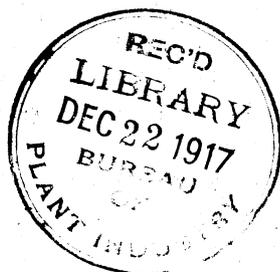


PLANT IMMIGRANTS

No. 131.



MARCH, 1917.

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Foreign Seed and Plant Introduction.

EXPLANATORY NOTE.

This multigraphed circular is made up of descriptive notes furnished mainly by Agricultural Explorers and Foreign Correspondents relative to the more important introduced plants which have recently arrived at the Office of Foreign Seed and Plant Introduction of the Bureau of Plant Industry of the Department of Agriculture, together with accounts of the behavior in America of previous introductions. Descriptions appearing here are revised and published later in the INVENTORY OF PLANTS IMPORTED.

Applications for material listed in these pages may be made at any time to this Office. As they are received they are placed on file, 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. Do not wait for the annual catalogue entitled NEW PLANT INTRODUCTIONS which will be sent you in the autumn and in which will be listed all plants available at that time. Regular requests checked off on the check list sent out with the catalogue are not kept over from year to year. If you are especially interested in some particular plant in the catalogue write and explain in detail your fitness to handle it.

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.

David Fairchild,

Agricultural Explorer in Charge.

December 6, 1917.

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Allium fistulosum L. (Liliaceae.) 44294. **Leek** seeds from Ansuhsien, Chihli province, China. Collected by Mr. Frank N. Meyer, January 18, 1917. "*Ta t'ou ts'ung*, 'Large-headed leek.' A peculiar variety of Chinese winter leek of very short growth, looking almost like a slender onion. Said to be of very good flavor; possesses also good shipping and keeping qualities. Does best in light, rich, moisture-retaining soil." (Meyer.)

Allium sativa L. (Liliaceae.) 44248. Sets of **garlic** from Ansuhsien, Chihli province, China. Collected by Mr. Frank N. Meyer, January 18, 1917. "*Suan*. Bulbs of first quality Chinese garlic, extensively eaten by the people as health promoters, raw, boiled, and pickled. They are said to prevent ptomaine poisoning through the action of the strong, antiseptic oil which they contain. These bulbs locally sell at two for one cent (Mex.)." (Meyer.)

Brassica pekinensis (Lour.) Skeels. (Brassicaceae.) 44291. **Chinese cabbage** seeds from Ansuhsien, Chihli province, China. Collected by Mr. Frank N. Meyer, January 18, 1917. "*Pan ch'ing pan pai pai ts'ai*, meaning 'Half green, half white pai ts'ai', or 'cabbage' on account of the outer leaves being green while the center is white. A fine quality of heavy winter *pai ts'ai*, coming from a locality famous for its cabbages, and formerly supplying the Imperial Court at Peking. This *pai ts'ai* has a sweet, wholesome flavor, quite juicy, but not watery like most other varieties. After having been boiled once it can be warmed up again three successive days without losing its fine taste. The plants are transplanted three times before being put in their places. They need rich, porous soil and plenty of water while growing fast. In good seasons specimens are obtained that weigh between 30 and 40 pounds each." (Meyer.)

Brassica sp. (Brassicaceae.) 44316. **Mustard** seed from China. Collected by Mr. Frank N. Meyer. "*Chieh*. Such mustard seed as is used in Peking in making ground table-mustard. It is cultivated a few days to the northwest of Peking, in a region with cool nights in summer; a climate resembling that of the intermountain sections in the United States." Received as *Brassica juncea*, but studies of the Seed Laboratory and Bureau of Chemistry have so far failed to identify this plant. Experiments, however, are being conducted with all

species of *Brassica* which are known to be used for the production of ground mustard or mustard oil, and it is hoped that in the near future the mustard-producing Brassicas will be thoroughly understood by those interested in this valuable plant.

Ceanothus hybridus Hort. (Rhamnaceae.) 44419-44420. One plant of each number from Elstree, Herts, England. Presented by Hon. Vicary Gibbs, through Mr. E. Beckett, The Gardens, Aldenham House. 44419. Var. *Gloire de Versailles*. Large bright blue panicles of flowers. 44420. Var. *Perle Rose*. Beautiful pink flowers.

