

grown there. I am not aware that this Combretum has any economic value but it is ornamental; it would be of interest in a tree collection in Florida, Louisiana or Southern California." (Davy.) For distribution later.

**CROTALARIA MADURENSIS.** (Fabaceae.) 28344. From Poona, Bombay, India. Presented by Mr. P. S. Kanetkar, Director, Empress Botanic Gardens. "A copiously branched undershrub, attaining 4 feet in height, with short-petioled leaves and panicles of bright yellow flowers produced in great profusion at the beginning of January. It thrives in any fair garden soil and is propagated by seed." (Extract from Woodrow's Gardening in India, p. 277.) Introduced for experimental growing as a cover crop, for breeding purposes and as an ornamental in our Southern States. For immediate distribution.

**CROTALARIA MADURENSIS.** (Fabaceae.) 28358. From Sibpur, Calcutta, India. Presented by Maj. A. T. Gage. For immediate distribution.

**DIOSPYROS SP.** (Diospyraceae.) 28343. From Sydney, New South Wales. Presented by Prof. J. H. Maiden. "A large shrub or tree, 20 to 40 or even 100 feet high; trunk sometimes 2 feet in diameter. Flowers dioecious. Fruit globular or ovoid, edible; ultimately 1-celled and 1-seeded. Slender growing tree with elongated trunk and elegant, rigid foliage. Wood close, very tough and firm." (Hiern in Trans. Camb. Philos. Soc., v. 12, p. 246.) For distribution later.

**DIOSPYROS DISCOLOR.** (Diospyraceae.) 28351. From Buitenzorg, Java. Presented by the Director of Agriculture. See No. 26112 for description. For distribution later.

**DIOSPYROS EBENUM.** (Diospyraceae.) 28352. From Baroda, Madras Presidency, India. Presented by Mr. B. S. Cavanagh, Superintendent, State Gardens. "This tree yields the best kind of ebony, generally jet black, but sometimes streaked with yellow or brown; it is very heavy, close and even grained, and takes a high polish. The sap-wood is white, hard, close-grained and strong, but not durable; it is used by the natives for various purposes." (Bedd.: Fl. Sylvat. I:65.) For distribution later.

**ELAEAGNUS ANGUSTIFOLIA.** (Elaeagnaceae.) 27541. From Mamouret-ul-Aziz (Harput), Turkey. Presented by Mr. W. W. Masterson, American Consul. "These are cuttings of the smaller kind of 'date' which seems to be more inclined to bush and spread than

the larger kind, which is inclined to make a heavier growth." (Masterson.) For further description see Nos. 26594-595. For distribution later.

**ERYTHROXYLUM LAURIFOLIUM.** (Erythroxylaceae.) 28360. "Mauritius torchwood", from Port Louis, Mauritius. Presented by Mr. G. Regnard. For distribution later.

**FAGOPYRUM VULGARE.** (Polygonaceae.) 28055. From Manchuria. Procured by Mr. Edward C. Parker. "Chinese name, 'Chiao-mai'. Common throughout all Manchuria where it is sown in the latter part of June or the first part of July, following barley or wheat. This sample comes from Mukden, 42° N. latitude. Manchurian buckwheat, as a rule, appears to have larger and heavier kernels than varieties common in America." (Parker.) For immediate distribution.

**FESTUCA SP.** (Poaceae.) 28355. From Algeria. Presented by Dr. L. Trabut. "Grows in the very alkaline regions of Chatt Khreida. This grass has a very remarkable resistance to alkalinity." (Trabut.) For distribution later.

**GOSSYPIUM SP.** (Malvaceae.) 28364. Presented by Mr. F. S. Chaffee, Trujillo, Honduras. "This is supposed to be wild cotton from the Aguan River, 25 miles east of Trujillo. It grew on a tree some 8 or 9 inches in diameter and 25 or 30 feet high, standing out in the middle of a savannah, in a sand and gravel soil with no other trees around it, and fully a mile from any house; no one in that vicinity has any knowledge of its origin, or how long it has been there. There are also 2 or 3 other trees about a mile apart, located in the heavy forest." (Chaffee.) For distribution later.

