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

NO. 77.

BULLETIN OF FOREIGN PLANT INTRODUCTIONS.

June 1 to 30, 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: Rollinia orthopetala.

MATTER IN THIS BULLETIN IS NOT TO BE PUBLISHED WITHOUT SPECIAL PERMISSION.

AMPELODESMA TENAX. (Poaceae.) 33750. Seeds of diss from Algiers, Algeria. Presented by Dr. L. Trabut. This plant which is often confused with the esparto, Stipa tenacissima, grows wild on the Algerian coast, and is said to produce 84 per cent of fiber, with an average length of five feet. This fiber has been used for nets for fishing, which are very durable if kept in water and protected from the sun. It has also been imported into Sicily for paper making and has been made into rope in Italy. (After Dodge, Useful fiber plants.) For distribution later.

ANNONA SPP. (Annonaceae.) 33745-748. Seeds of anonas from Guadalajara, Mexico. Presented by Mr. Samuel E. Magill, American consul. "There are four varieties of annonaceous fruits grown in this part of Mexico probably originating from the same stock but now having essential differences due to the changes made in time by different altitudes and temperatures. The names of these four varieties are chirimoya (A. chirimola), ilama (A. diversifolia), anona (A. reticulata) and cabeza negra (A. purpurea). The chirimoya is one of the best fruits grown in the 'tierra templada' or temperate region. When grown under the best conditions it is undoubtedly the best of the family. Color brownish-green, with dark brown or black seed, and pulp white, tender and very sweet. The ilama also grows best in a temperate climate although that grown at Colima and further south is very fine, but the variety grown on the sides of the Colima volcano and Cerro Grande, at an altitude much above the level of the surrounding country, is much better. The color of the ilama is green-gray when ripe with seeds of a light coffee color. The pulp is brownish-white and firm and it breaks open when ripe. The ilama matures in October and November. The anona is strictly a tropical fruit and grows on the 'tierra caliente' or hot coast lands. There are two kinds of fruit called anona, the only apparent difference being in outside color when ripe, one being a yellowish-red and the other a greenish-gray. Each has soft white pulp, and black or dark brown seed. It ripens in April or May. I am told there is also a wild variety known as the cabeza negra or black head. It is also known as 'frioy calentura' meaning 'cold and hot', or 'chills and fever,' due perhaps to its effect on one eating it, hence it is not popular and is rarely seen in the markets. It is difficult to get the truth as to the varieties of this fruit from the Indians or even from intelligent whites so much depending on the altitude or climate where the fruit is grown.

For instance, Mr. Bert Lindeman of Colima writes me from that place that the anona is a 'strictly tropical fruit from the hot coast', whereas on the market now in temperate Guadalajara one can buy locally grown fruits called 'anonas' which differ from the later ripening chirimoyas only in the outside color. The chirimoya should grow well in our southern states as it is hardy and developes best in the state of Guanajuato, Mexico, where it is rarely very hot or very cold but where frost is not uncommon." (Magill.) For distribution later.

ASPARAGUS SPP. (Convallariaceae.) 33721-735. Seeds and plants of fifteen species of asparagus from Kew, England. Presented by Mr. Arthur W. Hill, Royal Botanic Gardens. Introduced to complete as far as possible the collection of the species of this genus, grown for comparative tests and breeding work. For distribution later.

ASPARAGUS ALBUS. (Convallariaceae.) 33780. Seeds of an asparagus from near Byamor, Tenerife. Presented by Dr. George V. Perez, Puerto Orotava. A Canary Island species introduced for the same purposes as the preceding. For distribution later.

CASSIA FISTULA. (Mimosaceae.) 33782. Seeds of the "Canafistula" from Cuba. Presented by Mr. Robert L. Luaces, Camaguey, Cuba. "The 'Cauandonga' tree. The fruits are much used through the province of Oriente (Santiago de Cuba) as food and for making of something like chocolate. The smell of the fruit is bad, very bad, but the taste is not. The tree is pretty and could be grown as a shade tree in the south and some application may be found for the fruit. I do not know the botanical name and only that it is called in other parts of the island 'Canafistula.'" (Luaces.) "The 'Canafistula' is a small wing-leaved tree of the bean family, producing abundance of yellow flowers, a native of the East Indies and now common in most tropical countries. It produces a smooth cylindrical pod twice the thickness of the finger and sometimes two feet in length. The interior is divided into numerous transverse portions, each containing a seed embedded in pulp of a sweet taste, which forms an important laxative medicine. The leaves are used as a cure for ringworm." (Smith, Dictionary of Popular Names of Economic Plants.) For distribution later.

CASTILLA SPP. (Urticaceae.) 33743-744, 33784. Seeds of Central American rubbers from Guatemala and Costa Rica. Presented by Mr. Edward Reed, American consular agent, Livingston, Guatemala, and Mr. Carlos Werckle, National Museum, San Jose, Costa Rica, respectively. Introduced for the work of the

Bureau in bringing together all the promising rubber-producing plants for comparative tests and study. For distribution later.

