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NO. 56.

BULLETIN OF FOREIGN PLANT INTRODUCTIONS.

January 16 to 31, 1911.

NEW PLANT IMMIGRANTS.

AMYGDALUS SPP. (Amygdalaceae.) 29416-417. Seed of almonds from Mamouret-ul-Aziz (Harput), Turkey-in-Asia. Presented by Mr. W. W. Masterson, American Consul. No. 29416. Sweet. No. 29417. Bitter. "These almond trees seem to be possessed of a wonderfully hardy nature, as they flourish equally well in the low bottom land of the Euphrates River where the climate is very moderate or up in the mountain table lands where I have seen them growing at an altitude of 6,000 feet and where the thermometer registers below zero weather (Fahrenheit) for several weeks at a time. I cannot say, however, whether they will thrive in a locality where there is much rainfall in the summer or not, as in this country there is particularly no rainfall from the middle of May until the first of November and irrigation is resorted to entirely." (Masterson.) For distribution later.

ANDROPOGON SCHOENANTHUS, (Poaceae.) 29456. Plants of a lemongrass from Saigon, Cochin China. Presented by Mr. P. Morange, Chief of the Service of Agriculture. Introduced for the work of the Office of Drug Plant Investigations on the oil-producing grasses. For distribution later.

ANONA SQUAMOSA. (Anonaceae.) 29409-410. Cuttings and seeds of sugar apple from Paget Island, Bermuda. Procured by Mr. G. P. Wilder of Honolulu, Hawaii, from Miss Godet. Hardy only in the lower half of the State of Florida. For distribution later.

ARISTIDA PENNATA. (Poaceae.) 29425-426. Seeds of a grass from Central Asia, introduced for trial in sand-binding work. Presented by Prof. A. Fischer von Waldheim, Director, Imperial Botanic Garden, St. Petersburg, Russia. No. 29425. "Variety Karelini." Grown in the sand in the neighborhood of the railroad at Farab Station. "This grass, itself valuable as a sand-binder, is especially valuable from the fact that its tufts act as shelters in which the seeds of Salsola arbuscula and Calligonum sp. lodge and grow. Nearly every bunch of this grass will be found to have growing in it a young plant of Salsola or Calligonum. The seeds are sown in holes in the sand and covered with sand by the workman's foot, or are mixed at the rate of 1 pound to 200 or 300 pounds of sand and sown broadcast; the former method is, however, preferable. It is sown in the hollows between the sand dunes and requires only one seeding, as the following year it reseeds itself." (E. A. Bessey.) No. 29426. "Variety minor." From Turkestan.

Trans-Caspian. Grown on the sand dunes in the neighborhood of the Central Asian railroad, Repetek Station. For distribution later.

ASPARAGUS HORRIDUS. (Convallariaceae.) 29462. Seeds of asparagus from Tunis, North Africa. Presented by Mr. L. Guillochon, Director, Jardin d'Essais de Tunis. A wild species considered by some to be superior to the best cultivated asparagus. Procured for special asparagus breeding experiments. For distribution later.

ASPARAGUS SP. (Convallariaceae.) 29461. Seeds of asparagus from New York, N. Y. Purchased from Messrs. J. M. Thorburn & Company. "Variety scandens deflexus." Procured for special asparagus breeding experiments. For distribution later.

CALCEOLARIA SP. (Scrophulariaceae.) 29382. Seeds of calceolaria from the high Cordilleras, Chile. Presented by Mr. Jose D. Husbands, Limavida, Chile. "A new beautiful and rare calceolaria, found growing in dry sand." (Husbands.) For distribution later.

CHAETOCHLOA ITALICA. (Poaceae.) 29430-436. Seeds of forage grasses from Russia. Presented by Mr. J. A. Rosen, Chief, American Agricultural Bureau of the Governmental Zemstvo of Ekaterinoslav, Russia, located at Minneapolis, Minnesota. No. 29430. "Chu-Miza Paidza." No. 29431. "Mohar red Grushevka." No. 29432. "Chu-Miza Khvan-Ianga, Manchuria." No. 29433. "Chu-Miza Pane, Manchuria." No. 29434. "Grushevka Chu-Miza." No. 29435. "Kuzo Khunkjancho, Manchuria." No. 29436. "Paigonza, Manchuria." These are seven of twenty-one numbers presented by Mr. Rosen, consisting of seeds of forage and cereal crops successfully grown in Ekaterinoslav Government, Russia. This government has a moderate climate and short winters, the average temperature varying from about 20° F. winter to nearly 72° for the summer. For distribution later.

