

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

NO. 63.

BULLETIN OF FOREIGN PLANT INTRODUCTIONS.

May 16 to June 15, 1911.

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, so far as possible, to fill any specific requests for foreign seeds or plants from plant breeders and others interested.)

ARRACACIA XANTHORRHIZA. (Apiaceae.) 31273. Tubers of arracacia from Caracas, Venezuela. Presented by Mr. Antonio Valero Lara. "This is known by the name of 'Yuco', because the color of the stem and leaves is dark and so deep as to be almost black, and there are places where it is known as 'Apio negro'. This is made into preparations for the table as legumes are, in a kettle or glazed pot, for soups, cakes, conserves, and finally a flour is obtained from it called 'sulu', which is highly nutritious for convalescing invalids, babies and old people." (Lara.) For distribution later.

ASPARAGUS SPP. (Convallariaceae.) 31241-243. Seeds of three species of Asparagus from La Mortola, Ventimiglia, Italy. Presented by Prof. Alwin Berger. All secured for the work of the Office of the Truck-Crop Diseases in breeding a resistant asparagus and also various forms for florists' use. All for distribution later.

CARISSA BROWNII. (Apocynaceae.) 31111. Fruits from New South Wales. Presented by Mr. Walter Froggatt who procured them from Mr. R. T. Baker, Curator, Technological Museum. This native Australian species, the fruit of which is edible, and largely used for jam, is introduced for use as a stock for the tenderer species of the genus, in the hope of spreading the culture of this important home garden fruit. For distribution later.

CARYOCAR VILLOSA. (Caryocaraceae.) 31204. Seeds from Para, Brazil. Presented by Mr. Walter Fischer, acting director, Campo de Cultura Experimental Paraense. "The piquiá is one of the forest trees of this vicinity that is prized for its lumber. The wood is extremely hard and strong, so strong in fact that the word piquiá is almost symbolic for strength; it is white and close grained. I have seen but one tree that stood in the open. In fruit with nearly all of its leaves shed, it resembled one of our black walnuts in the fall of the year. The fruit is boiled before eating. After peeling off the thick rind there remains a fatty layer of one half inch thickness enclosing a rather spiny seed as large as a walnut in the hull. It is this fatty layer which is eaten boiled, while the kernel of the seed is eaten raw." (Fischer.) For distribution later.

CASTANEA CRENATA. (Fagaceae.) 31094. Seeds of what is probably the Aomori variety of chestnut. From Japan. Presented by the Agricultural College, Tohoku Imperial University, Sapporo. This is one of the hardier Japanese varieties, introduced for the work of a breeder who is trying to produce disease-resistant strains of chestnut. For distribution later.

CASTILLA SPP. (Urticaceae.) 31193, 31225. Seeds of the Central American rubber tree from Vera Cruz, Mexico. 31193, presented by Mr. J. C. Harvey, and 31225 presented by Mr. W. W. Canada, American Consul, both of Vera Cruz. Introduced for the work of the Bureau in encouraging rubber culture in Porto Rico, the Canal Zone and Hawaii. For distribution later.

CHRYSANTHEMUM MARSCHALLII. (Asteraceae.) 31227. Seeds of pyrethrum from Odessa, Russia. Procured from Mr. B. F. Schtamma, presented by Mr. John H. Grout, American Consul. This and the following are introduced for the work of the Office of Drug Plant Investigations, in growing in the United States, the various species of this genus which produce the pyrethrum insect powder. For distribution later.

CHRYSANTHEMUM ROSEUM. (Asteraceae.) 31103. Seeds of pyrethrum from Magyarovar, Hungary. Presented by Mr. J. Gyarfás, Chief, Hungarian Plant Experiment Station. Secured for the same work as the preceding. For distribution later.

CITRUS SPP. (Rutaceae.) 31210-223. Seeds of fourteen varieties of citrus fruits from Lahore, India. Presented by Mr. W. R. Mustoe, Superintendent, Government Agri-Horticultural Gardens, a part of them at the request of Mr. F. Booth Tucker, The Salvation Army, Simla. Among these fruits are sweet and sour limes, pomeloes, oranges and lemons. For distribution later.

