGA TOMENTELLA BUR. and Franch. Felty lilac.

A bushy shrub about 10 feet high, with elliptic leaves which are hairy beneath, and loose long-branched spikes of fine mauve-pink flowers, produced in late May and early June. It is native to western China.

For previous introduction see 97628.

104946. SYRINGA WOLFI C. Schneid.

An ornamental shrub remarkable for its peculiar foliage; the elliptic oblong leaves are up to 6 inches long, cuneate, and grayish green beneath. The fragrant dark-lilac flowers are in muchbranched panicles. Native to Manchuria and Chosen.

For previous introduction see 80717.

104947, SYRINGA YUNNANENSIS Franch.

A shrub from 3 to 8 feet high, with fragrant pink flowers. Native to southwestern China.

For previous introduction see 103350.

104948 to 104960.

From the Netherlands. Seeds presented by Prof. Dr. L. G. M. Baes Becking, Botanical Gardens, Leiden. Received March 26, 1934.

104948 and 104949. ANTIRRHINUM MAJUS L. Scrophulariaceae.

Common snapdragon.

- 104950 to 104953. DELPHINIUM spp. Ranunculaceae. Larkspur.
 - 104950. DELPHINIUM BRUNONIANUM Royle.

For previous introduction and description see 104355.

104951. DELPHINIUM CONSOLIDA L. Field larkspur.

An erect hairy annual over a foot high with blue or white flowers in loose panicles. It is native to Europe.

For previous introduction see 81884.

104952. DELPHINIUM TRICOLOB Bernh.

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

104953. DELPHINIUM TRISTE Fisch.

For previous introduction and description see 104943.

104954 to 104960. DIGITALIS SPD. Scrophulariaceae. Foxglore.

104954. DIGITALIS FONTANESII Steud.

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

104948 to 104960 Continued.

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104955, DIGITALIS LANATA Ehrh.

previous introduction and de-For scription see 104575.

104956. DIGITALIS LUTBA L. Straw forglove.

A glabrous perennial forglove with oblong or lanceolate, denticulate leaves and many-flowered racemes of yellow or white flowers. Native to southern Europe.

104957. DIGITALIS MINIANA Sampaio.

A stout biennial foxglove, native to Portugal, with lenceolate, dentate, re-ticulate-veined leaves, and purplish flowers about one-half inch long in dense elongated racemes.

104958. DIGITALIS NERVOSA Steud. and Hochst.

For previous introduction and de-scription see 104642.

104959. DIGITALIS NEVADENSIS Kunze.

A slender-stemmed perennial foxglove from the mountains of Spain, with large oblong leaves and lax secund racemes of showy purple flowers.

104960. DIGITALIS PARVIFLORA Jacq.

A perennial foxglove 2 or 3 feet high, with sessile, oblong acute leaves and a spike of rather small, rust-colored flowers. Cultivated in southern Europe.

104961 to 104987.

rom England. Plants purchased from Maurice Pritchard & Sons. Ltd., Riverslea Nurseries, Christchurch, Hants. Received March 31, 1934. From

104961 to 104967. ERICA CARNEA L. Erl-caceae. Spring heather.

104961. King George. A winter-flow-ering variety with bright rich-pink flowers.

104962. Mrs. S. Doncaster. Flowers light pink.

- 104963. Praecos rubra. A form which commences to bloom in January; the flowers are a rich shade of pink.
 - 104964. Queen of Spain. Flowers rosy red.
 - 104965. Rubra. Flowers deep ruby pink.
 - 104966. Vivellii. A form with dark fo-liage and deep-rose flowers.

104967. Winter beauty. Flowers pink.

- 104968 to 104980. KNIPHOFIA spp. Lilia-Torchilly.
 - 104968. C. M. Pritchard. The largest of the yellow-flowered kniphofias.
 - 104969. Dr. Legate. Flowers a good scarlet; bloom in July; plant becomes 4 to 5 feet high. Flowers a good
 - 104970. Erecta. The good red flowers of this variety are held erect. Bloom-ing season, September.
 - 104971. Greybeard. Flowers red, aging to pale gray; blooming in July and August; plant becomes 4 to 5 feet high.
- line 104972; Lemon Queen. The lemon-yel-low flowers are borne from July to September; the plant is 3½ feet high.

104961 to 104987—Continued.