CHLORIS GAYANA. (Poaceae.) 29361. Seed of Rhodes grass. Purchased from Anderson & Co., Sydney, New South Wales. "One of the most promising new grasses which has recently been tested is Rhodes grass. This grass is remarkably aggressive in the South and will yield three or more cuttings per season of valuable hay. It is also adapted to the irrigated sections of the Southwest." (R. A. Oakley.) For distribution later. See photograph.

CITRUS SP. (Rutaceae.) 29460. Seeds of mandarin from Algiers, Algeria. Presented by Dr. L. Trabut. "Mandarin of Canton. Hybrid of Citrus nobilis. Fruit bright colored, very sweet, ripens in January in Algiers." (Trabut.) For distribution later.

COCOS ODORATA and others. (Phoenicaceae.) 29419-422. Seeds of four palms from Rio de Janeiro, Brazil. Presented by Mr. Antonio Augusto Pereira da Fonseca. Acanthorhiza warscewiczii, Cocos odorata, Jessenia amazonum and Caryota speciosa. All suitable probably for cultivation in Southern Florida and California. For distribution later.

CUCUMIS MELO. (Cucurbitaceae.) 29458-459. Seeds of muskmelon from Malta. Presented by Mr. James Oliver Laing, American Consul, Malta. No. 29458. "Seeds from one dark green melon (winter variety). Grown in the Island of Gozo, one of this group. The particular melon is the finest specimen of the fruit I have seen here." (Laing.) No. 29459. "Seeds from several yellow melons (summer variety)." (Laing.) For distribution later.

CYCLANTHERA PEDATA. (Cucurbitaceae.) 29330. Seeds of the Caigua from Mollendo, Peru. Presented by Mr. W. Morrison, Acting Consular Agent. "The fruit of the caigua is cooked and eaten as a vegetable. The fruit is first cleaned of the seeds and the division that separates the rows, then boiled but not too tender; a forcemeat of finely chopped meat, raisins, walnuts and chopped hard boiled eggs with seasoning fills the interior the outside is covered with a mixture of beaten egg and flour, and the caiguas are then fried. Or a sauce is made with milk, flour, etc., and in this the caigua is stewed. The seeds sent were taken from a plant I had in the house in a flower pot of fair size. This climate is temperate." (Morrison.) For distribution later.

DATURA FASTUOSA. (Solanaceae.) 29454. Seeds from Villarrica, Paraguay. Presented by Mr. C. Mahaux. "This plant has mauve flowers from which the people here make cigarettes. It seems that it is a good antiasthmatic." (Mahaux.) For distribution later.

DIOSPYROS SP. (Ebenaceae.) 29384. Seeds of a species of ebony from Colombo, Ceylon. Presented by Dr. C. Drieberg, Secretary, Ceylon Agricultural Society. Introduced for the work of this Office in the breeding of persimmons. For distribution later.

ELAEAGNUS ANGUSTIFOLIA. (Elaeagnaceae.) 29414-415. Seeds of Trebizond date or oleaster from Mamouret-ul-Aziz (Harput), Turkey. Presented by Mr. W. W. Masterson, American Consul. No. 29414. Small fruited. No. 29415. Large fruited. For distribution later.

EUGENIA SP. (Myrtaceae.) 29381. Seeds from Chile. Received through Mr. Jose D. Husbands, Limavida, Chile. "Of West Indian

origin but grown in Chile from colonial days. Being acclimated to this climate and accustomed to grow semi-dry to dry, in poor arid soils, it is better suited for American introduction than direct from the rich soil and moisture conditions of the tropics." (Husbands.) For distribution later.