CLAUCENA LANSIUM. (Rutaceae.) 31203. Plant of the wampee from Edinburgh, Scotland. Presented by the Regius Keeper, The Royal Botanic Garden. "This is the well known wampee, which is cultivated for its fruits in southern China. These fruits are said to be of a very agreeable though somewhat aromatic flavor and are about the size of a loquat, though the tree is probably not so hardy." (Swingle.) For distribution later.

DIOSPYROS SP. (Diospyraceae.) 31224. Seeds from Lahore, India. Presented by Mr. W. R. Mustoe, Superintendent, Government Agri-Horticultural Gardens. Introduced for the work of this Office in breeding persimmons. For distribution later.

DRACAENA SP. (Liliaceae.) 31228. Seeds of a dragon's blood tree from the Island of Socotra, Africa. Procured by Mr. Charles K. Moser, American Consul, Aden, Arabia. "I saw three varieties of this tree growing close together and was much interested in their ruby-colored exudations, which the natives now make very little use of. They call the tree (*Dracaena cinnabari*) A-ará-eeib (as near as I can get it phonetically), and the exudation Mu-soilo. This tree I believe would grow in the San Bernardino Mountains, of which the Haghier hills much remind me. The seeds sent were all we had time to find." (Moser.) For distribution later.

ERYTHRINA LITHOSPERMA. (Fabaceae.) 31098. Seeds from Mandalay, Burma. Presented by Mr. J. Mackenna, Director of Agriculture. "This is known in Burmese as 'Ye-ka-thit'." (Mackenna.) Procured for the Porto Rico Experiment Station for experimental growing as a shade in young coffee and cacao plantations. For distribution later.

GARCINIA DULCIS. (Clusiaceae.) 30970. Seeds from Singapore, Straits Settlements. Presented by Dr. H. N. Ridley, Director, Botanic Gardens. To test as a stock for the mango-steen, which has notably a poor root system. For distribution later.

GOSSYPIUM BRAZILIENSE. (Malvaceae.) 31114. Seeds of cotton from San Pedro Macati, near Manila, Philippine Islands. Presented by Mr. E. D. Merrill, Bureau of Science, Manila. "This is a shrub, two to two and a half meters high, commonly cultivated in the Philippines, but scarcely commercially; usually known as 'bulac castila', 'bulac' cotton, 'castila' Spanish." (Merrill.) For distribution later.

JUBAEA CHILENSIS. (Phoenicaceae.) 31097. Seeds from Chile. Received through Mr. Jose D. Husbands, Limavida, Chile. "The tree is called 'Palma de Chile'; the fruit

'Coquitos'; Indian names, 'Lilla', 'Caucau'. This is the tall, slim sort, trunk about eighteen or twenty inches in diameter. Practically all these trees are found at the Hacienda 'Palmas de Ocoa', where there are said to be over 2500, forming woods upon the dry level land. In other parts of Chile they are very scarce, only individual trees are found rarely and great distances apart. They do not grow in the south, I presume on account of the moisture. They grow in the driest parts. In the Hacienda, 'Palmas de Ocoa', they manufacture palm syrup upon a large scale. It is very good and healthful. It is in general use among the well to do families. It is too high to be used among the poor, a small can two and three quarter inches in diameter by four and a quarter inches high costing 50 cents gold per can. It is also served alone as a dessert dish." (Husbands.) For distribution later.

MANGIFERA INDICA. (Anacardiaceae.) 30791-972. Cuttings of mango from San José, Costa Rica. Presented by Mr. C. Wercklé, Department of Agriculture. 30971. Roca. 30972. Scarlet. For distribution later.