**INGA EDULIS.** (Mimosaceae.) 27798. From Para, Brazil. Presented by Mr. Walter Fischer. "This is known as Inga cipo. Cipo here is the word for liane, given to the fruit undoubtedly on account of its curious appearance and resemblance to a liane. It is from a foot to two feet in length, about the thickness of a man's thumb or even thicker, and usually twisted and crooked. The seeds are surrounded by a pulp, in texture something like that of *Theobroma grandiflorum*. This pulp is acidulous, but has little flavor." (Fischer.) For distribution later.

**MEDICAGO ARBOREA.** (Fabaceae.) 28276-277. From Maison-Carree, Algeria. Presented by the Botanic Garden. For distribution later.

- MEDICAGO FALCATA X SATIVA.** (Fabaceae.) 27739-754, 28296-303. Hybrids between *Medicago falcata* (female) and various strains and varieties of *Medicago sativa*. Parents selected and hybrids made by Messrs. J. M. Westgate and W. J. Morse at the Arlington Experimental Farm during the summer of 1908. For distribution spring of 1911.
- MEDICAGO SATIVA.** (Fabaceae.) 27737-738. Plants growing at Arlington Experimental Farm, Virginia. "Two of four surviving plants from an alfalfa field near Weskan, Kansas, twenty years old, the rest having succumbed to the extreme drought and encroachment of buffalo grass. These plants were secured by me under Agrostology numbers 42 and 43, summer of 1907." (J. M. Westgate.) For immediate distribution.
- MEDICAGO SATIVA.** (Fabaceae.) 28359. Guaranda alfalfa from Ecuador. Procured by Mr. Herman R. Dietrich, American Consul General, Guayaquil. For immediate distribution.
- MELILOTUS MACROSTACHYS.** (Fabaceae.) 28357. From Maison-Carree, Algeria. Presented by the Botanic Garden. For distribution later.
- NEPHELIUM SPP.** (Sapindaceae.) 28332-341. From Buitenzorg, Java. Presented by the Director of Agriculture. Nos. 28332-334. **NEPHELIUM MUTABILE.** Three varieties of kapoel-  
asan. Nos. 28335-341. **NEPHELIUM IAPPACEUM.** Seven varieties of ramboetan. For description and photograph see Bull. 31, of this series. For distribution later.
- ORYZA SATIVA.** (Poaceae.) 28346-350. Five varieties of rice from the Philippine Islands. Received through Mr. Wm. S. Lyon. For distribution later.
- PASSIFLORA EDULIS.** (Passifloraceae.) 28353. From Madras Presidency, India. Presented by Mr. P. S. Kanetkar. "Edible passion fruit grown for culinary purposes." (Kanetkar.) For distribution later.
- PHYLLANTHUS EMBLICA.** (Euphorbiaceae.) 28328. From Kandawglay, Rangoon, Burma, India. Presented by the Secretary of the Agri-horticultural Society of Burma. "A small, deciduous tree found in China, Japan, India and elsewhere. The unripe fruit, formerly official in medicine, is known commercially as emblic myrobalans, and with the leaves and bark is used in tanning. The leaves have been found to contain 18 per cent tannin, and the bark 12.6 per cent." (W. W. Stockberger.) For distribution later.

**SAPINDUS SAPONARIA.** (Sapindaceae.) 27950. From Veracruz, Mexico. Presented by Hon. Wm. W. Canada, American Consul. "The berry-like fruit grows in clusters like the grape, and a tree will have at one time as many as one hundred of these clusters. They abound in the vicinity of Veracruz, where the fruit is known by the name of jaboncillo. The remarkable saponaceous properties of the fruit would warrant one in believing that it may have commercial value. The pulp and shell are the parts that appear to contain the soapy properties. When rubbed upon a wet hand a good, cleansing lather is immediately formed, one that to all appearances has been produced by ordinary soap." (Canada.) For distribution later.

#### NOTES FROM FOREIGN CORRESPONDENTS.

**CHINA, Shanghai.** Mr. D. MacGregor, June 21. Promises to send plants of the female form of *Actinidia chinensis* in the autumn.