CHENOPODIUM SP. (Chenopodiaceae.) 33742. Seeds from San Jose, Costa Rica. Presented by Mr. Carlos Werckle, National Museum. "'Apasote.' Used for seasoning like thyme, and especially good for shelled beans." (Werckle.) For distribution later.

CHRYSOBALANUS ICACO. (Rosaceae.) 33791. Seeds of the icaco from San Jose, Costa Rica. Presented by Mr. Carlos Werckle, National Museum, San Jose. "A much improved superior variety. Black." (Werckle.) This tree which is a native of Tropical America bears small pulpy fruits the size and shape of a plum, somewhat sweet, but with a harsh flavor peculiarly their own, which are much used for preserves and also as dessert fruit. For distribution later.

CITRUS SP. (Rutaceae.) 33761. Seeds of a lemon from Malta. Presented by Mr. James Oliver Laing, American consul. Obtained through the kindness of the secretary of the Malta Horticultural Society. "This new fruit is the result of experiments undertaken by the government expert here in the Gardens of San Antonio and is called the San Antonio lemon. The specimen sent and the lemon from which the seeds were taken were chosen as exhibition fruit to be shown at the yearly fair of the Malta Horticultural Society and are therefore not only a new variety but the best specimens of it. The fruit was labeled as follows at the fair: 'A seedling from a flat shaped variety at San Antonio gardens and exhibited now for the first time.' " (Laing.) For distribution later.

CITRUS SP. (Rutaceae.) 33788. Seeds of an orange from the Atlas Mountains, Algeria. Presented by Dr. L. Trabut, Algiers. "A late orange from Atlas Mountains, cultivated in the mountain valleys and grown from seed by the natives. Fruit excellent." (Trabut.) For distribution later.

COCOS SP. (Phoenicaceae.) 33762. Seeds from Haedo, a suburb of Buenos Aires, Argentine. Presented by Mr. C. F. Mead. "Found in southern Brazil, Paraguay and northern Argentina, but these seeds are from a tree grown by Vicente Peluffo & Co., at their proving grounds near Haedo, which speaks well for its frost-resisting ualities. This coco grows to a height of about 5 meters and is very similar in looks and fruit to the date palm. Fruit in looks is similar to a small crab apple except that it lacks lustre; it is comestible and tastes something like a green pineapple." (Mead.) For distribution later.

ANDROPOGON CITRATUM. (Poaceae.) 33786. Roots of an oil-grass from Trivandrum, Travancore, southern India. Presented by Mr. N. Kunjan Pillai, Director of Agriculture, Travancore. "A grass yielding oil in a fairly large quantity. It is locally known as Sambarapulla, (being used for flavoring butter-milk). This grass is more common in Ceylon and along the East coast. In the interior of Travancore it does not occur in abundance. There is reason to believe that the grass came from Ceylon because near Cape Comorin and up to a place called Arakkanikulam the grass occurs in abundance. Another peculiarity is that while I have never seen this grass in flower in Ceylon either under cultivation or in a native condition, it flowers freely amidst the boulders of Arakkanikulam on either side of the main road and also near the cape in Marathuvamala. This I think is due to its transport into a hotter locality. The boulders get heated and the grass lying between gets 'forced' as plants are in hot houses in other countries. When I saw the grass last time it was getting a disease corresponding to the black rust of cholam (maize). The pest was just beginning. The plants which I have selected are free. This grass is mixed with other Andropogons and distilled. The industry is in the hands of the uneducated and no sorting of varieties is done, because knowledge is absent." (Pillai.) For distribution later.

