



Reg. 4454 *10/28/36*

UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 119

Washington, D. C. ▼ Issued October 1936

PLANT MATERIAL INTRODUCED BY THE DIVISION OF PLANT EXPLORATION AND INTRODUCTION, BUREAU OF PLANT INDUSTRY, APRIL 1 TO JUNE 30, 1934 (Nos. 105036-105932)

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INTRODUCTORY STATEMENT

The present inventory, no. 119, is a record of the plant introductions (nos. 105036-105932) received by the Division of Plant Exploration and Introduction during the period from April 1 to June 30, 1934.

Conspicuous among the introductions listed are several large shipments of scions and plants of deciduous fruit varieties, chiefly from Europe; these will be grown for comparison with our present commercial varieties, in continuation of a plan inaugurated by this Division a few years ago. The countries of origin are Norway, Lithuania, the Union of Soviet Socialist Republics, Italy, Spain, and Australia; and the kinds of fruit included are apples, pears, peaches, nectarines, cherries, apricots, grapes, figs, and olives.

Pathologists working with potato diseases will be interested in a lot of tubers of reputedly wart-immune potato varieties (nos. 105478-105482) presented by the Norwegian Agricultural High School at Aas, Norway. The introduction from Turkey of two lots of seeds of native vegetable varieties (nos. 105258-105268, 105442-105447) and another lot of similar nature from China (nos. 105332-105347) indicates a growing interest in the testing of locally developed foreign vegetable varieties in the United States. These three lots include onions, beets, celery, carrots, tomatoes, and peppers.

From central and western China there is recorded a shipment of seeds of hardy plants (nos. 105311-105331), including relatives of several of our well-known American trees and shrubs, such as hackberries, hollies, etc. These will be tested in the moderately cold sections of the country. Two shipments of somewhat similar nature

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were received from the University of Nanking (nos. 105584-105645 and 105676-105706); these were collected in Kwangsi Province, southern China. Many types of woody plants are represented, including several wild species of *Ficus*, *Rubus*, and *Viburnum*.

Sixty lots of seeds from northern India (nos. 105873-105932), collected by Dr. Walter Koelz and presented through the University of Michigan, include many rare woody and herbaceous plants from high altitudes in the Himalayas, among them being several species of *Clematis*, *Cotoneaster*, *Rhododendron*, and *Rosa*.

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

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

DIVISION OF PLANT EXPLORATION AND INTRODUCTION,
Washington, D. C., April 30, 1936.

INVENTORY¹

105036. ANANAS SATIVUS Schult. f.
Bromeliaceae. Pineapple.

From Hawaii. Plants presented by J. L. Collins, geneticist, experiment station, Association of Hawaiian Pineapple Canners, Honolulu. Received April 18, 1934.

Sprny Samoa. Originally from Samoa, and probably identical with the variety *Queen*.

105037 and 105038.

From India. Seeds presented by Durgd Dott, fruit specialist, Department of Agriculture, Lyalpur. Received April 11, 1934.

105037. PHOENIX DACTYLIFERA L. Phoenicaceae. Date palm.

105038. PHOENIX DACTYLIFERA L. Phoenicaceae. Date palm.

105039. XANTHOCERAS SOBBIFOLIA Bunge. Sapindaceae.

From Grand Junction, Colo. Seeds presented by Charles M. Jaquette, through G. P. Van Esetine, Agricultural Experiment Station, Geneva, N. Y. Received April 13, 1934.

A Chinese shrub or small tree with ash-like leaves and large drooping racemes of white flowers with yellow stamens. The kernels of the large fruits are eaten by the Chinese.

For previous introduction see 77022.

105040 to 105042. RHODODENDRON spp. Ericaceae.

From the Philippine Islands. Seeds collected at Bangui, Mountain Province, and presented through the Bureau of Forestry, Manila. Received April 5, 1934.

105040. RHODODENDRON SCHADENBERGII Warb.

A tropical shrub with leathery oblong acute leaves nearly 4 inches long. The flowers, about 1 inch across, are in terminal clusters. Native to Luzon, Philippine Islands.

105040 to 105042—Continued.

105041. RHODODENDRON SUBSESSILE Rendle.

A Philippine shrub with brown-hairy young twigs and small oval leaves 1 inch long, brown hairy beneath. The solitary pink flowers are less than 1 inch across.

105042. RHODODENDRON VIDALII Rolfe.

An evergreen shrub of rather stiff habit, with smooth branches and oblanceolate leaves 2 inches long, the lower surface marked with black glandular scales. The flowers, white or pink tinged, are about 1 inch across. Native to the Philippines.

105043 to 105049. SACCHARUM OFFICINARUM L. Poaceae. Sugarcane.

From the Philippine Islands. Cuttings presented by the Philippine Sugar Association, Manila. Received April 10, 1934.

105043. P. S. A. no. 48.

105044. P. S. A. no. 49.

105045. P. S. A. no. 50.

105046. P. S. A. no. 51.

105047. P. S. A. no. 52.

105048. P. S. A. no. 53.

105049. P. S. A. no. 54.

105050 to 105054. ASTER spp. Astera-ceae.

From England. Plants purchased from Ernest Ballard, Old Court, Colwell, near Malvern. Received April 12, 1934.

105050. Bab Ballard. A dwarf *Novi-belgii* aster, 6 to 9 inches high, with neat leathery foliage and large lavender-blue flowers.

105051. Little Boy Blue. Very dwarf, early. Neat upright little pyramids, completely smothered with semidouble, deep-blue flowers.

105052. Little Pink Lady. A very dwarf, bushy variety with large semidouble deep-pink flowers.

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

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

105050 to 105054—Continued.

105053. Purple Emperor. An early blooming, dwarf variety with large numerous semidouble flowers of a beautiful rich purple. The buds are very dark and the stem is a black purple.

105054. Snow Sprite. A new type of the *Novi-belgii* aster. It has a very dwarf, branching habit and flowers freely when only 1 foot high. The foliage is dark green, and the semidouble white flowers, produced in profusion down to the ground, appear in the midseason.

105055 to 105085.

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Plant Industry, Leningrad. Received April 6, 1934.

105055 to 105065. AMYGDALUS PERSICA L.
Amygdalaceae. Peach.

105055. U. S. S. R. no. 141589. A white peach from Turtkul, Middle Asia.

105056. U. S. S. R. no. 141590. From Turtkul, Middle Asia.

105057. U. S. S. R. no. 142058. From Falsabad, Tadjikistan, Middle Asia.

105058. U. S. S. R. no. 142886. *Krasny Zafrani*, a red peach from Georgia, Transcaucasia.

105059. U. S. S. R. no. 142887. *Gru-dinskiy Celly*, a white peach from Georgia, Transcaucasia.

105060. U. S. S. R. no. 142888. *Elberta*, from Yalta, Crimea.

105061. U. S. S. R. no. 142890. *Eri-vanskii*, a yellow peach from Erivan, Armenia, Transcaucasia.

105062. U. S. S. R. no. 142891. *Tchuguri*, a white peach from Erivan, Armenia, Transcaucasia.

105063. U. S. S. R. no. 142892. *Dagestanskiy Celly*, a white peach from Dagestan, Caucasus.

105064. U. S. S. R. no. 142893. *Yellow Zafrani*, from Transcaucasia.

105065. U. S. S. R. no. 142894. *Rartule*, from Georgia, Transcaucasia.

105066 to 105073. PRUNUS ARMENIACA L.
Amygdalaceae. Apricot.

105066. U. S. S. R. no. 141556. *Spi-tack*, from Erivan, Transcaucasia.

105067. U. S. S. R. no. 141557. *Pet-vast-zavrja*, from Ordubad, Azerbaidjan, Transcaucasia.

105068. U. S. S. R. no. 141560. *Shalack*, from Erivan, Transcaucasia.

105069. U. S. S. R. no. 141561. *Pei-vact*, from Ordubad, Azerbaidjan, Transcaucasia.

105070. U. S. S. R. no. 141562. *Shalack*, from Erivan, Transcaucasia.

105071. U. S. S. R. no. 141563. From near Erivan, Transcaucasia.

105072. U. S. S. R. no. 141566. *Tzum-Erick*, from near Yalta, Crimea.

105073. U. S. S. R. no. 143036. *Hos-rovshai*, from Erivan, Transcaucasia.

105055 to 105085—Continued.

105074 to 105085. VITIS VINIFERA L.
Vitaceae. European grape.

105074. U. S. S. R. no. 150192. A black grape from the Katakalkisk district, Middle Asia.

105075. U. S. S. R. no. 150193. A black grape from Kurati, Middle Asia.

105076. U. S. S. R. no. 150194. A black grape from Kara-Kala, Middle Asia.

105077. U. S. S. R. no. 150195. *Kus-sayne*, from Kara-Kala, Middle Asia.

105078. U. S. S. R. no. 150197. *Kul-Dari*, from the Bakarden district, Middle Asia.

105079. U. S. S. R. no. 150198. From Kara-Kala, Middle Asia.

105080. U. S. S. R. no. 150199. A white grape from Middle Asia.

105081. U. S. S. R. no. 150200. A white grape from Nuchur, Middle Asia.

105082. U. S. S. R. no. 150201. A black grape from Sumbar, Middle Asia.

105083. U. S. S. R. no. 150202. *AU-Shaytan*, from the Kayne-Kassira district, Middle Asia.

105084. U. S. S. R. no. 150203. *Kok-Uzum*, from the Karakalpak district, Middle Asia.

105085. U. S. S. R. no. 150204. From Kara-Kala, Middle Asia.

105086 to 105091.

From Denmark. Seeds presented by Prof. K. Jessen, Universitetets Botaniske Have, Copenhagen. Received April 9, 1934.

105086. CANNA FLACCIDA Rosc. Cannaceae.

A tall green-stemmed canna, 4 to 6 feet high, very leafy below, with ovate-lanceolate or narrowly elliptic, acute, green leaves. The sulphur-yellow, iris-like flowers are about 5 inches long. Native to the southeastern United States.

105087. CANNA LUTEA Mill. Cannaceae.

A tall slender canna, 3 to 4 feet high, with oblong acute leaves and pale yellowish-white flowers in a lax simple raceme. Native from Mexico to Brazil.

105088 to 105090. DELPHINIUM spp. Ranunculaceae. Larkspur.

105088. DELPHINIUM CILIATUM Stev.

A stout upright perennial larkspur 1 to 3 feet high, with digitately five- to seven-parted leaves and blue flowers in simple or branched racemes. Native to the Caucasus region.

105089. DELPHINIUM HALTERATUM Sibth. and Sm.

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

For previous introduction see 104570.

105086 to 105091—Continued.

105090. DELPHINIUM REQUIENI DC.

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

For previous introduction see 104572.

105091. ROMULEA COLUMNAE Sebast. Iridaceae.

A crocuslike plant from the Mediterranean region, with linear leaves much longer than the scape that bears the solitary blue or violet or whitish flowers, each about 1 inch across.

105092 and 105093. SOLANUM TUBEROSUM L. Solanaceae. Potato.

From Canada. Tubers presented by J. W. Scannell, Department of Agriculture, Indian Head, Saskatchewan. Received April 14, 1934.

Introduced for the use of Department specialists.

105092. B. C. no. 32. 105093. B. C. no. 62.

105094 to 105099. TRITICUM AESTIVUM L. Poaceae. Common wheat.

From Finland. Seeds presented by Dr. Vilho A. Pesola, Chief, Central Experiment Station, Division of Plant Breeding, Jokioinen. Received April 11, 1934.

Introduced for the use of specialists working with cereals.

105094. *Hopea*, spring wheat.105095. *Pohjola*, autumn wheat.105096. *Sampo*, autumn wheat.105097. *Sopu*, spring wheat.105098. *Touko*, spring wheat.105099. *Varma*, autumn wheat.

105100 to 105106.

From England. Plants purchased from Maurice Pritchard & Sons, Ltd., Riverslea Nurseries, Christchurch, Hants. Received April 2, 1934.

105100. IRIS RUBRO-MARGINATA Baker. Iridaceae.

A dwarf iris of the Pogoniris section, not more than 4 inches high, with ensiform-falcate, red-edged leaves 2 to 3 inches long and stemless flowers, two to a root. The tube, 2 inches long, is green tinged with purple above; the limb is yellow or lilac and 2 inches long, and the segments are all oblong spatulate. Native to Asia Minor.

105101. THALICTRUM AQUILEGIFOLIUM L. Ranunculaceae. Columbine meadowrue.

Variety *Purple Cloud*.

For previous introduction see 95600.

105102 to 105106. TRADESCANTIA spp. Commelinaceae.

105102. *Blue Stone*.105103. *Lilac Time*.105104. *Pauline*.105105. *Purewell Giant*.105106. *Purple Dome*.

105107. ELEOCHARIS TUBEROSA (Roxb.) Schult. Cyperaceae. Waternut.

From China. Tubers presented by Albert F. Ding, Portland, Oreg. Received April 2, 1934.

A Chinese vegetable which grows very much in the same manner as wet-land rice. The corms or tuberous rhizomes are mostly eaten raw, but are also sliced or shredded in soups and in meat and rice dishes. The plants, which are grown on mulch or clay soil, need a hot summer to mature.

For previous introduction see 102620.

105108. CHRYSANTHEMUM CINERARIAE-FOLIUM (Trevir.) Vis. Asteraceae.

From France. Seeds purchased from Vilmorin-Andrieux & Cie., Paris, by the United States Department of the Interior. Received April 3, 1934.

A slender unbranched glaucous perennial 12 to 15 inches high. The long-petioled leaves are silky beneath with distant segments. The plant, grown commercially in southern and western Europe, is used in making insect powder.

For previous introduction see 40631.

105109 to 105149.

From Italy. Plants purchased from Martino Bianchi, Pistoia. Received April 2, 1934.

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

105109 to 105122. AMYGDALUS PERSICA L. Amygdalaceae. Peach.

105109. *Alexis Lepère*.105110. *Arthur Chevreau*.105111. *Baltet*.105112. *Buco Incavato*.105113. *Cotogna del Poggio*.105114. *Cotogna di Rosano*.105115. *Cotogna gialla*.105116. *Cotogna Massima*.105117. *Morellone*.105118. *Poppa di Venere d'Ognissanti*.105119. *Principe di Piemonte*.105120. *Reine des Verges*.105121. *Sanguigna*.105122. *Senator Carlo Ridolfi*.

105123 to 105132. MALUS SYLVESTRIS Mill. Malaceae. Apple.

105123. *Abbondanza*.105124. *Calvilla di Danzica*.105125. *Calvilla Lesans*.105126. *Calvilla rosso d'autunno*.105127. *Del Commercio*.105128. *Grand Alexandre*.105129. *Renetta Ananassa*.105130. *Renetta grande di Cassel*.105131. *Rosa*.105132. *Signe Tullisch*.

105133 to 105135. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.

105133. *Di Germania*.

105109 to 105149—Continued.

105134. *Tardivo di Boulbon*.105135. *Tardivo d'Orleans*.105136 to 105149. *PYRUS COMMUNIS* L.
Malvaceae. Common pear.105136. *Bergamotta de Pentecôte*.105137. *Bergamotta Esperen*.105138. *Butirra d'Arenberg*.105139. *Butirra Diel*.105140. *Butirra Giffard*.105141. *Butirra bianca Toscana*.105142. *Butirra Hardy*.105143. *Butirra dell'Assunta*.105144. *Coscia*.105145. *Gentil Bianca*.105146. *Louis Buone d'Avranches*.105147. *Margherita Marillat*.105148. *Passa Crassarin*.105149. *Spadona d'Estate*.105150. *TRIFOLIUM PRATENSE* L. Fa-
baceae. Red clover.From Poland. Seeds purchased from Udycz,
Hodowla Nasion, Warszawa. Received
April 4, 1934.Variety *Gloria*.

105151 to 105154.

From Cuba. Seeds presented by Robert M.
Grey, Superintendent of the Atkins In-
stitution of the Arnold Arboretum, Sole-
dad, Cienfuegos, through F. G. Walsing-
ham. Received April 2, 1934.105151. *ASSONIA NATALENSIS* (Sond.)
Kuntze. Sterculiaceae.A shrub or small tree, native to south-
ern Africa, with cordate, angular, toothed
leaves and axillary 6- to 8-flowered um-
bels of large, pure-white, fragrant flow-
ers.

For previous introduction see 90876.

105152. *SAPINDUS TRIFOLIATA* L. Sapin-
daceae. Soapnut tree.A stout tree, native to India, with alter-
nate pinnate leaves and dull-white flowers.
The round fruits, the size of cherries, are
used in southern India as a substitute for
soap. An oil is also extracted from them.
The hard yellow wood is used in house
building.

For previous introduction see 23315.

105153. *STIGMAPHYLLOM PUBERUM* (Rich.)
Juss. Malpighiaceae.A woody vine, native to the West Indies,
with the branchlets covered with ap-
pressed brown hairs. The ovate-acumi-
nate leaves, 2 inches long, are nearly
glabrous above and appressed pubescent
beneath. The petals of the bright-yellow
flowers, an inch across, are fringed on
the margin, and the maplelike fruits are more
than an inch long.

For previous introduction see 102681.

105151 to 105154—Continued.

105154. *STIGMAPHYLLOM SAGRAEANUM*
Juss. Malpighiaceae.A woody vine, native to the West
Indies, with rigid, leathery, linear to ovate
leaves, coarsely reticulated beneath. The
bright-yellow flowers are in axillary clus-
ters, and the maplelike fruits are oblong
with straight edges.

For previous introduction see 102680.

105155 to 105157. *MALUS SYLVESTRIS*
Mill. Malvaceae. Apple.From Michigan. Scions presented by Prof.
F. G. Bradford, Michigan State College,
East Lansing. Received April 9, 1934.105155. *Cilligos*. A Hungarian variety
with small fruits which do not color as
well in the North as they do farther
south.105156. *Daru*. A hardy, very late-flower-
ing apple which will stand 12° F. with-
out injury.105157. *Fenville*. A seedling, probably a
French crab, which sprang up as a root
sprout from a tree whose top had died.
Its sole merit is its very late blossom-
ing, as the fruit is small and inferior.

105158 to 105167.

From Sweden. Seeds presented by Prof. C.
Skottsberg, Botaniske Have, Göteborg.
Received April 7, 1934.105158. *ALTHAEA HELDREICHII* Boiss. Mal-
vaceae.A slender hairy perennial, with rounded,
heart-shaped leaves and rosy-pink flowers
in small clusters. Native to southeastern
Europe.105159 to 105161. *RHEUM* spp. Polygona-
ceae. Rhubarb.105159. *RHEUM ALEXANDRAE* Batal.A stout herbaceous perennial, native
to China, with a rosette of elliptic-
ovate, dark glossy green leaves and
flower stems, 3 to 4 feet high, bearing
large pale-yellow overlapping leaflike
bracts.105160. *RHEUM FRANZENBACHII* Muen-
ter.A rapidly growing species of rhu-
barb, native to temperate Asia, which
is a striking ornamental, suitable for
borders and possibly useful for breed-
ing purposes.

