EXPLANATORY NOTE.

This multigraphed circular is made up of descriptive notes furnished mainly by Agricultural Explorers and Foreign Correspondents relative to the more important introduced plants which have recently arrived at the Office of Foreign Seed and Plant Introduction of the Bureau of Plant Industry of the Department of Agriculture, together with accounts of the behavior in America of previous introductions. Descriptions appearing here are revised and published later in the INVENTORY OF PLANTS IMPORTED.

Applications for material listed in these pages may be made at any time to this Office. As they are received they are placed on file, and when the material is ready for the use of experimenters it is sent to those on the list of applicants who can show that they are prepared to care for it as well as to others selected because of their special fitness to experiment with the particular plants imported. Do not wait for the annual catalogue entitled NEW PLANT INTRODUCTIONS in which are described the plants ready for sending out.

One of the main objects of the Office of Foreign Seed and Plant Introduction is to secure material for plant experimenters, and it will undertake as far as possible to fill any specific requests for foreign seeds or plants from plant breeders and others interested.

David Fairchild,

Agricultural Explorer in Charge.

January 30, 1917.

Acacia cavenia (Mol.) Bert. (Mimosaceae.) 42861. Seeds from Santiago, Chile. Presented by Sr. Ernesto Palacios, Catholic University. A small Chilean tree, known as cavan, with exceedingly hard wood, durable in moist soil. The spiny plant makes admirable hedges. The tannin from this species is said to be especially valuable for dyeing.

Amherstia nobilis Wallich. (Caesalpiniaceae.) 42902. Seeds from Sibpur, Calcutta, India. Presented by the Curator, Royal Botanic Garden, at the request of Mr. Bernard Coventry, Agricultural Adviser to the Government of India, Pusa. Named in honor of Lady Amherst. A medium sized tree, native of Burma, and considered the most beautiful of all flowering trees. Its immense candelabra-like sprays of red and yellow flowers, drooping from every branch among the handsome foliage, present an appearance of astonishing elegance and loveliness. It is in flower during the greater part of the year, but its chief flowering season in Ceylon is from January to April, i.e., the dry season. The tree thrives in the moist low country up to 1600 feet elevation, and requires rich and well-drained soil. It does not seem to flourish near the sea, and is rarely met with about Colombo. It produces seed very scantily anywhere, a pod or two occasionally being all that can be obtained, and even these are often infertile. Propagation by layering has, therefore, to be adopted. Introduced into Ceylon in 1860. (H. F. MacMillan, Handbook of Tropical Gardening & Planting, p. 291.)

Annona marcgravii Martius. (Annonaceae.) 42988. Seeds from El Banco, Colombia. Presented by Mr. H. M. Curran. "*Guayacana del Monte*. Wild anona. Tree in second growth forest. Edible fruit, 6 inches in diameter. Greenish-white fruit, slightly acid." (Curran.)

Bactris sp. (Phoenicaceae.) 42855. Seeds of rattan palm from Bolivar, Colombia. Presented by Mr. H. M. Curran. "Outer coat of fruits edible. Bright red clusters of fruit very ornamental. Mountains of Magdalena, 1,000 feet elevation." (Curran.)

Beaumontia grandiflora (Roth) Wallich. (Apocynaceae.) 42971. Seeds from Dehra Dun, United Provinces, India. Presented by Mr. Thomas Tracy. "A mammoth creeper that has run up to the top of the cotton tree. The

blossoms are formed in a cluster; pure white and fragrant; corolla deep and unbroken. The corolla is about two inches deep with an undulating border." (Tracy.)

Berberis sargentiana Schneider. (Berberidaceae.) 42973. Cuttings from Jamaica Plain, Mass. Presented by Prof. C. S. Sargent, Arnold Arboretum. A black-berried barberry from western Hupeh, China, reaching a height of 2 meters. It is the only evergreen barberry which has proved entirely hardy at the Arnold Arboretum, and for this reason is one of the most desirable of the recent introductions as a garden plant. (Adapted from Plantae Wilsonianae, Vol. 1, p. 359, 1913.)