Chaenomeles lagenaria cathayensis (Hemsl.) Rehder. (Malaceae.) 44249. Seeds of **Chinese quince** from Peking, China. Collected by Mr. Frank N. Meyer, January 27, 1917. "*Mu kua*, meaning 'Wooden gourd,' the shape suggesting a gourd to the Chinese. The Chinese quince is much used in winter time as a room perfumer by the better class of Chinese. These fruits are said to have come from the Anhwei province. Plants raised from the seeds should be tested as a stock for pears and loquats. Experiments might be made also concerning its susceptibility to blight." (Meyer.)

Chrysanthemum indicum L. (Asteraceae.) 44287. **Chrysanthemum** seeds from Malanyü, Chihli province, China. Collected by Mr. Frank N. Meyer, November 30, 1916. "A wild, perennial Chrysanthemum producing masses of small, golden-yellow flowers late in the fall. The plant is well worth growing in dry banks and in large rockeries. It does best in partial shade. Deserves to be naturalized in a locality like Colorado Springs." (Meyer.)

Corylus avellana L. (Betulaceae.) 44350-44356. **Filbert** plants from Maidstone, England. Purchased from George Bunyard & Co., Ltd. Seven of the best cultivated filbert varieties of England for trial in the eastern United States where filbert growing has been hitherto considered unsuccessful. Recent experiments in Maryland have given such results that experiments should be continued with this valuable nut of which a great many thousand bushels are annually imported.

Cotoneaster salicifolia floccosa Rehder & Wilson. (Malaceae.) 4422. One plant from Elstree, Herts, England. Presented by Hon. Vicary Gibbs, through Mr. E. Beckett,

The Gardens, Aldenham House. A half-evergreen shrub from western China, up to 15 feet high, with oblong to lance-oblong bright green leaves; white flowers in dense corymbs; and 3-seeded, bright red fruits nearly one-half inch in diameter. The value of this shrub lies in the ornamental effect of the bright red fruits in autumn. (Adapted from A. Rehder, in Bailey, Standard Cyclopedia of Horticulture, vol. 2, p. 867.)

Gevuina avellana Molina. (Proteaceae.) 44409. **Avellano** seeds from Buenos Aires, Argentina. Presented by the Jardin Botanico. A Chilean evergreen tree, reaching a height of 12 meters (39 feet). Its large, dark green, glossy pinnate leaves and axillary racemes of white flowers make a very pleasing combination during the winter. The pleasant-flavored nuts resemble the hazelnut in taste, and are eaten raw or cooked. The wood is suited for general carpentry and for cabinet work, the medullary rays giving it a pleasing appearance. (Adapted from Louis Castilla & J. Dey, La Geografia Botanica del Inferior del Rio Valdivia, p. 39, and from W. A. Taylor, in L. H. Bailey, Standard Cyclopedia of Horticulture, vol. 3, p. 1335.)

Guilielma utilis Oersted. (Phoenicaceae.) 44268. **Pejibaye** seeds from El Coyolar, Coast Rica. Presented by Mr. Carlos Wercklé. "This palm, commonly called *pejibaye*, grows in the hot, humid sections of Costa Rica, more abundantly on the Atlantic slope. The Indians have cultivated it since remote times and it is not known in the wild state. The trunk reaches a height of 8 meters and is covered with thin, sharp spines disposed in circular zones. The leaves are pinnate, dark green in color. The flowers are yellow; very much sought after by insects. They form short racemes protected by a bristled spathe. The fruits reach the size of a small peach and, in the larger number of varieties, are red,—the other sorts being yellow. The seed is inclosed in a sweet, farinaceous pulp which is cooked and eaten. It has a flavor much like that of chestnuts, and is a favorite food of the town people. The wood is very hard and is used by the Indians for walking sticks, arrow points, bows, pikes, and for all purposes where strength and durability are required. The name *pejibaye* is probably South American with the variations: *pejiballe*, *pjibay*, *pixbae*, *pixbay*." (C. B. Doyle.)