For previous introduction see 69105.

105161. *RHEUM PALMATUM* L.
Sorrel rhubarb.A leafy perennial about 5 feet high,
with subcylindrical stems and broad
roundish leaves deeply palmately lobed.
Native to northwestern Asia.

For previous introduction see 104376.

105162. *RUBUS ARMENIACUS* Focke. Ro-
saceae.A stout thorny shrub with long branch-
es, coarsely serrate leaflets, white hairy
beneath, red flowers, and rather large,
black, juicy fruits of good flavor. Native
to Asia Minor.105163. *RUBUS HISPIDUS* L. Rosaceae.A prostrate shrub with more or less
prickly stems, firm, dark-green leaflets,
and small, sour, reddish-purple fruits.
Native to southeastern Canada.

105158 to 105167—Continued.

105164 to 105167. *THYMUS* spp. Mentha-
ceae.

105164. *THYMUS BRITANNICUS* Ronni-
ger.

An upright, much-branched perennial about 6 inches high, beset with long hairs throughout. The lowermost leaves are small and linear; the stem leaves are elliptic and about one-half inch long. The white flowers are on long stems. Native to the Balkans.

105165. *THYMUS LANICAULIS* Ronniger.

A small hairy perennial about 3 inches high, with small linear or elliptic leaves about one-half inch long and small heads of purplish flowers. Native to the Balkan region.

105166. *THYMUS SERPYLLUM MONTANUS* (Kit.) Benth.

A variety of the common creeping thyme with more erect branchlets and larger leaves. Native to central Europe.

105167. *THYMUS SERPYLLUM VULGARIS* Benth. Lemon thyme.

A perennial or subshrubby plant with wiry stems and small strongly veined, elliptic ovate leaves about one-fourth inch long. The minute rose-colored or lilac flowers are in sessile whorls. Native to Europe. Received as *T. sudeticus*, now considered to be identical with the above variety.

105168 to 105176.

From Lithuania. Scions presented by Frank Kokaska, Alytus. Received April 17, 1934.

105168 and 105169. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.

Autumn varieties.

105168. No. 8. 105169. No. 9.

105170 to 105176. *PYRUS COMMUNIS* L. Malaceae. Common pear.

105170. *Barilett*. A large pear.

105171. No. 2. 105174. No. 5.

105172. No. 3. 105175. No. 6.

105173. No. 4. 105176. No. 7.

105177 to 105179. *DELPHINIUM* spp. Ranunculaceae. Larkspur.

From the Union of Soviet Socialist Republics. Seeds presented by the Botanic Garden, Academy of Science, Leningrad. Received April 9, 1934.

105177. *DELPHINIUM SIMPLEX* Dougl.

An erect hairy plant 3 feet or more high, with three-parted multifid leaves and intensely blue flowers in long narrow racemes. Native to the subalpine Rocky Mountains, northwestern United States.

105178. *DELPHINIUM TIROLENSE* Kern.

A pubescent perennial herb with three-parted leaves. The blue flowers are in loose racemes. Native to central Europe.

For previous introduction see 104895.

105177 to 105179—Continued.

105179. *DELPHINIUM PRZEWALSKII* Huth.

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

For previous introduction see 104894.

105180. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

From Australia. Seeds presented by Thomas Mansell, The Summit, southwestern Queensland. Received April 11, 1934.

Densonia. A variety which produces large, bushy, wilt-proof plants and is a heavy midseason bearer.

105181 to 105199.

From Norway. Scions presented by Prof. Olav Moen, Norges Landbrukshøiskole, Aas. Received April 18, 1934.

105181 to 105184. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.

105181. *Silkeapple* (Annie Elizabeth).

105182. *Flaskeapple*.

105183. *Ribston*.

105184. *Signe Tillisch*.

105185 to 105190. *PRUNUS* sp. Amygdalaceae.

105185. *Frühste der Mark* (cherry).

105186. *Hedelfinger kjempe* (cherry).

105187. *Kronberg* (cherry).

105188. *Lucien* (cherry).

105189. *Skyggekirsebaer* (cherry).

105190. *Werderske* (cherry).

105191 to 105198. *PYRUS COMMUNIS* L. Malaceae. Common pear.

105191. *Bergamotte Hildesheimer*.

105192. *Bergamotte Høst*.

105193. *Clara Frijs*.

105194. *Esperens herrepaere*.

105195. *Fondante de Charneau*.

105196. *Grøpaere*.

105197. *Grev. A. V. Moltke*.

105198. *Keiserindepaere*.

105199. *RUBUS* sp. Rosaceae.

Åskerbringebaer raspberry.

105200 to 105218.

From the Union of Soviet Socialist Republics. Cuttings presented by the Mitchurin Horticultural Institute, Koslov, through the Institute of Plant Industry, Leningrad. Received April 18, 1934.

The Institute number follows the varietal name.

105200 to 105203. *MALUS SYLVESTRIS* Mill. Malaceae.

105200. *Anissovka*, 150622.

105201. *Krasny standard* (red), 150628.

105202. *Paradiska Mitchurina*, 150613.

105203. *Rebristoe*, 150623.

105200 to 105216—Continued.

105204 to 105217. *PRUNUS* spp. Amygdalaceae.

105204 to 105206. *PRUNUS CERASUS* L.
Sour cherry.

105204. *Pol'evka*, 150624.

105205. *Yubileynaya*, 150617.

105206. *Zacharievskaya* [number illegible].

105207. *PRUNUS CERASUS* × *AVIUM*.
Krassa Severa, 150630a.

105208. *PRUNUS CERASUS* × *FRUTICOSA*.
Monomach, 150621.

105209. *PRUNUS DOMESTICA* L.
Common plum.
Persikovaya, 150615.

105210. *PRUNUS DOMESTICA* × *SPINOSA*.
Renklod ternoviy, 150629.

105211. *PRUNUS FRUTICOSA* × *MAACKII*.
Cerapadus, 150627.

105212. *PRUNUS FRUTICOSA* × *PENNSYLVANICA*.
Ideal, 150611.

105213. *PRUNUS FRUTICOSA* × *PENNSYLVANICA* × *MAACKII*.
Cerapadus sladkiy, 150619.

105214. *PRUNUS INSITITIA* × *DOMESTICA*.
Tchernostiv Kozlovskiy, 150612.

105215. *PRUNUS JAPONICA* Thunb.
Cherry.
Yaponskaya, 150618.

105216. *PRUNUS SPINOSA* × *DOMESTICA*.
Tern sladkiy, 150610.

105217. *PRUNUS* sp.
Plodorodnaya, a cherry, 150616.

105218. *PYRUS* sp. Malaceae.
Dotch Blankovaja, 150625.

105219 and 105220.

From Canada. Plants presented by F. L. Skinner, Dropmore, Manitoba. Received April 21, 1934.

105219. *CLEMATIS LIGUSTICIFOLIA* × *SERRATIFOLIA*. Ranunculaceae.

A hybrid Clematis developed by F. L. Skinner.

105220. *POPULUS TRISTIS* Fisch. Salicaceae.

A rather small poplar from central Asia, with dark-brown branchlets and oblong-oval, crenate-serrate leaves about 4 inches long having whitish pubescent lower surfaces.

105221. (Undetermined.)

From Brazil. Bulbs presented by J. R. Swallen, Bureau of Plant Industry. Received April 26, 1934.

An unidentified terrestrial orchid, collected at Marahnão.

105222. *ILEX PARAGUARIENSIS* St. Hil. Aquifoliaceae. Yerba maté.

From Argentina. Seeds presented by Ing. Raul Ramella, Director de La Estación Experimental Central, Pergamino, through J. L. Colom, Chief, Division of Agricultural Cooperation, Pan American Union, Washington, D. C. Received April 14, 1934.

A tender evergreen Paraguayan holly, the leaves of which are dried and used to make the beverage known as maté, or Paraguay tea.

For previous introduction see 103698.

105223. *TRIPLARIS AMERICANA* L. Polygonaceae.

From Cuba. Seeds presented by Robert M. Gray, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. C. Walsingham. Received April 16, 1934.

A small tropical evergreen tree, with ovate acuminate leaves and curious three-angled woody fruits. Native to Central America.

For previous introduction see 80709.

105224. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.

From South Dakota. Scions presented by N. E. Hansen, South Dakota State College, Brookings. Received April 19, 1934.

Red Soviet.

105225. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

From Australia. Seeds presented by Mrs. A. Savage, Gloncurry, Queensland. Received April 2, 1934.

A small tomato used for jam and pickling.

105226. *CITRUS NOBILIS UNSHIU* Swingle. Rutaceae. Satsuma orange.

From the Union of Soviet Socialist Republics. Budwood presented by A. Zaretsky, citriculturist, Introduction Garden of Subtropical Cultures, Sukhum, Transcaucasia, through the All-Union Institute of Plant Industry, Leningrad. Received April 18, 1934.

A broad-leaved variety.

105227 to 105229.

From the West Indies. Bulbs and seeds collected by the Allison V. Armour expedition, through David Fairchild, Bureau of Plant Industry. Received April 24, 1934.

105227. *BLETIA PATULA* Hook. Orchidaceae.

Collected at Sawanar, on San Lorenzo Bay, Santo Domingo, by Mrs. Thomas Barbour. Large round bulbs with purple flowers.

105228. *EPIDENDRUM* sp. Orchidaceae.

Collected on Beata Island by Mrs. Thomas Barbour. Small flat green bulbs which produce large mauve flowers.

105229. *PINUS OCCIDENTALIS* Swartz. Pinaceae.

Collected in the mountains of Haiti by F. C. Baker. A native pine which resembles *Pinus caribaea*, but generally

105227 to 105229—Continued.

has five leaves in the fascicle instead of two. Formerly this pine covered the island above 2,500 feet altitude, but is now found only in small patches. The tree is a rapid grower and is now being planted on the mountain sides to prevent soil erosion.

For previous introduction see 102615.

105230 to 105239.

From the Union of Soviet Socialist Republics. Cuttings presented by A. Richter, division of pomology, Government Botanical Garden, Nikita, Yalta, Crimea. Received April 19, 1934.

105230 to 105233. *FICUS CARICA* L. Moraceae. Common fig.

105230. *Bijas injir C.*

105231. *Chara injir N 2 Cr.*

105232. *E. de Caucasie noire C.*

105233. *Lob injir Cr.*

105234 to 105239. *OLEA EUROPAEA* L. Oleaceae. Common olive.

105234. *Gorvala.*

105235. *Nikitsky N. 53.*

105236. *O. de Crimese N. 123.*

105237. *O. de Crimese N. 172.*

105238. *Otour.*

105239. *Tassijakaja.*

105240 to 105243.

From French Indo-China. Seeds presented by M. Pollane, Institut des Recherches Agronomiques de Indochine, Division de Botanique. Received April 25, 1934.

105240. *BAUHINIA MALABARICA* Roxb. Caesalpinaceae.

A small erect bushy tree, native to southeastern Asia, with thick, rigid, deeply bifid, somewhat heart-shaped leaves 2 to 3 inches long. The small white flowers are in dense sessile axillary clusters. The rather turgid, straight, firm, narrow pods fall at the end of the dry season, and cattle are very fond of them.

For previous introduction see 101091.

105241. *CROTALARIA* sp. Fabaceae.

From Blao, French Indo-China, at 2,500 feet altitude. A crotalaria of spreading habit, with a deep taproot.

105242. *MEIBOMIA GYROIDES* (DC.) Kuntze. Fabaceae.

Collected at Blao, French Indo-China, at 2,500 feet altitude. A shrubby leguminous plant 8 to 10 feet high, native to the warmer parts of the central and eastern Himalayas. It has pubescent leaves and terminal racemes of red-purple flowers. It is found growing in valleys, at times even on the borders of swamps, but doing equally well on good soil. It may prove of value as a forage plant.

105243. (Undetermined.)

A leguminous shrub of very rapid growth, with elongated branches that quickly afford a light shade.

105244 to 105248. *SACCHARUM OFFICINARUM* L. Poaceae. Sugarcane.

From India. Cuttings presented by Rao Bahadur T. S. Venkatraman, Government sugarcane expert, Imperial Department of Agriculture, Coimbatore. Received April 24, 1934.

Cuttings introduced for the use of Department specialists interested in sugarcane.

105244. G-496 Coimbatore.

105245. G-297 Coimbatore.

105246. Co. 285.

105247. Co. 399.

105248. Co. 515.

105249 to 105251. *BRASSICA CAMPESTRIS* L. Brassicaceae. Rutabaga.

From Turkey. Seeds presented by Charles E. Allen, American consul, Istanbul, through the State Department, Washington, D. C. Received April 9, 1934.

105249. Red.

105251. White.

105250. Red.

105252. *RUBUS* sp. Rosaceae.

From Canada. Plants presented by Edward Lowden, Hamilton, Ontario. Received April 24, 1934.

Lowden blackberry. A large blackberry that has an extra strong root system.

105253 and 105254.

From Trinidad, British West Indies. Seeds presented by the Director of Agriculture, through the Director of the Royal Botanic Gardens, Port-of-Spain. Received April 12, 1934.

105253. *ASTROCARYUM AUREUM* Griseb. and Wendl. Phoenicaceae. Palm.

A palm closely related to *Elaeis*, with a prickly trunk and pinnately divided leaves of linear-lanceolate segments, shining above and greenish golden beneath. It is native to Trinidad, British West Indies.

For previous introduction see 104332.

105254. *ERYTHROXYLON COCA* Lam. Erythroxylaceae. Cocaine-tree.

A tropical shrub, native to Peru, 5 to 6 feet high, with slender rust-brown branches and clusters of yellowish flowers borne along the branchlets. It is grown commercially throughout South America and the East Indies for the production of cocaine, which is extracted from the dried leaves.

For previous introduction see 104337.

105255 and 105256.

From southern India. Seeds collected by Dr. E. W. Erlanson, Science College, Trivandrum, Travancore. Received April 13, 1934.

105255. *CROTON TIGLIUM* L. Euphorbiaceae. Croton-oil plant.

A small ornamental shrub or tree with ovate leaves varying in color from metallic green to bronze and orange. The powerful purgative, croton oil, is obtained from the seeds by crushing. It is used locally as a fish poison.

For previous introduction see 98369.

105255 and 105256—Continued.

105256. *RANDIA DUMETORUM* (Retz.) Lam.
Rubiaceae.

Collected at 3,000 feet altitude. A deciduous thorny shrub or small tree, found throughout India and distributed eastward to southern China. The bark and fruit are used medicinally.

For previous introduction see 49557.

105257. *BASSIA HYSSOPIFOLIA* (Pall.)
Volk. Chenopodiaceae.

From the Union of Soviet Socialist Republics. Seeds presented by Dr. N. I. Vavilov, Director, Institute of Plant Industry, Leningrad. Received April 21, 1934.

From Bakuriany, Transcaucasia. A gray-hairy annual 2 or 3 feet high, with somewhat fleshy linear leaves and small inconspicuous axillary flowers. Native to sandy places in southwestern Europe, and of possible use in preventing soil erosion.

105258 to 105268.

From Turkey. Seeds grown in the Merzifon region and presented by Harold T. Pence, Gaziantep. Received April 21, 1934.

Introduced for the use of Department specialists.

105258. *ALLIUM CEPA* L. Liliaceae. Onion.

A light onion.

105259. *ALLIUM PORRUM* L. Liliaceae. Leek.

Prosa.

105260. *BETA VULGARIS CICLA* L. Chenopodiaceae. Leaf-beet.

Chard.

105261. *BRASSICA OLERACEA CAPITATA* L. Brassicaceae. Cabbage.

105262. *CAPSICUM ANNUUM* L. Solanaceae. Common redpepper.

A variety used for stuffing.

105263. *CUCUMIS SATIVUS* L. Cucurbitaceae. Cucumber.

105264. *CUCURBITA PEPO* L. Cucurbitaceae. Pumpkin.

105265. *DAUCUS CAROTA* L. Apiaceae. Carrot.

105266. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

105267. *LYCOPERSICON ESCULENTUM* Mill. Solanaceae. Tomato.

105268. *PETROSELINUM HORTENSE* Hoffm. Apiaceae. Parsley.

Mydanos.

105269 to 105275. *TRIFOLIUM HYBRIDUM*
L. Fabaceae. Alsike clover.

From Canada. Seeds presented by R. I. Hamilton, agrostologist, Central Experimental Farm, Ottawa, Ontario. Received April 23, 1934.

105269. From the Kenora district, Ontario.

105270. From Prince George, British Columbia.

105271. From the Joseph Laboratories, Belle Vallée, Ontario.

105269 to 105275—Continued.

105272. From Woodpecker, British Columbia.

105273. Sample no. 1. From Scarborough, York County, Ontario.

105274. Sample no. 2. From Akona, Ontario.

105275. Sample no. 3. From Hagersville, Ontario.

105276 and 105277.

From the Canal Zone. Seeds presented by J. E. Higgins, Experiment Station, Summit. Received in April 1934.

105276. *BELOTIA PANAMENSIS* Pittier. Tiliaceae.

Received April 24, 1934. A tropical tree up to 35 feet high, with gray bark, elliptic, long-acuminate leaves 3 to 7 inches long, and small purplish flowers in axillary cymes. Native to Panama.

105277. *TARAKTOGENOS KURZII* King. Fiacourtiaceae.

Received April 23, 1934. A large tree, 40 to 50 feet high, native to India. The seeds yield the true chaulmoogra oil, used in the treatment of leprosy.

For previous introduction see 56633.

105278 and 105279. *MALUS SYLVESTRIS*
Mill. Malaceae. Apple.

From England. Scions presented by G. T. Spinks, University of Bristol Research Station, Long Ashton, Bristol. Received April 26, 1934.

105278. *Bulmer's Norman.*

105279. *White Alphonso.*

105280 to 105304.

From South Africa. Seeds and bulbs purchased from John Martley, Banhoek, Stellenbosch. Received April 26, 1934.

105280. *GALAXIA GRAMINEA* Thunb. Iridaceae.

The numerous leaves that compose the rosette of this galaxia are linear, convolute, dilated, membranous at the base, and 1 to 2 inches long. The small fugacious lilac or yellow flowers are an inch in diameter when expanded. Native to the coastal region of South Africa. (Bulbs.)

105281. *GALAXIA OVATA* Thunb. Iridaceae.

A bulbous plant with a dense rosette of firm, ribbed, ovate leaves nearly 2 inches long. The borders of the leaves are pale and cartilaginous. The bright-yellow, fugacious flowers, 1 inch long, are borne in sessile spathes. Native to the coastal region of South Africa. (Bulbs.)

105282. *GEISSORHIZA SPLENDESSIMA* Diels. Iridaceae.

A low irislike plant from South Africa, 4 to 6 inches high, with three linear leaves 2 to 5 inches long and small azure blue flowers in a three- to five-flowered lax spike. (Bulbs.)

105283 to 105298. *GLADIOLUS* spp. Iridaceae.

105283. *GLADIOLUS ALATUS* L.