Britoa acida (Mart.) Berg. (Myrtaceae.) 42989. Seeds from Papayal, El Banco, Colombia. Presented by Mr. H. M. Curran. "*Guayabo.* Tree 20 to 30 feet. Large yellow fruit, few seeds, acid, 3 inches in diameter, flesh." (Curran.)

Buddleia globosa Hope. (Loganiaceae.) 42864. Seeds from Santiago, Chile. Presented by Senor Don Ernesto Palacios, Catholic University. The *panil* or *palguin,* a Chilean shrub better known as *matico,* owes its name *panil* to the soft fleshy consistency of its leaves, which are much used in curing inflammation and are used with good results for washing wounds. Abundant in Valdivia, where it occurs as a shrub, covered in November with yellow flowers, in globose clusters.

Chrysobalanus icaco L. (Rosaceae.) 43000. Seeds from Tierras de Loba, Bolivar, Colombia. Presented by Mr. H. M. Curran. "A shrub from four to eight feet in height, much branched. Planted more as an ornamental about the houses than for the fruit. Fruits white with a pinkish bloom, rather dry and insipid; about the size of a wild plum." (Curran.)

Cucumis melo L. (Cucurbitaceae.) 42840-42849. Seeds of ten varieties of melon from Petrograd, Russia. Presented by Miss M. I. Kurnakova Danilova, through the American Vice Consul, at the request of Dr. C. C. Young, Belen, Texas. Brief descriptions by Miss Danilova follow. 42840. "Red, soft-fleshed, aromatic, summer melon called *Ananas* (pineapple)." 42841. "Black summer melon called *Urlik.*" 42842. "Sweet, aromatic, soft-fleshed winter melon called *Adan.*" 42843. "Light green, summer melon called *Aramad.*" 42844. "Local

batrin, length ¾ yard, thickness 3 inches." 42845. "Soft, juicy summer melon called *Daniar.* 42846. "Mixed summer melons of all kinds." 42847. "Summer melon called *Akurtsi.*" 42848. "Sweet, juicy winter melon." 42849. "The Amir melon called *Maiskaja.*"

Cucurbita ficifolia Bouche. (Cucurbitaceae.) 42970. Seeds from Santa Ines, Chile. Presented by Mr. Walter Fischer, Bureau of Commerce, who secured them from Sr. Salvador Izquierdo, Santiago, Chile. "The alcallota is a pumpkin-like vegetable, from the pulp of which is made a sweet paste, comparable perhaps to "pumpkin butter," sold in cans under the names of *Dulce de alcallota* and *Creme de alcallota.*

Fraxinus oxycarpa Willd. (Oleaceae.) 42838. Seeds of ash from Kieff, Russia. Presented by Messrs. St. Przedpelski & T. Antoniewicz. Similar in its leaves in shape, size and leaflets to *F. angustifolia* Vahl, but the leaves are always downy about the midrib. Fruits more tapered at the base. The species has a more eastern natural habitat, reaching to Persia, the Caucasus, and Asia Minor.