MUSA SP. (Musaceae.) 31206. Sucker of banana from Paraguay. Presented by Mr. C. F. Mead, Villa Encarnacion. "This sucker came from an especially fine banana bush, one from which I cut a bunch weighing 52 kilos. The bunch of bananas cost me 24 cents gold. This fruit was pronounced by four Argentinas as the finest flavored banana they had ever eaten." (Mead.) For distribution later.

PHOENIX DACTYLIFERA. (Phoenicaceae.) 31104. Seeds of the Tafilet date from Tangier, Morocco. Presented by Mr. W. B. Harris, received through Mr. Maxwell Blake, Consul General. These dates from the most important Moroccan oasis, Tafilet, are considered by many superior to the Deglet Noors, the standard of date quality. For distribution later.

SOLANUM SPP. (Solanaceae.) 31230-231. Tubers of potatoes from Peru. Presented by Mr. J. A. Furlong, Perené Colony, Peru. "These potatoes were grown in a place called Huasihuasi (elevation 10000 feet) by hill Indians. They are called Papas de Mesa, and are much esteemed by the natives. For planting the potatoes the ground is broken by the primitive wooden plough. After it is crossed and drilled for the reception of the seed potatoes, they are planted by hand and after they appear above ground, they are cultivated by hand hoes of a very primitive pattern, having a wooden handle about eighteen inches long. A fine tool to break the backs of any people but hill Indians." (Furlong.) For distribution later.

SOLANUM TUBEROSUM. (Solanaceae.) 31275. Tubers of a potato from Paraguay. Presented by Dr. Moises S. Bertoni, Estacion Agronomica, Puerto Bertoni, Paraguay. "Variety guaraniticum." For distribution later.

SPHENOSTYLIS STENOCARPA. (Fabaceae.) 31194. Seeds from Amani, German East Africa. Presented by Prof. Dr. A. Zimmermann, Director, Royal Agricultural Institute. "This is a legume, which forms edible tubers, and which is cultivated by the natives in the region of Tabora. The tubers taste similar to potatoes." (Zimmermann.) For distribution later.

ULLUCUS TUBEROSUS. (Basellaceae.) 31198-202. Tubers from the Province of Jujaja, Junin, Peru. Presented by Mr. James Arthur Furlong, Perené Colony, Peru. "These tubers grew at an elevation of about 12,000 feet in poor and stony soil, worked with wooden ploughs. The Ullucus are planted in drills like potatoes, after which they are moulded and worked with hoes." (Furlong.) For distribution later.

UNDETERMINED. (Passifloraceae.) 31207. Seeds from Montevideo, Uruguay. Presented by Mr. Frederic W. Goding, American Consul. "This fruit, indigenous to Uruguay, is called the 'Viricuya'. It is a long climbing perennial vine, which is found only in forests along the margins of streams. The fruit, which is ripe here about the first of April, is similar in shape and size to a lemon. The skin is of a lovely orange yellow, smooth and shining. The interior is filled with a most luscious syrup-like juice, with a flavor peculiar to itself, but most satisfactory to the taste, and also a large number of seeds resembling those found in the passion fruit." (Goding.) For distribution later.

UNDETERMINED. 31326. Seeds from Chile. Received through Mr. José D. Husbands, Limavida, Chile. "This fruit is edible and sweet with no ill flavor. These are dried in the sun to make them harder, as taken ripe from the tree they baffle description, the skin slides at touch, revealing a viscous, slimy, ropy, mucous, soapy-mucilaginous jelly, elastic, stringy, and has ways of its own unexampled. It soon dries and shows other qualities. This material may be valuable. It reminds one of rubber when dried." (Husbands.) For distribution later.

NOTES FROM FOREIGN CORRESPONDENTS.

CHINESE TURKESTAN. Chuguchak. Mr. Frank N. Meyer, Agricultural Explorer, reports May 10, that he has reached this place in safety, and is now only eight days from the Siberian railway at Omsk. He is within reach of a custom house, telegraph station, and prompter mail service, and is preparing to go into the Altai Mountains at once. He will go by way of

Saissansk, Altaisk, and eastward into the mountains, finally descending the Katun River to Biisk, Barnaul, thence to Omsk.