A very interesting plant with flowers of a delightful fragrance not unlike that of the sweetbrier. The three upper

105280 to 105304—Continued.

petals are bright orange scarlet and the three lower ones are yellowish tipped with orange scarlet. The bulbs are not larger than ordinary peas and cannot remain long out of the ground. Native to South Africa. (Bulbs.)

For previous introduction see 81292.

105284. *GLADIOLUS ALATUS* L.

A variety with rose-pink flowers. (Bulbs.)

105285. *GLADIOLUS BLANDUS* Ait. Iridaceae.

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

For previous introduction see 44724.

105286. *GLADIOLUS CALLISTUS* Bolus f.

A tall plant, 30 to 40 inches high, with four to seven narrow sword-shaped basal leaves 1 to 2 feet long and two stem leaves. The flowers, white suffused with pink and 9 to 12 in number, are produced on 1 to 3 branches. (Bulbs.)

For previous introduction see 77223.

105287. *GLADIOLUS CUSPIDATUS* Jacq.

An erect bulbous plant, 2 to 3 feet high, with sword-shaped leaves usually shorter than the stem and four to eight white or pinkish flowers in a lax one-sided spike. It is native to the Cape of Good Hope, where it flowers in May and June. (Bulbs.)

For previous introduction see 44725.

105288. *GLADIOLUS GRACILIS* Jacq.

A plant with about three rigid, subterete leaves a foot or less long, and very slender stems up to 2 feet high bearing two to six pale-illac scentless flowers in a lax second spike. Native to South Africa. (Bulbs.)

105289. *GLADIOLUS GRANDIS* Thunb.

Closely related to *Gladiolus tristis*, this has three strongly subterete leaves 12 to 18 inches long and a slender stem up to 2 feet high. The purplish brown-tinged flowers are 2 to 3 inches long, in a lax second spike. Native to the southeastern part of the Cape of Good Hope. (Bulbs.)

105290. *GLADIOLUS HIRSUTUS* Jacq.

A species about a foot high, with bright-red, fragrant flowers, borne in a very lax, few-flowered spike, and sword-shaped, strongly ribbed leaves; found growing in sandy stretches which are moist only during the winter. Native to South Africa. (Bulbs.)

For previous introduction see 88680.

105291. *GLADIOLUS MARTLEYI* L. Bolus.

Seeds of an autumn-flowering species which becomes about a foot high, producing a single very narrow leaf and 1 to 11 flowers $1\frac{1}{2}$ inches long, white suffused with pink, in a second spike. Native to sandy places, Stellenbosch, South Africa.

105280 to 105304—Continued.

105292. *GLADIOLUS ODORATUS* L. Bolus.

A gladiolus about a foot high, with one spirally twisted leaf 8 inches long and a spike that sometimes bears 5 to 13 flowers; these flowers are a mixture of reddish purple, brown, and dull yellow, and have a sweet odor. Native to the Cape of Good Hope. (Bulbs.)

105293. *GLADIOLUS ORCHIDIFLORUS* Andr.

The three or four leaves of this gladiolus are linear, firm, crowded and 6 to 12 inches long, and the four to six greenish flowers are in a very lax spike on a stem the same height as the leaves. Native to South Africa. (Seeds.)

105294. *GLADIOLUS PAPPEI* Baker.

A gladiolus with three leaves up to 6 inches long, with linear, rigid tips. The pink flowers are in small lax spikes. Native to the summit of Table Mountain, Cape of Good Hope. (Bulbs.)

105295. *GLADIOLUS RECURVUS* L.

A slender-stemmed species, up to 2 feet high, native in boggy sandy places of South Africa. The two to six fragrant flowers, which appear in August, are borne in a very lax spike and vary in color from blue to flushed pink, with minute blackish-illac spots. (Bulbs.)

For previous introduction see 64654.

105296. *GLADIOLUS TRICHONEMIFOLIUS* Ker.

A species with a very slender stem 6 to 18 inches high, and, generally, three rigid, slender, long-sheathing leaves, the lower one often overtopping the stem. The one to three erect flowers, an inch long, have a yellow perianth, with the three lower segments blotched with purple at the throat. Native to South Africa. (Bulbs.)

105297. *GLADIOLUS VILLOSUS* Ker.

The simple stems of this gladiolus are up to 2 feet long, and the sheaths are very hairy, the lowest without any leaf blade. The upper sheaths enclose thick, rigid, linear leaves up to 12 inches long. The bright-red or illac flowers are in a lax second spike. Native to South Africa. (Bulbs.)

105298. *GLADIOLUS WATERMEYERI* L. Bolus.

A species with three or four leaves about 10 inches long, conspicuously two-nerved, and flowers $1\frac{1}{2}$ inches long. The upper segments are pale, flushed with pinkish purple, and the lower ones are yellowish green. Native to Cape Province, South Africa. (Seeds.)

105299. *HESPERANTHA* sp. Iridaceae.

Received under the name "buhrii", for which a place of publication has not been found. (Bulbs.)

105300 to 105302. *MORAEA* spp. Iridaceae.

Bulbs.

105300. *MORAEA PAPILIONACEA* Ker.

A dwarf moraea, 4 to 6 inches high, with red or lilac flowers, yellow on the claw. The stems, simple or forked

105280 to 105304—Continued.

lower down, bear one to six flower clusters, and the linear hairy leaves are 3 to 6 inches long. Native to South Africa.

105301. *MORAEA TORTA* L. Bolus.

A rather stiffly upright plant with sky-blue flowers about 1 inch long in small cymes. The two spirally twisted leaves are about 15 inches long. Native to the Cape of Good Hope.

105302. *MORAEA PAVONIA VILLOSA* (Ker.) Baker.

An irislike plant with one long, narrow, linear leaf and fugitive flowers 1 inch long borne on a slender stem up to 2 feet high. The flowers have bright purple falls with a blue-black spot and hairy claw. Native to the Cape of Good Hope.

105303. *NERINE FILIFOLIA* Baker. Amaryllidaceae.

A nerine with 6 to 20 slender, subulate, grass-green leaves 6 to 8 inches long and a centripetal umbel of 8 to 10 bright-red flowers with a deeply cut perianth about 1 inch long. Native to the Kalahari region, South Africa.

105304. *NERINE HUMILIS* (Jacq.) Herb. Amaryllidaceae.

The six linear, bright-green channeled leaves of this nerine are about 1 foot long and are contemporary with the bright-pink flowers. These are in a centrifugal umbel of 10 to 20 flowers with slender pedicels. Native to South Africa.

105305. *OLEA EUROPAEA* L. Oleaceae.
Common olive.

From Syria. Cuttings presented by Selim Challah, Damascus, through H. S. Goold, American consul general, Beirut. Received April 27, 1934.

Yullutt or Yallut olive.

105308. *LACTUCA SATIVA* L. Cichoriaceae.
Garden lettuce.

From China. Seeds presented by Andrew Tse, Hong Kong. Received April 14, 1934. Introduced for Department specialists.

105307. *SOLANUM TUBEROSUM* L. Solanaceae.
Potato.

From Canada. Tubers presented by J. W. Scannell, Indian Head, Saskatchewan. Received April 27, 1934.

Snowflake.

105308. *AMYGDALUS PERSICA* L. Amygdalaceae.
Peach.

From Italy. Plants purchased from Fratelli Sgaravatti, Saonara, Padova. Received April 28, 1934.

Agostinella.

105309 and 105310.

From Cuba. Seeds and cuttings presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received April 26, 1934.

105309 and 105310—Continued.

105309. *MYRCIARIA CAULIFLORA* (Mart.) Berg. Myrtaceae. Jaboticaba.

A Brazilian tree up to 35 feet high, with narrowly elliptic sharp-pointed leaves, short-petioled flowers produced directly from the bark of the trunk and branches, and purplish violet globose fruits half an inch to 1½ inches in diameter.

For previous introduction see 51830.

105310. *TABEBUIA SERRATIFOLIA* (Vahl.) Nicholson. Bignoniaceae.

Cuttings of an evergreen tree, native to the West Indies, with digitately compound leaves made up of four or five oblong-ovate leaflets 3 to 5 inches long and terminal panicles of yellow funneliform flowers.

For previous introduction see 98095.

105311 to 105331.

From China. Seeds presented by the director, Botanic Garden, the Sun Yat-Sen Tomb and Memorial Park Commission, Nanking. Received April 16, 1934.

105311. *CARPINUS TURCHANINOVII OVALIFOLIA* Winkler. Betulaceae.
Hornbeam.

A small graceful shrubby tree, 12 to 15 feet high, with ovate, serrate, dark-green leaves 1 to 2 inches long. Native to western China.

For previous introduction see 63346.

105312. *CASTANOPSIS SCLEROPHYLLA* (Lindl.) Schottky. Fagaceae.
Evergreen chinquapin.

A hardy evergreen tree, up to 65 feet high, with edible nuts having a flavor like that of the chinquapin. Native to south-central China.

For previous introduction see 71037.

105313 to 105315. *CELTIS* spp. Ulmaceae.105313. *CELTIS BIONDII* Pampan.

A stout-branched hackberry from western China, with rather stiff, broadly ovate, long-acuminate leaves 2 to 3 inches long and small black fruits.

105314. *CELTIS BUNGEANA* Blume.
Hackberry.

A large tree up to 50 feet high, with light-gray bark, small deep-green leaves, and black fruits the size of small peas. Native to northeastern Asia.

For previous introduction see 104842.

105315. *CELTIS* sp.105316. *DAPHNIPHYLLUM MACROPODUM* Miquel. Euphorbiaceae.

An evergreen shrub with elliptic-oblong, dark-green, leathery leaves 5 to 8 inches long, inconspicuous flowers, and small ellipsoidal fruits in axillary racemes 3 inches long. Native to eastern Asia.

For previous introduction see 99238.

105317. *DIANTHUS BREVICAULIS* Fenzl. Pink.
Sileneaceae.

A low caespitose plant, with erect glaucous linear leaves and small red-purple flowers borne singly. Native to the Taurus Mountains of Asia Minor.

For previous introduction see 101924.

105311 to 105331—Continued.

105318. HOLBOELLIA CORIACEA Diels. Lardizabalaceae.

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

105319. HOVENIA DULCIS Thunberg. Rhamnaceae.

An ornamental deciduous Japanese tree with leaves often 4 or 5 inches long and inconspicuous white or greenish-white flowers. After flowering the peduncles thicken and become edible, being red, pulpy, and of sweetish taste.

For previous introduction see 45620.

105320 to 105323. ILEX spp. Aquifoliaceae. Holly.

105320. ILEX PURPUREA Hassk.

An evergreen tree with crenate-serrulate, elliptic, lanceolate leaves 2 to 3 inches long and red berries half an inch long, in clusters of two to five. It is native to Japan and central China.

For previous introduction see 102075.

105321. ILEX ROTUNDA Thunb.

A large evergreen tree, sometimes over 40 feet high, with glossy, green, entire, elliptic, or oblong leaves 2 to 4 inches long and small, globose, scarlet berries. Native to Japan and Chosen.

For previous introduction see 102300.

105322. ILEX TRIFLORA VIRIDIS Loes.

A small tree, with stiff, small, ovate or oblong leaves 2 or 3 inches long and black globose fruits about one-fourth inch in diameter. Native to mountainous districts of eastern India.

105323. ILEX WILSONII Loes.

An ornamental evergreen Chinese shrub with broad, spiny, glistening green leaves.

For previous introduction see 78146.

105324. LILIUM BROWNII Poit. Liliaceae.

A Chinese lily with stems 2 to 3 feet high and lanceolate leaves 3 to 5 inches long. The flowers, usually solitary but sometimes two to four together, are 6 to 8 inches long and nearly as wide and are delicately fragrant. The waxy segments are creamy white inside, fading to pure white and tinged with yellow at the base. Outside they are white with brown-purple midribs, the three outer ones being variably tinged with brownish purple.

For previous introduction see 102076.

105325. LOROPETALUM CHINENSE (R. Br.) Oliver. Hamamelidaceae.

A handsome but somewhat tender bushy evergreen Chinese shrub of loose open habit and about 5 feet high. It has oval unsymmetrical leaves and curious white witch-hazellike flowers during the early spring.

For previous introduction see 104207.

105326. PINUS ARMANDI Franch. Pinaceae. Armand pine.

A tall 5-leaved pine 60 to 100 feet high, with a trunk often 6 feet in diameter, that grows in western China on

105311 to 105331—Continued.

well-drained, moist mountain slopes between 8,000 and 10,000 feet altitude. The slender, bright-green leaves are about 4 inches long. The edible seeds are sold in Chinese markets.

For previous introduction see 95373.

105327. PTEROCELTIS TATARINOWII Maxim. Ulmaceae.

A tall deciduous tree, native to north-western and central China, closely resembling *Celtis* in foliage and habit. The ovate to ovate-oblong, acuminate leaves, irregularly and sharply serrate, are over 3 inches long. The slender-stalked fruits, unlike those of *Celtis*, have wings usually emarginate at the apex.

For previous introduction see 46433.

105328. STEWARTIA MONADELPHA Sieb. and Zucc. Theaceae.

A tree up to 75 feet high, native to Japan. The bright-green ovate leaves are 2 to 4 inches long, and the fragrant, white, cup-shaped flowers, 1 to 2 inches across, are solitary in the axils of the leaves.

For previous introduction see 102261.

105329. STYRAX PHILADELPHOIDES Perkins. Styracaceae.

A large shrub, 5 to 6 feet high, with thin, narrowly oblong, hairy leaves, 1 to 3 inches long, and white flowers, half an inch long, in small axillary and terminal racemes. Native to eastern China.

105330. TRIPTERYGIUM FORRESTII Loesner. Celastraceae.

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

For previous introduction see 105032.

105331. ZELKOVA SERRATA (Thunb.) Planch. Ulmaceae. Sawleaf zelkova.

A handsome tree, native to Japan, up to 90 feet high, with a short trunk dividing into many upright, spreading branches and forming a broad, round-topped head. The sharply serrate leaves are ovate and are usually 2 to 3 inches long, or, on the young shoots, up to 7 inches long.

For previous introduction see 98780.

105332 to 105347.

From China. Seeds collected west of Peiping by Peter Liu. Received April 25, 1934.

105332. ALLIUM CEPA L. Liliaceae.

Onion.

Ta Ts'ung. A large onion which is grown on ridges. The Chinese plant it any time from early spring to fall.

105333. APIUM GRAVEOLENS L. Apiaceae. Celery.

Oh'in Tsai. A Chinese celery with very small seeds.

105334. BENINCASA HISPIDA (Thunb.) Cogn. Cucurbitaceae. Waxgourd.

Chia Tung Kwa. A winter gourd, used mostly in soups. The seed is planted in the middle of March in a coldframe, and transplanted when two or three leaves

105332 to 105347—Continued.

have developed. Only one gourd is allowed to grow on a vine, but each gourd weighs from 15 to 20 pounds.

105335. BETA VULGARIS L. Chenopodiaceae. Common beet.

Tzu Lo Pu Tou. Purple beet root. Said to be an introduced variety.

105336. BRASSICA sp. Brassicaceae.

Pao Tou Pai Tsai. Folded-leaf cabbage. This is planted in the middle of July and transplanted when the seedlings are 6 to 7 inches high. In October the outside leaves are tied over the head, and it is harvested in November.

105337. BRASSICA sp. Brassicaceae.

Hsiao Ching Kou Pai Tsai. Small green cabbage. Cultivated in the same way as *Pao Tou Pai Tsai* [105336].

105338. CAPSICUM ANNUM L. Solanaceae. Common redpepper.

Ta Shih Tzu Chiao. Large persimmon pepper which grows 3 to 4 inches in diameter.

105339. CAPSICUM ANNUM L. Solanaceae. Common redpepper.

Hsiao Chin Chiao. A small pepper about 3 inches long which ripens in June.

105340. CUCUMIS SATIVUS L. Cucurbitaceae. Cucumber.

Kwai Huang Kwa. An early-maturing cucumber which the Chinese plant in coldframes in the middle of March.

105341. CUCUMIS SATIVUS L. Cucurbitaceae. Cucumber.

Oh'iu Huang Kwa. An autumn cucumber, planted early in August.

105342. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

Ta Hsi Hung Shih. A red tomato 3 inches in diameter. A tall plant which bears fruit until late in the fall.

105343 to 105345. RAPHANUS SATIVUS L. Brassicaceae. Radish.

105343. Hsiao Shui Lo Pu, small water radish. These are planted 3 inches apart and require very little water. If overirrigated they produce tops at the expense of the root.

105344. Ch'ing Tsui Lo Pu, green fragile radish. A late radish always eaten raw. Planted in August and ripens early in November.

105345. Hsiang Ya Pai Lo Pu, elephant-tusk radish. Planted 4 inches apart and pickled or used for soup.

105346. SOLANUM MELONGENA L. Solanaceae. Eggplant.

Lao Lai Hsi Chieh Tzu. A black eggplant 6 to 7 inches in diameter. Plant begins to bear when it has nine leaves and continues to set fruit until late fall.

105347. SOLANUM MELONGENA L. Solanaceae. Eggplant.

Liu Ke Yieh Chieh Tzu, an early eggplant from 4 to 5 inches in diameter, with a rather short bearing period.

105348. (Undetermined.)

From Brazil. Seeds presented by J. R. Swallen, Bureau of Plant Industry. Received April 30, 1934.

An unidentified orchid collected on the Chapada Mesa between Caxias and Carolina, Maranhão, Brazil.

105349 to 105355.

From the Philippine Islands. Seeds presented by Dr. Arthur F. Fischer, Director of Forestry, Manila. Received April 23, 1934.

105349. CORYPHA ELATA Roxb. Phoenicaceae. Palm.

A tall palm up to 60 feet high, with a spirally ridged trunk and lunate, fan-shaped leaves 8 to 10 feet across, made up of 80 to 100 sword-shaped segments. Native to Burma and Bengal.

For previous introduction see 104678.

105350. HETEROSPATHE ELATA Scheff. Phoenicaceae. Palm.

A tall unarmed palm with a straight slender trunk and a terminal cluster of pinnate leaves. It is an attractive and graceful palm, suitable for the conservatory. Native to the island of Amboyna, Dutch East Indies.

For previous introduction see 103971.

105351. LIVISTONA BOBUNDIFOLIA LUZONENSIS Becc. Phoenicaceae. Palm.

A Philippine palm up to 35 feet high, with a straight terete trunk 6 to 10 inches thick. The fan-shaped leaves, 3 to 5 feet in diameter, are used for thatching. Native to the island of Luzon.

For previous introduction see 103783.

105352. ONCOSPERMA TIGILLARIA (Jack) Ridley. Phoenicaceae. Palm.

An elegant palm with a trunk 30 to 40 feet high, armed with long black spines. The drooping pinnate leaves are 10 to 12 feet in length, with coriaceous pinnae 2 feet long, scurfy beneath. The blue-black berries are half an inch in diameter. Native to Malaya.

For previous introduction see 51777.