104978. Leviathan

- **104974.** Lighthouse. Massive scarlet heads of flowers, from July to the end of August.
- 4975. *Majestic.* Very rich red flow-ers, blooming in September. 104975.
- 104976. Mrs. Samuel Smith. Flowers light scarlet, fading to yellow, ap-pearing in June and July. Plant be-comes 5 to 6 feet high.
- 104977. Preziosa. Flowers scarlet with rosy sheen, appearing in August; plant becomes 4 to 5 feet high.
- 104978. Searchlight. Large red flow-ers with widened spikes, appearing in September. Plant becomes 6 feet tall.
- **4979.** *Triumphans.* Flowers light scarlet; blooming in August and September; plant 3 to 4 feet high. 104979. light
- **4980.** Vincent's Delight. Flowers large, yellow-toned orange, each splke with tailed center; blooms in Sep-tember; plant becomes 4 feet high. 104980. Vincent's
- 104981. PRIMULA sp. Primulaceae. Primrose.

Arthur Dumoullin. A Ju with double violet-blue flowers. A Juliae hybrid

104982. PRIMULA sp. Primulaceae Primrose.

Croussei. Flowers double, plum purple, with a fine white wire edge to the petals.

104983. VERONICA ASTONI Petrie. Scrophulariaceae.

A veronica that forms a low dense or rounded bush, with very small, four-angled, closely imbricated leaves and small white flowers. Native to New Zealand and similar to Veronica tetragona.

104984. HEBE BUCHANANI (Hook. f.) Coc-kayne and Allen (Veronica buchanani Hook. f.).' Scrophulariaceae.

A small woody evergreen bush up to a foot high, with stout spreading branches, sometimes tortuous and decussate, closely imbricate, leathery, broadly oblong leaves about one-half inch in length. The small white flowers are in short spikes near the tips of the branches. Native to New Zealand.

For previous introduction see 98252.

104985. VERONICA LYCOPODIOIDES Hook. f. Scrophulariaceae.

A stout shrub 6 to 30 inches high, with acutely four-angled branches, densely im-bricating, broadly oblong, acute leaves one-eighth inch long, and small white flowers in ovate terminal heads. Native to New Zealand.

104986. VERONICA sp. Scrophulariaceae. Received under the name "pagei."

104387. HEBE PROPINGUA (Cheeseman) Cockayne and Allen (Veronica propin-gua Cheeseman). Scrophulariaceae.

A low woody evergreen bush 1 to 3 feet high, with spreading, sometimes tortuous, branches and densely imbricated leaves in opposite pairs, connate for the greater part of their length, forming a closed sheath around the branch. The white flowers are in small terminal heads. Na-tive to New Zealand.

For previous introduction see 89297

104988 and 104989.

From South Australia. Seeds presented by A. C. Trumble, agronomist, Waite Agricultural Research Institute, Glen Osmond, University of Adelaide. Received March 31, 1934.

104988. PHALARIS TUBEROSA L. PORCEAE. Grass.

Perennial canary grass. A forage grass which has proved particularly successful at the Waite Institute.

For previous introduction see 100118.

104989. TRIFOLIUM SUBTERBANRUM L. Fabaceae. Subterranean clover.

Originally from Dwalganup, Western Australia. An early subterfanean clover which has proved particularly successful at the Waite Institute.

For previous introduction see 99489.

104990 to 104999. MALUS SYLVESTRIS Mill. Malaceae. Apple.

From South Dakota. Trees presented by N. E. Hansen, horticulturist, South Dakota State Agricultural College, Brookings. Received March 31, 1934.

A collection of Russian varieties from I. V. Mitchurin.

104990. Antonofka.

104991. Bellefleur (Red).

104992. Bellefleur \times Katayka.

104993. Bellefleur Rekord.

104994. Komsomolez,

104995. Pepping Shafran.

104996. Red Standard.

104997. Seedless of Mitchurin.

104998. Wisantowoye.

104999. Yakhontowoye.

105000 to 105003. VITIS VINIFERA L. Vitaceae. European grape.

From France. Cuttings purchased from Rene Salomon, Maire & Thomery (Seine et Marne). Received March 31, 1934.

A collection of table grapes, introduced for the use of Department specialists.

105000. Chasselas Coulard-Dismante Traube.

105001. Ezerjo.

105002. Grois Coulard.

105003. Marechal Gallieni.

105004 to 105014. CITRUS spp. Rutaceae.

From Morocco. Budsticks presented by H. Brayard, Directeur de la Station Experimentale, Marrakech, Morocco Department of Agriculture. Received March 22, 1934.

A collection of citrus budsticks introduced for the use of Department specialists

105004. CITRUS MEDICA L. Citron. Sanguin panaché.

105005. CITRUS MEDICA L. Citron.

Inerme lilliput,

105004 to 105014—Continued.