**CHINA, Shanghai.** A son of the well known botanist, Prof. Marshall Ward, is in Shanghai. He took an agricultural course at Christ Church, Cambridge, and afterwards went to China. He has explored as far as the Tibetan frontier with the expedition fitted out by the Duke of Bedford and has done excellent work. He wants to engage in further exploration work and Prof. Isaac Bayley Balfour of the Edinburgh Botanic Garden, recommends him as a scientific explorer.

**DOMINICAN REPUBLIC, Santo Domingo.** Mr. Horace G. Knowles, July 21. Sends a report of his agricultural experiments there. He cleared out a large tract of jungle back of the Legation and planted it in bananas, grape fruit, pine-apples, various kinds of vegetables, corn and alfalfa. They are all in splendid condition. The people there know almost nothing about cultivating the ground, or about the importance of using good seed. He wants to show them by his experiments what can be done by a modern system of farm and garden cultivation. Many people have already become interested, and he intends to try to interest the Ministers of the different countries and get them to establish experiment stations and seed agencies in different parts of the Island. The report will be sent to any one interested.

**GERMANY, Colmar, Alsace.** Mr. Eugene Ackermann, July 14. Sends a copy of his book on Madeira, recently published, entitled "L'île de Madere Considerée au Point de vue Scientifique et Economique."

**INDIA**, Saharanpur. Mr. A. C. Hartless, June 22. Says the propagation of the leitchee in Northern India is entirely by layering. Says there is one kind which is nearly seedless and is called the "bidana" leitchee, or stoneless fruited leitchee.

**JAPAN**, Yokohama. Mr. Thos. Sammons, American Consul General, July 19. Sends a report on the vegetable oil made from *Perilla ocimoides*, which is used for coating the paper used in Japan in the manufacture of umbrellas.

**JAPAN**, Yokohama. Rev. H. Loomis, June 22. Sends an article treating at length on the cultivation and uses of the soy bean.

**JAVA**, Buitenzorg. Department of Agriculture, June 9. Sends photograph of fruits and tree of *Diospyros discolor*.

**JAVA**, Lawang. Mr. M. Buysman, June 9. Writes to inquire whether the Department could make use of articles written by him on the plants of Java. Says there are many valuable medicinal plants there. He has many of these in his garden, among them *Ipomoea mammosa*, *Andrographis paniculata*, *Eupatorium ayapanum* and *Orthosiphon stamineus*.

**MEXICO**, Mexico City. Dr. Pehr Olsson-Seffer, July 12. Has ordered his report "La Agricultura en varios Países tropicales y sub-tropicales" to be sent as it appears from the Government Printing Office in Mexico City.

**NEW YORK**. Mr. J. R. Lawrence has given up his experimental farm at Raynham, Mass., and is going to take up experimental farming for Hadenpyl, Walbridge & Co., Locust Valley, Long Island, New York.

**RUSSIA**, Batoum. Mr. A. Heingartner, American Consul, July 6. Sends soy bean coffee at request of Mr. F. N. Meyer.

OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION.

BUREAU OF PLANT INDUSTRY.

SEEDS NOW READY FOR DISTRIBUTION.

ARACHIS HYPOGAEA. 22022. Introduced from China. A small peanut, said by the Chinese to contain more oil than the large fruited varieties.

BOLUSANTHUS SPECIOSUS. 21808. A tree native of South Africa where it is said to be one of their most beautiful trees. This plant is found in Central Mississippi where it grows as an erect, branching annual 3 to 4 feet high. It is of vigorous growth, and as it reseeds itself freely, it may be of value as a cover crop in citrus groves and other fields where a rank-growing summer legume is desired.

LYGEUM SPARTUM. 21504. A perennial grass, indigenous to the Mediterranean countries, with a creeping rhizome and stiff rush-like convolute leaves.

RAPHANUS SATIVUS, SAKURAJIMA. 22399. A radish introduced from Japan.