105353. ORANIA PALINDAN (Blanco) Merr. Phoenicaceae. Palm.

A tall unarmed ornamental palm, native to Mindanao, Philippine Islands, at about 1,000 feet altitude. The trunk is straight and remarkably uniform in diameter, rarely exceeding 6 inches. The leaves are pinnate and silvery beneath.

For previous introduction see 94197.

105354. PINANGA INSIGNIS Beccarl. Phoenicaceae. Palm.

A rather small Philippine palm with a slender smooth trunk about 6 inches in diameter, graceful feathery leaves, and oval reddish fruits 2 inches in length. The seeds are occasionally used as a substitute for betel nuts in preparing "buyo," the mixture of leaves of *Piper betle*, lime, and betel nuts, which, when chewed, colors the saliva a characteristic red and is held to be a tonic and general stimulant.

105355. ZIZIPHUS TALANAI (Blanco) Merrill. Rhamnaceae.

A large forest tree of the Philippines, with alternate, obliquely obovate-lanceolate leaves, small flowers, and globose fruits. The seeds are said to be roasted and eaten.

105356 to 105440.

From Italy. Plants purchased from Fratelli Sgaravatti, Saonara. Received March 20, 1934.

105356 to 105375. *AMYGDALUS PERSICA* L.
Amygdalaceae. Peach.

105356. *Ammirabile*.
105357. *Clara Mayer*.
105358. *Di S. Martino*.
105359. *Dreyfus*.
105360. *Edouard André*.
105361. *Fogato*.
105362. *Genovese*.
105363. *Grossa giallo di Verona*.
105364. *Incomparabile Guillous*.
105365. *Jacques Rarrerip*.
105366. *La France*.
105367. *Lorenzina*.
105368. *Lugliatica*.
105369. *Ornamento del mercato*.
105370. *Pavia giallo*.
105371. *Perla di Zolia*.
105372. *Pescantina*.
105373. *Poppa di Venere tardiva*.
105374. *Re Umberto*.
105375. *Trionfo di Solferino*.

105376 to 105400. *MALUS SYLVESTRIS* Mill.
Malaceae. Apple.

105376. *Attalino*.
105377. *Belle Agathe*.
105378. *Borsdorfer aus Palmyra*.
105379. *Britzer Dauerapfel*.
105380. *Calamana*.
105381. *Calvilla bianca d'estate*.
105382. *Carpandola dolce*.
105383. *Cedrata della Brianza*.
105384. *Clara bianca*.
105385. *Grossa di Bohn*.
105386. *Imperatore Guglielmo*.
105387. *La Zingarella*.
105388. *Paradiso*.
105389. *Principe verde*.
105390. *Ranciata di Cos*.
105391. *Regina Luigia di Danimarca*.
105392. *Renetta di Berk*.
105393. *Renetta dei Carmelitani*.
105394. *Renetta dorata Peter Eugén*.
105395. *Renetta dorata Reder*.
105396. *Renetta Federico il Grande*.
105397. *Renetta di Gaesdonk*.
105398. *Renetta di Zuccalmaglio*.
105399. *Renetta Oberdick*.
105400. *Renetta Rambour dott. Lucas*.
105401. *Renetta screziata*.
105402. *Renetta vera*.

105356 to 105440—Continued.

105403. *Rheinischer Krummstiel*.
105404. *Riccardo giallo*.
105405. *Rosa della Virginia*.
105406. *Scodellini*.
105407. *Sergente*.
105408. *Taffetà d'Autunno*.
105409. *Trovatello di Bedfordshire*.
105410 to 105412. *PRUNUS ARMENIACA* L.
Amygdalaceae. Apricot.
105410. *Della Val Venosta*.
105411. *Peche*.
105412. *Precoce giallo*.
105413 to 105440. *PYRUS COMMUNIS* L.
Malaceae. Common pear.
105413. *Angelica di Saonara*.
105414. *Bella Angevina*.
105415. *Bella di Fianra*.
105416. *Bergamotta d'estate*.
105417. *Bergamotta di Pasqua*.
105418. *Bergamotta Fortune*.
105419. *Buona di Malines*.
105420. *Butirra a sapore di Mandorla*.
105421. *Butirra Liegel*.
105422. *Cannellino*.
105423. *Charbonnière*.
105424. *Commissario Delmotte*.
105425. *Consigliere d'Appello*.
105426. *Conte di Parigi*.
105427. *Direttore Alphand*.
105428. *Fertilita*.
105429. *Imperatore Alessandro*.
105430. *Madama*.
105431. *Maddalena Verde*.
105432. *Minsiro dott. Lucius*.
105433. *Moscattello S. Pietro*.
105434. *Nuovo Poiteau*.
105435. *Pelle di Dama*.
105436. *Professor Grosdemange*.
105437. *Soldato agricoltore*.
105438. *Sorbetto*.
105439. *Trionfo di Jodoigne*.
105440. *Trovatello di Hohensaat*.

105441. *DELPHINIUM ZALIL* Aitch. and Hemsl. Ranunculaceae.

From Scotland. Seeds presented by Thompson & Morgan, Ipswich, through Sir William Wright Smith, Regius Keeper, Royal Botanic Garden, Edinburgh. Received April 27, 1934.

An erect perennial, 1 to 2 feet high, with slender ternately divided or triternate leaves 3 to 4 inches across and yellow flowers about 1 inch in diameter in a lax raceme. Native to Khorasan, Asia.

105442 to 105447.

From Turkey. Seeds presented by Harold T. Pence, Gaziantap. Received April 26, 1934.

A collection of locally grown vegetable seeds, collected at Merzifon; introduced for the use of Department specialists working in the north-central part of the United States.

105442. *ABELMOSCHUS ESCULENTUS* (L.) Moench. Malvaceae. Okra.
Flowering okra.

105443. *ALLIUM CEPA* L. Liliaceae. Onion.
Kelle; a large onion.

105444. *CAPSICUM ANNUUM* L. Solanaceae. Common redpepper.
A mild pepper.

105445. *CITRULLUS VULGARIS* Schrad. Cucurbitaceae. Watermelon.

105446. *SOLANUM MELONGENA* L. Solanaceae. Eggplant.

105447. *SPINACIA OLERACEA* L. Chenopodiaceae. Spinach.

105448 to 105461.

From Jamaica, British West Indies. Material presented by Col. Robert H. Montgomery, Director, Coconut Grove arboretum and T. A. Fennell, Bureau of Plant Industry. Received April 30, 1934.

105448. *ADENIUM OBESUM* (Forsk.) Roem. and Schult. Apocynaceae.

Cuttings collected in Hope Garden, Kingston. A slow-growing shrub, not over 3 feet high, native to the dry regions of Arabia and named after the desert port of Aden. The gorgeous rose-pink to white flowers are 3 inches across and remind one of enormous oleander blossoms. The flowers are borne so abundantly that they cover the entire shrub.

For previous introduction see 102644.

105449. *AMHERSTIA NOBILIS* Wall. Caesalpiniaceae.

Plants collected in the Castleton Gardens, Kingston. This gorgeous red-flowered tree is considered by some to be the most beautiful of all the flowering trees. It is native to the Malay Peninsula, and was named after Lady Amherst.

105450. *ANANAS SATIVUS* Schult. f. Bromeliaceae. Pineapple.

Seeds collected in Kingston.

105451. *ANANAS SATIVUS* Schult. f. Bromeliaceae. Pineapple.

Sugarloaf pineapple; purchased in the market at Kingston.

105452. *ARTOCARPUS INTEGRUS* (Thunb.) Skeels. Moraceae. Jackfruit.

Seeds bought in the public market at Kingston.

105453. *ASTROCARYUM VULGARE* Mart. Phoenicaceae.

Plants purchased in the Castleton Gardens, Kingston. A spiny pinnate-leaved palm, 20 to 40 feet high, native to northern Brazil. The 8 to 10 leaves are about 9 feet long, with lanceolate shining-green segments, silvery white beneath.

105448 to 105461—Continued.

105454. *BUGINVILLEA* sp. Nyctaginaceae.

Cuttings, collected in the Hope Gardens, of a hybrid buginvillea (a seedling of *B. spectabilis lateritia*) with large bracts of a soft rosy-orange color.

105455. (Undetermined.)

Cuttings, collected in the Hope Gardens, of a large erect cactus, said to be a native species and to produce large white nocturnal flowers.

105456. *CHRYSOPHYLLUM CAINITO* L. Sapotaceae. Star-apple.

Seeds from a very large fruit of the purple variety served in a hotel at Kingston. The star-apple is a handsome West Indian tree with striking dark-green leaves, copper-colored underneath. The smooth, round, dark-purple fruit is about 3 inches in diameter. When the fruit is ripe, the white jellylike substance surrounding the seed is sweet and agreeable.

For previous introduction see 73003.

105457. *DILLENIA BURBIDGEI* (Hook. f.) Gilg. Dilleniaceae.

Plants purchased in the Castleton Gardens, Kingston. A small ornamental tree, native to Borneo, with large leaves and very beautiful bright-yellow flowers 2 inches in diameter.

For previous introduction see 66213.

105458. *LICUALA ELEGANS* Blume. Phoenicaceae. Palm.

Plants purchased in the Castleton Gardens, Kingston. A fan palm, native to Sumatra, with a short thick trunk about 4 feet high, a crown of orbicular leaves on petioles 3 to 5 feet long, with linear-lanceolate lobes obliquely truncate at the end.

For previous introduction see 80764.

105459. *NAPOLEONA IMPERIALIS* Beauv. Lecythidaceae.

Plant purchased in the Castleton Gardens, Kingston. An interesting ornamental tree from west Africa with oblong leaves, sometimes 18 inches in length, and solitary, saucer-shaped axillary flowers, dominantly reddish and bluish, and about 2 inches across; these are borne on the trunk and larger branches.

For previous introduction see 60439.

105460. *ONCOSPHERA FASCICULATUM* Thwaites. Phoenicaceae. Palm.

Seeds collected in Kingston. A graceful cluster palm, 40 to 60 feet high, with spiny stems and equally pinnate leaves about 18 feet long. Native to Ceylon.

For previous introduction see 103730.

105461. *THUNBERGIA ERECTA* (Benth.) T. Anders. Acanthaceae.

Plants purchased in the Castleton Gardens, Kingston. Variety *alba*, a form with white flowers.

For previous introduction see 103933.

105462. *DIOSCOREA ALATA* L. Dioscoreaceae. Winged yam.

From Florida. Tubers presented by H. O. Albert, Brooksville; originally from Hawaii. Received May 3, 1934.

A strain of the Hawaiian purple-skinned yam (*F. P. I. 47446*) with nearly pure

105462—Continued.

white flesh instead of the purple-streaked or tinted flesh common in the ordinary form of this yam. The tubers are of desirable form and size, weighing usually 12 to 20 ounces each.

For previous introduction see 101189.

105463 to 105466. *AMYGDALUS PERSICA*
L. Amygdalaceae. Peach.

From Argentina. Seeds presented by the manager of the Tigre Packing Co., Province of Buenos Aires, through A. M. Warren, American consul general, Buenos Aires. Received May 1, 1934.

A collection of seeds from trees native to the lower end of the delta of the Parana River, Argentina. Introduced for the use of Department specialists interested in plant breeding.

105463. Fruit ripens the end of February.

105464. Fruit ripens the first week in March.

105465. Fruit ripens the first week in March.

105466. [No data.]

105467. *SOJA MAX* (L.) Piper. Fabaceae. Soybean.

From Spain. Seeds presented by Alfonso Regoyos, Madrid. Received May 9, 1934.

A variety, originally from Chosen, which is most promising under semiarid conditions in Spain.

105468 to 105471.

From French Indo-China. Seeds presented by M. Poilane, Institut des Recherches Agronomiques de l'Indochine, Division de Botanique Forestiere, Cholon, Cochinchina. Received May 3, 1934.

105468. *BAUHINIA MALABARICA* Roxb. Caesalpinaceae.

For previous introduction and description see 105240.

105469. *CROTALARIA* sp. Fabaceae.

105470. (Undetermined.)

A leguminous shrub with foliage excellent for shading crops.

105471. (Undetermined.)

A leguminous shrub whose leaves are browsed by cattle.

105472 to 105477.

From the Union of Soviet Socialist Republics. Seeds presented by the Alma Ata Botanic Garden, Alma Ata, Kazakhstan. Received May 4, 1934.

105472. *ALTHAEA NUDIFLORA* Lindl. Malvaceae.

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

For previous introduction see 104636.

105473. *HEDYSARUM SONGARICUM* Bong. Fabaceae.

An erect herbaceous perennial, a foot or more high, with several branched stems, small compound leaves, and pink flowers in spikelike clusters. Native to central Asia.

105472 to 105477—Continued.

105474. *IRIS ALBERTI* Regel. Iridaceae.

A bearded iris with glaucous sword-shaped leaves, about as long as the stem, and purplish flowers, yellowish toward the base, nearly 2 inches long. Native to Turkistan.

105475. *ROSA* sp. Rosaceae.105476. *TULIPA OSTROWSKIANA* Regel. Liliaceae. Tulip.

A tulip from eastern Turkistan, with a stem about 8 inches high, bearing three linear-lanceolate leaves and a solitary flower. The perianth segments are cinnamon-purple and more or less spreading.

105477. *TULIPA* sp. Liliaceae.105478 to 105482. *SOLANUM TUBEROSUM* L. Solanaceae. Potato.

From Norway. Tubers presented by A. P. Lunden, Akervestforsakene Norges Landbrukskole i Aas. Received May 11, 1934.

A collection of wart-immune potatoes introduced for the use of Department specialists.

105478. *Arnica*. Of German origin.105479. *Hindenburg*. Of German origin.105480. *Hindenburg* × *Centifolia*, plant 9.

A cross made at the garden at Aas. A medium early potato, which is resistant to common scab.

105481. *Hindenburg* × *Centifolia*, plant 15.

A cross made at the garden at Aas. Matures rather late and is resistant to late blight of foliage and tubers.

105482. *Jubel*. Of German origin.

105483 to 105577.

From Spain. Plants purchased from Viveros Manuel San Juan, Sabinan, Zaragoza Province. Received May 4, 1934.

Introduced for the use of Department specialists.

105483 to 105497. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach.105483. *Agra*.105484. *Amarillo de Sastago*.105485. *Anteado*.105486. *Blanca*.105487. *Blanquilla*.105488. *De Conserva*.105489. *De Gallur amarillo*.105490. *De Gallur encarnado*.105491. *De Grio*.105492. *De Zuera*.105493. *Encarnado de Agosto*.105494. *Encarnado tardio*.105495. *Espartana*.105496. *Jeróninia*.105497. *Zaragozano encarnado*.105498 to 105535. *MALUS SYLVESTRIS* Mill. Malaceae. Apple.105498. *Bella de Jardines*.105499. *Calvilla amarilla de Oquendo*.105500. *Camuesca castellana de verano*.

105483 to 105577—Continued.

105501. *Camuesa Real*.
 105502. *Champ Gaillard*.
 105503. *Comadres*.
 105504. *Cullawhee*.
 105505. *Del Cirio*.
 105506. *De San Felipe*.
 105507. *Esperiega de Ademuz*.
 105508. *Ferdinana*.
 105509. *Flamenche*.
 105510. *Garcias*.
 105511. *Helada Verde de Levante*.
 105512. *Helada Verde (Glase)*.
 105513. *Hocico de Perro*.
 105514. *Homony*.
 105515. *Hueteveta*.
 105516. *Morro de Hebre*.
 105517. *Moulin a Vent*.
 105518. *Normanda*.
 105519. *Pero Pardo*.
 105520. *President des Pays Dusnoceau*.
 105521. *Rebollon*.
 105522. *Reina de las Reinetas*.
 105523. *Reineta d'Anjou*.
 105524. *Reineta de Caravia*.
 105525. *Reineta dorato del Canada*.
 105526. *Renetta Parda*.
 105527. *Repinaldo castellano*.
 105528. *Repinaldo de Liebana*.
 105529. *Roja del Valle de Benefama*.
 105530. *Sanroqueras*.
 105531. *Sensación*.
 105532. *Velasca*.
 105533. *Verde Doncella blanca*.
 105534. *Verde Doncella encarnada*.
 105535. *Viña de Oro*.
 105536 to 105540. *PRUNUS ARMENTIACA L.*
 Amygdalaceae. Apricot.
 105536. *Alemania*.
 105537. *Blanco de Mucoia*.
 105538. *De Héllin*.
 105539. *Encarnado fino*.
 105540. *Zaragozano*.
 105541 to 105577. *PYRUS COMMUNIS L.*
 Malaceae. Common pear.
 105541. *Abugos (Siete en boca)*.
 105542. *Alphonse Alegatiere*.
 105543. *Amadeo Thirriot*.
 105544. *Azúcar verde*.
 105545. *Bella de Bruselas*.
 105546. *Banzach*.
 105547. *Buena Luisa*.
 105548. *Buerre Flon*.
 105549. *Buerre Superfina*.

105483 to 105577—Continued.

105550. *Castell*.
 105551. *Cristalina de verano (Cristalina de San Juan)*.
 105552. *De Agua (Blanca de Aranjuez)*.
 105553. *De Amor*.
 105554. *De la Forestiere*.
 105555. *De limon*.
 105556. *Duquesa Elena de Orleans*.
 105557. *Epine du Mar*.
 105558. *Espadón de Agua*.
 105559. *Fondant des Bois*.
 105560. *Gamusinas*.
 105561. *General Tholeben*.
 105562. *Leonardeta (de Magallón)*.
 105563. *Louis Pasteur*.
 105564. *Malacara*.
 105565. *Monterrey*.
 105566. *Praviana*.
 105567. *Rey Eduardo*.
 105568. *Senador Belle*.
 105569. *San Antonio*.
 105570. *Sán German*.
 105571. *Sanroqueras*.
 105572. *Sideria de verano*.
 105573. *Sucree de Montlucon*.
 105574. *Tardiva de Solesmes*.
 105575. *Ternales*.
 105576. *Triomphe de Gadoyne*.
 105577. *Urraca de Galicia*.

105578. *CHRYSANTHEMUM SP.*

From Normal, Ill. Plants presented by A. M. Augustine, American Association of Nurserymen. Received May 11, 1934.

A chrysanthemum, originally from Germany, which bears bronze and pink flowers with a pineapple odor.

105579. *SOJA MAX (L.) Piper.* Fabaceae. Soybean.

From the Union of Soviet Socialist Republics. Seeds presented by J. W. Pincus, of the Amtorg Corporation, New York City. Received May 11, 1934.

A soybean which was developed under French conditions by Prof. L. Rouest. The seed is medium large, olive yellow with a black hilum.

105580 and 105581.

From Mexico. Seeds presented by Dr. C. A. Purpus, Hacienda Zacuapam, Huatusco, Vera Cruz. Received May 11, 1934.

105580. *CHAMAEDOREA SP.* Phoenicaceae. Palm.

A shade-loving palm, apparently of the section of genus to which *Chamaedorea sartorii* belongs, in which the seedlings have simple bifid leaves.

105580 and 105581—Continued.