105006. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Mandarin orange. Sanguine.

105007. CITRUS sp.

De Tétovan.

105008. CITRUS sp.

Précoce de Valence.

105009. CITRUS Sp.

Cadena punchosa.

105010. CITRUS sp.

Viciedo.

105011. CITRUS sp.

Gzezel (Gzel-Gzel).

105012. CITRUS Sp.

Pajarito.

105013. CITRUS sp.

Taregrosso.

105014. CITRUS sp.

Sanguine grosse ronde.

- 105015. Pyrus communis L. Malaceae. Common pear.
- From Italy. Plant purchased from Fratelli Ingegnoli, Milan. Received March 5, 1934. *Risparmio*.
- 105016. DIANTHUS BALBISII Ser. Silenaceae.
- From France. Seeds presented by R. Salgues, Director, Botanic Garden, Brignoles. Received March 29, 1934.

105017 to 105034.

From China. Seeds presented by H. K. Fu, Director, Botanic Garden, Dr. Sun Yat-Sen's Memorial Park, Nanking. Received March 21, 1934.

105017. CELASTRUS sp. Celastraceae.

105018. GORDONIA AXILLARIS (Roxb.) Dietrich. Theaceae.

A large evergreen shrub or small tree up to 25 feet high, native to southern China. The oblanceolate leaves, 4 to 6 inches long, are dark green above, and the solitary, creamy-white flowers are 2 to 3 inches across.

For previous introduction see 102249.

105019. ILLICIUM sp. Magnoliaceae.

105020. LUCULIA GRATISSIMA (Wall.) Sweet. Rubiaceae.

A Himalayan shrub up to 15 feet high, growing at altitudes of 4,000 to 5,000 feet, with opposite ovate leaves 6 inches long and gorgeous rounded panicles of pink or rose flowers.

For previous introduction see 76903.

105021. MUSSAENDA sp. Rubiaceae.

105022. ORMOSIA HENRYI Prain. Faba-

A small handsome tree, native to central China, with velvety branches, palegreen, compound leaves composed of 7 to 9 very stiff, narrow leaflets, yellowishwhite flowers in axillary racemes, followed by small black pods.

105017 to 105034-Continued.

105023. OROXYLON INDICUM (L.) Vent. Bignoniaceae. East Indian trumpetflower.

A tropical ornamental tree up to 40 feet high, with glossy compound leaves 2 to 4 feet across and terminal panicles of white or purple flowers. The large flat pods, up to 3 feet in length, contain winged seeds. Native to southeastern Asia.

For previous introduction see 88104.

105024. PIERIS sp. Ericaceae.

105025. PINUS YUNNAMENSIS Franch. Pinaceae. Yunnan pine.

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

, For previous introduction see 100586.

105026. PINUS sp. Pinaceae.

105027. PITTOSPORUM GLABRATUM Lindl. Pittosporaceae.

A tree, native to central China, with evergreen foliage and orange fruits.

For previous introduction see 99196.

105028. POLYGALA WATTERSI Hance. Polygalaceae.

A herbaceous perennial from central China with woody stems, membranous elliptic-lanceolate leaves over 2 inches long, and small yellow flowers in lax terminal racemes.

105029. PORANA RACEMOSA Roxb. Con-volvulaceae. Snow creeper.

A vine, native to the Himalayan region of India. It occurs in dense masses,

105017 to 105084-Continued.

climbing over other plants in the jungle. The dazzling-white flowers resemble patches of snow.

For previous introduction see 61618.

105080. PSYCHOTRIA SD. Rubiaceae.

For previous introduction see 104116.

105031. SCHIMA ABGENTEA Pritz. Theaсеяе.

An evergreen tree native to southwestern China.

For previous introduction see 99220.

105032. TRIPTERMGIUM FORRESTII LOSSNER. Celastraceae.

A shrub about 3 feet high, with oval crenulate-serrate papery leaves 2 to 8 inches long, and terminal panicles of small green-brown flowers. Native to open situations on the Tali Range, Yunnan.

For previous introduction see 100610.

105083. WISTARIA SD. Fabaceae.

105084. (Undetermined.)

Received as *Mallotus* sp., but the seeds are not of that genus.

105035. Avena BROMOIDES Gouan. Poaceae.

rom France. Seeds presented by R. Sal-gues, Director, Botanic Garden, Brig-noles. Received March 20, 1934. From France.

A slow-growing perennial grass up to 2 feet high, with thick, very tough, rough-hairy leaves. It is confined almost entirely to the Mediterranean countries.

For previous introduction see 89816.

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