ANDROPOGON NARDUS. (Poaceae.) 33787. Roots of an oil-grass from Trivandrum, Travancore, southern India. Presented by Mr.N. Kunjan Pillai, Director of Agriculture, Travancore. "A grass very common all over Travancore, except at great elevations and very near the sea coast. In soft alluvial loam and under careful cultivation this grass grows to a height of 6 or 8 feet. This grass can be very easily identified by a light magenta tinge from the bottom upwards. The spikes are short and the leaves are narrow. It is locally known as chukku-nari-pullu, (grass smelling like Zinziber officinale). In Travancore I do not know of many places where this grass is taken up for cultivation. Grass is collected from the jungle by women getting between 4 and 5 chuckrums (2-3 annas) a day and by men getting 7 chuckrums (4 annas) a day. A monster vessel of copper is installed as a 'primitive' vat. In one day, one and a half bottles of oil could be distilled. The prices vary from Rs. three to Rs. six for a bottle of 24 ounces. One Mr. A. F. Sanderson, the then Deputy Conservator of Forests, and Mr. Miller, a manager of the Vellanad plumbago mines, made an attempt to open an estate of oil grass. They went on for sometime unmindful of outside talk, and collected a fair quantity of oil, but the business was dropped because it was taken up only as a side industry. Other beginnings were made which were but short-lived. One cwt. of leaves is said to yield about 3 ounces of oil. The pure oil is thin, colorless and strong with a citron-like flavor. The average exportation of citronella from Colombo is about 40,000 pounds valued at 8,000 pounds sterling or about 4 shillings and 1 penny per pound. It is largely used to give the peculiar odor to what is known as 'honey soap' and in the making of perfumes. In Travancore propagation of this grass is left to nature, no care of any kind whatever being given. It is treated purely as a natural product of the jungle. It is even looked down upon as a glutton upon soil-food, deserving if possible extermination and cremation. In Ceylon the citronella grass is raised from seed and planted like Guinea grass, and will give two or three crops a year. When fit to cut the grass is carried to a large boiler and the oil is distilled. It is estimated to give about 3 dozen bottles to the acre, but the demand is limited and the price fluctuates from 2 shillings and 6 pence a bottle to 4 shillings and 6 pence a bottle. At the latter price it pays handsomely while at the former it little more than covers expenditure. A still capable of turning out a dozen bottles a day costs 300 pounds. A decoction of the leaves is used it is said to purify blood. It is also given in cases of cough and used in steam baths for colds. Externally it is applied to remove rheumatic pains in which case it is said to equal the Samadera indica of the sandy regions of northern Travancore. The oil is said to be good for cholera. For children it is a good tonic. It is also a stimulant and diaphoretic." (Pillai.) For distribution later.

HIBISCUS ESCULENTUS. (Malvaceae.) 33749. Seeds of okra from Avery Island, La. Presented by Mr. E. A. McIlhenny. "These seed are a variety of okra a friend of ours sent us from Egypt six or seven years ago. By careful selection we have produced a variety of okra which is unexcelled for table purposes. It is an early bearer, and has a thicker flesh and is more tender than any of the commercial okra which we have tried." (McIlhenny.) For distribution later.

MALPIGHIA COSTARICENSIS. (Malpighiaceae.) 33740. Cuttings from San Jose, Costa Rica. Presented by Mr. Carlos Werckle, National Museum, San Jose. "A small tree with large pubescent leaves; prolific, bearing very good fruit. Grows from cuttings, but root cuttings are said to be best." (Werckle.) For distribution later.

OLEA FOVEOLATA. (Oleaceae.) 33783. Seeds of bastard ironwood from East London, Cape Colony. Presented by Mr.

Charles P. Lounsbury, chief of the Division of Entomology of the Department of Agriculture of the Union of South Africa. A hard-wooded tree 30-40 feet in height, with glossy leaves and elliptical purple fruit ½ inch long, nearly dry, with a large one-seeded stone. Introduced as a possible hardy stock for the olive. For distribution later.

RUBUS MACRAEI. (Rosaceae.) 33793. Seeds of the akala from the Kau district, Hawaii. Presented by Mr. Ralph S. Hosmer, Superintendent of Forestry. "The native raspberry, akala. This species is quite generally distributed through this Territory between the elevations of 3500 and 5000 feet. It is a tall growing shrub, the canes frequently reaching a height of 12 to 15, or more feet. The fruit is large, from an inch to an inch and a half in length and about an inch in diameter. The flavor is rather sharp, but to me a pleasant acid. It has always seemed to me that this raspberry might with advantage be crossed with some cultivated variety." (Hosmer.) For distribution later.

NOTES FROM FOREIGN CORRESPONDENTS.

ARGENTINA. SANTA CRUZ. Mr. Henry L. Regnard, Estancia Canadon de las Vegas, writes April 30, 1912: "This place is just about 50° 30' South on the Atlantic Coast with a very clear dry air, rainfall from 3 to 9 inches and strong gales of cold wind of frequent occurrence. I have two kinds of willows which grow fairly well, two kinds of poplars which also grow, a few ash trees making a brave struggle, oak the same, some horse chestnuts which remain dwarfed and starved looking, some sycamore struggling ahead, privets, laburnums, cherries, black currants rather luxuriant, red and white currants, raspberries dwarfed, dog roses, a pink rambler and some briars and brambles. Larch I cannot get to grow and out of very many maritime and Scotch pines planted I have only one left alive; it is some eight years old and about 3 ft. 6 in. high. I grow thick willow hedges and plant under thin shelter. Turnips, marigolds, cabbages, carrots, onions, potatoes, parsnips, salsify grow moderately well, broad beans form many pods but very few of the pods have beans in them, peas do fairly well. I have got a little white clover to grow, a few little patches of red clover; some alfalfa, rye, and oats do fairly well. Wheat and barley I have ripened, the oats and rye I cut a little before they are ripe for fodder. One great difficulty I have to contend with is the reversal of the seasons which tries all plants very much. Plants from Chile or the River Plate do not seem to have the capacity of resisting this climate. I think the winds are what check vegetation more even than the dryness of the climate. Gales last not infrequently 3 4, & 5 days. In spite of all I got two cuttings, light ones it is true, from my, alfalfa."