105581. IPOMOEA TUXTLENSIS House.
Convolvulaceae.

A slender perennial vine 6 to 12 feet long, softly pubescent, with ovate-cordate leaves 2 to 3 inches long and deep-purple flowers about 1½ inches across. Native to Chiapas, Mexico.

105582. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. **Cushaw.**

From Washington, D. C. Seeds presented by A. J. Pieters, Bureau of Plant Industry. Received May 16, 1934.

A globular green cushaw, originally from northern Africa. The plant roots at all the internodes, so that if part of the vine is injured by insects the rest of the plant continues to grow.

105583. ASTRAGALUS DAVURICUS (Pall.) DC. Fabaceae. **Milkvetch.**

From China. Seeds presented by S. T. Shen, Yenching University, Peiping. Received May 10, 1934.

A perennial 3 to 5 feet high, with purple flowers, that grows wild around Peiping and is considered to be promising as a green manure.

For previous introduction see 90545.

105584 to 105645.

From Nanking, China. Seeds collected in Kwangsi Province by Albert N. Steward and H. C. Cheo, University of Nanking. Received April 28, 1934.

105584. ADINA sp. Rubiaceae.

Sha Tung Kwa. No. F. 101. Collected October 25, 1933, at Ta Tseh Tsuen, Yung Hsien. A small evergreen tree with small flowers in globose heads and globose green fruits one-half inch in diameter.

105585. ALANGIUM CHINENSE (Lour.) Rehder. Cornaceae.

No. F. 85. Collected August 25, 1933, at Ta Tseh Shan, Yung Hsien, in forest at 1,600 feet above sea level. An evergreen tree of remarkably rapidly growth, reaching its full height of 50 feet in 5 years, after which the trunk merely thickens. The small, whitish, fragrant flowers are in cymes, and the ovate black fruits are one-half inch long.

For previous introduction see 93175.

105586. ALBIZZIA sp. Mimosaceae.

No. F. 43. Collected October 1, 1933, at Tseh Tsuen, Yung Hsien, at 1,000 feet altitude, along the roadside.

105587. ALBIZZIA sp. Mimosaceae.

No. F. 112. Collected November 10, 1933, in a valley at Kwei Ling, Hsien. A small tree with pods nearly 2 inches long.

105588. ALEURITES FORDII Hemsl. Euphorbiaceae. **Tung-oil tree.**

T'ung Tze. No. F. 23. Collected at Loh Hoh Tsuen, Ling Yui Hsien, June 1, 1933, at 3,000 feet altitude.

105589. ALNUS sp. Betulaceae. **Alder.**

Pei Fan Mu. No. F. 4. Collected March 16, 1933, in the valley foothills at Loh Hoh Tsuen, Ling Yui Hsien. A small tree about 20 feet high, fairly common in this region.

105584 to 105645—Continued.

105590. BENZOIN sp. Lauraceae. **Spicebush.**

No. F. 34. Collected September 1, 1933, at 1,000 feet altitude in a valley at Ta Tseh Tsuen, Yung Hsien. A small tree about 10 feet high with black fruits.

105591. BENZOIN sp. Lauraceae. **Spicebush.**

No. F. 89. Collected October 21, 1933, along a stream at Ch'ang An, Yung Hsien, at 1,500 feet altitude. A moderate-sized tree with globose black fruits about two-fifths of an inch in diameter.

105592. CALLICARPA sp. Verbenaceae.

Tze Chu. No. F. 99. Collected October 26, 1933, at 1,100 feet altitude at Ta Tseh Tsuen, Yung Hsien. A small tree with globose violet fruits.

105593. CELTIS sp. Ulmaceae.

Ching P'oh. No. F. 79. Collected October 21, 1933, in dense forest, 1,500 feet altitude at Ch'ang An, Yung Hsien. A tree with globose green fruits.

105594. CITRUS GRANDIS (L.) Osbeck. Rutaceae. **Grapefruit.**

Yu Tze. No. F. 67. Collected October 25, 1933, at 1,500 feet altitude at Ch'ang An, Yung Hsien. A cultivated tree with yellow fruits of good flavor.

105595. CITRUS sp. Rutaceae.

Chu Tze. No. F. 2. Collected March 2, 1933, in the market at Ling Yui Hsien. A lemon-yellow fruit, 6 inches in diameter, of good flavor but not very juicy.

105596. CUNNINGHAMIA LANCEOLATA (L.) Hook. Pinaceae. **China-fir.**

Shan Mu. No. F. 69. Collected October 20, 1933, on a slope at 1,600 feet altitude at Ta Tseh Tsuen, Yung Hsien. A common forest tree about 65 feet tall.

For previous introduction see 99157.

105597. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki persimmon.**

Yah Shih Tze. No. F. 83. Collected November 2, 1933, in a valley at 1,000 feet altitude at Ta Tseh Tsuen, Yung Hsien. A small tree with ovoid yellow fruits over an inch long.

105598. DIOSPYROS SINENSIS Hemsl. Diospyraceae. **Persimmon.**

Shih Tze. No. F. 88. Collected in a cultivated field at 1,000 feet altitude at Ta Tseh Tsuen, Yung Hsien. A small semievergreen Chinese tree with a short thick trunk, widespread branches, and spiny branchlets, thick oblong-lanceolate leaves 2 to 3 inches long, and globose or ovoid golden-yellow edible fruits nearly 2 inches long.

For previous introduction see 95650.

105599. ELAEAGNUS sp. Elaeagnaceae.

Hu Teh Tze. No. F. 14. Collected May 6, 1933, on a slope at 4,000 feet altitude at Chu Tung, Ling Yui Hsien. An ornamental deciduous tree with small but fragrant flowers and red edible fruits.

105600. EUSCAPHIS JAPONICA (Thunb.) Dipp. Staphyleaceae.

Yeh Yah Chung. No. F. 52. Collected October 20, 1933, in a valley at 1,000 feet altitude near Ta Tu Tsuen, Yung

105584 to 105645—Continued.

Hsien. A shrub or small tree with compound leaves composed of 7 to 11 ovate-lanceolate serrate leaflets 1 to 3 inches long. The small white flowers, in upright panicles, are followed by brown-red pods which open, exposing the steel-blue fruits.

For previous introduction see 102938.

105601 to 105607. *FICUS* spp. Moraceae.105601. *FICUS* sp.

Yen Pa Teu. No. F. 19. Collected May 10, 1933, on a rocky slope at 3,500 feet altitude near Loh Hoh Tsuen, Ling Yun Hsien. A woody vine with black globose fruits.

105602. *FICUS* sp.

No. F. 20. Collected May 20, 1933, in a valley at 3,500 feet altitude near Loh Hoh Tsuen, Ling Yun Hsien. A small tree with black edible fruits.

105603. *FICUS* sp.

No. F. 30. Collected August 12, 1933, in mixed forest at 1,600 feet altitude, near Ta Tseh Tsuen, Yung Hsien. A tree over 30 feet high with yellow fruits.

105604. *FICUS* sp.

No. F. 39. Collected June 14, 1933, in a valley at 3,000 feet altitude near Nē I, Ling Yun Hsien. A vine with red fruits.

105605. *FICUS* sp.

No. F. 63. Collected October 23, 1933, in a forest at 600 feet altitude at Ch'ang An, Yung Hsien. A shrub with globose yellow fruits.

105606. *FICUS* sp.

No. F. 65. Collected October 23, 1933, on a rocky slope at 600 feet altitude near Ch'ang An, Yung Hsien. A small tree.

105607. *FICUS PUMILA* L.

No. F. 86. Collected October 30, 1933, in a valley at 1,100 feet altitude near Ta Tseh Tsuen, Yung Hsien. A woody vine with black ovate fruits nearly 3 inches long.

105608. *GARDENIA* sp. Rubiaceae.

Chih Tze Hwa. No. F. 54. Collected October 20, 1933, in a valley at 1,100 feet altitude near Ta Tseh Tsuen, Yung Hsien. A shrub over 4 feet high with reddish-yellow fruits.

105609. *GLEDITSIA SINENSIS* Lam. Caesalpiniaceae. Chinese honeylocust.

No. F. 115. Collected November 10, 1933, along the roadside at 300 feet altitude, near Kwei Ling, Hsien. A large tree with black pods 10 inches long and over an inch wide.

For previous introduction see 90349.

105610. *ILEX* sp. Aquifoliaceae.

No. F. 87. Collected September 15, 1933, on a slope at 1,000 feet altitude, near Ta Tseh Tsuen, Yung Hsien. A shrub with globose fruits less than half an inch in diameter.

105584 to 105645—Continued.

105611. *LIQUIDAMBAR FORMOSANA* Hance. Hamamelidaceae. Formosa sweetgum.

Lo Lo Tung. No. F. 77. Collected November 20, 1933, in a valley at 1,100 feet altitude, near Ta Tseh Tsuen, Yung Hsien. A handsome tree up to 100 feet high, with a straight trunk, a much-branched head, and frequently buttressed roots. The leaves turn to chestnut brown or red in the autumn and are retained late into the winter. The fruits are globose spiny-headed capsules.

For previous introduction see 99187.

105612. *MELIA* sp. Meliaceae.

No. F. 24. Collected May 10, 1933, in a valley at 4,000 feet altitude, near Chu Tung, Ling Yun Hsien. A tree over 60 feet high, with handsome pinnate foliage and yellow globose fruits.

105613. *MELIA* sp. Meliaceae.

Ku Lien Muk. No. F. 82. Collected October 23, 1933, on the roadside at 600 feet altitude, near Ch'ang An, Yung Hsien. An ornamental tree about 30 feet high, with handsome pinnate foliage.

105614. *MUCUNA* sp. Fabaceae.

No. F. 13. Collected June 9, 1933, in a valley over 3,000 feet altitude, near Nē I, Ling Yun Hsien. An ornamental woody vine with pods about 18 inches long.

105615. *MYRICA* sp. Myricaceae.

Yang Mei. No. F. 9. Collected June 8, 1933, on a slope at 4,000 feet altitude, near Ping Shan, Ling Yun Hsien. A shrub over 6 feet high, with sour, red, edible fruits.

105616. *MYRICA* sp. Myricaceae.

Yang Mei. No. F. 21. Collected May 21, 1933, in a valley at 3,500 feet altitude near Loh Hoh Tsuen, Ling Yun Hsien. A small tree over 10 feet high, with red edible fruits.

105617. *ORMOSIA* sp. Fabaceae.

No. F. 29. Collected August 20, 1933, in a forest at 1,600 feet altitude, near Ta Tseh Tsuen, Yung Hsien. A tree about 35 feet high, with black pods containing red seeds.

105618. *PALIURUS* sp. Rhamnaceae.

No. F. 106. Collected November 10, 1933, along a roadside at 300 feet altitude, near Kwei Ling, Hsien. A small deciduous tree with yellowish flowers and round flat brown fruits.

105619. *PITOSPORUM* sp. Pittosporaceae.

Hai Tung. No. F. 62. Collected October 25, 1933, in a valley at 1,100 feet altitude, near Ta Tseh Tsuen, Yung Hsien. A small evergreen tree about 10 feet high, with yellow globose fruits.

105620. *PITOSPORUM* sp. Pittosporaceae.

No. F. 74. Collected October 25, 1933, in a valley at 1,100 feet altitude, near Ta Tseh Tsuen, Yung Hsien. A small evergreen tree about 10 feet high, with globose capsules.

105621. *PRUNUS* sp. Amygdalaceae.

Ku Li. No. F. 26. Collected September 1, 1933, in a valley at 1,600 feet altitude, near Ta Tseh Tsuen, Yung Hsien. A tree about 15 feet high, with globose fruits, edible, but somewhat bitter.

105584 to 105645—Continued.

105622. PTEROCARYA STENOPTERA DC.
Juglandaceae. Chinese wingnut.

Feng Young. No. F. 56. Collected at about 700 feet altitude along a roadside near Ch'ang An, Yung Hsien. A large tree over 50 feet high, with large pinnate leaves 6 to 12 inches long, inconspicuous flowers, and small winged nuts.

105623. PUNICA GRANATUM L. Puniceae.
Pomegranate.

Shih Liu. No. F. 111. Collected in the Kwei Ling market. A small globose, reddish-yellow pomegranate about 3 inches in diameter.

105624. PYRUS sp. Malaceae.

Yeh Li. No. F. 68. Collected October 10, 1933, at 1,100 feet altitude, along the roadside near Ta Tseh Tsuen, Yung Hsien. A tree about 25 feet high, with dark-yellow globose fruits.

105625. PYRUS sp. Malaceae.

Lu. No. F. 92. Collected October 23, 1933, in a cultivated field near Ch'ang An, Yung Hsien. A globose yellow fruit about 1 inch in diameter.

105626. RADERMACHERA sp. Bignoniaceae.

No. F. 114. Collected November 10, 1933, along the roadside near Kwei Ling City. A handsome tree with large pinnate leaves and terminal panicles of yellowish flowers.

105627. REEVESIA sp. Sterculiaceae.

No. F. 48. Collected October 15, 1933, along a roadside at 1,100 feet altitude, near Ta Tseh Tsuen, Yung Hsien. An eyergreen tree over 30 feet high. The reevesias have alternate entire leaves and dense corymbs of white or pink flowers.

105628. RHUS sp. Anacardiaceae.

Yeh Chih Shu. No. F. 38. Collected October 14, 1933, at 1,100 feet altitude, in a valley near Ta Tseh Tsuen, Yung Hsien.

105629 to 105632. RUBUS spp. Rosaceae.

105629. RUBUS sp.

No. F. 5. A vine collected on a slope at 3,500 feet altitude, near Loh Hoh Tsuen, Ling Yui Hsien. The edible fruits are dark red.

105630. RUBUS sp.

Hwang Pao. No. F. 8. Collected June 6, 1933, at 3,500 feet altitude in a valley near Loh Hoh Tsuen, Ling Yui Hsien. A shrub about 5 feet high, with sweet, edible, yellow fruits.

105631. RUBUS sp.

Shan Pao Tze. No. F. 11. Collected June 14, 1933, on the slope of Lao Shan, at 4,000 feet altitude, near Ne Kwang, Ling Yui Hsien. A shrub over 10 feet high, with edible yellow fruits.

105632. RUBUS sp.

No. F. 18. Collected June 6, 1933, in a valley at 3,900 feet altitude, near Ne Hung, Ling Yui Hsien. A shrub over 6 feet high, with hairy red fruits.

105633. SAPINDUS MUKROSSI Gaertn.
Sapindaceae. Soapberry.

Wu Hwan Tze. No. F. 108. Collected November 10, 1933, in a valley near Kwei

105584 to 105645—Continued.

Ling, Hsien. A Chinese tree about 35 feet high, with alternate pinnate leaves and round yellow fruits an inch in diameter.

For previous introduction see 50724.

105634. SAPIUM SEBIFERUM (L.) Roxb.
Euphorbiaceae. Chinese tallowtree.

Wu Chu. No. F. 55. Collected November 10, 1933, in a valley at 1,100 feet altitude near Ta Tseh Tsuen, Yung Hsien. A tree 25 feet high, with rhombic-ovate leaves, handsomely red colored with age, and inconspicuous flowers in terminal racemes. The oil from the seeds is used for making machine oil and the tallow from the outer seed coat for making candles.

For previous introduction see 95655.

105635. SORBUS sp. Malaceae.

No. F. 90. Collected October 25, 1933, at 1,600 feet altitude at Ta Tseh Shan, Yung Hsien. A small tree.

105636. SPIRAEA sp. Rosaceae.

Chen Chu Hwa. No. F. 46. Collected September 18, 1933, in a valley at 6,500 feet altitude near Ling Wang Shan, San Kiang Hsien. A shrub over 4 feet high, with yellow fruits.

105637. STRANVAESIA sp. Malaceae.

Shan Hu Shu. No. F. 98. Collected September 18, 1933, in dense forest at 6,500 feet altitude near Ling Wang Shan, San Kiang Hsien. A small tree with globose red edible fruits.

105638. STYRAX sp. Styracaceae.

No. F. 45. Collected October 2, 1933, at 1,600 feet altitude at the edge of the forest near Ta Tseh Tsuen, Yung Hsien. A tree about 35 feet high, with white flowers and grayish drupes.

105639. THEA sp. Theaceae.

Cha Tze. No. F. 22. Collected May 6, 1933, in a cultivated field at 4,000 feet altitude at Chu Tung, Ling Yui Hsien. A small tree about 10 feet high, from whose seeds oil is obtained.

105640. THEA sp. Theaceae.

Cha Tze. No. F. 44. Collected October 20, 1933, on a slope at 1,100 feet altitude at Ta Tseh Tsuen, Yung Hsien. A cultivated tree 75 feet high, with reddish-green fruits and black seeds which are a source of oil.

105641 to 105643. VIBURNUM spp. Caprifoliaceae.

105641. VIBURNUM sp.

No. F. 35. Collected September 18, 1933, in a valley at 6,500 feet altitude near Ling Wang Shan, San Kiang Hsien. A small tree over 6 feet high, with edible red fruits.

105642. VIBURNUM sp.

No. F. 51. Collected October 25, 1933, in a valley at 1,100 feet altitude near Ta Tseh Tsuen, Yung Hsien. A small tree about 8 feet high, with red ovate fruits.

105584 to 105645—Continued.

105643. *VIBURNUM* sp.

No. F. 100. Collected September 17, 1933, at 6,500 feet altitude near Ling Wang Shan, San Kiang Hsien. A tree about 10 feet high, with small globose red edible fruits.

105644. *VITIS* sp. Vitaceae.

Pu Tao. No. F. 91. Collected October 23, 1933, at Ch'ang An, Yung Hsien. A vine with black globose fruits.

105645. *WISTARIA* sp. Fabaceae.

No. F. 102. Collected October 20, 1933, in a valley at 1,100 feet altitude near Ta Tseh Tsuen, Yung Hsien. A vine with pods over 5 inches long and less than half an inch wide.

105646 to 105652.

From China. Seeds presented by H. H. Chung, Wu-Han University, Wuchang, Hupeh. Received May 9, 1934.

Nos. 105646 to 105648 were collected in the Lushan Mountains, Kiangsi Province, by H. H. Chung and S. C. Sun.

105646. *ACER* sp. Aceraceae. Maple.105647. *CEPHALOTAXUS FORTUNEI* Hook. Taxaceae. Chinese plum-yew.

A small tree up to 30 feet high, native to central China. The linear leaves, 2 to 3 inches long, spread nearly horizontally and are glossy green above with two pale bands beneath, and the ovoid purple fruits are 1 inch long.

For previous introduction see 100521.

105648. *CORNUS* sp. Cornaceae.105649. *EUCOMMIA ULMOIDES* Oliver. Trochodendraceae. Tu-chung.

Shih mien shu. Collected in Hupeh Province by S. C. Sun. A tree which reaches a height of 80 feet and seems to grow best when sheltered by other trees. It is native to the southwestern part of China. The native name means stone cotton tree, in reference to the rubber-like threads of shining whitish color which appear when the pieces of bark or leaf are snapped across.

For previous introduction see 98370.

Nos. 105650 to 105652 were collected in the Lushan Mountains, Kiangsi Province, by H. H. Chung and S. C. Sun.