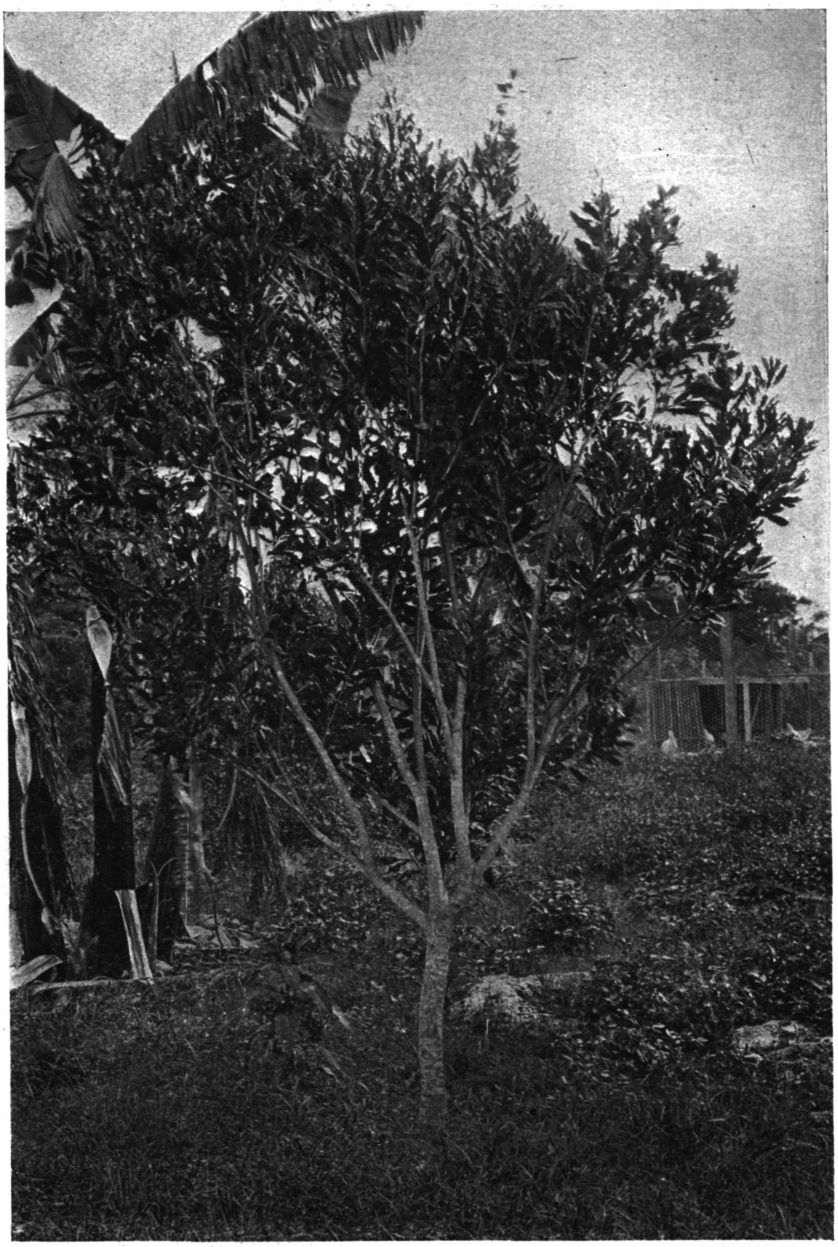
Hibiscadelphus giffardianus Rock. (Malvaceae.) 42879. Seeds of *Hau Kuahiwi* from Honolulu, Hawaii. Presented by Mr. J. F. Rock, Botanist, College of Hawaii. "You may know that of this species there is only one single tree in existence and consequently seed is very scarce. I have a number of young trees growing in Honolulu and thus hope to perpetuate the species." (Rock.) "The *Hau Kuahiwi* is a remarkable tree. At first appearance one would think it to be the common *Hau* (*Hibiscus tiliaceus*), but at closer inspection one cannot but wonder at the most peculiar shape of the flowers, which are of a deep magenta, and the large yellowish tuberculate capsules. It is a rather low tree with not erect but rather inclining trunk of a foot in diameter, with a many-branching round crown. The genus Hibiscadelphus, meaning brother of Hibiscus, was described by the author and the species named in honor of Mr. W. M. Giffard of Honolulu, in whose company the writer collected his first specimens. It differs from the genus Hibiscus in its very peculiar flowers and mainly in the calyx, which is not persistent with the capsules, but drops together with the bracts as soon as the capsules are formed. Unfortunately the tree, of which a specimen is figured

in this book, is the only one in existence. It is unique among all Hawaiian plants, and the author is sorry to relate that nothing has been done to protect it. Like many other Hawaiian trees, it will succumb to the ravages of cattle, which inhabit a great many of our native forests. This single tree is found on a small Kipuka of 56 acres called Puaulu, on the land of Keauhou, near Kilauea Volcano, at an elevation of 4,200 feet, on the Island of Hawaii. It is surrounded by a great many rare trees, which will share its fate sooner or later. Among them are beautiful trees of *Sapindus saponaria, Pelea, Xanthoxylum, Urera, Straussia, Ochrosia,* etc. The genus consists of three species, the above described one on Hawaii, one on Maui with only a single tree left, and the third on Hualalai, Hawaii." (J. F. Rock, Indigenous Trees of the Hawaiian Islands, p. 299.)

