UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF PLANT INDUSTRY,
OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION.

NO. 74.

BULLETIN OF FOREIGN PLANT INTRODUCTIONS.

March 1 to 31, 1912.

NEW PLANT IMMIGRANTS.

(NOTE: Applications for material listed in this bulletin may be made at any time to this Office. As they are received they are filed, 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.

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.)

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PLATE: Lonicera maackii. Honeysuckle.

NEW PLANT IMMIGRANTS.

AESCHYNOMENE ELAPHROXYLON. (Fabaceae.) 33119. Seeds from Lawang, Java. Presented by Mr. M. Buysman. This tree from the Sudan grows in shallow water along the upper Nile, in the shallows of Lae Chad, and throughout Central Africa. The wood which grows so rapidly that the tree attains its full height of 25 feet in two years is very light, and has attracted the attention of the Lighthouse Service, at whose suggestion the seed was obtained. For distribution later.

AMYGDALUS COMMUNIS. (Amygdalaceae.) 33215-218. Plants of almond from Granada, Spain. Purchased from Mr. Pedro Giraud through Mr. Walter T. Swingle, of this Department. "Malagueña. This is the famous Jordan almond which is exported so largely from Malaga. I was told at the American consulate that some $800,000 worth of almonds had been exported from the port of Malaga alone during the year 1911. These exports consist largely of the Malagueña variety. Jordan almonds are classified by the wholesale dealers as to number per ounce. They run 15 tc 30 or more per ounce. The English market takes the very large size, the American market taking most of the 30's and other small sizes. Out of 100,000 boxes only three or four hundred would be as large as 15 or 16 to the ounce. This is called the export variety by the cultivators around Malaga, after the Spanish word 'exportacion.' It is grown in very dry situations and is properly speaking a dryland crop of very great importance. Mr. Pedro Giraud, from whom the plants were secured, says of almonds in general that they give best results in calcareous, warm, dry, rocky, soils. Of No. 33218, 'Almendro del Desmayo,' Mr. Pedro Giraud says 'This is the most resistant to frost, which is caused by the peculiar attachment of the flower, which is turned downward, its corolla and sepals protecting it against the action of frost, in this way securing the fertility of this sort when all other varieties would have their crops destroyed.'" (Swingle.) For distribution later.

AMYGDALUS PERSICA. (Amygdalaceae.) 33219-221. Plants of peaches from Granada, Spain. Procured from Mr. Pedro Giraud through Mr. Walter T. Swingle, of this Department. "As to these three varieties of peaches no definite information was available but as the Spanish peaches are famous for their quality any variety which is propagated in Spain is likely to be of good quality." (Swingle.) For distribution later.

CACARA EROSA. (Fabaceae.) 33258. Seeds of the yam bean from Kingston, Jamica. Presented by Mr. William Harris,

Superintendent of Public Gardens. "The root is formed of a number of simple cord-like fibres, several feet in length, stretching under the surface of the ground, bearing in their course a succession of tubers. The beans are poisonous, but the root affords a very plentiful supply of very wholesome food. The produce of three plants is usually sufficient to fill a bushel basket. The tubers may either be boiled plain, in which state they are a very good substitute for yams and other roots in common use; or they may be submitted to a process similar to arrowroot, and a starch obtained. This starch is pure white, and is equal in every respect to arrowroot. To the taste it is very palatable, is easily digested, and is employed for custards and puddings. Even the trash left after obtaining the starch, and which in the preparation of arrowroot is lost, may, when thoroughly dried, be formed into a palatable and wholesome flour. A very excellent flour may also be obtained by slicing the tubers, drying them in the sun, and then reducing to a powder. This plant is deserving of being more generally cultivated than it has hitherto been. It ought in a great measure to supersede the arrowroot in cultivation. It can be planted at any season of the year, and the roots are fit for digging in the course of four or five months; the return is infinitely greater than that from arrowroot, and the proportion of starch also is more abundant, so that it can be brought to market at so cheap a rate, as to admit of being employed by the calico-printers in place of potato-starch. Dr. Trimen, pointed out that the pods when young are not poisonous, but may be eaten like French beans, being superior in the absence of any fibrous string along the sutures of the pod. The large size is also an advantage, as they are often 10 to 12 inches long. In Jamaica the seeds are generally sown in March or April, but they can be sown at any time. At Hope Gardens seeds were sown in September. The pods are ready for use as French beans 7 months after sowing and when pods are quite ripe, 9 months after sowing, the yams are fit to dig. From one seed sown at Hope Gardens 5 yams were dug weighing altogether 14 pounds. They generally vary in size from one foot to eighteen inches long, and 4 to 6 inches in diameter." (Harris, Bull. Bot. Dept. Jamaica, 44:4(1893). For distribution later.