105650. *LIRIODENDRON CHINENSE* (Hemsl.) Sargent. Magnoliaceae. Chinese tuliptree.

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

For previous introduction see 104206.

105651. *NYSSA SINENSIS* Oliv. Cornaceae.

A deciduous shrub or small tree about 20 feet high, with oblong-elliptic, membranous leaves 4 to 6 inches long, inconspicuous flowers, and ovoid blue fruits about one-half inch long. The leaves become brilliant red in autumn. It is native to western China.

105646 to 105652—Continued.

105652. *SASSAFRAS TZUMU* Hemsl. Lauraceae.

The Chinese sassafras is common in moist woods in western Hupeh, China, where it becomes a handsome tree sometimes 100 feet tall with horizontal branches. The yellow flowers are produced in great quantity in early spring before the leaves unfold; the globose fruits are black with a glaucous bloom.

105653 to 105660.

From the Belgian Congo, Africa. Seeds presented by J. B. H. Lejeune, Director, Government Agronomic Station, Kisozi, Territories of Ruanda-Urundi, Received May 11, 1934.

105653 to 105655. *CROTALARIA* spp. Fabaceae.105653. *CROTALARIA INCANA* L.

A tropical American plant about 3 feet high, somewhat shrubby, and softly pubescent. The yellow flowers are in dense racemes 2 to 8 inches long.

105654. *CROTALARIA SPINOSA* Hochst.

A spiny perennial with an annual stem 6 to 18 inches long, oblanceolate leaflets one-third of an inch long, and scattered yellow flowers. Native to tropical Africa.

105655. *CROTALARIA* sp.105656. *ERYTHRINA* sp. Fabaceae.105657. *LUPINUS* sp. Fabaceae.105658. *PSEUDARTHRA HOOKERI* Wight and Arn. Fabaceae.

A tall herbaceous leguminous plant which, at a distance, looks like a pink spirea. It is abundant in the tree savanna country and may be useful as a green manure or even as an ornamental.

For previous introduction see 50052.

105659. *VICIA* sp. Fabaceae. Vetch.

105660. (Undetermined.)

105661 to 105675.

From southwestern China. Seeds presented by Lord Aberconway, Bodnant Gardens, Tal-Y-Cafn, North Wales. Received May 10, 1934.

105661. *ACER CAPPADOCICUM SINICUM* Rehd. Aceraceae. Maple.

MCL. no. 16. A Chinese maple, sometimes 50 feet high, with bright-green, five-lobed leaves about 3 inches long and small pale-yellow flowers. This variety differs from the typical form chiefly in having smaller leaves.

105662. *ANEMONE DEMISSA* Hook. f. and Thoms. Ranunculaceae.

MCL. no. 60. A lovely alpine plant, common in limestone soil in mountain meadows at altitudes between 11,000 and 13,000 feet in Yunnan. The leaves form a basal rosette, and the large white flowers are in umbels.

Received as variety *villosa*, for which a place of publication has not been found.

For previous introduction see 100148.

105661 to 105675—Continued.

105663. *BERGENIA DELAVAYI* (Franch.) Engler. Saxifragaceae.

McL. no. 23. A handsome perennial with broadly ovate leaves 3 to 4 inches long and large purple flowers in small racemes. Native to Yunnan and closely allied to *Bergenia purpurascens*.

105664. *EUONYMUS HAMILTONIANUS* Wall. Celastraceae.

McL. no. 126. A large Himalayan shrub which, under favorable circumstances, becomes a moderate-sized tree 30 to 35 feet high, with a short straight trunk 4 to 5 feet in circumference. The clusters of greenish-white flowers are followed by yellow capsules, the seeds of which are entirely surrounded by a scarlet aril. The fruit begins to ripen in August, and the leaves are brilliantly colored in the autumn.

For previous introduction see 103773.

105665. *EUONYMUS ILICIFOLIA* Franch. Celastraceae.

McL. no. 121. A much-branched shrub 6 to 12 feet high, with evergreen, leathery, ovate-lanceolate leaves, remotely dentate, and small flowers. The foliage strongly resembles that of certain hollies. Native to Yunnan, China.

105666. *GLYCYRRHIZA ECHINATA* L. Fabaceae.

McL. no. 110. An upright, little-branched perennial, with compound leaves composed of 5 or 6 pairs of elliptic leaflets and bluish flowers in compact globular heads. Native to Europe and western Asia.

For previous introduction see 65868.

105667. *INCARVILLEA GRANDIFLORA BREVIPES* Sprague. Bignoniaceae.

McL. no. 33. A low perennial herb, native to Yunnan, China. The pinnately divided leaves, 1 foot long, are made up of ovate, nearly entire segments, and the brilliant-crimson, trumpet-shaped flowers, 2 to 3 inches long, are borne in clusters of 8 to 12 on scapes a foot high.

For previous introduction see 99877.

105668. *INDIGOFERA PENDULA* Franch. Fabaceae.

McL. no. 39. An exceedingly ornamental shrub 10 to 15 feet high, with handsome bluish-purple flowers in large pendulous racemes.

For previous introduction see 59419.

105669. *KETELEERIA DAVIDIANA* (Bertand) Beilsner. Pinaceae.

McL. no. P. 28. A coniferous tree, native to western China, which is closely allied to the firs. It sometimes becomes 100 feet tall, is of pyramidal habit, and has handsome green glossy firlike foliage. The tree is said to be somewhat tender to frost and therefore probably adapted for growing only in the southern half of the United States.

For previous introduction see 101964.

105670. *MELIOSMA CUNEIFOLIA* Franch. Sabiaceae.

McL. no. P. 80. A beautiful shrub or small tree up to 12 feet high. In habit it resembles the weeping willow, with

105661 to 105675—Continued.

drooping branches bearing at their tips large pyramidal clusters of cream-colored flowers.

For previous introduction see 55936.

105671. *PAEONIA DELAVAYI* Franch. Ranunculaceae. Peony.

McL. no. 5. A very attractive vigorous shrub 4 feet high, with deep-crimson flowers 3 inches in diameter.

For previous introduction see 103259.

105672. *PRIMULA LITONIANA* Forrest. Primulaceae.

McL. no. 37. A handsome plant of the section *Muscarioides*, 2 to 3 feet tall, growing in swampy meadows in southwestern China between 10,000 and 11,000 feet altitude. The gray-green hairy leaves form a rosette from which rises the scapes bearing pendent deep indigo-blue flowers in densely packed spikes, sometimes 5 inches long. The blood-red bracts and calyxes of the flowers form a wonderful contrast to the blue flowers.

For previous introduction see 100026.

105673. *RHODODENDRON BEESIANUM* Diels. Ericaceae.

McL. no. 64. A shrub 15 to 20 feet high, with leathery purple-green, narrowly lanceolate leaves about 6 inches long and deep rich-rose flowers up to 2 inches across. Allied to *R. delavayi*, and native to Yunnan.

For previous introduction see 103430.

105674. *RHODODENDRON CUNEATUM* W. W. Smith. Ericaceae.

McL. no. 73. A small shrub 4 feet high, with elliptical-oval leaves, silky beneath, and deep lavender flowers.

For previous introduction see 97390.

105675. *BELAMCANDA CHINENSIS* (L.) DC.

McL. no. 201. A low-growing form with yellowish flowers.

105676 to 105706.

From Nanking, China. Seeds collected in Kwangsi Province by A. N. Steward and H. C. Cheo. University of Nanking. Received April 28, 1934.

105676. *BOEHMERIA* sp. Urticaceae.

No. F. 6. Collected June 6, 1933, on a rocky slope at Loh Hoh Tsuen, Ling Yui Hsien, at 3,500 feet altitude. A shrub about 10 feet high, with red fruits.

105677. *CALAMUS* sp. Phoenicaceae.

No. F. 32. Collected August 12, 1933, at 1,800 feet altitude in dense forest near Ta Tseh Tsuen, Yung Hsien. A climbing palm with spiny stems and yellow edible fruits.

105678. *CLERODENDRUM* sp. Verbenaceae.

No. F. 57. Collected October 1, 1933, in a valley at 1,200 feet altitude near Ta Tseh Tsuen, Yung Hsien. A small tree about 18 feet high.

105679. *EUONYMUS* sp. Celastraceae.

No. F. 58. Collected October 1, 1933, at 1,800 feet altitude in a forest near Ta Tseh Shan, Yung Hsien. A tree about 40 feet high, with round yellow fruits.

105676 to 105706—Continued.

105680. *EURYA* sp. Theaceae.

No. F. 70. Collected September 18, 1933, along a roadside at 6,600 feet altitude near Ling Wang Shan, San Kiang Hsien. A tree about 18 feet high, with black globular fruits.

105681. *FICUS* sp. Moraceae.

No. F. 15. Collected May 12, 1933, along a stream at 3,300 feet altitude near Né I, Ling Yuin Hsien. A tree about 35 feet high, with red fruits.

105682. *MALLOTUS* sp. Euphorbiaceae.

No. F. 33. Collected August 3, 1933, at 1,200 feet altitude near Ta Tseh Tsuen, Yung Hsien. A tree about 18 feet high, with red fruits.

105683. *MALLOTUS* sp. Euphorbiaceae.

No. F. 64. Collected October 25, 1933, in a valley at 1,200 feet altitude near Ta Tseh Tsuen, Yung Hsien. A tree about 7 feet high, with round black spiny fruits.

105684. *NAGEIA* sp. Taxaceae.

No. F. 72. Collected October 16, 1933, in a valley at 1,200 feet altitude near Ta Tseh Tsuen, Yung Hsien. An evergreen tree 20 feet high, with globose green fruits.

105685. *RHODOMYRTUS TOMENTOSA* (Ait.) Wight. Myrtaceae. *Downy rosemyrtle*.

No. F. 109. Collected November 10, 1933, in the Kwel Ling market. A shrub with black edible fruits about one-half inch long. The fruits as well as the under sides of the leaves are covered with fine gray hairs.

For previous introduction see 65849.

105686. *CORIARIA* sp. Coriariaceae.

No. F. 7. Collected June 8, 1933, on a slope at nearly 4,000 feet altitude near Loh Hoh Tsuen, Ling Yuin Hsien. A shrub over 6 feet high, with racemes of black fruits.

105687. (Undetermined.)

No. F. 10. Collected May 30, 1933, along a stream at 3,800 feet altitude near Né I, Ling Yuin Hsien. A small tree 10 feet high, with black fruits.

105688. (Undetermined.)

No. F. 17. Collected May 6, 1933, in a valley at 4,300 feet altitude near Né Hung, Ling Yuin Hsien. A leguminous tree over 60 feet high.

105689. (Undetermined.)

No. F. 27. Collected September 1, 1933, at 1,800 feet altitude along the roadside near Ta Tseh Tsuen, Yung Hsien. A tree over 30 feet high, with red fruits.

105690. (Undetermined.)

No. F. 28. Collected September 17, 1933, in a valley at 1,800 feet altitude near Ta Tseh Tsuen, Yung Hsien. A small tree about 6 feet high, with greenish-red fruits.

105691. (Undetermined.)

No. F. 31. Collected September 1, 1933, in a forest near Ta Tseh Shan, Yung Hsien. A tree over 30 feet high, with yellow edible fruits.

105676 to 105706—Continued.

105692. (Undetermined.)

Pei Tón. No. F. 37. Collected October 1, 1933, along the roadside at 1,200 feet altitude near Ta Tseh Tsuen, Yung Hsien. A tree about 25 feet high, with yellow fruits.

105693. (Undetermined.)

No. F. 40. Collected June 14, 1933, on a slope at 4,500 feet altitude near Né Kwang, Ling Yuin Hsien. A small tree about 7 feet high, with green fruits.

105694. *MORUS* sp.

Feng Shu. No. F. 50. Collected October 15, 1933, in a valley at 1,200 feet altitude near Ta Tseh Tsuen, Yung Hsien. A tree about 25 feet high, with greenish-yellow globose fruits.

105695. *ANTIDESMA* sp. Euphorbiaceae.

No. F. 53. Collected October 1, 1933, in forest at 1,800 feet altitude near Ta Tseh Tsuen, Yung Hsien. A shrub about 8 feet high, with red edible fruits.

105696. *VITEX* sp. Verbenaceae.

No. F. 71. Collected October 6, 1933, in a forest near Ta Tseh Tsuen, Yung Hsien, at 3,800 feet altitude. A tree about 10 feet high, with digitate leaves.

105697. (Undetermined.)

No. F. 76. Collected October 23, 1933, in a dense forest at 6,000 feet altitude near Ch'ang An, Yung Hsien. A tree with egg-shaped black fruits.

105698. (Undetermined.)

No. F. 78. Collected October 23, 1933, in a rocky situation near Ch'ang An, Yung Hsien, at 6,000 feet altitude. A tree with globose yellow fruits.

105699. *CIPADESSA* sp. Meliaceae.

No. F. 80. Collected October 23, 1933, in a forest at 6,000 feet altitude near Ch'ang An, Yung Hsien. A small tree with globose black fruits.

105700. *PAVETTA* sp. Rubiaceae.

No. F. 81. Collected October 23, 1933, in a forest at 6,000 feet altitude near Ch'ang An, Yung Hsien. A shrub with globose green fruits.

105701. (Undetermined.)

No. F. 93. Collected October 8, 1933, in a valley near Ta Tseh Tsuen, Yung Hsien, at 1,200 feet altitude. A vine with greenish-red ovate fruits almost an inch long.

105702. *VITEX* sp. Verbenaceae.

No. F. 94. Collected October 23, 1933, on a rocky slope at 6,000 feet altitude near Ch'ang An, Yung Hsien. A tree with roundish green fruits about one-half inch in diameter.

105703. (Undetermined.)

No. F. 95. Collected October 20, 1933, at 1,200 feet altitude near Ta Tseh Tsuen, Yung Hsien. A shrub with ovate greenish fruits three-fifths of an inch long.

105704. (Undetermined.)

No. F. 96. Collected October 23, 1933, at 6,000 feet altitude near Ch'ang An, Yung Hsien. A vine with globose reddish-yellow fruits about an inch in diameter, found growing in rocky places.

105676 to 105706—Continued.

105705. THEA JAPONICA (L.) Baill. Theaceae.

No. F. 103. Collected October 20, 1933, in a valley at 1,200 feet altitude near Ta Tsch Tsuen, Yung Hsien. An evergreen shrub native to Japan and China, sometimes becoming a small tree up to 40 feet high, with glossy deep-green leaves 3 to 4 inches long and solitary red flowers up to 4 inches wide, appearing at the end of the branchlets. The oil expressed from the seeds is used by the Japanese women for dressing their hair.

For previous introduction see 43923.

105706. MORUS sp. Moraceae.

No. F. 116. Collected November 10, 1933, near Chang Shan Park, Kwei Ling Hsien, at 300 feet altitude. A large tree with red globose fruits over an inch in diameter.

105707 to 105712.

From Africa. Seeds presented by the Superintendent of Plantations, East African Agricultural Research Station, Amani, Tanganyika Territory, through Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, Cuba. Received May 12, 1934.

105707. ADENANTHERA MICROSPERMA L. Mimosaceae.

A handsome deciduous tree, native to the East Indies, with spreading branches. The bipinnate leaves have 2 to 6 pairs of pinnae, each pinna having 2 to 12 pairs of oval, obtuse, glabrous leaflets. The small white and yellow fragrant flowers, borne in racemes, are followed by glossy scarlet biconvex seeds.

For previous introduction see 94176.

105708. DEGUELIA DALBERGIOIDES (Baker) Taub. Fabaceae.

A small spreading tree about 20 feet high, with rigid, dark-green compound leaves and copious racemes of pink flowers. Native to eastern India and Java.

For previous introduction see 69111.

105709. ELETTARIA CARDAMOMUM (L.) Maton. Zinziberaceae. Cardamon.

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

For previous introduction see 98791.

105710. FICUS NATALENSIS Hochst. Moraceae.

A shrub or small tree with oblanceolate-obovate, papery dull-green leaves 2 to 3 inches long. The small globose-obovoid fruits, one-half inch long, are mostly in axillary pairs. Native to eastern Africa from the Nile to Natal.

105711. INTSIA BIJUGA (Colebr.) Kuntze (*Afzelia bijuga* Gray). Caesalpinaceae. Ipil.

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

For previous introduction see 94193.

105712. MAESOPSIS EMINII Engler. Rhamnaceae.

A tropical shrub from eastern Africa, with thick, leathery, oblong acuminate leaves, small greenish flowers in small axillary clusters, and small ovoid fruits.

105713 and 105714.

From Brazil. Seeds collected by J. G. Myers, and presented through David Fairchild, Bureau of Plant Industry. Received May 15, 1934.

105713. CUCURBITA PEPO L. Cucurbitaceae. Pumpkin.

Jirimú caboco, or Indian pumpkin, collected in September 1933 at Santarem, Amazon. An excellent pumpkin with dry yellow flesh.

105714. ROLLINIA DELICIOSA Safford. Annonaceae. Biribá.

Collected in July 1933 at Manáos, Amazon. The fruit is like the sugar-apple in shape and color, but considerably larger and with soft drooping spines arranged in slight vertical ridges. The pulp is very smooth, almost custardlike, with a delicate flavor. The tree is said to fruit in 3 years from seed.

For previous introduction see 38171.

105715. EORA BAUERI (Wendl. and Drude) O. F. Cook (*Rhopalostylis baueri* Wendl. and Drude). Phoenicaceae. Norfolk Island palm.

From California. Seeds presented by David Barry, Jr., Los Angeles. Received May 15, 1934.

A tall spineless palm with equally pinnatisect leaves 6 feet or more long, in a stiffly erect terminal cluster. The spadix is 1 to 2 feet long, the flowers are white, and the globose fruits are scarlet. Native to Norfolk Island.

105716. ANNONA DIVERSIFOLIA Safford. Annonaceae. Ilama.

From Guatemala. Seeds presented by Mariano Pecheco H., Director General de Agricultura. Received May 14, 1934.

Anona blanca. A small tree, native to Mexico and tropical America, with brown-gray, aromatic bark. The thin membranous leaves, 5 inches long, are broadly elliptical to oblanceolate. The broadly ovoid, densely tomentose fruit, about 6 inches long, is usually covered with stout thick protuberances. The golden-brown, nutlike seeds are embedded in the edible cream-colored or rose-tinted flesh.

For previous introduction see 101256.

105717 to 105719.

From Mexico. Seeds presented by Peter Heinz, Brownsville, Tex. Received May 21, 1934.

105717. CEIBA sp. Bombacaceae.

Collected on an arid mountain slope near Tasco. A tree whose seeds are in conspicuous bunches of cottony expanded capsules.

105718. SERJANIA MEXICANA Willd. Sapindaceae.

A climbing evergreen shrub with spiny stems, thick biternate leaves 2 to 4 inches long, and small fragrant white flowers. Native to Mexico. The plant is used as a fish poison in Mexico.

105719. (Undetermined.)

A shrub from 6 to 10 feet high, found on arid rocky slopes. The large flower clusters are like those of hydrangea.