DOMINICAN REPUBLIC. Comendador. Mr. M. E. Beall, Collector of Customs, writes May 22, that he is still on the lookout for an especially fine muskmelon he has heard of, and recently "was told of a small round melon that grows near Azua, very fragrant, and the people put them in their trunks to give odor to their clothes." He will attempt to secure seed of this for us.

INDIA. Calcutta. Mr. John D. Shanahan writes May 22 that he is looking into the possibilities of white linseed, concerning which we requested information, and finds that in some cases at least one Bombay firm has been able to get considerable premiums for it. He has requested further information from the Economic Botanist of India, who has promised to give it.

INDIA. Darjeeling. Mr. G. H. Cave of the Lloyd Botanic Garden writes May 15, that the *Asparagus filicinus* we have requested does not occur in Sikkim, but that his collectors are instructed to watch for it and to procure it if possible.

INDIA. Ootacamund. Mr. F. H. Butcher, Curator of the Government Botanic Gardens, writes May 15 that he will send us seeds of *Bassia longifolia*, the mahua, in August, but doubts his ability to get us *Bassia malabarica*, the southern India form of *B. longifolia*.

INDIA. Simla. Mr. Everard Cotes writes May 14 that he is leaving for England, but has turned our request for *Asparagus filicinus* over to Mr. Bernard Coventry, officiating Director General of Agriculture for India, who will use his best efforts in our behalf.

PARAGUAY. Villa Encarnacion. Mr. C. F. Mead writes April 25 and May 2 that he will send us seeds of the Samun, or tree cotton (*Chorisia* sp.) in June when it is ripe. This cotton is as fine as silk and each boll appears to contain about as much as the average cotton boll in America. The tree is certainly somewhat frost resistant as the trees are in blossom, although for a week there have been heavy frosts every night. He has received a letter from Sr. H. Louis Krummel, a botanist and land surveyor who has had thirty years experience in the upper Parana. "He says that thirty inch maize is pretty large, but that he would not at all be surprised if such was found. He has seen extraordinary large maize brought by Brazilian colonists from Rio Grande or Santa Catharina, Brazil, of the class called 'diente de caballo'

(horse tooth). It was a pure white maize and used principally for making flour. He also reports having seen peanuts as long as his finger, six kernels to each, also a wild potato, 'Iby-á' in the upper Paraguayan chaco, not as good as the regular potato, but containing more starch. I have sent for both of these, hoping they may be of use to you."