CORYLUS AVELLANA. (Fagaceae.) 33234. Plants of hazel nut from Granada, Spain. Procured from Mr. Pedro Giraud, through Mr. Walter T. Swingle, of this Department. "Rouge ronde. Spain furnishes the bulk of the hazel nuts that enter into the world's commerce, whole regions being given up to this remunerative culture in the north of Spain. It is said to prefer rather light, cool soils and to grow well with more or

less shade. The trees are set at a short distance apart. The variety from its name would seem to be of French origin, meaning the 'round red.'" (Swingle.) For distribution later.

CRATAEGUS AZAROLUS. (Malaceae.) 33205. Plants of azarol from Granada, Spain. Procured from Mr. Pedro Giraud through Mr. Walter T. Swingle, of this Department. "Encarnado. The azarol represents a type of fruit whose cultivation has been much neglected in the United States. These fruits, which ripen from August to October in Spain and France, are from a half inch to an inch in diameter or even more and have a delicious subacid flavor with flesh of a melting character. In flavor and texture its fruits resemble loquats in many respects. These plants are grafted on common hawthorn and are said to grow in all kinds of soil, both dryland and under irrigation. The variety in question is a flesh-colored one, supposed to be of Italian origin." (Swingle.) For distribution later.

DIOSPYROS SP. (Ebenaceae.) 32901. Cuttings of a persimmon from Algiers. Presented by Dr. L. Trabut. "Boufarik. A new variety, with very good, large, round, flattened, green fruits." (Trabut.) For distribution later.

DIOSPYROS KAKI. (Ebenaceae.) 33069-070, 33086-082, 33203-204. Cuttings of persimmons from Japan, mostly from branches bearing male flowers. These have been found necessary in order to supply adequate amounts of pollen, since most of the Japanese persimmons now growing in this country bear comparatively few male flowers. For distribution later.

EUGENIA SP. (Myrtaceae.) 33261. Seeds from Para, Brazil. Presented by Mr. Walter Fischer, late acting director, Campo de Cultura Experimental Paraense. "This is a small-sized tree about six inches in diameter and 20 feet high. The fruit is bright red like a wild goose plum and of the same size. The peel or rind is somewhat thick but edible like the soft juicy pulp that surrounds the one or two large hairy seeds; the flavor is slightly resinous and also suggestive of strawberries. It makes a good sauce when stewed and is also very good raw." (Fischer.) For distribution later.

FICUS MACROPHYLLA. (Moraceae.) 33071. Seeds of the Moreton Bay fig from Sydney, New South Wales. Presented by Mr. J. H. Maiden, Director, Sydney Botanic Garden. A remarkable shade tree from the coastal districts of Queensland and New South Wales, the leaves and fruit of which are an excellent stock food, while the trees will grow amongst rocks where

scarcely anything else will grow, and will stand being blown upon by fierce winds and being hacked back more than almost any other tree. With plenty of room it is one of the most beautiful of trees. Will probably be of value in the nearly frost-free regions of the Southwest, although it occurs as far south as 34° in New South Wales. Less suited for arid regions than the next which has about the same range. For distribution later.

FICUS RUBIGINOSA. (Moraceae.) 33104. Seeds of the Port Jackson fig from Sydney, New South Wales. Presented by Mr. J. H. Maiden, Director, Sydney Botanic Garden. Less ornamental than the preceding and better suited for dry regions than that tree. Probably like that only suited for regions where frosts are rare. For distribution later.

GOSSYPIUM SPP. (Malvaceae.) 33089-090. Cotton seeds from Lake Tsana, Abyssinia. Presented by Mr. Guy R. Love, American vice consul general, Adis Ababa. "The cotton raised in Lake Tsana district is of a much superior quality, being of longer fiber and lighter in color." (Love.) For distribution later.

HEDYSARUM CORONARIUM. (Fabaceae.) 33073. Seeds of sulla from Jerez de la Frontera, Spain. Presented by Mr. Percival Gassett, American consul. This seed is from Jerez, referred to in a recent consular report as a region where a specially fine breed of horses are pastured entirely on the 'zulla', which is supposed to give them many of their admirable qualities. For distribution later.

JUGLANS REGIA. (Juglandaceae.) 36180-181. Walnuts from China. Presented by Mr. Samuel S. Knabenshue, American consul general, Tientsin. A hard-shelled and a soft-shelled variety, the former from the hills west of Peking, the latter from Changli. For distribution later.