FICUS UTILIS. (Urticaceae.) 29359. Seeds from East Africa. Presented by Mr. O. W. Barrett, late Director of Agriculture, Lourenco Marques, Portuguese East Africa. "A medium sized tree of the open bush from Zululand to Somaliland; prefers sandy soil. Almost evergreen except in long droughts. Thick bark used, when beaten out, for bags, clothing, etc.; appears to wear well. Tree roots well from cuttings. Fruit worthless. Shironga name, M'Pam'ah." (Barrett.) The beaten bark resembles the Tapa of Pacific islanders. "A flat-topped or rounded tree, single-stemmed by nature, but often cultivated to the extent of being cut off at the ground so as to produce four to six clean young coppice branches without knots and of rapid growth, from which to obtain fiber, which after preparation is used as cloth. This preparation consists merely of beating and washing the fresh bark. The fiber is not spun or woven. This is the source of all the native cloth in the M'Chopes district. The manufacture of cloth from this tree is confined to M'Chopes, and these cloths are carried to neighboring districts and sold, where the tree itself is abundant, but only used for rough cordage or for caoutchouc. This latter product is yielded abundantly but is of low quality and value. The preference of M'Chopes cloth I can only account for by the local knowledge of the art of coppicing, and the suitable stems produced thereby." (Extract Sim: Forest Flora of Portuguese East Africa, p. 100.) For distribution later.

GARCINIA SP. (Clusiaceae.) 29362. Seeds of bitter kola from Ibadan, Southern Nigeria, West Africa. Presented by the Curator of the Agricultural Department. "Vernacular names: Efrie (Uwet, McLeod); Bitter Kola; False Kola; Male Kola; Orogbo Kola-nut. Tree grows 10 to 30 feet high. Leaves about 6 inches long, 3 inches broad, shining above, pale beneath. Mature fruit about 3 inches long and 2½ inches across, with remains of the styles at the apex and of five imbricate sepals at the base. Rind apricot-colored, resiniferous, covering a juicy, orange, acid pulp. Mature seeds 1½ inches long, ¾ inch across, obtuse at both ends, with a brown parchment-like coat. According to Milton (Journ. Bot. iv. 1875, p. 65), the newly dried nuts are esteemed by the natives as a remedy in cases of cough, and are said to improve the voice of the singer. The bitter principal is agreeable and free from the astringency of the common red and white Colas, and it imparts to water a pleasant sweet taste. The Bitter Kola is also said to be a

good restorative after sea-sickness; it is eaten by the natives to enhance the flavor of liquor (McLeod, Herb., Kew) and used as a remedy for dysentery (Monteiro, Mus. Kew). The seeds of the Bitter Kola do not appear to possess the same stimulating properities as those of the true Kola (Cola acuminata), and are of less commercial importance. The fresh nuts of Bitter Kola (Garcinia kola) in West Africa are worth 2s. for 200 nuts, while the value of the nuts of Cola acuminata is 3s. to 4s. 6d. for 200 (von Bernegan in Der Tropenflanzer, 1904, p. 361)." (Kew Bull. misc. inf. add. ser. 9: 63-64. 1908.) For distribution later.

GOSSYPIUM SPP. (Malvaceae.) 29411-412. Seeds of cotton from Mesopotamia, Turkey. Presented by Mr. J. S. Levack, American Vice and Deputy Consul, Bagdad, Turkey. No. 29411. "Luka." No. 29412. "Iraki." "The foregoing are the varieties of native cotton grown in Mesopotamia. They are cultivated to a very small extent and according to primitive methods. The varieties mentioned are considered to be of very inferior staple. In the opinion of experts (such as Sir William Willcocks, in charge of the irrigation works in Mesopotamia), this district will be one of the great cotton-producing areas of the world when the irrigation scheme is complete." (Levack.) For distribution later.

MANGIFERA INDICA. (Anacardiaceae.) 29455. Seeds of mango from Oneco, Florida. Presented by Reasoner Bros., Royal Palm Nurseries, Oneco, Florida. "Langra Benarsi. Form oblong, oblique; cross section roundish, flattened; size very large; cavity regular, small, very shallow; suture medium wide; beak prominent; surface undulating; color watermelon green with marblings of lighter green; dots small, russet; bloom whitish; skin medium thick, tenacious; flesh yellow, tender, juicy, some fiber but not enough to interfere with spoon; seed flat, oval, cling, large; flavor acid; quality good for culinary purposes." (W. R. Irwin.) For distribution later.