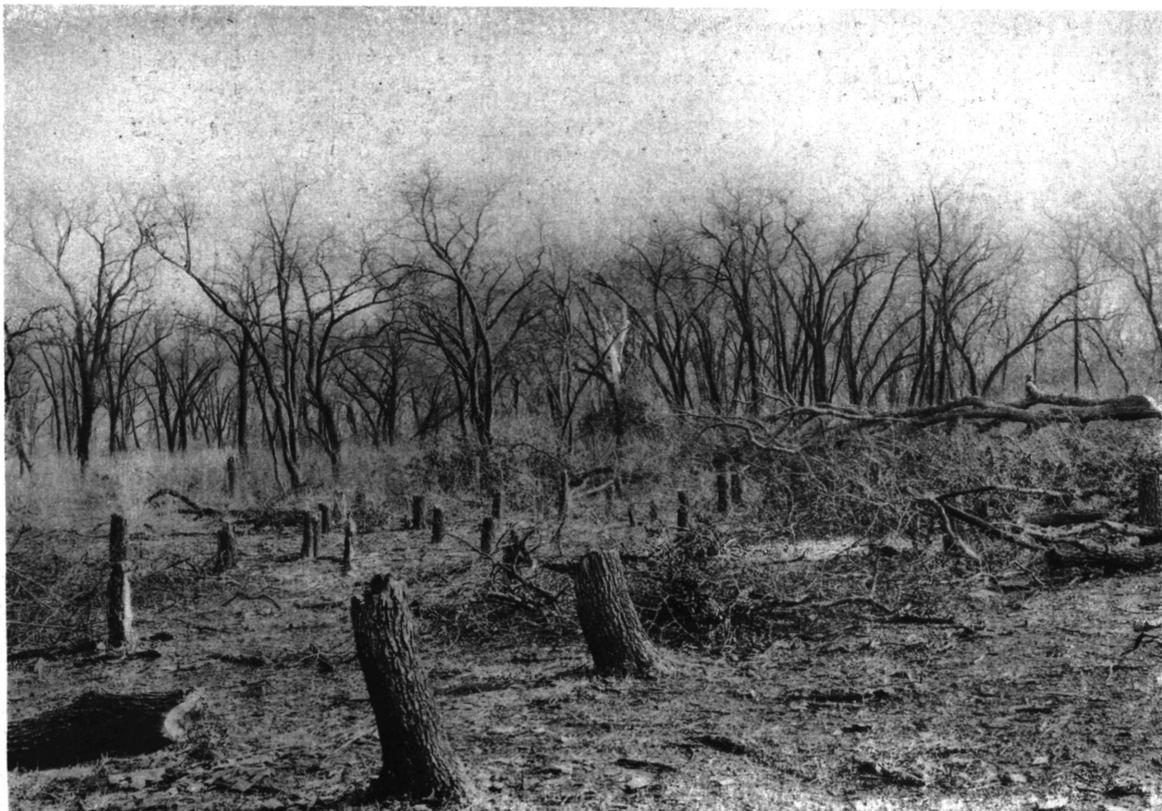
Malus baccata (L.) Moench. (Malaceae.) 44283. **Crabapple** seeds from Peking, China. Collected by Mr. Frank N. Meyer, December 15, 1916. "*Hai tan kuo*, meaning 'Sea red fruit'. A medium-sized crabapple, of bright red color and of pleasant sour taste. Calyx deciduous; peduncle medium long. Much used in the north of China as a preserve. This variety seems to be able to stand considerable drought and alkali, and might be of value in breeding experiments in the Upper Mississippi valley." (Meyer.)

Malus spectabilis (Ait.) Borkhausen. (Malaceae.) 44281. Seeds of flowering **crabapple** from Peking, China. Collected by Mr. Frank N. Meyer, November 3, 1916. "*Hai tan kuo*, meaning 'Sea red fruit', implying that the plant came to North China by the sea route, probably from Central China. A flowering crabapple, resistant to drouth and to the alkali of North Chinese soils. The small, greenish white fruits, which are of no value, have a persistent calyx. To be sown out to obtain new types." (Meyer.)