LECYTHIS USITATA. (Lecythidaceae.) 33259. Sapucaia nuts from Para, Brazil. Presented by Mr. Walter Fischer, late acting director, Campo de cultura experimental Paraense. "This is a large tree of the Monkey-pot family, native of forests in the region of the Amazon. It has large, urn-shaped fruits of a hard, woody texture, about 6 inches in diameter, with lids measuring about 2 inches across. When ripe the lid separates from the capsule, emitting a sharp sound, which when heard by the monkeys is a signal that the nuts are falling and a scramble and a fight to be the first to obtain them ensues; on this account few are left for the trader, and the export is consequently small. The common name of Monkey-pot is applied to the capsule when empty." (Smith's Dictionary of popular names of economic plants.) For distribution later.

LONICERA MAACKII. (Caprifoliaceae.) 33053. Seeds of a honeysuckle from the Royal Botanic Gardens, Kew. Presented by Dr. David Prain, Director. This honeysuckle from southern Manchuria and northern Japan promises to be hardy throughout the eastern United States. It has slender arching branches with nearly glabrous ovate-acuminate leaves,and dense clusters of creamy-white flowers. For distribution later. See half-tone.

MISCANTHUS JAPONICUS. (Poaceae.) 33191. Seed from Yokohama, Japan, Procured from the Yokohama Nursery company. "Miscanthus japonicus has been found in our experimental work to produce a light bulky paper in many respects similar to that made from esparto. The yield of fiber is up to the average of esparto, and there may be areas where the plants can be grown especially for paper making. It thrives on the poorer soils in this region and has been grown with some success even in Maine; the excessive winterkilling here, however, would prevent its becoming a successful crop plant." (Charles J. Brand, for whose paper-making experiments the seed was secured.) For distribution later.

MYRTUS ARAYAN. (Myrtaceae.) 33271. Seeds of the arayan from Rio Verde, San Luis Potosi, Mexico. Presented by Dr. Felix Foex, Director of the agricultural experiment station of Rio Verde. "These seeds are from a fruit tree of the state of Jalisco. This fruit is well appreciated by young boys, and above all, by young girls; but not by older people, because of the acidity. But they are delicious: 1st. Cooked with sugar. 2nd. Dried in powdered sugar. 3rd. In sauces for puddings, etc. 4th. In syrups. These fruits are very small, but when the young trees are 18 months old they can be budded with larger and better varieties." (Foex.) For distribution later.

OLEA EUROPAEA. (Oleaceae.) 33225. Plants of olive from Granada, Spain. Procured from Mr. Pedro Giraud, through Mr. Walter T. Swingle, of this Department. "Gordal or Sevillana. This is the famous variety which yields the large green pickled olives so common in America. It is largely cultivated in the zone immediately about Seville, where its culture is said to succeed better than in any other part of Spain. They run from about 70 to 200 per kilo or about 30 to 90 to the pound. These enormous olives are of beautiful appearance, but by the Spaniards are not considered to be of as good quality as some of the other varieties, such as the Manzanillo. The Sevillana is graded very carefully, running 70, 80, 90, and 100 and so on per kilo, and this grading makes the olives for

the American market much more expensive than for the Argentine and other markets which do not require such an excessively high grading." (Swingle.) For distribution later.

VITIS VINIFERA. (Vitaceae.) 33074-076, 33111-118. Cuttings of grapes from Bhamdun, Mt. Lebanon, Syria. Presented by Rev. Alfred Ely Day. Eleven varieties of grapes of table, raisin and wine sorts. For distribution later.

NOTES FROM FOREIGN CORRESPONDENTS.

CUBA. Central Soledad, Cienfuegos. Mr. Robert M. Grey, superintendent of the Harvard Botanical Experimental Station, writes April 23, 1912, "I have a variety of cane that is rich in sucrose but cannot be fertilized with its own pollen. This year I covered one of the panicles with gauze cloth and fertilized the flowers with quantities of pollen from Indian corn which resulted in my obtaining over seven hundred seedlings from one cane panicle thus treated. The plants are small yet and show no traces of corn and it is possible that the corn pollen simply acted as a stimulus to fertilization."

RUSSIA. Rostoff-on-Don. Mr Frank N. Meyer wrote Dec. 11, 1911: "I went to the newly established Selection Station at Saratov, where I saw Mr. A. J. Stebut, who is in charge. This Station was started only some months ago, so the buildings even were not finished and the grounds were not laid out. Mr. Stebut told me of their plans. And here are his main remarks. Southern Russia derives her greatest income from the durum wheats, therefore this selection station will devote the major part of both time and money to the study of these wheats, the aim being to select types better suited to drouth than the present varieties: to create good winter durum wheats, if possible; to hybridize durum wheats with other wheats, so as to develop new races; to study "Poltavka", a soft wheat; to try to develop strains of sunflowers, resistant to the ravages of Orobanche, which is a pest in Southern Russia (one variety of sunflower called "Selonka" seems much more resistant than other varieties and will be taken as a starting point);to study all the local varieties of wheats, as there are several existant, which are grown in limited localities only and have escaped the attention of describers; to investigate the reasons why durum wheat degenerates so seriously, when sown on soil which grew wheat before; to create new races of forage plants, better suited to local conditions than alfalfa or red clover, cooperating in this line with Mr. W. S. Bogdan, at Krassny Koot. Later on they would also start the