Licania platypus (Hemsl.) Fritsch. (Rosaceae.) 42991. Seeds from Papayal, El Banco, Colombia. Presented by Mr. H. M. Curran. "*Chupa.* Large fruits, with smooth brown or greenish coat. Soft yellow, rather dry flesh. Fruits 4 to 6 inches long, 2 to 3 inches in diameter. Tree 40 to 60 feet. Said to bear at all seasons." (Curran.)

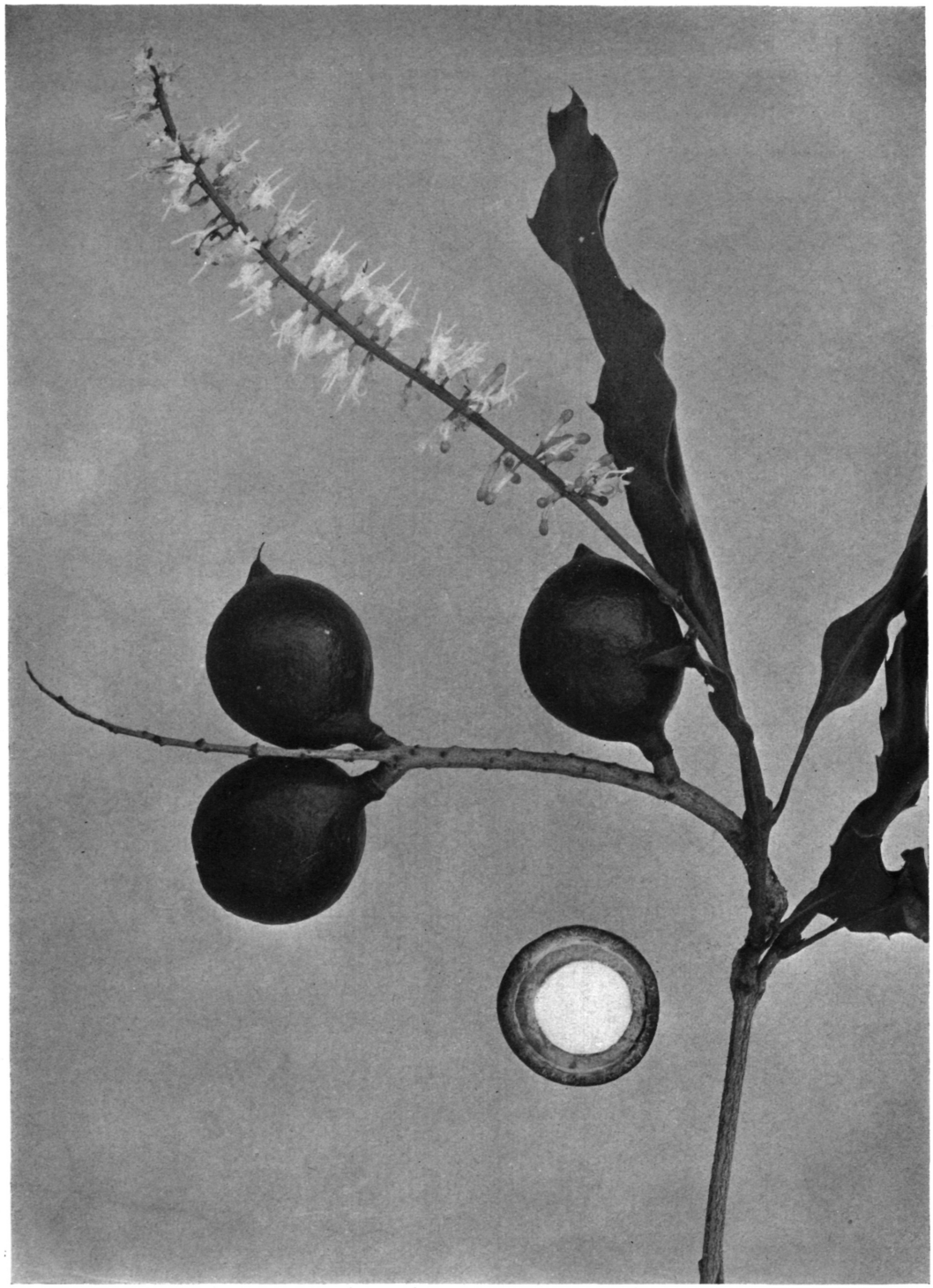
Mangifera indica L. (Anacardiaceae.) 42992-42996. Seeds from Papayal, El Banco, Colombia. Presented by Mr. H. M. Curran, who furnished the following brief description. 42992. "*Mango Hobo.* Very large, very yellow, good flavor." 42993. "*Mango Liso.* Large, one of the earliest, ripe March to April, good flavor." 42994. "*Mango Chupa.* Large red." 42995. "*Mango Masa.* Yellow with dark lines." 42996. "*Mango Lechoso.* Commonest and best flavored of the mangoes in this region. Very large crop this year. Fruit medium sized, yellow, very much fiber."