Myrianthus arboreus Beauv. (Moraceae.) 44250. Seed from Loanda, Angola, Africa. Presented by Mr. J. Gosweiler. A tree, native of tropical Africa, with large entire or 3 to 5-lobed leaves with prominent stipules. The male flowers are borne on thick branching receptacles, and the female flowers appear in solitary head-like inflorescences. The fleshy fruits are edible. (Adapted from A. Engler, Die Pflanzenwelt Ost-Africas und der Nachbargebiete, part C, p. 162.)

Populus szechuanica Schneider. (Salicaceae.) 44424. A **poplar** from Elstree, Herts. Presented by Hon. Vicary Gibbs, through Mr. E. Beckett, The Gardens, Aldenham House. A common tree in the forests of Szechwan, China, growing to a large size, with massive branches and stout branchlets. It has very large, ovate-elongated or rounded leaves. It is hardy in the north-eastern United States. (Adapted from L. H. Bailey, Standard Cyclopedia of Horticulture, vol. 5, p. 2765.)

Prunus serrulata Lindley. (Amygdalaceae.) 42296-44311. Cuttings from Yokohama, Japan. Purchased from the Yokohama Nursery Company. Japanese flowering cherries. Scions of 16 varieties of cherries including some of the most beautiful forms.



EXTERMINATION OF THE INVALUABLE BLIGHT-RESISTANT WILD PEAR.

(*PYRUS USSURIENSIS* MAXIM.)

Nothing could illustrate more forcibly the necessity for a quick exploration of China than this picture of the destruction for fuel of a grove of wild pears in Chihli Province. This particular species has been proved by the researches of Mr. F. C. Reimer, of the Oregon Experiment Station, to be highly resistant to the destructive pear-blight, or fire-blight, and Mr. Frank N. Meyer was authorized to secure a large amount of seed of it. Between the time of Mr. Meyer's first visit to this grove, nine years ago, and the date of this photograph, the Chinese have made a good beginning in the extermination of what seems likely to prove an invaluable wild species of pear. In order to study this and other Chinese species of pear and to secure a large amount of seed, Mr. Reimer has been sent to China to meet Mr. Meyer, who is already there. (Photographed by Frank N. Meyer, December 3, 1916, at Shinlungshan, Chihli Province, China; P13229FS.)



OLD TRUNK OF THE BLIGHT-RESISTANT PEAR.

(*PYRUS USSURIENSIS* MAXIM.)

The possibility that this species of Chinese pear may become widely used as a stock for the finer European varieties of pear, because of its resistance to pear-blight, makes this photograph of unusual interest. Mr. Frank N. Meyer reports that this trunk is 6 feet in circumference 4 feet above the ground. The bark is characteristically grooved and of a grayish black color, which may enable orchardists to identify the stock in case cultivated pears are budded on it. (Photographed by Frank N. Meyer, December 3, 1916, at Shinlungshan, Chihli Province, China; P13231FS.)

Pyrus calleryana Dacaisne. (Malaceae.) 44333. Grafts of a **wild pear** from Hongkong, China. Presented by Mr. W. J. Tutcher, Superintendent, Botanical and Forestry Department. This wild Chinese pear is not uncommon in western Hupeh at an altitude of from 1000 to 1500 m. and is easily recognizable by its comparatively small, crenate leaves and small flowers. This pear maintains a vigorous and healthy appearance under the most trying conditions, and might prove to be a very desirable blight-resistant stock. The woolly aphid, which attacks other species of pears, has not been known to touch this species. (Adapted from Compere, Monthly Bulletin Calif. State Comm. Hort. vol. 4, pp. 313, 314, and from Rehder, Chinese Species of Pyrus, Proc. Am. Acad. vol. 50, pp. 237, 238.)

Pyrus sp. (Malaceae.) 44246. **Pear** scions from Charles City, Iowa. Presented by Mr. Charles G. Patten. "In Grundy Center, Iowa, there is a pear tree growing which endured the extremely cold winter of 1883, 1884 and 1885. This pear is owned by Mr. O. A. Bardhall, a tailor, and was imported from China as a Chinese Sand pear by Mr. John S. Collins & Sons of New Jersey, and was supposed by them to bear pears nearly the size of *Flemish Beauty*, but only of cooking quality. The extreme hardiness of the tree appealed to Mr. C. G. Patten of Charles City, Iowa, who planted one in his orchard in 1885, and the following year planted two in an isolated orchard on his farm. The second year after that, the tree bore fruit, but on account of its early blooming and consequent lack of pollination bore only a very scanty number of very small, green-colored, hard pears, from which but few seeds were saved. (Adapted from C. G. Patten, in Report of the Iowa State Horticultural Society for the Year 1912, p. 162.)