105720 to 105725. NICOTIANA TABACUM
L. Solanaceae. Tobacco.

From Venezuela. Seeds presented by the Ministerio de Salubridad y de Agricultura y Cria, through Dr. H. Pittier, Museo Comercial, Caracas. Received May 19, 1934.

105720. *Tabaco corriente.* From Distrito Nirgua, Estado Yaracuy.

105721. *Tabaco corriente.* From Municipio Catuaro, Distrito Rivero, Estado Sucre.

105722. *Tabaco Guácharo.* From La Cueva del Guácharo, Estado Monagas.

105723. *Tabaco Negro.* From Municipio Santa Maria, Distrito Rivero, Estado Sucre.

105724. *Tabaco Negro.* From Municipio Santa Cruz, Distrito Rivero, Estado Sucre.

105725. *Tabaco Rabo de Gallo* (Cocktail). From Municipio Cocorote, Distrito San Felipe, Estado Yaracuy.

105726. CROTALARIA sp. Fabaceae.

From the Belgian Congo, Africa. Seeds presented by J. B. H. Lejeune, Director, Government Agronomic Station, Kisozi, Territories of Ruanda-Urundi. Received May 21, 1934.

105727 to 105734.

From Cuba. Seeds and plants presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received in May 1934.

105727. ARIKURYROBA SCHIZOPHYLLA (Mart.) Bailey. Phoenicaceae. Palm.

A small slender-stemmed palm, about 15 feet high, with pinnate leaves. Native to Brazil.

For previous introduction see 104681.

105728. BAUHINIA RACEMOSA Lam. Caesalpiniaceae.

A small shrub with drooping branches and rounded leaves, the two lobes rounded oval, white-hairy beneath. The small yellow flowers are in racemes of 12 to 18. Native to eastern India.

105729. LIVISTONA CHINENSIS (Jacq.) R. Br. Phoenicaceae. Palm.

A palm, native to China, with a short thick trunk up to 6 feet high and 1 foot thick, having a crown of reniform palmately divided leaves 4 to 6 feet across on petioles about 5 feet long, which are armed below the middle with recurved brown spines more than an inch long.

For previous introduction see 93412.

105730. LIVISTONA COCHINCHINENSIS (Blume) Mart. Phoenicaceae. Palm.

A slender palm about 50 feet high, with a crown of large fan-shaped leaves. It is native to Malacca.

For previous introduction see 104240.

105731. ADENIUM OBESUM (Forsk.) Roem. and Schult. Apocynaceae.

For previous introduction and description see 105448.

105727 to 105734—Continued.

105732. DOLICHANDRONE CRISPA Seem. Bignoniaceae.

A large tropical tree, 40 to 60 feet high, with compound leaves a foot or less in length, the two to four broadly elliptic leaves being 2 to 4 inches long. The white flowers are in small corymbs. Native to southern India.

105733. FAGRAEA OBOVATA Wall.

Plants of a tropical tree of moderate size, with ovate or rounded thick leaves 5 or 6 inches long and fragrant white flowers, 2 inches long, in corymblike clusters. Native to Assam, India.

105734. LONCHOCARPUS NEUROSCAPHA Benth. Lancepod.

An evergreen tree with alternate pinnate leaves and racemes of purplish pea-like flowers.

For previous introduction see 94776.

105735. ARTOCARPUS COMMUNIS Forst. Breadnut.

From Central Mercedita, Pinar del Rio, Cuba. Seeds presented through W. A. Mace, Madruga, Cuba, and L. H. Dewey, Bureau of Plant Industry. Received June 1, 1934.

A tree, native to the East Indies, 30 to 40 feet high, with viscid milky juice and leathery ovate leaves 3 feet long, entire at the base but divided above into 3 to 9 lobes. The large fruits, 4 to 6 inches in diameter, are often seedless, but in this variety the seeds are present and are much the size, shape, and flavor of chestnuts.

For previous introduction see 80173.

105736. OLEA EUROPAEA L. Oleaceae. Common olive.

From Spain. Cuttings presented by Julius Matz, Bureau of Plant Industry. Received June 25, 1934.

Variety *Zorzalena*. A relatively tender variety. The tree is leafy, compact, and a good early bearer whose fruit is grown for its oil.

105737 to 105743. HELIANTHUS TUBEROSUS L. Asteraceae.

Jerusalem-artichoke.

From the Union of Soviet Socialist Republics. Tubers presented by the Chicory Institute, Moscow. Received May 26, 1934.

105737. No. 8. 105741. No. 92.

105738. No. 9. 105742. No. 166.

105739. No. 48. 105743. No. 167.

105740. No. 53.

105744 and 105745.

From the Canal Zone. Seeds presented through David Fairchild, Bureau of Plant Industry. Received May 28, 1934.

105744. CAVANILLESIA PLATANIFOLIA H. B. K. Bombacaceae.

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

For previous introduction see 98928.

105744 and 105745—Continued.

105745. *MYRCIARIA CAULIFLORA* (Mart.)
Berg. Myrtaceae. Jaboticaba.

For previous introduction and description see 105309.

105746 to 105748. *ALLIUM* spp. Liliaceae.

From Cochinchina. Bulbs presented by the Directeur du Jardin Botanique et Zoologique de Saigon. Received May 25, 1934.

105746. *ALLIUM CEPA* L. Onion.

105747. *ALLIUM SATIVUM* L. Garlic.

105748. *ALLIUM TRIQUETRUM* L.

A bulbous plant with a three-angled stem, common on the coast of Algeria. In its usual surroundings this plant is a rather dwarfed weed of dry texture, but it has been found that when transplanted to good garden soil with plenty of fresh water it produces, during the winter, large plants with white, tender, and succulent underground parts. If the green leaves are removed, the rest of the stem forms a delicate vegetable with no odor of garlic.

For previous introduction see 82018.

105749 and 105750. *NICOTIANA TABACUM* L. Solanaceae. Tobacco.

From Puerto Rico. Seeds presented by Dr. J. A. B. Nolla, Department of Agriculture and Commerce, San Juan. Received June 8, 1934.

105749. *Ambalema*. A mosaic-resistant variety. Seed gathered under bags, but not pure lined.

105750. *Ambalema*. A pure-line variety which is mosaic resistant.

105751 to 105754. *AVENA SATIVA* L. Poaceae. Oats.

From Nanking, China. Seeds presented by Sheo Wang, Department of Agronomy, University of Nanking. Received May 23, 1934.

105755 to 105760. *ZEA MAYS* L. Poaceae. Corn.

From Peru. Seeds presented by L. S. Blaisdell, general manager, Southern Railway, Arequipa, through M. Cooper. Received May 23, 1934.

Native varieties grown near Puno in the region of Chucuito.

105761 to 105764. *MACADAMIA TERNIOFOLIA* F. Muell. Proteaceae. Queensland-nut.

From Queensland, Australia. Seeds presented by R. Allsopp, Queensland Acclimatization Society, Lawnton. Received June 11, 1934.

An evergreen tree up to 50 feet high, native to shady jungles in the eastern part of Australia where the soil is rich and the annual rainfall is over 60 inches. It is cultivated for its edible nuts which have sweet white flesh, with the flavor of chestnuts, incased in a shell which is, typically, very hard.

For previous introduction see 103738.

105761. Giant thin shell.

105761 to 105764—Continued.

105762. Giant thin shell.

105763. Mammoth thick shell.

105764. Thin shell no. 2.

105765 and 105766. *CUCURBITA MAXIMA* Duchesne. Cucurbitaceae. Squash.

From California. Seeds presented by Claude D. Tribble, Elk Grove. Received May 25, 1934.

A squash with thick flesh of the very finest grain and quality; it grows to a large size, averaging about 65 pounds, and originally came from Japan.

105767 and 105768. *LINUM USITATISSIMUM* L. Linaceae. Flax.

From the Netherlands. Seeds presented by B. C. Algra, Stiens, Zaadhandel. Received May 28, 1934.

Concurrent. A white-flowered variety that not only produces a large quantity of seed but also yields an excellent quality of fiber.

105769. *ANTIGONON* sp. Polygonaceae.

From Puerto Rico. Seeds presented by T. B. McClelland, Director, Agricultural Experiment Station, Mayaguez. Received June 7, 1934.

A very beautiful double antigonon, differing from the common *Rosa de montana* in having a much larger and very different flower, somewhat suggestive of a wild rose in appearance but of paler pink. The seeds were brought from Venezuela to Puerto Rico many years ago.

105770 to 105779. *AVENA* spp. Poaceae. Oats.

From India. Seeds presented by the Imperial economic botanist, Imperial Institute of Agricultural Research, Pusa. Received June 11, 1934.

A collection of hybrid oats, introduced for the use of Department specialists.

105770. *AVENA* sp.

Pusa Hybrid A.

105771. *AVENA* sp.

Pusa Hybrid D.

105772. *AVENA* sp.

Pusa Hybrid F.

105773. *AVENA* sp.

Pusa Hybrid G.

105774. *AVENA* sp.

Pusa K. S. no. 10.

105775. *AVENA* sp.

Pusa Hybrid IV-104.

105776. *AVENA* sp.

Pusa Hybrid IV-106.

105777. *AVENA* sp.

Pusa Hybrid VII-194.

105778. *AVENA* sp.

Pusa Hybrid VII-265.

105779. *AVENA* sp.

Pusa Hybrid VII-578.

105780. MELINIS MINUTIFLORA Beauv.
Poaceae. **Molasses grass.**

From Brazil. Seeds presented by B. H. Hunnicutt, Mackenzie College, São Paulo. Received June 18, 1934.

Gordura grass. Collected from the highest altitude at which this is known to grow in Brazil.

105781 to 105786.

From Puerto Rico. Cuttings and plants collected by K. A. Ryerson, Bureau of Plant Industry. Received May 21, 1934.

105781. MAGNOLIA PORTOBICENSIS Bello.
Magnoliaceae.

Cuttings from a handsome tree, endemic in the forests of western Puerto Rico, with leathery, broadly oval leaves about 6 inches long and terminal, solitary white flowers 4 inches in diameter with about 12 perianth divisions.

105782. TILLANDSIA sp. Bromeliaceae.
Plants.

105783. (Undetermined.)

Plant of an undetermined orchid.

105784. (Undetermined.)

Plants of an undetermined orchid.

105785. (Undetermined.)

Plants of an undetermined orchid.

105786. (Undetermined.)

A shrub with white flowers 1 inch across, resembling those of anemone, and red fruits. Collected in the mountains.

105787. LESPEDEZA SATSUMENSIS Nakai. Fabaceae.

From Japan. Seeds presented by T. Nakai, Director, Botanic Garden, Imperial University, Tokyo. Received May 28, 1934.

Collected at Kinsin, on Mount Isoma, Satsuma Province. This bushy shrub is a rare species and is found only on the summit of Mount Isoma. It has oblong-obovate leaflets up to four-fifths of an inch long, retuse or emarginate, and very short axillary racemes of deep purple flowers. Allied to *Lespedeza floribunda*, but differing chiefly in its smaller size and in having shorter racemes.

105788. HETEROPHRAGMA ADENOPHYLLUM (DC.) Seem. Bignoniaceae.

From Florida. Seeds presented by W. D. Carrier, Crescent City. Received June 14, 1934.

An ornamental African tree related to the catalpa, but adapted for cultivation in subtropical regions only, as it is very susceptible to frost. It reaches a height of 30 to 50 feet, with large opposite pinnate leaves and brownish-yellow woolly flowers in terminal panicles.

For previous introduction see 59679.

105789 to 105797. CASUARINA spp. Casuarinaceae.

From Western Australia. Seeds presented by C. A. Gardner, Government botanist, State Herbarium, Department of Agriculture, Perth. Received June 11, 1934.

105789 to 105797—Continued.

105789. CASUARINA ACUARIA F. Muell.

A leafless shrub with erect rigid branches and numerous deciduous branchlets; these are erect, slender but rigid, and each consists of but two internodes. The cones, globular and solitary or in small clusters, are about 1 inch in diameter. Native to Western Australia.

105790. CASUARINA ACUTIVALVIS F. Muell.

An erect branched shrub with the internodes marked by 12 lines of low linear-subulate teeth and with rather large globular cones. The minute dark-brown leaves are easily dislodged. Native to Victoria, Australia.

For previous introduction see 93780.

105791. CASUARINA CAMPESTRIS Diels.

A dioecious shrub 3 to 6 feet high, with numerous erect branches; native to Western Australia. The internodes are glaucous or shining green and striate.

For previous introduction see 93782.

105792. CASUARINA DECUSSATA Benth.

A small tree, native to Western Australia, closely allied to *Casuarina torulosa*, with slender elongated branches arranged in fours. The stems have a decussate appearance, owing to the prominence of alternate pairs of angles at the nodes.

For previous introduction see 93784.

105793. CASUARINA sp.

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

105794. CASUARINA GLAUCA Sieber.

An Australian tree 60 to 70 feet high, usually straight and of rapid growth. The timber is red, beautifully marked, hard and tough and is there used for cabinetwork. In periods of drought the foliage is used for stock feed. When the trees are cut down, the young growth shoots up quickly from the stump. This variety grows in the coastal districts, marshy country, and frequently in land submerged with tidal water. It makes a very handsome shade tree.

For previous introduction see 93788.

105795. CASUARINA GREVILLEOIDES Diels.

A low much-branched shrub about 1 foot high, with the branches and branchlets much-jointed and the younger joints white tomentose. Native to Western Australia.

105796. CASUARINA HUMILIS Otto and Dietr.

An erect shrub 2 to 6 feet high, with the branchlets usually in whorls of four and the angles of the internodes prominent but obtuse. It is native to Western Australia.

For previous introduction see 93791.

105797. CASUARINA THUYOIDES Miquel.

A straggling shrub 3 to 5 feet high, with numerous spreading slender branchlets about 1 inch long arranged in whorls of four or five. The ribs on the nearly round internodes are scarcely noticeable. It is native to Western Australia.

For previous introduction see 93793.

105798. ACER NIVEUM Blume. *Aceraceae*. Maple.

From the Philippine Islands. Seeds presented by Arthur F. Fischer, Director of forestry, Department of Agriculture, Manila. Received June 12, 1934.

Collected in Bakiling National Park, Laguna. A large ornamental maple, sometimes over 100 feet tall, with undivided elliptic or oblong leaves 8 inches long, white glaucous beneath, and yellowish-green flowers in lax racemes. Native to upper Assam, India.

105799 to 105801.

From Java. Seeds presented by A. M. Cramer, Wonosobo. Received June 1, 1934.

105799. ALLIUM PORRUM L. *Liliaceae*. Leek.

Shimonita. A large, fast-growing, hollow-leaved Japanese variety of good flavor. It is grown from seed and seeds abundantly.

105800. BRASSICA PEKINENSIS (Lour.) Rupr. *Brassicaceae*. Pe'tsai.

White Longhead. The seed of this variety is imported from and grown in the Netherlands, where the seed is not sown before early July, to prevent flowering. This is the best of all varieties of pe'tsai; very sweet and of a fine flavor.

105801. BRASSICA PEKINENSIS (Lour.) Rupr. *Brassicaceae*. Pe'tsai.

Witte Reuzen or *Giant Round*. A variety grown in Japan which forms a very large round head.

105802 to 105820.

From the Union of Soviet Socialist Republics. Seeds presented by Hortus Botanicus Bakuensis, Baku, Azerbaïdzhan. Received June 15, 1934.

Introduced for testing by soil-erosion specialists.

105802. AMYGDALUS COMMUNIS L. *Amygdalaceae*. Almond.**105803. AMYGDALUS FENZLIANA (Fritsch) Korsh. *Amygdalaceae*.**

A shrubby tree with long purplish branches and narrowly ovate leaves. The reddish flowers appear before the leaves in few-flowered clusters and are smaller than those of *Amygdalus communis*. The small peachlike fruits have rather dry flesh. Native to the Caucasus region.

For previous introduction see 43302.

105804. ARISTIDA PENNATA Trin. *Poaceae*. Grass.

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

For previous introduction see 101979.

105805. ATRIPLEX INCISA Bieb. *Chenopodiaceae*.

A desert-loving annual, native to the Caucasus region, with rhombic-sinuate, shallowly incised leaves and small four-angled fruits.

105806. ATRIPLEX DESERTORUM (Iljin) D. Sosn. *Chenopodiaceae*.

A succulent desert plant.

105802 to 105820—Continued.**105807 to 105810. CALLIGONUM spp. *Polygonaceae*.****105807. CALLIGONUM CAPUT-MEDUSAE Schrenk.**

Native to northern and central Asia, where it is used as a sand binder.

105808. CALLIGONUM COMOSUM L'Her.

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

For previous introduction see 98208.

105809. CALLIGONUM ERIPODUM Bunge.

A slender-branched shrub with whitish branchlets and linear-subulate, minute leaves which are early deciduous. Native to Turkistan, where it is used as a sand binder.

For previous introduction see 94931.

105810. CALLIGONUM SETOSUM Litv.

A leafless shrub native to the Caspian region, where it is used as a sand binder.

For previous introduction see 98209.

105811. EPHEDRA MAJOR PROCERA (Fisch. and Mey.) Aschers and Graebn. *Gnetaeae*. Jointfir.

A leafless shrub, 4 to 5 feet high, native to the Caucasus, with stiff branches and nearly sessile flower clusters, followed by red fruits.

For previous introduction see 79906.

105812. HALIMODENDRON HALODENDRON (Pall.) Voss. *Fabaceae*. Salt-tree.

A hardy, drought-resistant, ornamental shrub 8 feet high, with pink flowers. Native to Turkistan.

For previous introduction see 73604.

105813. HALOXYLON AMMODENDRON (Meyer) Bunge. *Chenopodiaceae*. Sauxul.

A Persian shrub or sometimes a small tree with a thick gnarled trunk, either leafless or with rudimentary leaves, and small fruits with thin papery wings.

For previous introduction see 78481.

105814. LOTUS CORNICULATUS CILIATUS (Tenore) C. Koch. *Fabaceae*.

A variety with hairy leaflets and calyx.

105815. ONOBRYCHIS MICHAUXII DC. *Fabaceae*.

An erect perennial with oblong-elliptic, mucronate leaflets and elongate spikes of yellowish flowers. Native to Asia Minor.

105816. PROSOPIS STEPHANIANA (Bieb.) Kunth. *Mimosaceae*.

A deep-rooted shrubby legume which grows abundantly on dry lands in the interior plain of the island of Cyprus. Sheep and cattle browse on it, and the bees make good honey from its abundant flowers.

For previous introduction see 88697.

105817. RHAMNUS PALLASII Fisch. *Rhamnaceae*.

An ornamental deciduous shrub, native to very dry sterile places in the Caucasus region.

For previous introduction see 33002.

105802 to 105820—Continued.

105818. *SALSOLA SUBAPHYLLA* Meyer. Chenopodiaceae.

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

For previous introduction see 98219.

105819. *SCORZONERA RIGIDA* Auch. Cl-choriaceae.