Maytenus boaria Molina. (Celastraceae.) 42874. Seeds from Santiago, Chile. Presented by Senor Ernesto Palacios, Catholic University. This Chilean tree, known as *huripo* to the Araucanians attains 12 meters in height with slender trunk. It is undoubtedly the most beautiful native tree in its foliage, which trembles and waves in the slightest breeze. Its leaves, which have a great forage value, are most eagerly sought by hungry cattle, like those of the weeping willow. Its wood, which is often yellow, is



SMALL BEARING TREE OF THE MACADAMIA, MACADAMIA TERNIFOLIA, S. P. I. No. 21249.

The Macadamia, or Queensland nut, appears to be doing admirably in the rocky soil at the Miami Garden. The specimen shown in the photograph has flowered for the past three years and is now 8 years old from seed. Last year it produced a few nuts of good quality and is bearing again this year, and if its behavior so far can be taken as an indication, it deserves to be considered as a new and promising nut tree for Florida. Photographed (P19612FS) by P. H. Dorsett at Miami Field Station, June 12, 1916.



FLOWERS, LEAVES, AND FRUIT OF THE MACADAMIA, MACADAMIA TERNIFOLIA.

In Queensland this nut has become of commercial importance and orchards of it are being planted. No selection of varieties has yet been made, nor is it possible as yet to predict with regard to yields or diseases, but the fact that the tree will fruit in southern Florida makes it eligible for trial by a large number of experimenters. The fruits are borne in clusters, the shell is thick, and the edible portion is as easily removed as that of a filbert. In Plant Immigrants No. 78 is shown an illustration of the nuts. Photographed (P19721FS) by P. H. Dorsett at Miami, Fla., Field Station, June 14, 1916. Natural size.

hard and elastic. There are varieties the wood of which is finely streaked with red and olive.

Metrosideros spp. (Myrtaceae.) 42851-42852. Seeds from Avondale, Auckland, New Zealand. Presented by Mr. H. R. Wright, 42851. *M. robusta* A. Cunningham. "Native name *Rata.* This tree grows to over 100 feet high and 6 feet or more through, a hard wood, very durable; is largely used by wheelwrights. Found all over New Zealand. When in bloom is very gorgeous. *M. robusta* is only found inland in the forests and not on the coast. It is very difficult to gather seed, owing to the height it grows before seeding." (Wright.) 42852. *M. tomentosa* A. Richard. "Native name *Pohutukawa.* This is without doubt one of the most beautiful of flowering trees and is invaluable for bees, the honey from which is of excellent flavor and is as white as lard. This tree is to be found skirting the New Zealand coast, on the hill sides, along the sea beach, and even grows out of the sides of cliffs, overlooking the sea. In many cases you can see trees just above high water mark, where the roots are frequently washed by the tide, and doing well. Like *M. robusta* its wood is hard and is used for making knees for boat building; grows to about 40 feet high. Strange to say *M. tomentosa* is only found in the wild state growing near the sea, although it grows well inland providing it is protected from frost." (Wright.)

Pittosporum tenuifolium Gaertner. (Pittosporaceae.) 42853. Seeds from Avondale, Auckland, New Zealand. Presented by Mr. H. R. Wright. "Hardy, used for hedges. Seed takes a very long time to germinate, often 12 months." (Wright.)