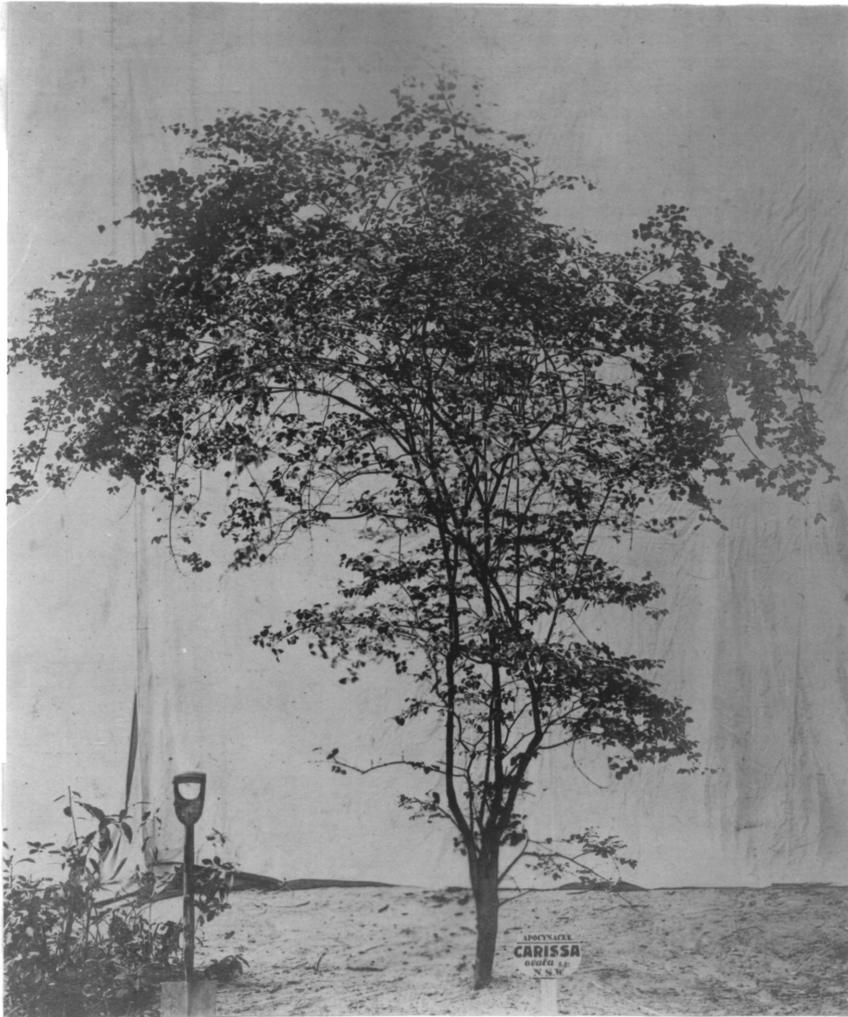
TUNIS. Gabes. Mr. Frank Edward Johnson, the American artist, writes May 25 that he has arranged to have sent to us young shoots of the fine olives and the figs of the Mountains of the Troglodytes. In the very dry region southwest of Gabes the modern ploughs of the French do not do as well as the Arab wooden ploughs which merely scratch the earth, since the grain dies from lack of moisture if the soil is too well prepared. From Tunis he will go into Spain, and will investigate mushroom cultivation in that region, securing spawn for us if possible. A report on fenugreek with much new information will be sent us as soon as he can prepare it.

TURKEY IN ASIA. Smyrna. Mr. Edward Whittall writes June 1, that the native beet is "sweeter to the taste than the European one and he has ceased importing seed from England". He will send us all the local forms he can obtain.

RECENT CALLERS FROM ABROAD.

Mr. F. H. Hope, of Kribi, Kamerun, West Africa, called June 8, and in conversation described a number of the native fruits, the Irvingia which furnishes the so-called "Dika butter", a native vegetable glue so strong that boards fracture before the glue gives way, and a palm, locally called bamboo, and used for building. Of the fruits and other interesting plants he has promised to send us pictures, fruits, seeds and full descriptions, and especially of a number of the native drug plants of which he had noticed the effects.

Mr. Arthur Garrels, American Consul, now at Catania, Sicily, late of Zanzibar, in conversation June 12, spoke of the clove industry of Zanzibar. This district furnishes from 90 to 95 per cent of the cloves of the world, but mainly for oil production, and not for the spice, which comes from Penang. The trees for the first three years are almost impossible to grow, but after they are once established are almost impossible to kill. They grow like a pear tree with erect branches; the olive like fruit, which has two seeds, has very little oil, but the seeds have started germination before they fall. This rapid germination is the probable cause of poor results in shipping the seeds. The fruits are sometimes planted immediately on falling, and at other times thrown in piles and allowed to ferment, which they do very quickly, before planting. Probably the only way to import the clove is in Wardian cases.



CARISSA OVATA (Syn. C. BROWNII.) Black Lime Bush.

This shrub, said by Prof. Maiden to be the same as *Carissa Brownii*, is described by Guilfoyle as an evergreen shrub from three to six feet in height with white flowers. It is said by Mueller to have edible fruit, largely used for jam. Introduced as stock for and for breeding work with the related *Carissa grandiflora*, which has shown itself so well adapted as a home garden fruit in the subtropics. From photograph presented by Prof. J. H. Maiden, Director, Sydney Botanic Garden, New South Wales.