Raphanus sativus L. (Brassicaceae.) 44293. **Radish** seeds from Ansuhsien, Chihli province, China. Collected by Mr. Frank N. Meyer, January 18, 1917. "*Teng lung hung lo po*, meaning 'Lantern red root', referring to the resemblance of the root to a Chinese or Japanese flat lantern. A large, flat, red, winter radish, said to grow as heavy as 5 cattles (7 pounds) each. Needs rich, well-drained soil to do well. Sow out in summer, not in spring." (Meyer.)

Rosa omeiensis Rolfe. (Rosaceae.) 44400. A plant from Elstree, Herts, England. Presented by Hon. Vicary Gibbs, through Mr. E. Beckett, The Gardens, Aldenham House. A stout, branched shrubby rose, from 3 to 10 feet high, with the young shoots covered with dense bristles, and the older stems armed with stout, straight thorns. The long, green leaves are composed of 9 to 13 sharply serrate leaflets, and the white flowers, which are over an inch in diameter, occur singly on short lateral twigs. The bright red fruits are up to one-half inch in length, and their yellow stalks are very striking in autumn. These fruits are said to be eaten in China, where the plant grows at elevations of from 8000 to 9500 feet. It thrives in good loamy soil, and may be propagated from the freely produced seeds. (Adapted from Curtis's Botanical Magazine, plate 8471.)

Styrax wilsonii Rehder. (Styracaceae.) 44403. One plant from Elstree, Herts, England. Presented by Hon. Vicary Gibbs, through Mr. E. Beckett, The Gardens, Aldenham House. A very pretty, small, compact, Chinese shrub with alternate, oval, irregularly dentate leaves, up to 2/3 inch long; white flowers in axillary and terminal racemes, appearing when the plant is but a few inches high and two or three years old; and gray, velvety, roundish fruits, about 1/3 inch long. It is best propagated by seeds, although layering may be used. On one occasion, in the nursery at Kew, England, this shrub withstood a temperature of 12° F. (Adapted from Curtis's Botanical Magazine, vol. 138, plate 8444.)

Ulmus parvifolia Jacquin. (Ulmaceae.) 44286. Seeds of elm from Chihtaoyin, Chihli province, China. Collected by Mr. Frank N. Meyer, December 1, 1916. "An autumn-flowering elm, found in a locality farther north than one generally meets with this species." (Meyer.)

Notes from Correspondents abroad.

Port Louis, Mauritius. Mr. G. Regnard writes, July 24, regarding the Jujubes of Mauritius which differ specifically from those of China mainly in seed and leaf character and have been given the name *Ziziphus mauritiana*: "To meet the wishes you expressed in your letter of October 18 last, I have endeavored to obtain fruits of the principal varieties of *Ziziphus sativa* Lam., growing in Mauritius . . .

"I might add to what I said on this subject in my previous letter. If the *Ziziphus* are not cultivated, in the strict sense of the word, they are to be found in large numbers in the villages inhabited by Indians and Africans, in the warmer localities of the island; and the fruits are well appreciated, not only by those people, but also by Europeans, and they are sold in great quantities in the fruit markets during June, July, and August (the cold season). On having fruits gathered on different trees, I have noticed that there are many varieties, probably more than one hundred, of different sizes, shapes, tastes, and colors. The fruits, on ripening, may be green, pink, red, or yellow. The majority are of a certain shade of yellow. When over-ripe, that is, when the fruit softens, all the fruits have the same uniform color, that is, yellowish brown.

"The fruits are eaten before they become what I call 'over-ripe', and, except for some varieties, have a very good taste. Usually, those fruits which have the lower extremity slightly pointed are considered to be the best, but this is not always the case.