TRIGONELLA FOENUM-GRÆCUM. 21501. An annual legume, indigenous to the countries bordering the Mediterranean Sea, Western and Central Asia. In some Oriental countries the foliage is used as a vegetable, and the seeds have medicinal value.

XIPHAGROSTIS CONDENSATUS. 21820. A perennial evergreen grass, indigenous to Japan, possibly of value as a pasture and fodder grass in Florida and California.

ZIZYPHUS SATIVA. 21225. A shrub or small tree attaining a height of 30 feet, indigenous to Southern Europe and South and East Asia. May be used as a stock on which to graft the improved jujubes.

ALEURITES MOLUCCANA. 24351. A tree indigenous to the Sunda Isles and probably parts of Malayasia, growing luxuriantly up to an elevation of 3,000 feet. An oil is expressed from the seeds, known as candle-nut oil, which is used principally in the manufacture of soap.

AMARANTHUS SP. 23985. An annual, introduced from China, where it is grown by the Chinese as an ornamental.

AGROPYRON IMBRICATUM. 24467. A grass of wide distribution in Northern Asia and European Russia. Highly recommended

as one of the best grasses of the Volga River region of eastern European Russia.

**ANDROPOGON SORGHUM.** 24478. A sorghum introduced from Northern Manchuria.

**ARISTOTELIA MACQUI.** 23451. A shrub native to Chile. The small berries have the flavor of bilberries and are used to considerable extent by the native population in Chile; the berries are also used in coloring pale wines. This shrub exceeds the orange in hardness.

**CHRYSANTHEMUM CORONARIUM.** 24075. An ornamental annual introduced from China; much grown by the Chinese.

**GOSSYPIUM HIRSUTUM.** 24545. An upland cotton introduced from Turkestan.

**GUIZOTIA ABYSSINICA.** 24902. An annual legume, indigenous to tropical Africa. An oil is expressed from the seeds, that is used for culinary, as well as technical purposes.

**MEDICAGO RUTHENICA.** 24451. An alfalfa indigenous to sandy and stony regions of Siberia, extending east to the region of Lake Baikal and into China. This is a favorite forage for the stock kept by the Mongolian nomads of this region and should be tested in the driest and coldest parts of the Northwest, especially where the most extreme cold comes at times without snow on the ground.

**MEDICAGO FALCATA.** 24452. An alfalfa, native of Europe and Asia, extending from Sweden to China. One of the most characteristic and dominant plants in Tomsk Province, Western Siberia. It is highly regarded by the natives as a pasture plant and for hay. Worthy of thorough trial in all regions where the common alfalfa suffers from winter killing.

**PISUM SATIVUM.** 24599. A sugar pea introduced from France. The variety is distinguished by its fiberless pods that can be used in a manner similar to string beans.

**RUBUS SPECTABILIS.** 23452. The salmon-berry of Oregon, California and New Mexico. The fruit is red, yellow or salmon in color, and very similar to the raspberry.

**TRIFOLIUM LUPINASTER.** 24458. A clover indigenous to the steppes of Siberia, extending north to the Arctic Circle.

TRIFOLIUM SUAVEOLENS. 24548. An annual clover grown extensively in Persia, also cultivated in India. Two to three cuttings are obtained in one season from this plant.

VICIA CRACCA. 24462. A perennial vetch, indigenous to the temperate zone in both hemispheres. In Norway it extends to latitude 71° 10'. An excellent fodder plant for perennial meadows and pastures; particularly adapted to moist lands. This seed was gathered in the Tomsk Province, Western Siberia.

BOEHMERIA NIVEA. 26842. A perennial fiber plant, indigenous to Southern Asia, which furnishes a very strong and beautiful fiber. Under irrigation, four crops per year may be cut from the plant in California, and in Assam even six annual crops are obtained. The fiber is sometimes 6 feet long. The product from one acre has been estimated at 2 tons of fiber. The fiber is strong, durable and glossy, and of silky appearance, enduring wear to an extraordinary extent. The leaves serve as food for silk worms.

ACACIA LONGIFOLIA. 26304. A shrub or small tree, indigenous to Australia and used as a street tree in California. The plant is of rapid growth and is serviceable in binding loose coast-sand, the lower branches striking root in the soil. This seed was collected in Chile.