Rosa spp. (Rosaceae.) 42974-42982. Cuttings from Arnold Arboretum, Jamaica Plain, Mass. Presented by Professor C. S. Sargent. 42974. *R. banksiopsis* Baker. A very common rose in western Hupeh in thickets of low-growing shrubs on mountain slopes at altitudes from 1,300 to 2,000 meters. It grows to a height of 3 meters, has rose-red flowers, coral-red fruits, and more or less reddish-purple shoots and branches remarkably free from prickles. (Adapted from Plantae Wilsonianae, Vol. 2, p. 322, 1915.) 42975. *R. bella* Rehder & Wilson. "This pretty rose from mountains in north-western Shansi, seems most closely related to *R. moyesii* Hemsley & Wilson, which is a much more vigor-

ous plant with stout prickles, larger usually more acute leaflets pubescent beneath, at least on the midrib, globose-ovoid flowerbuds abruptly contracted at the apex, larger flowers and pinnate sepals. (Plantae Wilsonianae, Vol. 2, p. 342, 1915.) 42976. *R. caudata* Baker. "This is a rose discovered by Wilson in western China. It is a tall vigorous shrub with stout arching stems covered not very thickly with stout spines, dark green foliage, and flowers about two inches in diameter, in wide, sometimes twenty-five flowered clusters. The beauty of the flowers is increased by the white marking at the base of the pure pink petals. The fruit is orange-red, an inch long, gradually contracted above into a narrow neck crowned by the much enlarged calyx-lobes. This handsome rose is flowering now for the third year in the Arboretum; it is perfectly hardy and an excellent addition to the roses of its class. (Arnold Arboretum, Bulletin of Popular Information, new series, Vol. 1, p. 42, 1915.) 42977. *R. corymbulosa* Rolfe. "A distinct new species with unarmed or sparingly prickly branches and numerous flowers in corymb-like inflorescences. Flowers ¾ to 1 inch across. Petals broadly obcordate, deep rose above, white at the base. Fruits globose, glandular, about 1/3 inch long, crowned by the persistent sepals. Central China." (Kew Bulletin of Miscellaneous Information, New Garden Plants of the Year 1915, p. 80.) 42978. *R. davidi* Crepin. An orange-fruited, pink-flowered rose from western Szechuan, China, reaching a height of 5 meters at altitudes of 1,600 to 3,000 m. It is the species nearest in China to *R. macrophylla* Lindley of the western Himalaya. (Adapted from Sargent, Plantae Wilsonianae, Vol. 2, p. 322, 1915.) 42979. *R. helenae* Rehder & Wilson. "From the seeds of a rose collected by Wilson in western China a new species of the *Moschata* group has been raised. It is now flowering in the Arboretum for the third year and is to be named *R. helenae;* it is a vigorous and perfectly hardy shrub with slender, arching stems furnished sparingly with short red spines, and five or six feet high, light green cheerful foliage, and terminal and axillary many-flowered clusters of pure white, delicately fragrant flowers an inch and a half in diameter and borne on short erect branchlets. It is a plant which will be prized by persons realizing that among the wild roses are some of the most beautiful of all flowering plants and who find a place for them in their gardens." (Arnold Arboretum, Bulletin of Popular Information,

new series, Vol. 1, p. 39, 1915.) 42980. *R. jackii* Rehder. "This beautiful rose was introduced into the Arboretum from Korea several years ago by Mr. Jack, and when it flowered was named for him. At about the same time it was named in England *R. bakeri* and *R. kelleri,* names which cannot be used for it, however, as they had previously been given to other roses. It is one of the *Multiflorae* roses with long stems which lie flat on the ground, lustrous foliage, and pure white flowers two inches or more in diameter, in wide, many-flowered clusters. The flowers are larger than those of the Japanese *R. multiflora* and it blooms much later than that species. This rose is perfectly hardy and a first-rate garden plant. The hybridizer ought to be able to find it in a good subject from which to raise a race of hardy, late-flowering Rambler roses. (Arnold Arboretum, Bulletin of Popular Information, new series, Vol. 1, p. 43, 1915.) 42981. *R. multiflora cathayensis* Rehder & Wilson. "It is a hardy, vigorous, and handsome plant with the habit of the Japanese *R. multiflora*. The flowers are from two to two and a half inches in diameter and are produced in large, many-flowered clusters, and the large, conspicuous, bright yellow anthers add to the beauty of the clear pink petals. This rose may well become a popular garden plant. It offers possibilities which the hybridist will undoubtedly take advantage of; and it is of considerable historical interest as the wild original of garden plants cultivated probably for centuries by the Chinese and known in Europe and America for more than a hundred years." (Arnold Arboretum, Bulletin of Popular Information, new series, Vol. 1, p. 35, 1915.) 42982. *R. sweginzowii* Koehne. A rose from western Szechuan, with deep rose colored flowers, growing to a height of 5 meters, at altitudes of 2,300 to 3,600 meters. The shoots are thickly covered with short, stout, flattened prickles. (Adapted from Plantae Wilsonianae, Vol. 2, p. 324, 1915.)