MIMUSOPS SP. (Sapotaceae.) 29373. Seeds of a sapotaceous tree from Magaliesberg, Pretoria, South Africa, locally known as Moople. Presented by Prof. J. Burtt-Davy, Government Agrostologist and Botanist, Department of Agriculture, Pretoria. "Seed of a tree that has an edible fruit which is slightly astringent and is much eaten by the natives and by white children but it is not of any particular merit; its taste reminds one a little of acorns. The tree is an evergreen, of shapely habit of growth, and well worth growing as an ornamental. I have no data as to the value of the wood, but that of the closely allied Mimusops obovata is described as yellowish-white, close grained, tough, heavy and durable; it is said

to be used principally for fellies, axles and various wagon work. This tree grows in the Upper Bushveld, below 4,000 feet altitude, with a rain fall of about 25 inches, falling in the summer months only; it grows in districts practically free from frost." (Davy.) For distribution later.

PASSIFLORA SP. (Passifloraceae.) 29360. Seed of passion fruit from Mexico. Presented by Mr. Richard M. Stadden, Vice Consul, Manzanilla, Mexico. Introduced for the work of this Office in breeding passion fruit. For distribution later.

PERSEA AMERICANA. (Lauraceae.) 29363. Plants of the avocado grown at the Plant Introduction Garden, Chico, California. Avocados to be distributed in Southern California to test the hardiness of the southern type in that locality. For immediate distribution.

PHOENIX DACTYLIFERA. (Phoenicaceae.) 29391. Seeds of Menakher date from Tunis. Purchased from Mr. Martel, Deggache, Tunis. "The Menakher of the Tunisian Sahara is a variety later than the Deglet Noor, with large brown fruits which attain the length of the little finger. This sort is rare and much sought after in the Tunisian Sahara, where it sells for slightly more than the Deglet Noor, which it surpasses in length by 50 per cent and to which it is by many considered superior in quality. The average yield of a Menakher palm is said to be 30 kilos or 66 pounds, only half the yield of the Deglet Noor." (W. T. Swingle.) For immediate distribution. See photograph.

PISUM SATIVUM. (Fabaceae.) 29365-372. Seed of peas grown at Pullman, Washington, by Mr. Morgan W. Evans. Eight varieties of field peas grown from seedsmen's stock. For distribution later.

RAVENALA MADAGASCARIENSIS. (Musaceae.) 29424. From Palm Beach, Florida. Presented by Mr. J. B. Donnelly, Palm Beach, Florida. The so-called traveller's tree is one of the most conspicuous semitropical plants. It grows to a height of from 20 to 30 feet, and resembles the banana somewhat in its leaves. It has a palm-like trunk with large leaves, crowded in two ranks so that the head has the form of a gigantic fan. Suitable for planting in semitropical sections. For distribution later.

TRIFOLIUM SPP. (Fabaceae.) 29392-403. Seeds of twelve varieties of clover from Adis Ababa, Abyssinia. Presented by Mr. Guy R. Love, American Vice Consul-General. For distribution later.

VITIS CAPENSIS. (Vitaceae.) 29408. Cuttings of a vine from San Gabriel, California. Presented by Mr. William Hertrich, Superintendent for Mr. H. E. Huntington, Los Robles Ranch. "This plant is an evergreen, fast-growing, broad-leaved vine. In my opinion it is the best climbing plant for this part of the country, as far as foliage is concerned." (Hertrich.) For distribution later.

ZEA MAYS. (Poaceae.) 29375-376. Seed of corn from Mogadiscio, Italian Somaliland. Presented by Prof. J. Burtt-Davy, Pretoria, South Africa. "May be of value in extremely arid parts of the Southwest." (Davy.) For distribution later.

UNIDENTIFIED BAMBOOS. (Poaceae.) 29451-453. From Republic of Panama. Presented by Mr. Luis Alfaro, Sub-Secretaria de Fomento, Panama. "One plant each of three varieties of unidentified bamboos, indigenous to Chiriqui Province, Panama." (H. F. Schultz.) For distribution later.