AKEBIA LOBATA. 26424. A climber indigenous to Japan, grown for its ornamental value and its large sweet fruits. Baskets are sometimes made in Japan from the vine of this plant.

ALBIZZIA MOLUCCANA. 25783. A tree native to the Moluccas with large compound leaves. The flowers are ornamental.

ALEURITES FORDII. 27518. A tree indigenous to Southeastern China. Seeds are the source of the tung oil, a valuable drying oil that is imported in increasing quantities from China, reaching a figure of 2,000,000 gallons in 1907. The tree attains a height of 20 to 40 feet and very ornamental. The Chinese have innumerable uses for the tung oil, chief of which may be mentioned its use in the preservation of wood, in waterproofing cloth, in the manufacture of oil paper, putty, etc.

ALTHAEA OFFICINALIS. 26453. Native to a large part of Europe, Asia and Africa. A tall perennial herb with handsome flowers, the root and foliage of which are used for medicinal purposes. The plant succeeds best on damp, somewhat saline soil.



- AMYGDALUS DAVIDIANA. 26604. The original peach, very resistant to drought and alkali. To be used as a stock for peaches, almonds, prunes, plums, etc. Native of China.
- AMYGDALUS ARMENIACA. 27109. A small spreading tree common in the hills of Manchuria as far north as latitude 43°. The fruit is small, fibrous and of poor quality. It is being introduced into the United States for its value as a stock only.
- APIUM GRAVEOLENS. 26068. Improved Paris celeriac; a variety introduced from France. The taste is similar to the meat of the large artichoke and only requires boiling and a dressing of drawn butter sauce, after it is cut into slices.
- BASELLA RUBRA. 25739. A twining fleshy herb, probably native of India. The leaves may be used the same as spinach. The plant requires fairly moist land to succeed well.
- CALENDULA OFFICINALIS. 26443. An ornamental annual herb. The flower buds are sometimes used in perfuming soaps.
- CARUM CARUI. 26445. Annual or biennial plant, indigenous to Europe and Northern and Central Asia. The seeds are used for flavoring bread, cakes and cheese, and the young tender leaves and shoots are sometimes eaten.
- CEDRELA ODORATA. 26178. Indigenous to the West Indies and the source of the cedar wood of commerce. The tree attains a height of 80 feet.
- CICER ARIETINUM. 27513. Chick pea, indigenous to Southern Europe and Southwestern Asia. An annual herb, valuable for fodder. The seeds are extensively used for human food in India. In Spain it is the most important cereal next to wheat. It is grown to considerable extent in Mexico. It is an excellent substitute for corn meal. This seed was introduced from Caucasus, Russia.
- CICER ARIETINUM. 26898. Introduced from Mexico. (See No. 27513 for description.)
- CONIUM MACULATUM. 26447. A biennial herb, indigenous to Europe, Northern Africa and Northern and Western Asia. An important medicinal plant.
- CRATAEGUS SP. 27179. A hawthorn introduced from Caucasus, Russia. A tall shrub or small tree bearing black, juicy berries. Found growing on dry and stony places; of value as an ornamental shrub in southern United States.

CYTISUS BIFLORUS. 26798. A legume with a prostrate woody stem four to twelve inches long; indigenous to Southern Russia and Siberia.

EUCALYPTUS LEUCOXYLON. 26256. The Ironbark tree of Victoria, some parts of Southern Australia and New South Wales. It attains a height of 100 feet and supplies a most valuable timber. The wood is very strong, bearing nearly twice the strain of the American oak and ash, and excels hickory by about 18%. It resists decay well and therefore is well adapted for railway ties and mining timber. The bark yields 22% tannin and the dried leaves 9% to 10%. The flowers are rich in honey.

FEDIA SCABIOSAEFOLIA. 26431. An ornamental, herbaceous perennial, indigenous to Japan and China.

FURCRAEA BEDINGHOUSII. 26186.

GREWIA CANA. 27519.

INULA HELENIUM. 26451. A perennial ornamental herb, native to Central and Southern Europe and Central Asia. The root is used for medicinal purposes.