Rymandra excelsa Salisbury. (Proteaceae.) 42850. Seeds from Avondale, Auckland, New Zealand. Presented by Mr. H. R. Wright. "New Zealand honeysuckle tree, the wood of which is used for veneering purposes, in making furniture. Very pretty in the grain. Its flowers are pretty and at the same time odd, coming out of the side of the branches, instead of out of the terminals as in most cases. A pretty tree and a useful timber for furniture." (Wright.)

Strychnos spinosa Lam. (Loganiaceae.) 42903. Seeds from Beira, Mozambique, Portuguese East Africa. Presented by Mr. E. H. Heron, Director of Agriculture. "Vernacular name M'Tamba." (Heron.) A small tree up to 10 feet high found throughout Tropical Africa, in Madagascar, and the Seychelles. This tree is interesting because of its cannon-ball-shaped hard-shelled fruit, 2 to 3 inches in diameter, with acid pulp which is wholesome and agreeable with a clove-like aroma very noticeable when ripe. The seeds contain no alkaloid. This plant has produced fruit in Florida where it seems to do well.

Theobroma purpureum Pittier. (Sterculiaceae.) 42857. Seeds from Bolivar, Colombia. Presented by Mr. H. M. Curran. "*Cacao del Monte.* Wild cacao from Cauca River valley. Small tree in dense forest. Said to be edible." (Curran.)

Ximenia americana L. (Olacaceae.) 42896. Seeds of false sandalwood from Donga, Northern Nigeria, West Africa. Presented by Rev. C. L. Whitman, Sudan United Mission. "Seeds of what might be called an apricot-plum. A fruit the size of a small plum growing on a plum-like tree, but having considerable of an apricot flavor." (Whitman.)

Notes on Behavior of Previous Introductions.

Cicer arietinum. Garbanzo. The Garbanzo is now being cultivated rather extensively in some parts of the West. Mr. R. L. Beagles, Farm Superintendent in charge of the Chico Plant Introduction Field Station, writes that he saw in the neighborhood of Gridley, near Sacramento, Calif., a plantation of about fifty acres which looked very promising.

Diospyros kaki. (S.P.I. 16912, 16921, 26773.) Tamopan persimmon. This large and delicious variety is now on the market in Washington and is seemingly proving popular. Fruits are being grown for the market by J. C. Breese, Fayetteville, N. C., and H. H. Hume, Glen St. Mary, Fla.

Feijoa sellowiana. This Office has just received a consignment of these fruits from Mr. Hertrich, manager of the Huntington estate in Pasadena, Calif. It is a most promising myrtaceous fruit, and is likely to

be greatly increased in size by selection and prove hardy farther north than any other large fruit of this family. It has a granular pulp of peculiar flavor which may prove objectionable to some people at first, though many consider it a very delicious fruit. It is probable that a ready market will be found for selected strains of this relative of the guava.

Prunus serrulata. Japanese flowering cherry. Several varieties of the flowering cherry are proving to be striking in autumn foliage. The younger shoots are particularly beautiful and hold their leaves well into November in the vicinity of Washington. Particularly beautiful seem to be the *Ussussumi,* with masses of gorgeous bronze and green leaves; *Murasaki,* with its daintier pink and yellow; and *Yoshino* with a series of hues ranging from wine-red to bright yellow. The many other varieties are also valuable in bringing out masses of colors ranging from green, bronze and almost maroon to bright red, pink and yellow.

United States Department of Agriculture.
Bureau of Plant Industry.
Office of Foreign Seed and Plant Introduction.
Washington, D. C.

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