UNIDENTIFIED. 29407. Seeds of grape-mango from Island of Mauritius. Presented by Mr. Gabriel Regnard, Port Louis, Mauritius. "A tall shrub which bears panicles of purple flowers and fruits of a pleasant sweet-sour mango taste. These drupes grow in a remarkable and interesting way, not only from the branches but chiefly from the main trunk of the tree, looking as if they were air-roots, with fruit upon them, or like parasites." (Regnard.) For distribution later.

UNIDENTIFIED. 29427-429. Fruits of "guabiroba" from Itapetininga, S. Paulo, Brazil. Presented by Mr. Welman Bradford, Chefe da commissao de ensaio da cultura do trigo. "The Guabiroba is very common and hardy, and in spite of the numerous fires bears abundantly. The bloom appears about in October or November, and in a month the fruits are ripe; these all have a slightly turpentine taste, which is not unpleasant. The small varieties are especially agreeable." (Bradford.) For distribution later.

NOTES FROM FOREIGN CORRESPONDENTS.

BRAZIL, Piracicaba. Mr. Clinton D. Smith writes January 12 that he has written in regard to Copernicia cerifera seed to a former pupil who will get us the seed in any quantity desired. He himself will make a selection of the best varieties of the sugar-apple, Anona squamosa, for our use, and send them in proper season.

CHINA, Chengtu. Mr. E. W. Wilson writes December 16, 1910, that he is leaving for home soon, and hopes to reach Boston early in April. He has had a fairly successful time, though he met with the misfortune of a badly broken right leg.

CHINESE TURKESTAN. Mr. Frank N. Meyer, Agricultural Explorer for this Office, writes January 7 that he has returned to Kashgar. Both his Chinese and Russian interpreters wish to return to their homes, his permit for work in Russian Turkestan, to which he wishes to return because of the poorness in plants of Chinese Turkestan, has run out, and he is ill from exposure and bad quarters. He hopes, however, to return to Russian Turkestan for some of the interesting things seen on his way to Kashgar.

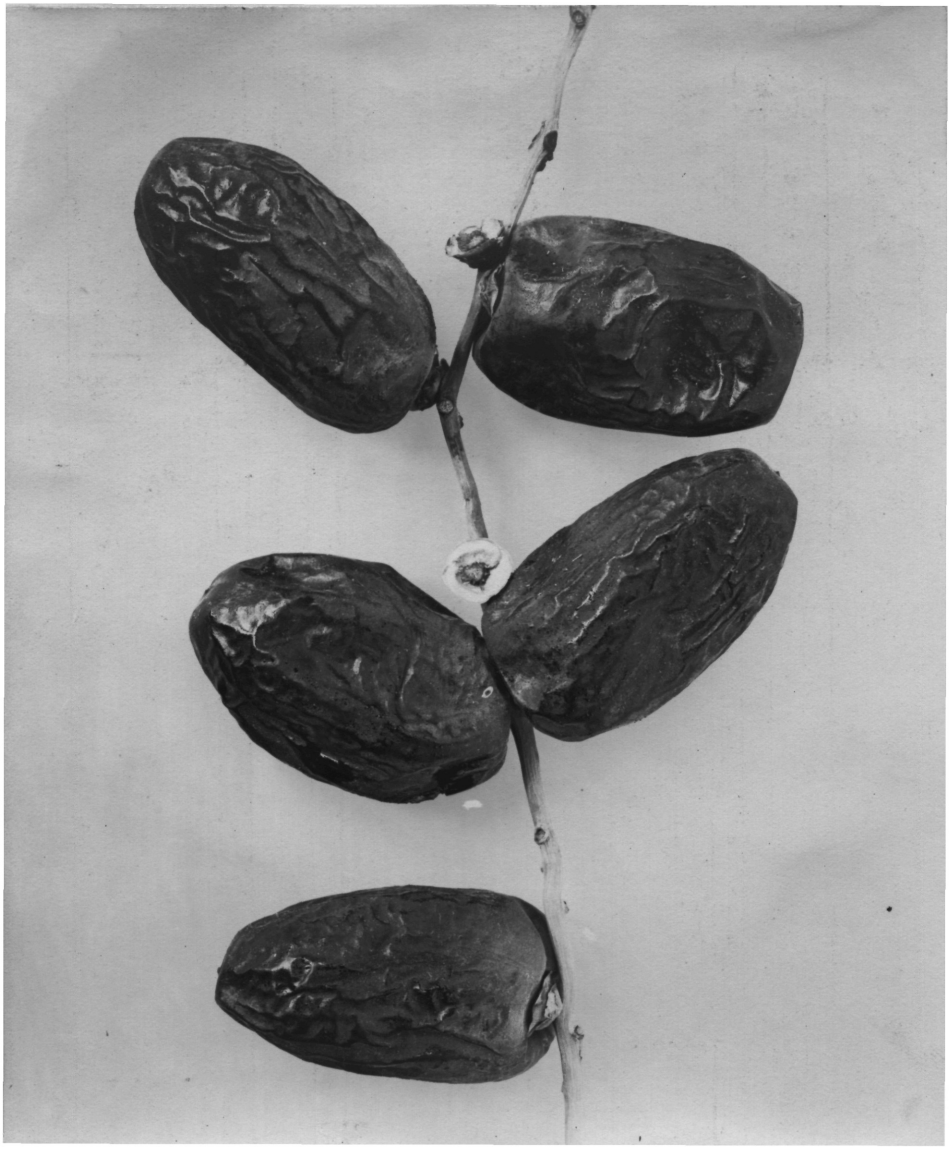
INDIA, Saharanpur. Mr. A. C. Hartless, Superintendent of the Government Botanical Gardens, Saharanpur, in reply to our request for alfalfas, writes that he has requested the Superintendent of Farms, Kashmir, to send us what alfalfas he can, and sends the following reply received from him: "Our staple leguminous fodder crop in this province (Kashmir) is known as Trifolium suaveolens (Shaftal) a kind of vigorous lucerne. It is wonderfully vigorous and can be cut many times between early January and late May. I have six acres sown on the Peshawar Agricultural Station. I am afraid there is no one across the border who knows botany sufficiently to enable him to collect species of Medicago. The photograph you have sent should enable me to spot anything unusual."