IPOMOEA SINUATA. 26411. A white-flowered, perennial, ornamental morning-glory, indigenous to Mexico; cultivated for its flowers and handsome foliage.

JUNIPERUS PACHYPHLOEA. 27497. A tree indigenous to the arid mountain slopes in the Southwest, usually on elevations between 4,000 to 6,000 feet. It attains a height of 60 feet.

LOBELIA INFLATA. 26452.

MONARDA FISTULOSA. 26454. An ornamental herb, indigenous to the United States.

NEPETA CATARIA. 26446. An aromatic herb of medicinal value, used as a condiment in France; a good bee plant, indigenous to Europe and Western Asia.

OLEA EUROPEA. 27027. An olive introduced from the Amanus Mountains, Turkey, where it grows in a semi-arid region.

PANICUM SP. 26267. A grass indigenous to South Africa. It is considered one of the best grasses in Orange River Colony.

PENTZIA INCANA. 26266.

PERILLA NANKINENSIS. 26436.

PHYSALIS IXOCARPA. 26195. A bush tomato, indigenous to California, the Southwest, Mexico and Cuba. The blue fruits, frequently 4 cm. in diameter, are sometimes found in the markets of Mexico City and Oaxaca.

PSIDIUM LAURIFOLIUM. 26413. Indigenous to the west coast of Nicaragua. Jelly made from this fruit is quite distinct in flavor from the ordinary guava jelly. It is said that it jellies much quicker than the common guava. The jelly with ice and soda makes an excellent soft drink, equal to or better than the ordinary fruit syrups.

RUBUS FRUTICOSUS. 27312. A blackberry introduced from Chile; of very robust growth and extremely prolific.

SALICORNIA TENUIS. 27096.

SESAMUM ORIENTALE. 26505. Black seeded.

SESAMUM ORIENTALE. 26506. White seeded.  
Two varieties of sesame introduced from China. This annual herb is the source of the sesame oil of commerce, and is extensively cultivated in the Orient. The seeds contain 45% to 50% of oil. Parched and pounded the seeds make rich soup. The soot of the oil is used in the manufacture of Chinese ink.

SPIGELIA MARILANDICA. 26455. A perennial, ornamental herb, indigenous to Northeastern America; of medicinal value.

TRITICUM DURUM. 27514 and 27515. Two varieties of winter wheat, introduced from Batoum, Caucasus, Russia. For testing in mild-wintered, semi-arid sections.

SICANA ODORIFERA. 28125. A perennial cucurbitaceous climber, indigenous to South America. The fragrant, curious fruits are edible.

ACACIA DECURRENS. 27792. The black or green wattle of New South Wales, Queensland and Victoria. The principal value of the tree is in its bark, which is one of the best in the world for tanning. The tree also yields a gum, that is used in making glue. The wood is comparatively light and tough; it makes excellent fuel.

- ATROPA BELLADONNA. 26442. An important medicinal herb, indigenous to Southern and Central Europe and Western Asia.
- LENS ESCULENTA. 27816. A lentil introduced from Caucasus, Russia, where the natives use it boiled in soup. This variety is said to have very good flavor. The flowers yield honey and the plant makes a nutritious hay. Annual.
- LIMUSOPS CORIACEA. 27852.
- PHASEOLUS VULGARIS. 27819, 27825 and 27826. Three varieties of beans introduced from Tiflis, Caucasus, Russia. For trial in semi-arid sections of the United States.
- PREWIA CANA. 27519.
- CHENOPODIUM QUINOA. 18537. An annual herb, indigenous to New Granada, Peru and Chile. The leaves are used the same as spinach. The seeds are sometimes used by the natives for porridge and soup. They also make a bread like coarse graham bread, which is much more nutritious, it is claimed, than corn bread.
- CHENOPODIUM QUINOA. 28017. (See No. 18537 for description.)
- CYNARA SCOLYMUS. 18832. French artichoke, Violetto di Provenza.
- BRASSICA SP. 18442. Introduced from China, where the seed is used as a food for song birds.