"The tree rarely attains more than 20 feet high, the trunk is six to eight inches in diameter. It grows all around the island, from the sea level to 500 or 600 feet elevation, but it appears, save in a few exceptions, that the best products are obtained from the regions where the heat is more regular, because they are sheltered from the winds which blow during most of the year from the southeast.

"I have had photos taken, in natural size, of fourteen principal varieties of different trees.

"I send you a small package (No. 15) of seeds of a little fruit, long and pointed, excellent to eat; but which I was unable to procure when the photo was taken."

Mr. F. C. Reimer writes from Peking, China. September 26, 1917: "At last, I am in China, arriving here somewhat later than I had first planned. This is due to the fact that the work in Japan and Korea required more time than I had anticipated. For this reason it has been necessary to utilize every hour and to push the work with great vigor in order to get to Peking before it was too late for the early maturing species. As a result, all my correspondence has been neglected.

"In Japan, I visited the northeastern, southern and central regions. In Korea, the central, southwestern, and northeastern sections, and in Manchuria, the central part, were studied. The fruit in central and northern Japan was extremely light this year, which makes the results obtained less satisfactory. The wild pear trees of northern Korea and central Manchuria have practically no fruit this year. In all cases this poor crop is attributed to the remarkable drought last spring.

"I found no pure *Pyrus ussuriensis* in Japan, but other interesting types. I found *P. calleryana* in southern Japan and many trees of it in central and southern Korea. The trees of this species, especially in Korea, are usually mere bushes, owing to the fact that the trees are continually cut off for fuel. As a result, these trees seldom get large enough to bear large quantities of fruit. However, I found some fine, large trees of this species in southern Japan, bearing good crops of fruit. Wherever the trees are permitted to grow to any size in Korea they bear fine crops of fruit.

"*P. ussuriensis* is quite abundant in some places in the mountains of central Manchuria, but very little fruit could be found there. Tomorrow, I start for the Shinglungshan region, northeast of Peking, where I hope to see many trees of *P. ussuriensis*, and I also hope much fruit. This trip will require about two weeks. Mr. Meyer is in central China now, collecting and studying *P. calleryana*. I have not seen him yet, but will go down there later.

"Large areas in eastern China are now flooded and the railroad system south of Peking is demoralized and will be for weeks to come. This is very unfortunate as it will seriously interfere with my work."

Notes from Correspondents.

Jacksonville, Fla. Mr. Robert A. Young writes, Oct. 10: "At Fargo, Ga., yesterday, I saw about five acres of dasheens, which have done very well. The yield will be somewhere near 1400 bushels, and the quality of the tubers is apparently good. The corms, I have not yet tested. Fargo is southeast of Valdosta, near the Florida line.

"In the vicinity of Callahan and Crawford, Nassau Co., Fla., (north of Jacksonville), where I spent most of yesterday, I saw about ten acres of dasheens, most of which were good to very good. I was told of 5 to 6 acres more in the county that I was not able to see. The people are showing more practical enthusiasm in the subject there than I have seen anywhere else at any time so far. The dasheen seems to be the surest crop they can grow. It 'makes' well enough to pay to grow it, on land that is said to be worthless for almost everything else. At Fargo, I saw five-eighths of an acre of very good dasheens, right next to the railroad station, on land that it was stated had failed to raise any other crop that had been tried on it. (The Fargo Land Company owns about everything there at present.)

"In the regions referred to, there are scores, if not hundreds, of thousands of acres of land just like that on which I saw the dasheens growing.

"The people near Callahan,- especially Carl Froitzheim, the man who has done so well with the dasheen under adverse conditions,- are talking of the great desirability of a dasheen flour mill in the county.

"In Effingham County, Ga., just north of Savannah, there are also great areas that are said by men there to be just like the land at Clyo on which some fine dasheens were growing.

"In southern Alabama and Mississippi there are immense areas that would grow dasheens for flour production and stock feed, as well as for human food in the fresh state. The land does not seem to be well adapted for most staple crops, though occasionally good ones are obtained.

"In short, there are many hundreds of thousands of acres in a rather narrow strip of latitude, that it seems probable would grow dasheens better than anything else of value."

United States Department of Agriculture.
Bureau of Plant Industry.
Office of Foreign Seed and Plant Introduction.
Washington, D. C.

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