PALESTINE, Jerusalem. Mr. E. F. Beaumont of the American Colony writes January 20 that they are interested in the variety of cactus called Indian fig. "We have observed here apparently two varieties; one with a long offensive spine over the leaf, and another which seems to be more abundant with scarcely any spine and those existing are only from one-eighth to one-fourth of an inch long and so inoffensive as to be eaten readily by the cattle, singeing not being at all necessary."

PERU, Perene Colony. Mr. James A. Furlong writes January 9 that he will try to get us anything we wish that grows in his region. He will try to get us Rollinia, Golden tree, and Cucurbita maxima, as soon as he can get in touch with ways of getting them. The Sapium rubber does not grow in his region but he hopes to obtain seed for us from the missionary priests who travel throughout the interior.

CHLORIS GAYANA. RHODES GRASS.

"Rhodes grass is a native of central and southern Africa, where it is regarded as an extremely valuable species for pasture on dry soils. It is a perennial grass, growing from three to four feet high, very leafy, quite succulent, and the seed is borne on branching spikes on slender, branching stems. This is one of the most promising new introductions, especially for pasture in the southern part of the Gulf States. It is also a very promising hay grass, giving two or three cuttings during a season, and the hay is of excellent quality. It is quite drought resistant, but is seriously injured by frosts, succumbing to temperatures of 18° F. Aside from being valuable in the Gulf Coast States, it appears also to be promising for the semi-arid regions of the extreme Southwest, where such low temperatures do not occur." (R. A. Oakley.) Photograph of plot at Arlington Farm, Virginia, taken in 1908. Plant Introduction No. 29361.



PHOENIX DACTYLIFERA. MENAKHER DATE.

In point of appearance, cleanness of skin and keeping quality, the Menakher date is thought by many to surpass the Deglet Noor, the standard of date quality, while the latter is superior in the crisper texture of the flesh and the smaller development of the stringy core. In flavor the two varieties are somewhat similar. Menakher dates are generally reserved for the tables of the wealthier natives and for gifts for their friends. On the rare occasions when they are sold they are said to bring about one-third more than Deglet Noors. The variety is known only from the Jerid Oases of Tunis and is extremely rare. (Kearney, Date Varieties and Date Culture in Tunis, p. 60-63.) Natural size photograph from fruit purchased from Mr. Martel, Deggache, Tunis. Plant Introduction No. 29391.