A stemless perennial with rigid entire linear leaves and yellow flower heads on scapes four times as long as the leaves. Native to the mountainous regions of Asia Minor.

105820. (Undetermined.)

Received as *Eremosparton aphyllum*, but the seeds are not of that genus.

105821. *BAUHINIA RACEMOSA* Lam. Caesalpiniaceae.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received June 20, 1934.

105822 to 105828.

From California. Seeds presented by David Barry, Jr., Los Angeles. Received June 18, 1934.

105822. *CYRTOSTACHYS RENDA* Blume. Phoenicaceae. Palm.

A tall slender palm, 25 to 30 feet high, crowned by a graceful cluster of pinnate leaves, with linear or ensiform segments and brownish-red petioles. Native to Sumatra.

For previous introduction see 99560.

105823. *ERYTHEA EDULIS* (Wendl.) S. Wats. Phoenicaceae. Guadeloupe palm.

A stout spineless palm, 50 feet high, with a terminal cluster of much-divided leaves 3 feet across. The shining black fruits are produced on a long, white-tomentose, paniculate spadix. Native to the island of Guadeloupe, Baja California, Mexico.

For previous introduction see 77153.

105824. *LICUALA PALUDOSA* Griff. Phoenicaceae. Palm.

A handsome dwarf palm, 4 to 10 feet high, with a smooth slender trunk and roundish fan-shaped leaves about 3 feet across. Native to Malacca.

105825. *PHOENICOPHORUM BOESIGIANUM* (Koch.) Stuntz. Phoenicaceae. Palm.

A handsome, pinnate-leaved palm, native to the Seychelles Islands. When mature it is entirely spineless, whereas in the young state the deep orange-red petioles are clothed with black needlelike spines 1 to 3 inches long. The young leaves are orange beneath and mottled with orange spots above. The spadix is 3 to 6 feet long, divided into numerous slender branches, swollen at the base, and densely covered above with yellow flowers, each about one-fourth of an inch in diameter.

For previous introduction see 103731.

105822 to 105828—Continued.

105826. *PHOENIX PUSILLA* Gaertn. Phoenicaceae. Date palm.

A dwarf palm about 4 feet high, with pinnate leaves having leafy petioles, dark-green, sword-shaped, rigid leaflets, and black fruits. The stem is said to contain a farinaceous pith. It is native to Ceylon.

For previous introduction see 103110.

105827. *PHOENIX ZEYLANICA* Trimen. Phoenicaceae. Ceylon date palm.

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

For previous introduction see 104699.

105828. *SEAFORTHIA ELEGANS* R. Br. Phoenicaceae. Palm.

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

For previous introduction see 104842.

105829 to 105833.

From Australia. Plants and budwood presented by George Althofer, Dripstone, New South Wales. Received June 25, 1934.

Introduced for the use of Department specialists.

105829. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach. Glen Ora.

105830. *AMYGDALUS PERSICA* L. Amygdalaceae. Peach. High's Early Canada.

105831. *AMYGDALUS PERSICA NECTARINA* Ait. Amygdalaceae. Nectarine. Irrewarra.

105832. *PRUNUS SALICINA* Lindl. Amygdalaceae. Japanese plum. Narrabeen plum (budwood).

105833. *PRUNUS SALICINA* Lindl. Amygdalaceae. Japanese plum. Wilson (budwood).

105834 and 105835.

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

105834. *UVARIA* sp. Annonaceae.

A vine with edible fruits, collected at 1,500 feet altitude in Annam, Col d'Ailao.

105835. *DIOSPYROS KAKI* L. f. Diospyraceae. Kaki persimmon.

Collected at Col de Blac near Haut Donal in a forest at 3,000 feet altitude. A wild kaki which becomes 30 to 60 feet high with a trunk circumference of 2 to 3 feet. It is a vigorous tree with a large taproot, excellent as a stock for cultivated kakis.

105836. SACCHARUM OFFICINARUM L.
Poaceae. **Sugarcane.**

From Hawaii. Cuttings presented by the experiment station of the Hawaiian Sugar Planters' Association, Honolulu. Received June 23, 1934.

Introduced for the use of Department specialists.

105837 to 105863.

From Australia. Plants purchased from L. P. Rosen & Son, Carlingford, New South Wales. Received June 27, 1934.

A collection of fruit trees introduced under the following varietal names for the use of Department specialists.

105837 to 105854. AMYGDALUS PERSICA L.
Amygdalaceae. **Peach.**105837. *Aunt Becky.*105838. *Bell's Improved.*105839. *Blackburn.*105840. *Braddock.*105841. *Christmas Box.*105842. *Doncaster.*105843. *Edward VII.*105844. *Governor Rawson.*105845. *King of All.*105846. *La France.*105847. *Princess Royal.*105848. *Rennie.*105849. *Robert Stewart.*105850. *Roger Louis.*105851. *Rowe's Champion.*105852. *Ruby Red.*105853. *Shanghai Seedling.*105854. *Shanghai Slip.***105855 to 105868. AMYGDALUS PERSICA NECTARINA Ait.**
Amygdalaceae. **Nectarine.**105855. *Lady Carrington.*105856. *Lee's.*105857. *The Jury.*105858. *W. C. Fripp.***105859 to 105863. PRUNUS ARMENIACA L.**
Amygdalaceae. **Apricot.**105859. *Cattell Early.*105860. *Colorado.*105861. *Kingston Early.*105862. *Mansfield's.*105863. *Cullin's Early.***105864. CARICA QUERCIFOLIA (St. Hil.)**
Benth. and Hook. **Papayaceae.**

From France. Seeds presented by M. Garry Desloges, Caravan. Received June 30, 1934.

A small tree with palmately 3-lobed leaves and small fruits which contain a greater percentage of papain than those of *Carica papaya*. The plant is said to be hardy in southern California.

Received as *Carica hastaeifolia*, which is now considered a synonym of this species.

For previous introduction see 73837.

105865. TRITHRINAX BRASILIENSIS
Mart. **Phoeniceaceae.** **Palm.**

From California. Seeds presented by David Barry, Jr., Los Angeles. Received June 25, 1934.

A slender-stemmed fan palm 6 to 12 feet high, with palmate-fanelliform leaves divided into 20 or 30 segments. The much-branched spadix has numerous spirally arranged flowers. Native to Brazil.

105866 to 105868. CLEMATIS spp.
Ranunculaceae.

From Sydney, Australia. Seeds presented by the School of Botany, University of Sydney, New South Wales, through J. E. Spingarn, Armenia, N. Y. Received June 23, 1934.

105866 and 105867. CLEMATIS ARISTATA
R. Br.

An evergreen woody vine with trifoliate leaves of cordate to narrowly lanceolate, entire or serrate leaflets 1 to 3 inches long, and yellowish white flowers 2 inches across in short panicles. It is native to Australia.

For previous introduction see 88318.

105868. CLEMATIS GLYCINOIDES DC.

A woody climber that trails over rocks and bushes or ascends tall trees in several parts of Australia. The long-stalked leaves are three-parted and 1 to 3 inches long, and the white or yellowish flowers, in short clusters, are about 1½ inches across.

105869 to 105871.

From Egypt. Seeds presented by Thomas W. Brown, Director, horticultural section, Ministry of Agriculture, Giza. Received June 25, 1934.

105869. ACACIA LAETA R. Br.
Mimosaceae.

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

105870 and 105871. BAUHINIA RETUSA
Ham. **Caesalpinaceae.**

A tree with rounded, stiff, leathery leaves about 5 inches long and small yellow flowers in large terminal panicles sometimes a foot long and broad. Native to the western Himalayas up to 4,000 feet altitude.

105872. WARSZEWICZIA COCCINEA
(Vahl.) Klotzsch. **Rubiaceae.**

From the Canal Zone. Seeds presented by J. E. Higgins, Canal Zone Experiment Gardens, through E. M. Dickens, Lake Worth, Fla. Received June 28, 1934.

An ornamental tree with dark-green foliage and clusters of small flowers each one-fourth inch across. One sepal of each cluster is brilliant scarlet and over 2 inches long, making a startling splash of color against the dark leaves. The tree blooms during the wet season, whereas most of the showy flowering trees of the Tropics bloom in the dry season. Native to Trinidad, British West Indies.

For previous introduction see 97986.

105873 to 105932.

From India. Seeds presented by Dr. Walter Koelz, through Prof. H. H. Bartlett, University of Michigan, Ann Arbor, Mich. Received June 12, 1934.

105873 and 105874. AMPHICOME ARGUTA
Royle. Bignoniaceae.

A low herbaceous perennial, not over 3 feet high, native to northern India. The compound leaves are made up of 5 to 9 deeply serrate, lanceolate leaflets 2 inches long, and the rose-colored, funnel-shaped flowers, 1 inch long, are borne in terminal racemes 6 to 8 inches long.

105873. Collected on sunny bare cliffs at Urni, Rampur, Bashahr.

105874. Collected at Wangtu, Rampur, Bashahr.

105875. AMYGDALUS sp. Amygdalaceae.

From Roghi, Rampur, Bashahr. A wild white peach which becomes 30 feet high. The flowers are attractive, but the fruit is useless.

105876. ASTER sp. Asteraceae.

From Rapshu, at 1,300 feet altitude. A very attractive aster with purple flowers 6 inches in diameter.

105877. CITRUS sp. Rutaceae.

From Buzuri, Kulu. A thick-skinned, orange-colored lemon 6 inches long.

105878 to 105880. CLEMATIS spp. Ranunculaceae.

105878. CLEMATIS sp.

From Nago, Rampur, Bashahr, at 12,000 feet altitude in a cold dry situation. An attractive vine with yellow flowers.

105879. CLEMATIS sp.

From Kibor, Spiti, at 12,000 feet altitude in a dry cold situation.

105880. CLEMATIS sp.

From Sungnam, Rampur, Bashahr, at 10,000 feet altitude.

105881. COLUTEA sp. Fabaceae.

From Rampur, Bashahr, at 10,000 feet altitude. The coluteas are ornamental leguminous shrubs, useful as soil binders.

105882. COTONEASTER sp. Malaceae.

A very attractive shrub, 3 feet high, with dark-green leaves.

105883. COTONEASTER sp. Malvaceae.

From Dankhar, Spiti, a dry cold region. A shrub 7 feet high, with very attractive carmine fruits.

105884. CUCURBITA PEPO L. Cucurbitaceae.
Pumpkin.

From Nachar, Rampur, Bashahr. A cultivated green pumpkin which grows chiefly in a hot climate.

105885. EREMURUS HIMALAICUS Baker.
Liliaceae. Himalayan desertcandle.

From Hang La, Rampur, Bashahr, at 13,000 feet altitude. A tall herbaceous perennial, found growing in masses, with lanceolate leaves 1 to 2 feet long in a rosette at the base of the stem. This stem rises to 6 feet and bears a spike 2 to 3 feet long of white flowers. It is native to India.

For previous introduction see 91626.

105873 to 105932—Continued.

105886. HIPPOPHAE RHAMNOIDES L.
Elaeagnaceae. Common sea-buckthorn.

From Po, Spiti, at 10,000 feet altitude. A hardy spiny deciduous shrub with silvery foliage and orange-yellow fruits, found along watercourses.

For previous introduction see 92240.

105887. HORDEUM VULGARE L. Poaceae.
Barley.

From Gya, Ladakh, at 1,400 feet altitude.

105888. ILEX sp. Aquifoliaceae.

From Sarahan, Rampur, Bashahr. An attractive tree with a trunk 12 inches in diameter.

105889. IRIS sp. Iridaceae.

From Po, Spiti, in a field at 10,000 feet altitude.

105890. JASMINUM sp. Oleaceae.

From Bathad, Kulu. A vine which bears very fragrant white flowers throughout the summer.

105891. NEPETA sp. Menthaceae.

From Taho, Spiti, at 10,000 feet altitude. A prostrate annual mint with pale-lilac flowers; found in a dry cold atmosphere.

105892. NEPETA FLOCCOSA Benth. Menthaceae.

From Hemis, Ladakh, at 11,000 feet altitude. A stout herb up to 3 feet high, white woolly throughout, with rounded cordate long-stemmed leaflets 1 to 3 inches across and dense whorls of rose-colored or purple flowers. Native to northwestern India at altitudes of 7,000 to 11,000 feet.

105893. LILIUM GIGANTEUM Wall. Liliaceae.
Giant lily.

From Bathad, Kulu. A lily, native to the Himalayas between 5,000 and 12,000 feet altitude, with bulbs that grow close to the surface. The hollow stems are 6 to 9 feet high, and the handsome cordate leaves are shining dark green above and paler beneath. The large fragrant white flowers, often 12 in a raceme, are slightly greenish without, and the inner surface of the segments is tinged with deep purple.

For previous introduction see 102833.

105894. LONICERA sp. Caprifoliaceae.
Honeysuckle.

From Sungnam, Rampur, Bashahr, on a cold semiarid slope at 10,000 feet altitude. A well-formed bush 7 feet high, with transparent white fruits that are eaten by birds.

105895. LONICERA BICOLOR Klotzsch. Caprifoliaceae.
Honeysuckle.

From Sungnam, Rampur, Bashahr, at 10,000 feet altitude. A small much-branched shrub with small, elliptic-ovate, entire leaves, green and nearly glabrous above, more or less hairy beneath. The orange flowers are borne in pairs toward the ends of the branchlets. Native to the Himalayas, and closely allied to *L. hypoleuca*.

105873 to 105932—Continued.

105896. MALUS sp. Malaceae.

From Po, Spiti, in a cold dry climate at 10,000 feet altitude. A tree 2 feet in diameter, with pale-pink to white blossoms and very attractive fruits.

105897. MEIBOMIA sp. Fabaceae.

From Chaura, Rampur, Bashahr. A pink-flowered shrub 8 feet high, found in damp situations in semishade.

105898 to 105900. PEDICULARIS spp. Scrophulariaceae.

From Losar, Spiti, at 13,000 feet altitude. Found along the irrigation canals.

105898. PEDICULARIS sp.

105899. PEDICULARIS sp.

105900. PEDICULARIS sp.

105901. PINUS sp. Pinaceae. Pine.

From Kulu, Kulu, Punjab. A 5-leaved pine.

105902. PODOPHYLLUM EMODI Wall. Berberidaceae.

From Bushero La, at 12,000 feet altitude. A forest mandrake of possible interest to wild-flower growers.

105903. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.

From Ballistan. This fruit is one of the principal foods of the hill people, who eat it fresh or stewed with barley flour. The fruit thus prepared needs no sugar. The edible seeds are used like almonds.

105904. PYRACANTHA sp. Malaceae.

From Arsu, Kulu. An attractive tree with a trunk 12 inches in diameter. It stands full sunshine but not severe cold.

105905. PYRUS sp. Malaceae.

From the Kulu Valley at 7,000 feet altitude. A wild pear tree with a trunk 2 feet in diameter. The flowers are attractive, and the small fruits are eaten by the natives.

105906. RHAMNUS sp. Rhamnaceae.

From Po, Spiti, at 11,000 feet altitude. A bushy shrub with blackish fruits.

105907. RHAMNUS sp. Rhamnaceae.

105908. RHODODENDRON ARBOREUM J. E. Smith. Ericaceae. Tree rhododendron.

From Bathad, Kulu. A bushy tree found on slopes too sunny for pines, and also among oaks on shady cold slopes.

For previous introduction see 97657.

105909. RHODODENDRON CAMPANULATUM Don. Ericaceae.

From Bushero La, at 12,000 feet altitude, a region covered with snow in winter and never hot in summer, with monsoon rains from July to September. A large evergreen shrub of stiff spreading habit, sometimes 12 feet high, with oval leaves that are densely covered beneath with red-brown felt. The flowers, of various rosy purple shades and 2 inches across, are borne during April in rather loose clusters about 4 inches across. It is native to India.

For previous introduction see 80656.

105873 to 105932—Continued.

105910 to 105917. ROSA spp. Rosaceae. Rose.

105910. ROSA MOSCHATA Mill.

Musk rose.

From Nacahr, Rampur, Bashahr.

105911. ROSA sp.

From Huling, Tibet, at 12,000 feet altitude; a cold dry region. A very attractive shrub 7 feet high, with abundant single pink flowers.

105912. ROSA sp.

From Nago, Rampur, Bashahr. An attractive bush 8 feet high, with single pink flowers.

105913. ROSA sp.

From Li, Rampur, Bashahr, at 10,000 feet altitude. A bush 8 feet high, with attractive single pink flowers.

105914. ROSA sp.

From Nachar, Rampur, Bashahr. A rambler, said to be native, but may be an escape.

105915. ROSA sp.

105916. ROSA sp.

105917. ROSA sp.

From Nago, Rampur, Bashahr. A shrubby rose 8 feet high, with very large hips.

105918. SALVIA sp. Menthaceae. Sage.

An attractive herb collected on a dry slope.

105919. ULEX sp. Fabaceae.

From Nachar, Rampur, Bashahr. A cultivated leguminous shrub 6 feet high, with yellow flowers which appear before the leaves.

105920. VIBURNUM sp. Caprifoliaceae.

From Pangl, Rampur, Bashahr, at 10,000 feet altitude. A well-formed bush.

105921. VITIS VINIFERA L. Vitaceae.

European grape.

From Nago, Rampur, Bashahr, at 10,000 feet altitude where it is dry and cold. A cultivated Malaga grape with sweet white fruits in clusters a foot long. The origin is unknown, but it is not grown below this altitude because of the monsoon which splits the fruit, permitting the entry of decay-producing fungi.

105922. VITIS VINIFERA L. Vitaceae.

European grape.

From Li, Rampur, Bashahr. Fruits said to be red and to ripen a month earlier than the white grape with smaller bunches.

105923. (Undetermined.)

From Nago, Rampur, Bashahr, on dry slopes at 15,000 feet altitude. A very attractive mint, 3 feet high, found growing in clumps with purple, blue, and pink flowers.

105924. (Undetermined.)

From Bathad, Kulu, at 9,000 altitude. An orchid found in dense forest.

105873 to 105932—Continued.

105925. (Undetermined.)

From Sungnam, Rampur, Bashahr. A very attractive bush, 8 feet high, with clusters of cream-colored flowers.

105926. (Undetermined.)

From Wangtu, Rampur, Bashahr. A very attractive composite shrub over 3 feet high with yellow flowers. Found chiefly on cliff faces.

105927. (Undetermined.)

From Banjar, Kulu. A very attractive tree 18 inches in diameter, with clusters of white flowers.

105928. (Undetermined.)

From Chaura, Rampur, Bashahr. An herb 6 feet high, found in deep shade.

105873 to 105932—Continued.

105929. (Undetermined.)

From Nachar, Rampur, Bashahr. A wild flower found in the soft earth in open or semishade.

105930. (Undetermined.)

From Nachar, Rampur, Bashahr. A wild flower found in open or semishade where it is not subject to heavy frost.

105931. (Undetermined.)

From Arsu, Kulu. A tree with very attractive long clusters of purple flowers. Will not stand frost.

105932. (Undetermined.)

From Nachar, Rampur, Bashahr. A very attractive bush.

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