investigations of fruits and develop varieties better suited to the South Russian climate. Mr. Stebut stated that although the Svalöf wheats are absolute failures in Southern Russia, the oats are successes, especially "Whiteling" and "Ligowo"; that the name "Kherson oats" is American, that a variety so named is not known in Russia, but that these same oats, re-imported from American, are proving a great success in Saratoff Government; that Russia is realizing at last that agriculture is the basis of all prosperity and that it is today spending more than ten times the amount of money upon agricultural investigations that it did four or five years ago; that America is taken as a model for all this new work; that the Russian people appreciate their own products better after they have been re-imported from America than they do when picking them out themselves; that Mr. Bogdan at Krassny Koot is doing a noble work; that he has given to the world two new fodder plants, Triticum cristatum and Medicago falcata, both true Russian products; that Russia has long been dormant but that the world may expect yet many new things from her in the agricultural line.

Mr. Stebut is much interested in obtaining from us samples of various wheats and literature on wheats and cereals in general. Then he wants to exchange with us later on local wheats for American wheats. Mr. Stebut has studied in Vienna and at various places in Germany; has visited Dr. Nilsson at Svalöf, in Sweden, and Prof. Johansen in Denmark, and is of good scientific training in general. He also told me, as an example of what a monetary loss may result when the wrong sorts of grain are imported, that several years ago the beer of Samara was famous for its good qualities. Now, however, it has become quite bad, simply on account of a serious drouth which ruined the barley crops and which made the farmers import barleys from the Caucasus, which were absolutely unfit for beer production. The results are that the breweries of Samara are being closed one after the other and beer is imported from places where there is apparently still good brewing barley to be had. I also heard that the mills in Russia pay extra salaries to those men who thoroughly understand how to mix the largest quantities of flour from soft wheats with durum wheat flour, as the last flour is the more expensive in Russia.

The country around Sarepta is very interesting. The level land stretching down to the Wolga, suddenly rises up in a tableland and this land is cut up by numerous gullies and ravines. Some of these ravines are covered with a dense growth of Acer tataricum, some are full of Ulmus suberosa and others have groves of wild apples as inhabitants, while small scrub of Spiraea hypericifolia is seen on the higher edges.

In a broad valley I passed a dense wood of Quercus pedunculata, while on the edges there was a dense growth of wild sloughs (Prunus spinosa), Euonymus verrucosa, Crataegus sanguinea, Rhamnus cathartica and some minor things.

I noticed that Cytisus biflorus is a great sand-binder, making roots of truly enormous length; the sheep and goats, which graze in large numbers on the hills, leave it severely alone, so I suppose it must be rather poisonous. There is a good lot of Ephedra vulgaris to be seen of which the Russians make use as a blood purifying remedy. On some hill slopes I noticed clumps of Triticum cristatum growing in pure sand and it appears to me, that this grass has also a future before it in the drier sections of America."

PLANTS FOR DISTRIBUTION, May, 1912

Acacia cornuta	33652
Ambelania tenuiflora	27577
Ananas sativus	29211
Atalantia glauca	29660
Bambos arundinacea	32761
Castilla sp.	31225,31360
Clerodendrum dichotomum	31706
Coffea dewevrii	31758
Dipterocarpus alatus	23343
Dipterocarpus intricatus	23344
Dymocarpus longan	
Elaeodendron orientale	29020
Ficus utilis	29359
Glycosmis pentaphylla	24609
Gustavia sp.	27851
Inga edulis	27798,29013
Jatropha sp.	25775
Lansium domesticum	24431
Machilus nanmu	29485
Mangifera zeylanica	31633
Psidium guajava	30476-477,31359
Quillaja saponaria	26325
Ravenala madagascariensis	29424
Rheedia edulis	30492
Rheedia macrophylla	27578
Rosa, Belle Portuguoise	29729
Rosa hybrid	32668
Spathodea campanulata	31953
Vangueria madagascariensis	29021

LONICERA MAACKII. HONEYSUCKLE. S. P. I. No. 3

A beautiful rapid-growing flowering shrub, attaining a height of 10 feet, with spreading branches, ovate-elliptic leaves, in the axils of which are borne clusters of trumpet-shaped flowers, white on first opening, rapidly turning yellow.

(Issued June 4, 1912.)